



ALCUE NET meeting, 27 November 2014

Global Biodiversity Information Facility (GBIF)

gbif@gbif.fr

www.gbif.org / www.gbif.fr

What is GBIF?

- Intergovernmental collaboration
- Founded 2001, recommendation of OECD science panel
- Promotes and facilitates free and open access to biodiversity data via the internet
- 53 participating countries, 40 organizations
- Secretariat based in Copenhagen coordinates network and global informatics infrastructure





Data ▾

News ▾

Community ▾

About ▾

www.gbif.org

Global Biodiversity Information Facility

Free and Open Access to Biodiversity Data

517,325,592

OCCURRENCES

1,454,694.

SPECIES

13,848

DATASETS

644

DATA PUBLISHERS

Feedback

Leaflet

Sharing biodiversity data for re-use

[Learn about GBIF](#)

Publish your data through GBIF

Technical infrastructure

Providing evidence for research and decisions

Using data through GBIF

Enabling biodiversity science

Supporting global targets

Collaborating as a global community

Current Participants

How GBIF is funded

Enhancing capacity

Search news items and information pages...

Search

Latest GBIF news

Go to [GBIF Newsroom](#)

FEATURED STORY

Capacity project generates new guide on camera trapping

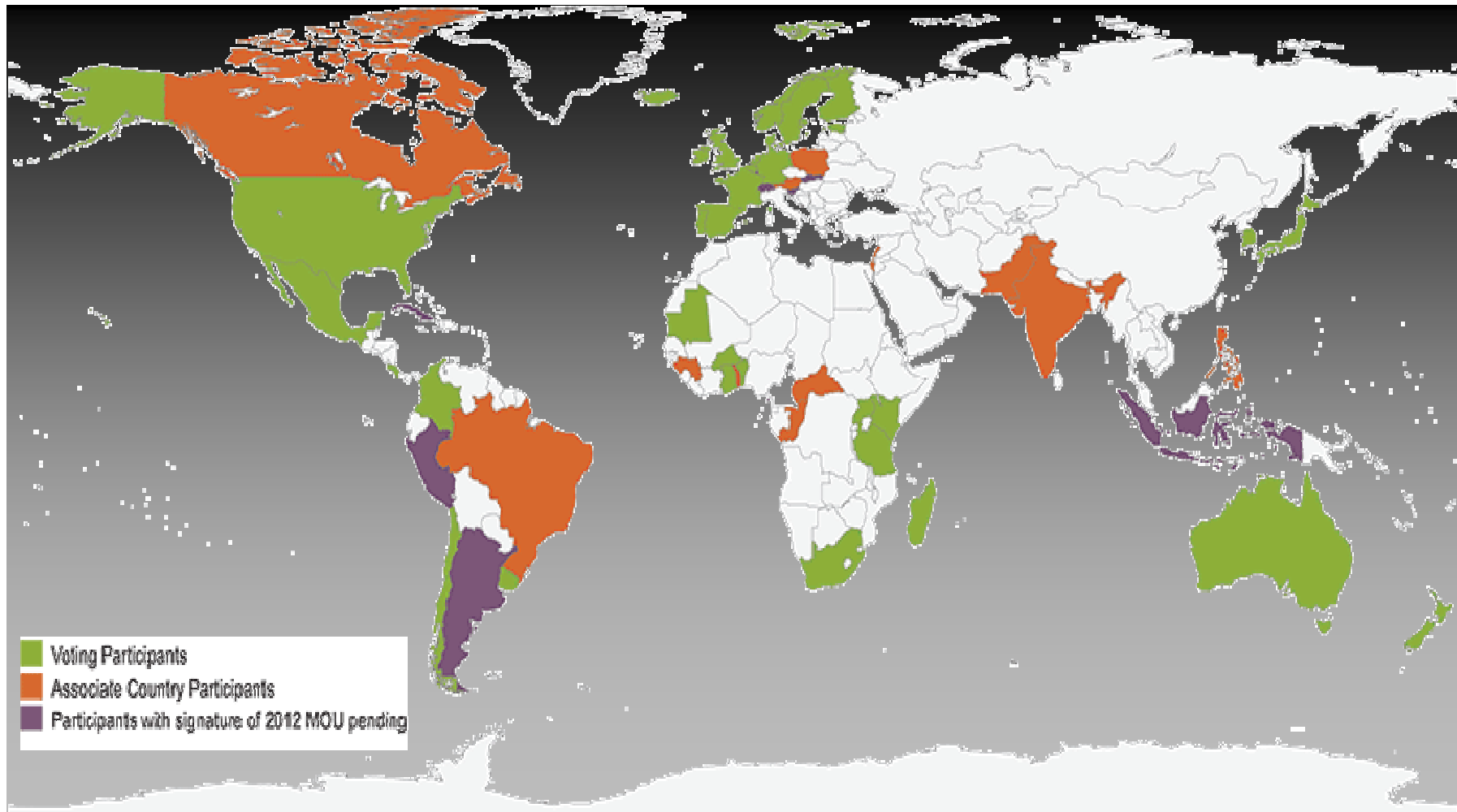
LATEST NEWS

November 7th, 2014
Capacity project generates new guide
on camera trapping

UPCOMING EVENTS

DEC 02 Arctic Biodiversity Congress
Trondheim, Norway

GBIF country participants



<http://www.gbif.org/participation/summary>

Types of data shared through GBIF

Museum, herbarium collections



Field surveys, monitoring projects



Citizen science observations



Records extracted from literature

Mr. Wixson's Flora of Northumberland, &c. 129

Conferva setacea, Eng. Bot. 1689; Dillwyn, t. 82.
Among the rejectamenta on the coast, N. and D. Near Berwick.—Dr. G. Johnston.

2. *C. epistictifolia*.
Gr. Fl. Eds. 312; *Conferva epistictifolia*, Eng. Bot. 1479; Dillwyn, t. 54.
On the beach at Hartlepool, D.

3. *C. ovalis*.
Hook. Fl. Scot. 84; *Conferva ovalis*, Dillwyn, 98; Eng. Bot. 1815; Lightfoot, 988.
On the coast near Hartley, and at Newbiggin, N. In Manhaven near Whitburn, D.

236. CLADOSTEPHUS.

1. *C. verticillatus*.
Gr. Fl. Eds. 313; *Conferva verticillata*, Dillwyn, t. 55; Eng. Bot. 1716.
On the beach at Sunderland and Hartlepool, D.

2. *C. spumosa*.
Gr. Fl. Eds. 313; Berwick Flora, ii. 245; *Conferva spumosa*, Eng. Bot. 2427; Dillwyn, t. 42.
On rocks near Hartley, N. Near Hartlepool, Whitburn, and Sunderland, D. Near Berwick.—Dr. G. Johnston.

Sunderland, and on the bark of the Holly in Galside and Bessworth Woods, D. On rocks at Hartley, N.—W. C. Trevelyan, Esq. Near Berwick.—Dr. G. Johnston.

2. *A. linearis*.
Spreng. Syst. Veg. iv. 345; Berwick Flora, ii. 245.
On the bank of Ash Trees.—Dr. G. Johnston.

241. CONFERVA.

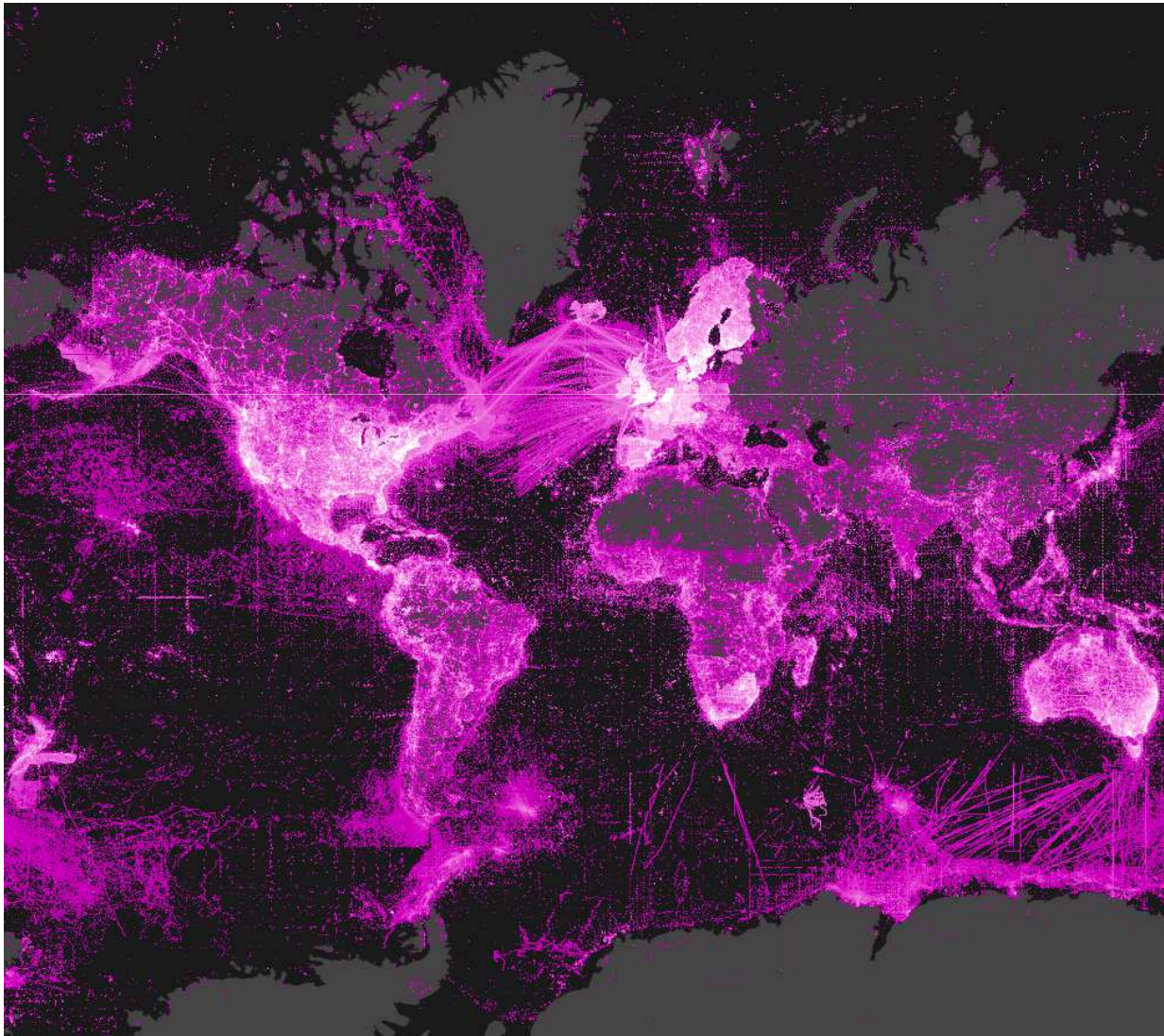
1. *C. tortuosa*.
Gr. Fl. Eds. 315; Eng. Bot. 2220; Dillwyn, t. 46; Berwick Flora, ii. 253.
On the Tress, side above the Old Castle, Berwick, N.—Dr. G. Johnston.

2. *C. fasciata*.
Gr. Fl. Eds. 316; Dillwyn, p. 53, t. C; Eng. Bot. 2310; Berwick Flora, ii. 253; *C. curia*, Dillwyn, t. 75.
On *Fucus nodosus* and *F. vesiculosus*, N. and D. At Seaton, D.—Mr. Backhouse. Near Berwick.—Dr. G. Johnston.

3. *C. fuscula*.
Gr. Fl. Eds. 316; Dillwyn, t. 66; Berwick Flora, ii. 253.
Parasitical on *Fucus nodosus* and *F. vesiculosus*.

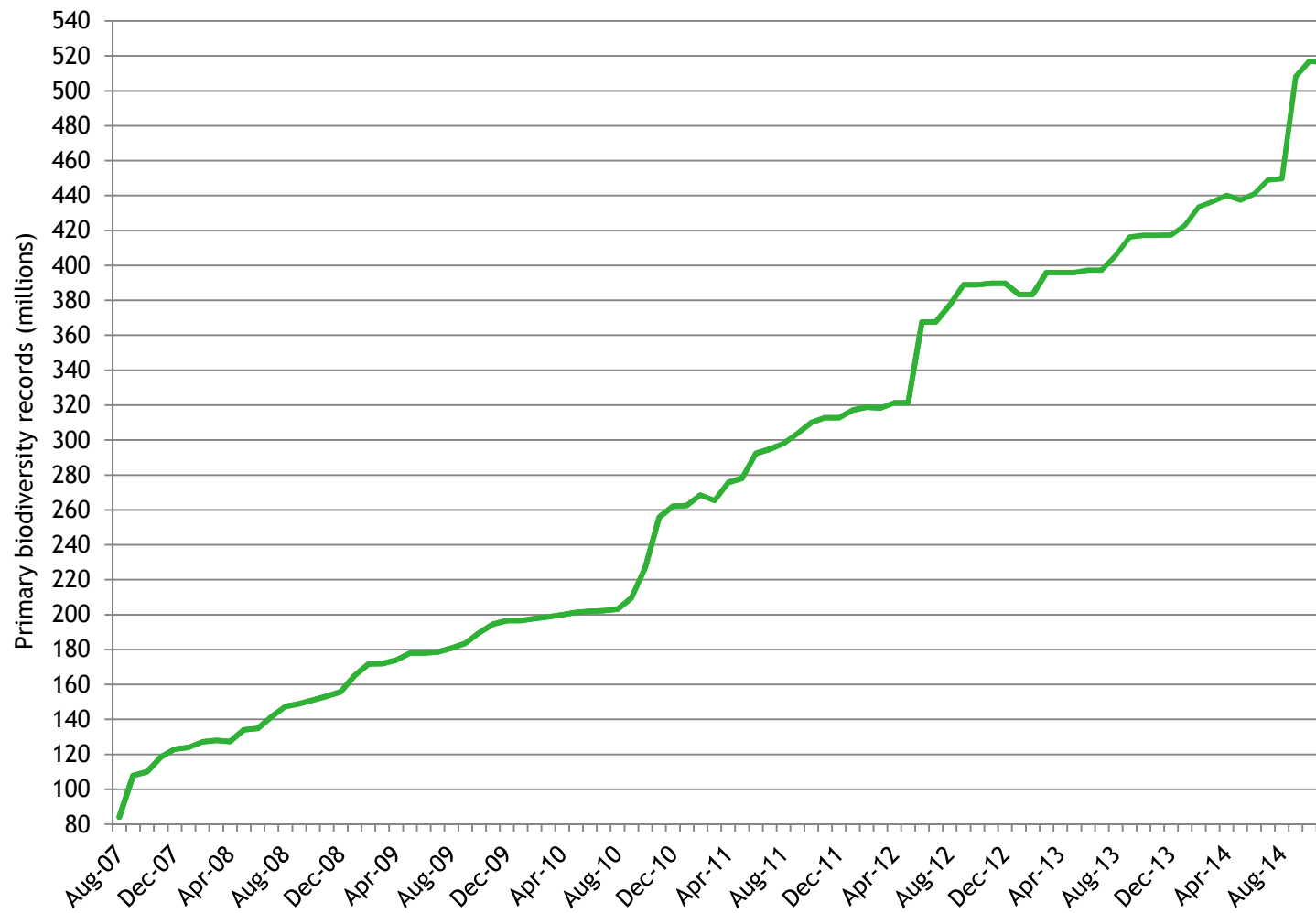


GBIF in numbers



- 518M species occurrence records
- 451.8 M georeferenced
- 1.4M species
- 13,852 datasets
- 644 data publishers

Data mobilization 2007 - 2014



Data repatriation

France

A GBIF Voting Country Participant from Europe

Names of countries, territories and islands are based on the ISO 3166-1 standard.

Summary

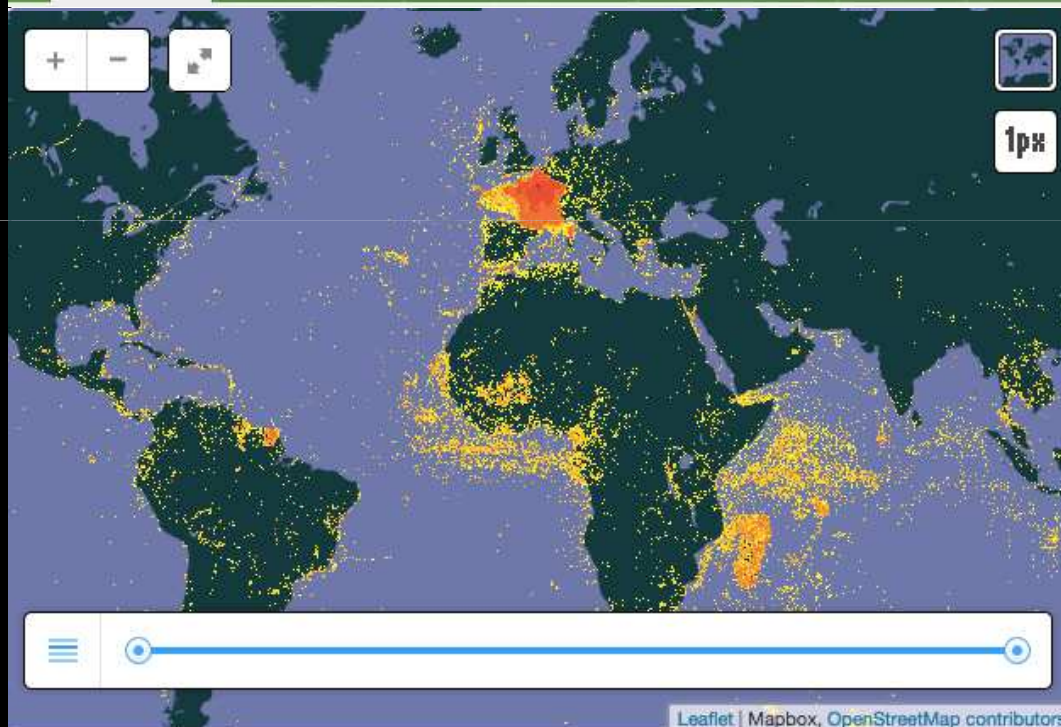
Data About

Data Publishing

Participation

News

Publications



Data from France

- 140 occurrence datasets with 17,397,426 records.
- 1 checklist dataset with 414,261 records.
- 2 metadata-only datasets.
- France publishes data covering 248 countries, territories and islands.

Returns data to countries of origin through electronic access

<http://www.gbif.org/country/FR/summary>



Global data trends

Trends in data availability on the GBIF network, 2008 to 2014

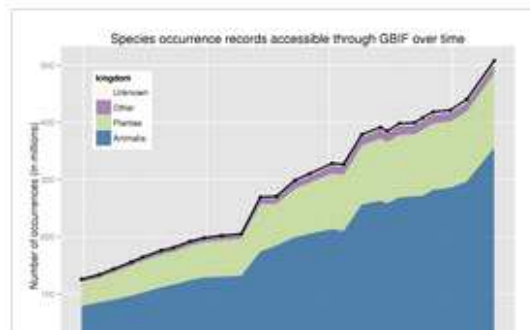
[Global](#)[Trends About](#)[Publishing Trends](#)[FAQ](#)

Number of occurrence records

These charts illustrate the change in availability of the species occurrence records over time.

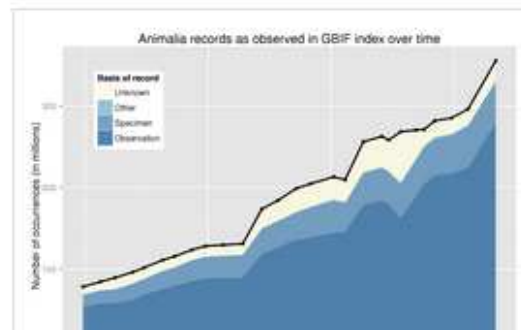
Records by kingdom

The number of available records categorized by kingdom. "Unknown" includes records with taxonomic information that cannot be linked to available taxonomic checklists.



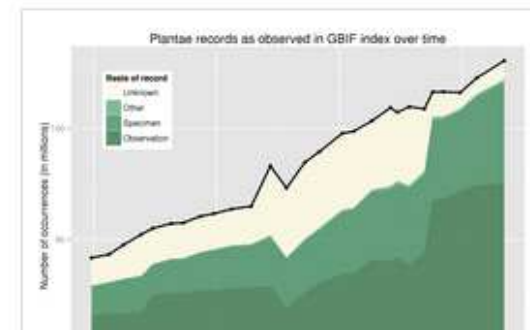
Records for Animalia

The number of animal records categorized by the basis of record. "Unknown" includes records without defined basis of record or with an unrecognised value for basis of record.



Records for Plantae

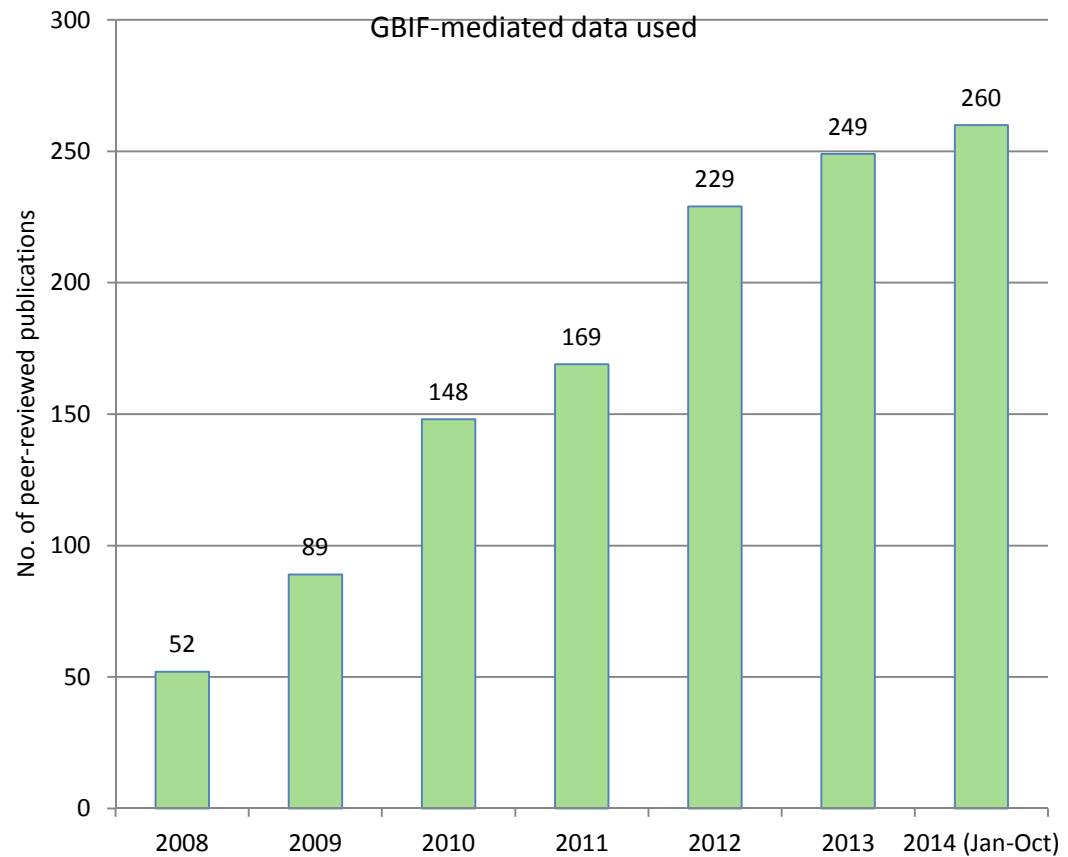
The number of plant records categorized by the basis of record. "Unknown" includes records without defined basis of record or with an unrecognised value for basis of record.



- ⇒ All tools developed by GBIF are **free** and **open source** and use **international standards**.
- ⇒ **All data can be downloaded** (unlimited size) and **reused by other portals** (API).
- ⇒ **Usage:** these data, correlated with environmental data, contribute to scientific research and help make decisions in the following areas:
 1. Threatened, migratory and invasive species
 2. Impact of climate change
 3. Conservation Policy
 4. Management of natural resources
 5. Agriculture, forestry, fishing and mining
 6. Public Health and SafetyAnd much more ...



Use of GBIF in research



GBIF Science Review available at <http://www.gbif.org/resources/3427> .



GBIF.ORG

Free and Open Access to Biodiversity Data

Q News and articles

About ▾

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Data ▾

Using Data

How data accessed through GBIF are used in research and policy

Summary

Science relevance

Methods

Data applications

Policy relevance

Climate change



Overview

The relationship between climate and biodiversity lies at the heart of much of the science informed by data accessed through GBIF. Studies in this category overlap with most of the other science relevance areas, and range from investigations into the influence of ancient climate shifts on species distributions, to projections of the impacts of future climate change on biodiversity and the ecosystem services it provides to people and their livelihoods. Researchers increasingly combine climate data and

QUICK LINKS

- [Invasive alien species](#)
- [Conservation](#)
- [Food and farming](#)
- [Human health](#)
- [Species distributions](#)

SEE ALSO

- [Featured research relating to climate change](#)

EXTERNAL LINKS

- [Climate change and biodiversity \(CBD\)](#)

Feedback



GBIF.ORG

Free and open access to biodiversity data

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Uses of data

Opportunities

Events

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GBIF Newsroom

News and events from around the GBIF community

Featured uses of data accessed through GBIF

These are selected examples from the growing body of peer-reviewed research making use of GBIF-mediated data, including descriptions of what types of data were used and how they contributed to the study. Click on 'Related GBIF resources' at the bottom of each example page to see the types of filters available to access data through this portal.

Brazilian forest reserves in a changing climate

Study uses GBIF-mediated data to look into the effectiveness of current forest reserves in conserving 16 forest plant species under changing climate conditions.

Also tagged:

Brazil

Latin America



GBIF enables global study of climate impact on species

Research published in Nature Climate Change uses records on nearly 50,000 species accessed through GBIF to forecast major reductions in the climate ranges of common plants and animals around the world.

Also tagged:

United Kingdom

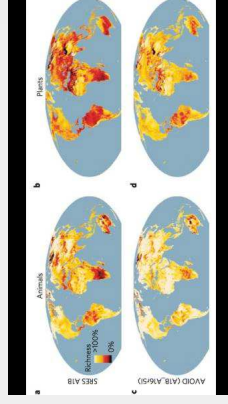
Australia

Colombia

Oceania

Europe

Latin America



Projecting future malaria risk in tropical Americas

Modelling of future occurrences of a mosquito strongly associated with malaria in Mesoamerica and the Caribbean suggests that high altitude areas will become increasingly at risk of the disease, due to climate change.

Also tagged:

United States

Colombia

Latin America

North America

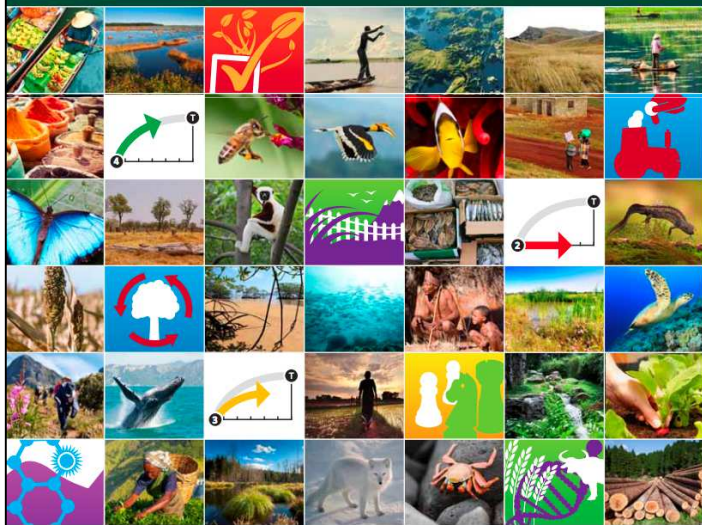


Why mobilize data?



Global Biodiversity Outlook 4

A mid-term assessment of progress towards the implementation of the Strategic Plan for Biodiversity 2011–2020



Convention on
Biological Diversity

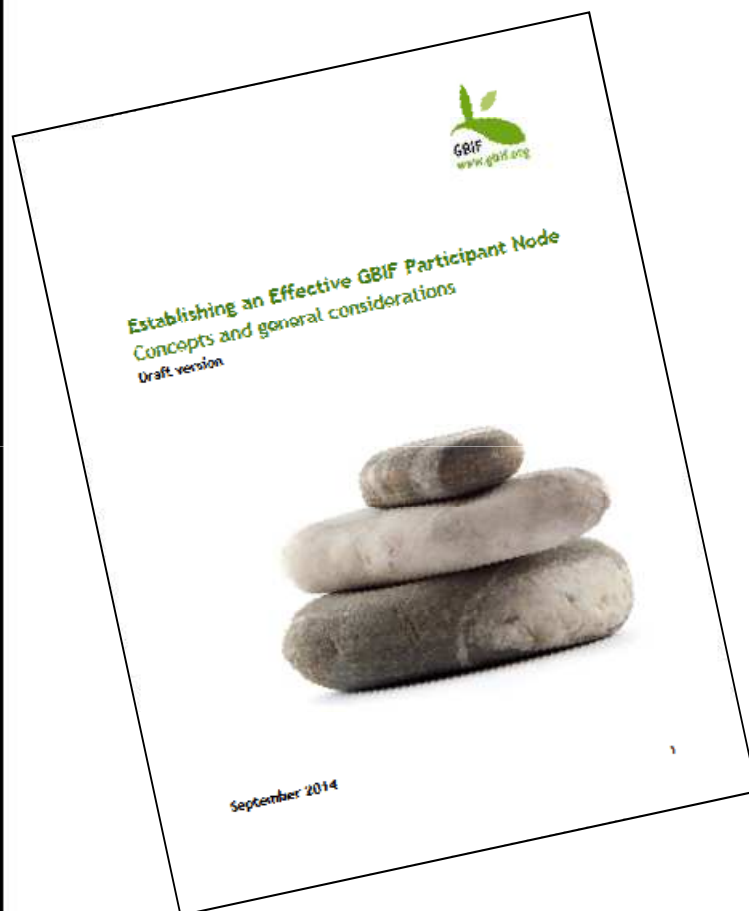


www.cbd.int/gbo4

- Key actions for accelerating progress towards Aichi Biodiversity Targets include:
- *"Strengthening and promoting the further mobilization of and access to data by, for example, encouraging the use of common informatics standards and protocols, promoting a culture of data sharing, investing in digitization of natural history collections and promoting citizen scientists' contributions to the body of biodiversity observations"*



Mobilizing further biodiversity data



National nodes/biodiversity information facilities

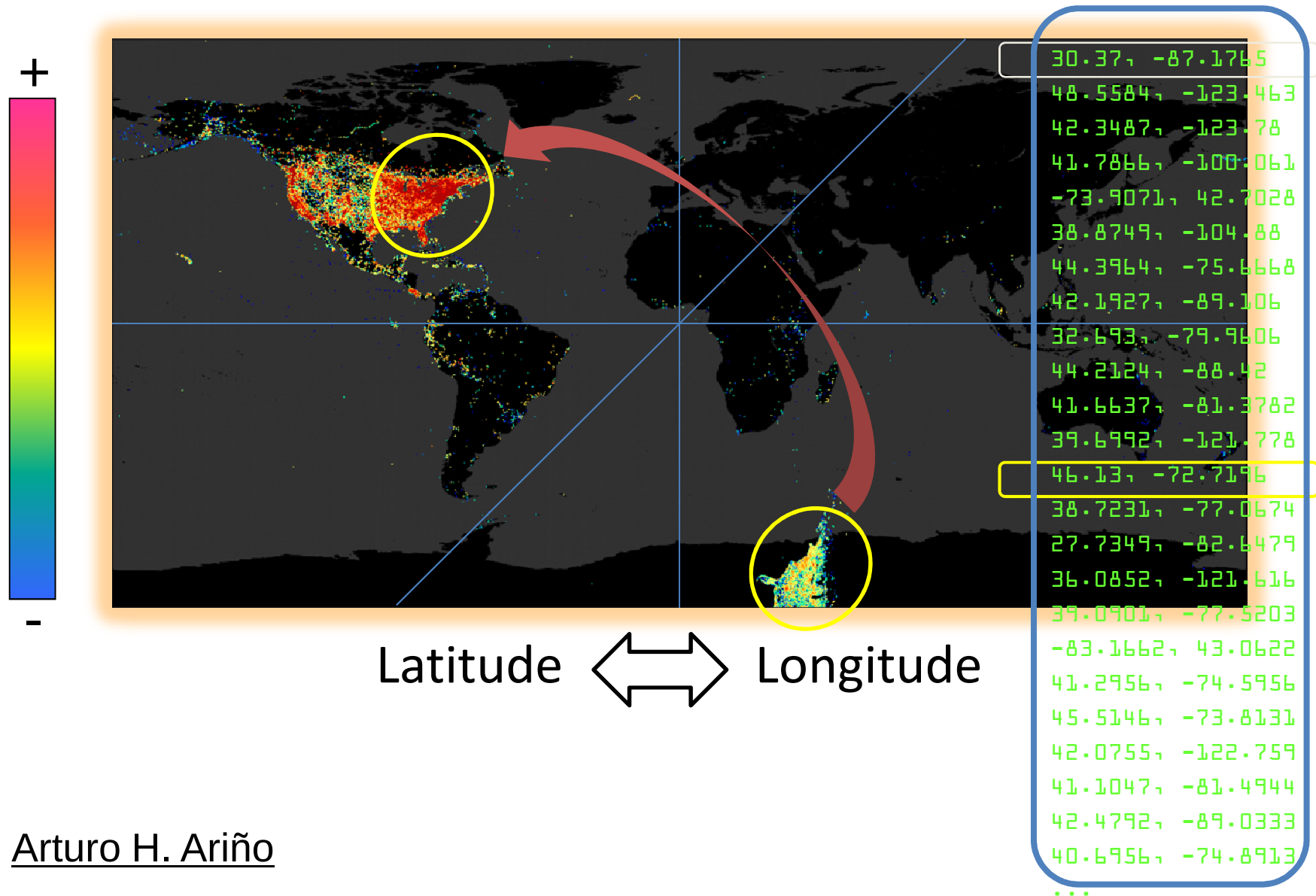
- Neutral coordinating units promoting common standards, engaging relevant stakeholders
- Identify national user needs and priorities for data mobilization
- Develop network of data publishers, web platform for discovery of national data
- Collaborate at regional/global levels through GBIF network
- Share best practices, tools, incentives for sharing data

Key priorities for improved data provision

- Expand GBIF network, engage more potential data publishers
- Investment in capacity to mobilize data
- Strategies for digitization, identify data gaps
- Improve data 'fitness for use' through engaging expert communities, key users
- Improve data citation, replicability of research e.g. through use of DOIs for datasets and downloads



Data quality



Arturo H. Ariño

Data quality hub

<http://www.gbif.es/BDQ.php>



best practice guides on different languages



RESOURCE DETAILS

Présentation : Comment enregistrer les jeux de données au GBIF

Presentation: How to register datasets with GBIF (in F

DESCRIPTION

RESOURCE
Best p
dissen

RESOURCE DETAILS

Video: proceso de publicación de un recurso en el IPT

RESOURCE DETAILS

생물종 데이터 품질의 원칙 Principles of Data Quality (in Korean)

DESCRIPTION

A guide to principles of data quality by Arthur Chapman in Korean.

AUTHOR(S)

A. Chapman

PUBLISHER(S)

GBIF, Thursday, June 1, 2006 (All day)

TARGET AUDIENCE

Biodiversity data managers.



[Download \(889 KB\)](#)

Data Paper

Incentivising Biodiversity Data Publishing: GBIF–Pensoft Partnership

=> Data Paper is a scholarly journal publication whose primary purpose is to describe a dataset or a group of datasets, rather than to report a research investigation.



Data Paper



DOI : indexation and citation
- Indexed by Web of Knowledge (ISI), PubMedCentral, Scopus, Zoological Record, Google Scholar, CAB Abstracts, DOAJ, EBSCO.



Bring the existence of the data to the attention of the scholarly community



Provide a citable journal publication that brings scholarly credit to data publishers



Describe the data in a structured human-readable form

ZooKeys xx: x-xx (2010)
doi: 10.3897/zookeys.xx.xxx
www.pensoftonline.net/zookeys

DATA PAPER

A peer-reviewed open-access journal
ZooKeys
Launched to accelerate biodiversity research

IndFauna, electronic catalogue of known Indian fauna

Jitendra Gaikwad¹, Rebecca James², Monica Peterson³, David Robertson⁴,
Tom Griswold⁵, S. Krishnan¹

¹ National Chemical Laboratory, 411007, Pune, India ² Bulgarian Academy of Sciences, 2300, Sofia, Bulgaria ³ National Natural History Museum, 1722, Leiden, The Netherlands ⁴ 1988 ½ South Shenandoah Street, 3041, Los Angeles, USA ⁵ California Academy of Sciences, 1111, San Francisco, USA

Corresponding author: Jitendra Gaikwad (jgaikwad@ncl.res.in), Monica Peterson (mpeterson@nnhm.nl)

Academic editor: | Received 6 June 2010 | Accepted 15 July 2010 | Published 29 July 2010

Citation: Gaikwad J, James R, Peterson M, Robertson D, Griswold T, Krishnan S (2010) IndFauna, electronic catalogue of known Indian fauna. ZooKeys xx: xx-xx. doi: 10.3897/zookeys.xx.xxx

Abstract

This article describes the development and features of IndFauna, electronic catalogue of known Indian fauna. Accessible at <http://www.ncbi.org.in>, this catalogue raises several issues concerned with taxonomy or systematics and information technology in biodiversity information management. Baseline information on more than 93% of the 90,000 known faunal species in India has been documented in IndFauna, which demonstrates a model of collaboration between domain experts and IT managers. It is our belief that such ECATs would be effective in overcoming taxonomic impediments as well as better sustainable use and conservation of our biotic resources.

Keywords

Biodiversity informatics, IndFauna, data publishing, electronic catalogue

Taxonomic coverage

General taxonomic coverage description: The coverage of this database spans whole of Kingdom Animalia. Database collates occurrences of over 90000 species belonging to 2222 genus.

Taxonomic ranks: Kingdom: Animalia, Phylum: Acanthocephala, Annelida, Arthropoda, Mollusca, Chordata, Rotifera, Class: Amphibia, Aves, Chondrichthyes, Mammalia, Reptalia, Order: Monotremata, Anura, Caudata, Gymnophiona, Family:

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Molluscan fauna of Gueishan Island of Taiwan

This dataset records the occurrence and inventory of molluscan fauna on Gueishan Island, the only active volcanic island in Taiwan, based on the literature survey and field investigation conducted between 2011 and 2012. The literature review involved seven studies published from 1934 to 2003, which collectively reported 112 species from 61 genera and 37 families of Mollusca on Gueishan Island. Through our field investigation, we identified 34 species from 28 genera and 23 families. Fourteen of these species were new records on Gueishan Island: *Liolophura japonica*, *Lottia luchuana*, *Nerita costata*, *Nerita rumphii*, *Diplommatina suganikeiensis*, *Littoraria undulata*, *Solenomphala taiwanensis*, *Assiminea* sp., *Siphonaria laciniosa*, *Laevapex nipponica*, *Carychium hachijoensis*, *Succinea erythrophana*, *Zaptyx crassilamelata*, and *Allopeas pyrgula*. In Total, there are 126 species from 71 genera and 45 families of Mollusca on Gueishan Island.



Summary

Date Published	Apr 25, 2013
Version	7 (Latest)
Darwin Core Archive	download (14 KB) 151 records
EML	download (18 KB)
RTF	download (17 KB)
GBIF Registration	3586d3d4-5178-46aa-be2d-77036191e2ae
Organisation	Taiwan Biodiversity Information Facility (TaiBIF)
Endorsing Node	Chinese Taipei

Keywords

Mollusca; Gastropoda; Bivalvia; Cephalopoda; Polyplacophora; Taiwan; Gueishan Island

Language

Metadata Language	English
Resource Language	English

Resource Contact

Name	Wen-Lung Wu
Position	Research Fellow
Organisation	Biodiversity Research Center, Academia Sinica
Address	128 Academia Road Sec. 2, Nankang, Taipei, Outside USA, CHINESE TAIPEI, Postal Code: 11529
Contact	malacoi@gate.sinica.edu.tw Telephone: 886227899547
Home Page	http://shell.sinica.edu.tw/

Resource Creator

Name	Chih-Wei Huang
Position	Ph.D. candidate
Organisation	Biodiversity Research Center, Academia Sinica
Address	128 Academia Road Sec. 2, Nankang, Taipei, Outside USA, CHINESE TAIPEI, Postal Code: 11529
Contact	limnoperna@gmail.com Telephone: 886227899547
Home Page	https://www.facebook.com/eco.evo

Metadata Provider

Name	Ta-Wei Hsiung
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GBIF capacity enhancement

- A **capacity enhancement support programme**, which provides GBIF Participants with co-funding to address self-identified capacity needs through collaborative regional and international projects.
- **Regional collaboration**, supporting Participants within the six GBIF regions to develop priorities and projects of mutual interest.
- **Training**, through courses, workshops and extensive documentation in different languages.
- **Capacity programmes for developing countries**, funded by international cooperation agencies or other development aid donors.

<http://www.gbif.org/capacityenhancement/summary>



GBIF capacity enhancement

- GBIF Spain - Sistema Nacional de Datos Biológicos (SNDB, Argentina). 2010: Technical assistance
http://www.gbif.es/colaboracion_internacional_anteriores_in.php
- CRBio (Costa Rica) - GBIF Spain - GBIF Colombia - Cuban GBIF Node. 2010: Technical assistance
<http://www.gbif.es/formaciondetalles.php?IDForm=81>
- GBIF Spain - SNDB (Argentina). 2012: Capacity building
<http://www.gbif.es/formaciondetalles.php?IDForm=102>
- GBIF Portugal - GBIF France - GBIF Spain. 2014
Capacity & expertise exchange project on specific technologies (data quality tools, crowdsourcing, global identifiers, e-learning, etc.).
<http://www.gbif.es/ficheros/Mentoring2014/MentoringPoster2014-A4.pdf>
- GBIF Colombia - Argentina, Brazil, Mexico, Spain, Uruguay 2014
Data quality: Improving primary biodiversity data shared and published through GBIF network



Infraestructura Iberoamericana de Información sobre Biodiversidad

Una red CYTED

The **Iberoamerican Infrastructure for Biodiversity Information** : strategic platform for collaboration and scientific communication.

Its purpose is to contribute significantly to make the relevant biodiversity information not only available to the scientific community, but useful for the management and sustainable development of the region.

Activities are focused on capability (e.g. workshops, distance education platforms, online resources), and on communication and collaboration infrastructure (e.g. website, biodiversity data development and standard adoption, virtual communities) development.

Duration: 2012-2015

Partnership: 18 institutions from 12 countries

<http://www.recibio.net/home-i3b/>

Participantes



Argentina

- Museo Argentino de Ciencias Naturales “Bernardino Rivadavia” (MACN-CONICET) *

Brasil

- Centro De Referência Em Informação Ambiental (CRIA)
- Laboratório Nacional de Computação Científica (SiBBR)*

Chile

- Ministerio de Medio Ambiente*

Colombia

- Instituto de Ciencias Naturales, Universidad Nacional de Colombia
- Instituto de Investigación de Recursos Biológicos Alexander Von Humboldt (SiB)*

Costa Rica

- Instituto Nacional de Biodiversidad (Inbio)*

Cuba

- Instituto de Ecología y Sistemática

Ecuador

- Pontificia Universidad Católica del Ecuador, Escuela de Ciencias Biológicas

España

- GBIF España, CSIC [Coordinación de la red I3B]*
- Real Jardín Botánico (CSIC)
- Centro Iberoamericano de la Biodiversidad (CIBIO) de la Universidad de Alicante

México

- Instituto de Biología (UNAM-UNIBIO) Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO)*

Nicaragua

- Museo Entomológico de León (MEL)

Uruguay

- Museo Nacional de Historia Natural (MNHN)*

Venezuela

- Museo Del Instituto De Zoología Agrícola Francisco Fernández Yépez (MIZA)

* entes nacionales coordinadores de GBIF

GBIF current affiliations

1. Biodiversity Indicators Partnership (**BIP**): partner
2. Encyclopedia of Life (**EOL**): council
3. Eye on Earth Biodiversity Special Initiative: partner
4. Global Genome Biodiversity Network (**GGBN**): steering committee member
5. Global Invasive Alien Species Information Partnership (**GIASIP**): partner
6. Global Partnership for Plant Conservation (**GPPC**): partner
7. Group on Earth Observations (**GEO**): participant
8. Group on Earth Observations Biodiversity Observation Network (**GEO-BON**): steering committee member
9. European Biodiversity Observation Network (**EU BON**): participant
10. **LifeWatch** Policy & Science Board: member
11. Convention on Biological Diversity (**CBD**): observer
12. Intergovernmental Platform on Biodiversity & Ecosystem Services (**IPBES**): observer
13. Biodiversity Knowledge Network for the European Union (**KNEU**): member of dialogue group.
14. Convention on Migratory Species Strategic Plan Working Group: observer



MESSAGE BY
MR. BRAULIO FERREIRA DE SOUZA DIAS
EXECUTIVE SECRETARY OF THE
CONVENTION ON BIOLOGICAL DIVERSITY

ON THE OCCASION OF
THE TWENTY FIRST MEETING OF THE GLOBAL BIODIVERSITY INFORMATION
FACILITY GOVERNING BOARD
NEW DELHI, INDIA
16 SEPTEMBER 2014

The Chair of the Governing Board of the Global Biodiversity Information Facility (GBIF),
Distinguished delegates,
Ladies and gentlemen,

The Convention on Biological Diversity achieved an important milestone four years ago with the adoption of the Strategic Plan for Biodiversity 2011-2020 with its 20 Aichi Biodiversity Targets as well as the adoption of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS). I am pleased to announce that, on 14 July 2014, we received the 50th instrument of ratification for the Nagoya Protocol, meaning that it will enter into force on 12 October 2014. As a result, the first meeting of Conference of the Parties serving as the Meeting of the Parties to the Nagoya Protocol (COP-MOP 1) will take place next month in Pyeongyang, Republic of Korea, in conjunction with the twelfth meeting of the Conference of the Parties to the Convention on Biological Diversity (COP 12). At these meetings the progress made in the implementation of the Strategic Plan and the adoption and operationalization of the Nagoya Protocol will be reviewed globally in light of the findings of the fourth edition of the Global Biodiversity Outlook (GBO 4) and information provided by Parties in their Fifth National Reports.

Let me use this opportunity to express my sincere gratitude to the GBIF community of experts for their significant contribution to the assessment of the status and trends of global biodiversity as well as for their support to Parties in making national information available through national clearing house mechanisms. I would also like to thank the GBIF Secretariat for taking the lead on the information relating to the assessment of progress on Aichi Biodiversity Targets 9 and 19 on invasive alien species and on sharing information biodiversity, respectively. And perhaps most significantly, we owe our thanks to the skills of GBIF Secretariat staff in pulling together information from a range of sources and turning it into coherent draft versions of GBO-4. This has not been a trivial task and it demonstrates the contribution of GBIF of turning data and information from disparate sources into analysable datasets from which policy-relevant conclusions can be drawn.



GLOBAL
BIODIVERSITY
INFORMATION
FACILITY

**GBIF
and
IPBES:**

Leveraging a
decade of
investment in
biodiversity data
sharing

WWW.GBIF.ORG



Global Biodiversity Informatics Outlook

DELIVERING BIODIVERSITY KNOWLEDGE IN THE INFORMATION AGE

The Global Biodiversity Informatics Outlook helps to focus effort and investment towards better understanding of life on Earth and our impacts upon it. It proposes a framework that will help harness the immense power of information technology and an open data culture to gather unprecedented evidence about biodiversity and to inform better decisions.

THE GBIO FRAMEWORK

