

# **EU BON – Constructing the European Hub for GEO BON**

Anke Hoffmann, Florian T. Wetzel, Johannes Penner, Katrin Vohland, Christoph L. Häuser

Museum für Naturkunde, Leibniz-Institute for Evolution and Biodiversity Science, Invalidenstraße 43, D-10115 Berlin, Germany anke.hoffmann@mfn-berlin.de, florian.wetzel@mfn-berlin.de, johannes.penner@mfn-berlin.de, katrin.vohland@mfn-berlin.de, christoph.haeuser@mfn-berlin.de

### MAIN OBJECTIVE of EU BON:

build a substantial part of the Group on Earth Observation's Biodiversity Observation Network (**GEO BON**), also in light of the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (**IPBES**)

# EU BON facts: • EU FP7 collaborative project • 31 partners (18 countries) • Coordination: Museum für Naturkunde Berlin • Project duration: 54 months; 2012-2017 • EC contribution: 9 mio Euro

Images: Mihai Tamsila, Wanetta Ayers, Johannes Penne

# The EU BON approach

There is an urgent demand to integrate, harmonize and standardize biodiversity information from on-ground to remote sensing data, in order to adequately address questions from decision makers. The global framework is set by the Global Earth Observation System of Systems (GEOSS) and its biodiversity section, the Group on Earth Observations Biodiversity Observation Network (GEO BON). Europe's contribution towards these goals and initiatives is currently EU BON (European Biodiversity Observation Network) which builds on existing biodiversity information systems and infrastructures (e.g. GBIF, LifeWatch, DataOne, LTER and national biodiversity data centres) thereby integrating access to multiple data sources.

EU BON is an integration between social networks of science and policy and technological networks, resulting in a new open access platform for sharing biodiversity data and tools as well as results from state of the art analyses. The developed tools are evaluated and refined across terrestrial, marine and freshwater ecosystems. Together with the latest modelling scenarios, a network of test sites is used to verify the observed patterns, processes and trends (Hoffmann et al. 2014).

EU BON addresses the existing barriers to improve the biodiversity data landscape. There are a number of roles and contributions of Biodiversity Observation Networks (BONs) towards mobilizing biodiversity information for use by policy development and decision-makers (Wetzel et al. 2015). At the center of the EU BON's efforts is promoting and adopting existing standards of good practice and integrating data within a single biodiversity portal in order to make it discoverable, accessible and digestible.

## **EU BON key outcomes**

- Strategies for targeted data mobilization in / for Europe
- European Biodiversity Portal with new functionalities
- Software tools & improved models for better biodiversity data recording / mapping and analysis / visualization of patterns & trends
- Results & lessons learnt from EU BON (& other) sites for regional/global network of long term recording/monitoring sites (LTER / ILTER)
- Recommendations for integrated national / regional biodiversity monitoring schemes and information infrastructures
- Blueprint for a global biodiversity monitoring scheme / infrastructure (GEO BON)



## EU BON's support to GEO BON

- Contribution to several aspects of the GEO BON Work Program
- EU BON partners are linked to GEO BON working groups:
   WG2 Terrestrial species monitoring; WG8 Data integration and interoperability; WG9 Biodiversity indicators)
- EU BON tool list as part of BON-in-a-Box
- Development of a Spatial EBV Browser (EU BON-GBIF)
- Darwin core extension for sample-based monitoring
- GBIF IPT for publishing biodiversity data
- EU BON task groups are related to GEO BON activities: Informatics, Remote Sensing, Essential Biodiversity Variables
- EU BON delivers: access to biodiversity data, data integration, and analysis that links to international environmental policies







This project has received funding from the European Union's Seventh Programme for research, technological development and demonstration under grant agreement No 308454

### References:

Geijzendorffer, I.R., E.C. Regan, H.M. Pereira, L. Brotons, N. Brummitt, Y. Gavish, P. Haase, C.S. Martin, J.-B. Mihoub, C. Secades, D.S. Schmeller, S. Stoll, F.T. Wetzel & M. Walters. 2015. Bridging the gap between biodiversity data and policy reporting needs: An Essential Biodiversity Variables perspective. *Journal of Applied Ecology.* doi: 10.1111/1365-2664.12417. Hoffmann, A., J. Penner, K. Vohland, W. Cramer, R. Doubleday, K. Henle, U. Kõljalg, I. Kühn, W.E. Kunin, J.J. Negro, L. Penev, C. Rodriguez, H. Saarenmaa, D.S. Schmeller, P. Stoev, W.J. Sutherland, E. O Tuama, F.T. Wetzel & C.L. Häuser. 2014. The need for an integrated biodiversity policy support process — Building the European contribution to a global Biodiversity Observation Network (EU BON). *Nature Conservation* 6: 49-65. doi: 10.3897/natureconservation.6.6498.

Wetzel, F.T., H. Saarenmaa, E. Regan, C.S. Martin, P. Mergen, L. Smirnova, É. Ó Tuama, F.A. García Camacho, A. Hoffmann, K. Vohland & CL. Häuser. 2015. The roles and contributions of Biodiversity Observation Networks (BONs) in better tracking progress to 2020 biodiversity targets: a European case study. *Biodiversity*. doi: 10.1080/14888386.2015.1075902.