

EU BON: A framework that connects data, technology and people – for biodiversity

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Global challenges

The **big** issues:

- **Biodiversity loss**
- **Climate change**
- **Water & Food scarcity**
- **Poverty**

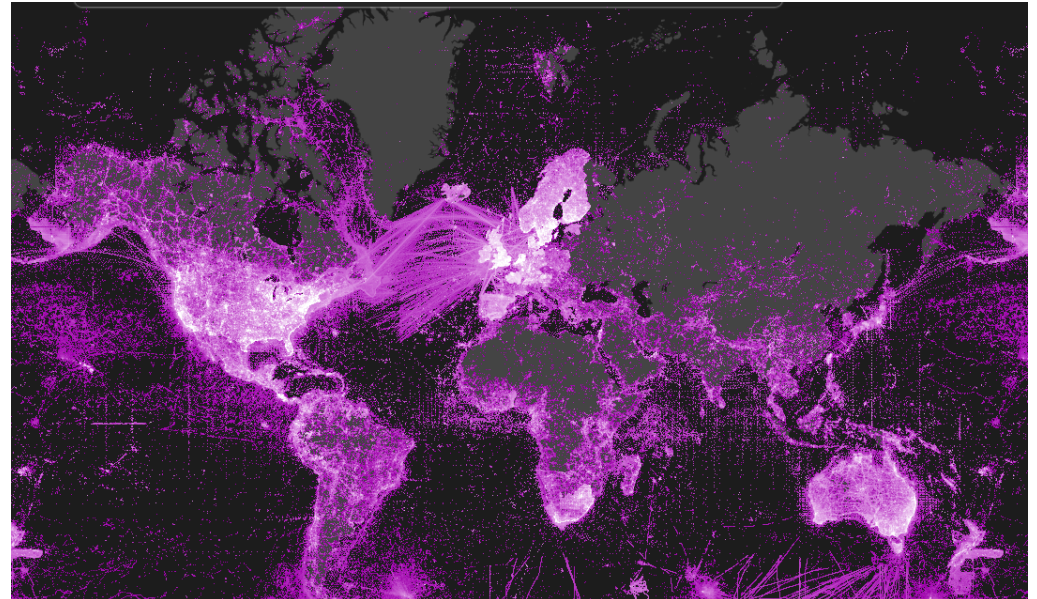
Our *Knowledge Society* is based on science and technology, i.e., the availability of sound & reliable scientific data, analysis and interpretation



Biodiversity Observations



Photo: MfN



GBIF.ORG

Free and open access to biodiversity data

Collecting Data & Sharing Data

Data from experts and citizen science needed

CONSERVATION TARGETS

A mid-term analysis of progress toward international biodiversity targets

Tittensor et al. (2014) Science 346, 241-244

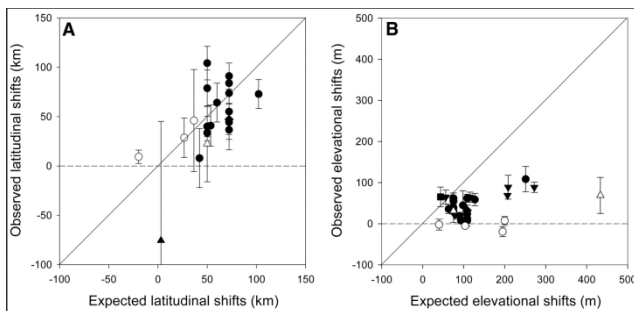
A Curator's Perspective

The Erosion of Collections-Based Science: Alarming Trend or Coincidence?

*By Vicki A. Funk**

Plant Press, Vol. 17, No. 4, October 2014

State and trends of biodiversity + „real time ecology“ and observations for imminent threats



*Ching Chen (2011)
Science 333, 1024-1026*



Help save the rare animals and forests of Woodlark Island from logging companies

e.g. predicted range shifts

EU BON - key information

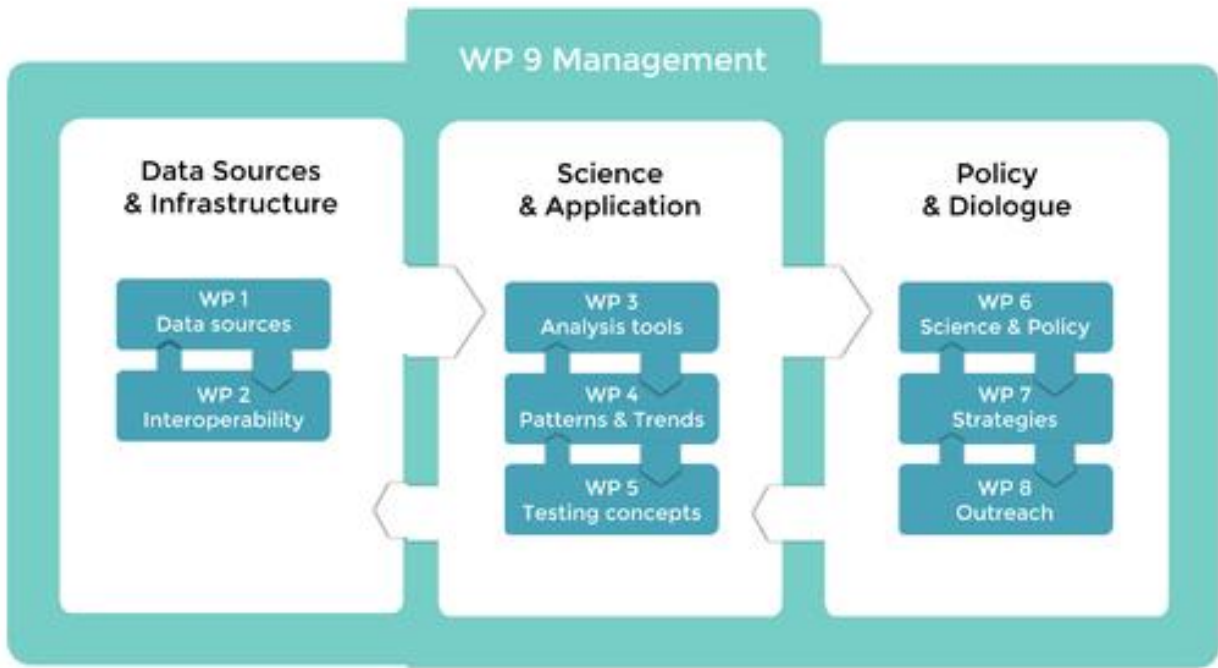
European Biodiversity Observation Network

A project dedicated to BIODIVERSITY INFORMATION

- **Project start:** 1st December, 2012
- **Duration:** 54 months (until May 2017)
- **Projektkoordination:** MfN
- **Consortium:** 30 partners (18 countries)
- **Budget:** 11,6 mio Euro, <9 mio Euro EC contribution



EU BON - Structure



The EU BON Framework and Links to Citizen Science



Datasources:

- data mobilization efforts: Citizen science involvement for additional observation records
- exploring citizen science – based approaches for mobilizing and generating biodiversity data



Data integration and interoperability:

- data portal: Search, upload and Access Biodiversity Data
- improving data standards and interoperability: Also for CS Data
- tools for data sharing (e.g. for observation records,



Stakeholder Engagement:

- to build up stakeholder dialogue with exemplar sector-specific user communities
- organizing Roundtables
- test and refine interactive visualisation and decision support tools

EU BON proposes two related networking levels

(1) a **science-based social network**, comprising and connecting the *communities of practice* engaged in collecting, managing, analyzing, and utilizing biodiversity observations and data, and

(2) a **technological network** of interoperating IT infrastructures and systems that store and distribute information of all kinds held by multiple organisations and partners, and to provide a user-friendly platform for data analysis and interpretation.

➤ For **resource efficiency**, the establishment of the EU (GEO) biodiversity information network (BON) will build on **existing infrastructures** and efforts to integrate recording and monitoring schemes and their data, across Europe, and internationally.

EU BON Citizen Science

Explore the potentials of citizen-science based approaches

- biodiversity assessment
 - monitoring
- more comprehensive data coverage, towards future GEO BON developments.
- using **technology-based citizen science recording schemes** from EU BON partner
 - links to curricula and **environmental education**
 - supporting an **education network**
 - linking with existing **citizen science initiatives**

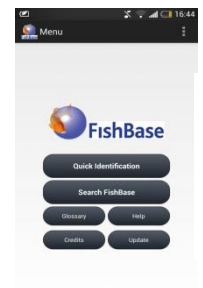
EU BON partners and Citizen Science projects

- Conducting and leading scientific projects with citizen science initiatives
- Developing of technology based citizen-science recording schemes
- Developing of CS Apps
- Engaging in national and European Citizen Science Organisations



Some Examples.....

FIN CS Tool: Quick Identification + FishWatcher



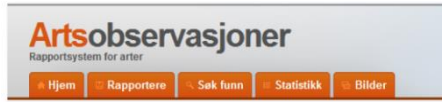
UFZ and EuMON



UTARTU:Cloud Database



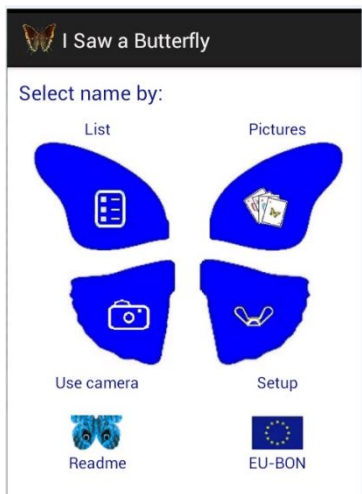
NBIC and species observations



MfN and Anymals and plants



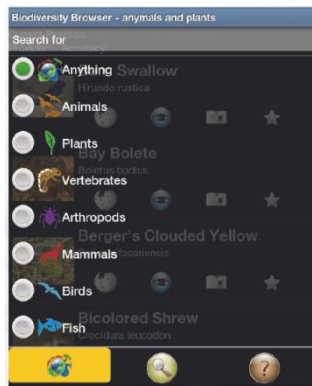
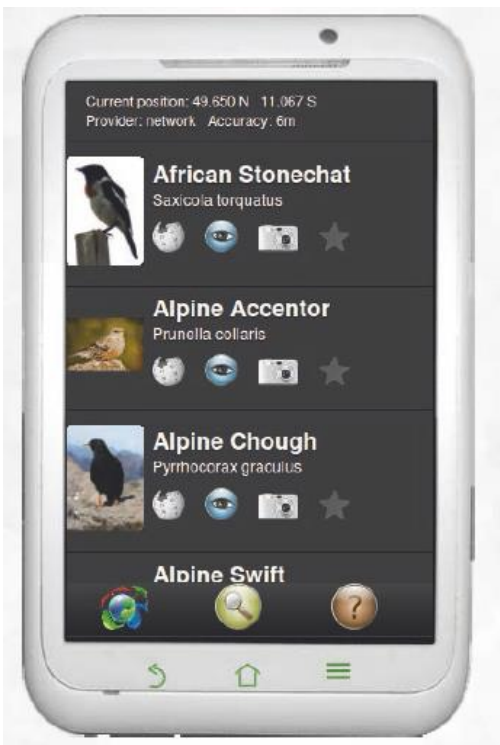
GlueCad: I saw a Butterfly



COMBER: Pilot Citizen Science project by HCMR



An App Example: Anymals and Plants – Mobile Interface for Citizen Scientists



museum für
naturkunde
berlin

FAU FRIEDRICH-ALEXANDER
UNIVERSITÄT
ERLANGEN-NÜRNBERG



Information and Network



- simple species search:
look for scientific or common names



- filter your current species list by
taxonomic groups
(e.g. birds, mammals, plants, ...)



- **anymals+ plants** is shipped with a full-scale
mobile tree of higher taxa

- usable without internet connection

- interface for biodiversity portals

Sighting, Identification, Gathering



- display species occurrences depending
on your current position with variable
search radius



- custom species lists created by users

- precise localization via GPS or GSM

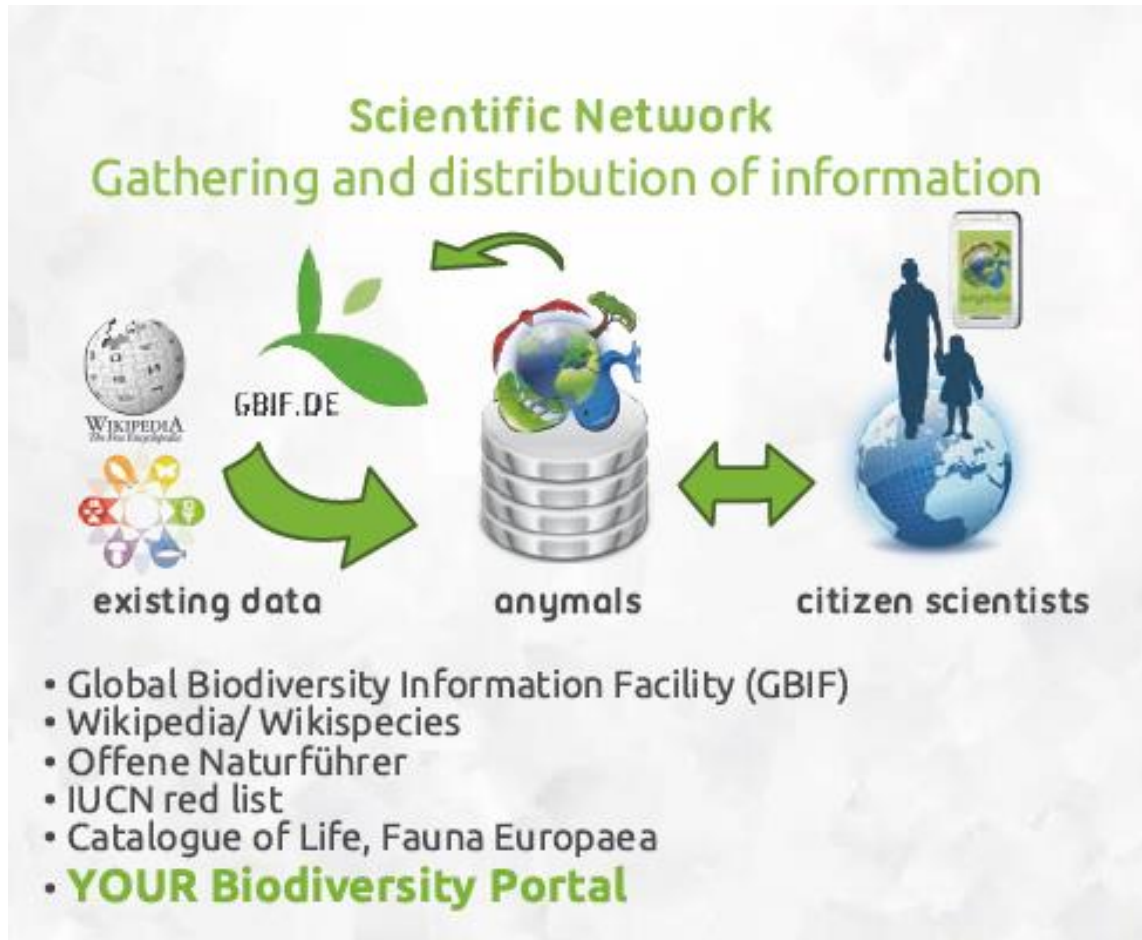
- enter your sightings



- take pictures as proof

- customizable forms for gathering
additional information

Animals and Plants



For Associations and Citizens:

- Information and raising the awareness for biodiversity
- Education
- Direct participation of citizens in research projects
- Communication with expert groups

Animals and Plants - Features

Occurrences

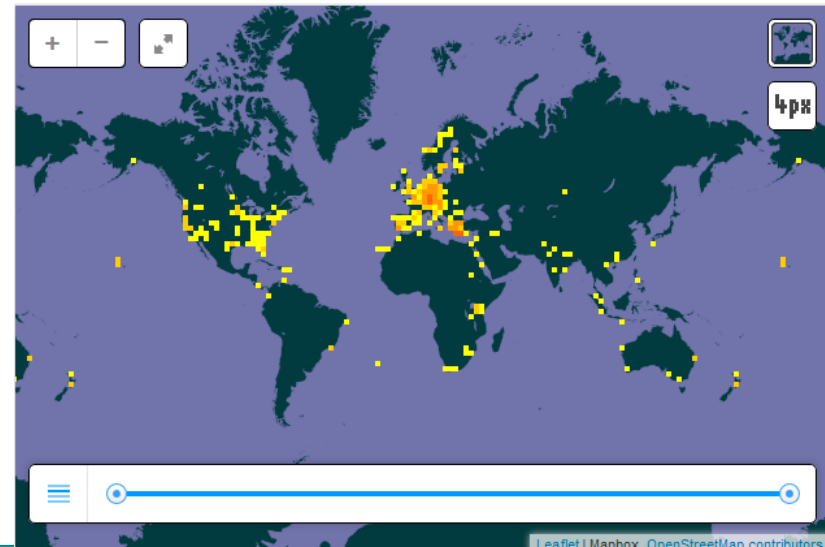
- Who, When, Where, What
- Research-specific information with customizable forms
- Image documentation
- Identification keys
- Offline availability
- Illustration on maps
- Multilingual

User groups

- Bound taxonomically and/or geographically
- Potentially restricted area for research topics and/or projects
- Customized forms per group

Species lists

- Generic interface for data export
- Data export to Scratchpads





Thank you!