



# Citizen Science in EU BON

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**Task 1.5** Exploring citizen science – based approaches for mobilizing and generating biodiversity data

This task will explore the potentials of citizen-science based approaches for biodiversity assessment and monitoring, particularly for achieving more comprehensive data coverage and towards future GEO BON developments.

Using highly successful technology-based citizen science recording schemes from EU BON partners and associates (anymals+plants, artsobservasjoner, artportalen, Fishwatcher), the status of citizen science and its links to curricula and environmental education will be evaluated for best practice examples from at least five EU countries.

Elements for an action plan for pan-European citizen science networking for biodiversity information will be developed, including supporting an education network that will provide links to international and global initiatives and programs.

Consultations and negotiations with local citizen science initiatives as promoted by NGOs, museums, educational and R&D institutions will be carried out for linking and integrating activities and data via the EU BON portal or a future common European gateway (e.g., Eye on Earth).

Outputs of this task will contribute to overall EU BON strategy development (WP7), and directly support data mobilization efforts. (Lead UTARTU; MfN, Pensoft, FIN, HCMR, UCPH, Plazi, GlueCAD, NRM, IBSAS, NBIC; Months 12-54)



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## EU BON: Outcomes and task

1. Strategy roadmap for EU citizen science gateway for biodiversity data – what does that mean
2. European Biodiversity Portal to enable fast access to integrated data and products
3. Policy paper on strategies for data mobilization and use in conservation
4. Prototype of integrated, scalable, global biodiversity monitoring schemes
5. Strategies for EU-integrated national and regional biodiversity information infrastructures
6. Sustainability plan for regional and global biodiversity information network

**Task 1.1 Assessment and evaluation of biodiversity data sources**

**Task 1.5 Exploring citizen science – based approaches for mobilizing and generating biodiversity data**

**Task 4.4 Optimizing monitoring designs and improving their cost efficiency**

**Task 4.5 Quantifying uncertainty from different sources**



## **Solution for CS data collecting / managing through EU BON portal**



## PlutoF - cloud database and workbench

- Contains data on biological collections and observations, functionality for ecological studies
- **Collections**
  - Number of specimens inserted: 488,431
  - Number of collections: 63
  - Specimens have been collected from 170 countries
  - Distinct species in database: 24,331
  - Persons involved in data insertion: 131
- **Observations**
  - Number of observations inserted: 201,207
  - Observations have been made in 3 countries
  - Number of distinct species: 2,492
  - Persons involved in data insertion: 189



## PlutoF - cloud database and workbench

- Web framework Django (in Python)
- PostgreSQL database motor
- Server OS: CentOS linux
- Modules:
  - Specimens
  - Observations
  - References
  - Persons
  - Sequences (DNA)
  - Laboratory mode: taxon descriptions, GIS, ecological analysis etc
- [http://elurikkus.ut.ee/login\\_plutof.php?lang=est](http://elurikkus.ut.ee/login_plutof.php?lang=est)
- <https://demo.plutof.ut.ee/>



## Mid-winter waterfowl count

- Coordinated by Wetlands International
- Participating countries – 110 +
- 14.-15. January every year
- In Estonia – partner is Estonian Ornithological Society
- In Estonia part of national biodiversity monitoring
- Number of monitored birds in Estonia 2012: 109 851
- Reports in printed form
- Web-based observations and reportings make easier to get citizen scientist involved





## Mid-winter waterfowl count

As a model

- national language support?
- Taxa-specific developments?

...

PlutoF workbench-generated observation form, demo:

<http://canary.karrancia.com>





## Other options

- Linking other portals / project webpages
  - Socientize – cooperation / linkings
  - Univerzoo – few projects on site, not clear how to cooperate
  - Sratcpads
  - iSpot <http://www.ispotnature.org/uk-and-ireland>
- Linking other online recording schemes
  - <http://inaturalist.org>
  - National schemes?



## Survey

- Identifying needs – education, research, monitoring
- Mapping situation in different EU countries
- Gaps – regions, taxa
- CS-linked activities and outputs – nature photography, hiking, diving