Citizen Science’s contribution to GEO BON

Laetitia M. Navarro
GEO BON Executive Secretary

GEO XIV, Washington DC
23.10.2017

www.geobon.org
GEO BON in a nutshell

Mission
Improve the **acquisition**, **coordination** and **delivery** of biodiversity observations and related services to users including decision makers and the scientific community.

Vision
A **global biodiversity observation network** that contributes to effective **management policies** for the world’s biodiversity and ecosystem services.
A Global Partnership
GEO BON core focus

Developing a standard and flexible framework for biodiversity observations

Supporting the development of Biodiversity Observation Networks

Producing Policy Relevant Outputs
**Biodiversity Observation Framework: the Essential Biodiversity Variables**

**EBVs:** Minimum set of measurements, complementary to one another, that can capture major dimensions of biodiversity change.

---

**Users**

- National Governments
- CBD
- SUSTAINABLE DEVELOPMENT GOALS

---

**Raw data**

-Observations

-EBV-useable data sets

-EBV-ready data sets

-Derived & modelled EBV data

---

**Indicators**

-Indicator

-Indicator

-Indicator

---

**Kissling et al., (2017) Biological Reviews**
From Citizen Science to EBVs

→ Acquisition, Mobilization of biodiversity observations

eBird

Genetic Composition
e.g. Allelic diversity

Species Populations
e.g. Species distribution

Species Traits
e.g. Body size, phenology

Community Composition
e.g. Species interactions

Ecosystem Structure
e.g. Ecosystem extent

Ecosystem Functions
e.g. Disturbance

Zooniverse

Global
From Citizen Science to EBVs

Species Populations
e.g. Species distribution, Population abundances
From Citizen Science to EBVs

Portugal

Community Composition
  e.g. Species interactions
From Citizen Science to EBVs

Species Traits
- e.g. Body size, phenology

Zooniverse
- Global

eBird
- Global

migrantwatch
- India

ODS
- France
Challenges: Data standards for interoperability

Efforts to track biodiversity change have increased the amount of species information available through monitoring programmes. Beyond ‘presence-only’ data, these systematically collected datasets capture richer, more complex details about species quantities and frequencies. The newly introduced ‘Event core’ places the sampling event at the center of the simplified dataset.

This extension will enable data holders publishing through GBIF to share population abundance data (including time series population data) or presence/absence data, while documenting the sampling protocol.

The events can also be used to relate data in time, for instance, from in situ measurements that are repeated every year.

“Data providers can now inform on the sampling protocol, sample size, and organism quantity, in addition to the occurrence records, for each species found at each site.”
Opportunities: Biodiversity Observation Networks

Contribute to the **collection** and **analysis** of **harmonised biodiversity observations**, the development of integrated and interoperable **biodiversity monitoring programs**, the development of **data standards**.

**National and Regional BONs**

**BON Endorsement**

**Thematic BONs**
- Marine BON (MBON)
- Freshwater BON (FWBON)
Opportunities: Capacity building

BON in a Box

Improving Capacity for Biodiversity Conservation

BON in a Box (Biodiversity Observation Network in a Box) is a customizable and continually updated toolkit. It provides access to the latest biodiversity observation design, data collection protocols, and data management, analysis and reporting tools. It serves as a technology transfer and capacity building mechanism to ensure you have access to the best and most up-to-date tools and technologies for building a biodiversity observation system.

BON in a Box connects tools users and developers to promote ongoing tool improvements and the development of new tools. The goal is to lower the threshold for the start-up or enhancement of biodiversity observation networks and support more effective conservation actions through the improved supply of quality biodiversity data. BON in a Box is a Group on Earth Observations – Biodiversity Observation Network initiative and the development of this Latin American regional version was led by Colombia’s Alexander von Humboldt Institute.
If you want to know more

The content of this talk was largely inspired by:

Chapter 9

9. Involving Citizen Scientists in biodiversity observation

Mark Chandler¹, Linda See², Christina D. Buesching³, Jenny A. Cousins⁴, Chris Gillies⁵, Roland W. Kays⁶, Chris Newman⁷, Henrique M. Pereira⁸,⁹,¹⁰, Patricia Tiago¹¹
Thank you

For more information:
www.geobon.org
laetitia.navarro@idiv.de
@GEOBON_org

www.geobon.org
GEO BON • German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Deutscher Platz 5a, 04103 Leipzig, Germany • info@geobon.org