BELGIË EN DE WERELD VAN OPEN BIODIVERSITEITSDATA

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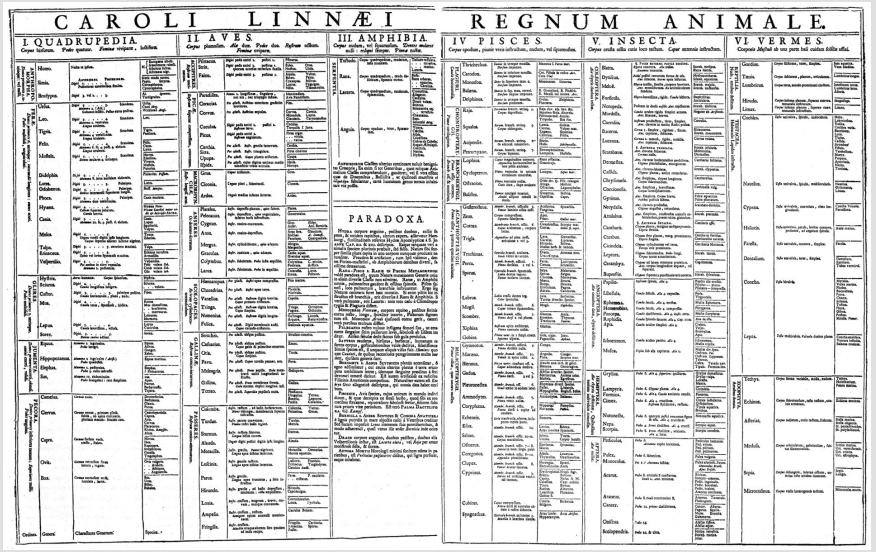
Vlaanderen is wetenschap

Biodiversity.be

belspo

GBIF Global Biodiversity Information Facility

1735


CAROLI LINNÆI
REGNUM ANIMALE.
I QUADRUPEDIA.
II AVES.
III AMPHIBIA.
IV PISCES.
V INSECTA.
VI VERMES.
PARADOXA.

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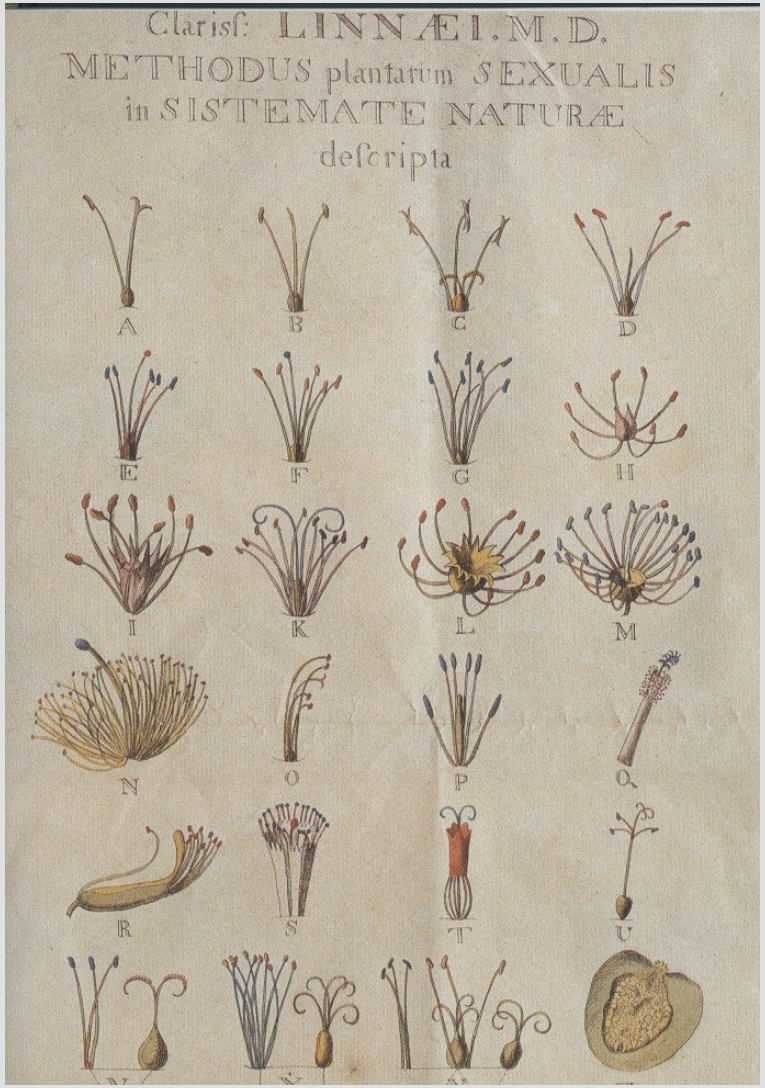
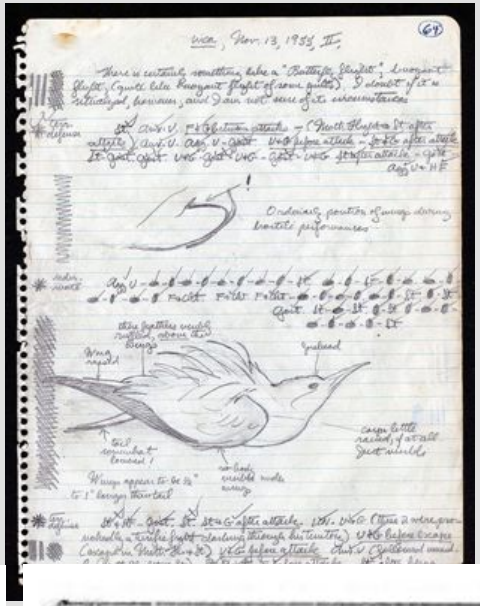
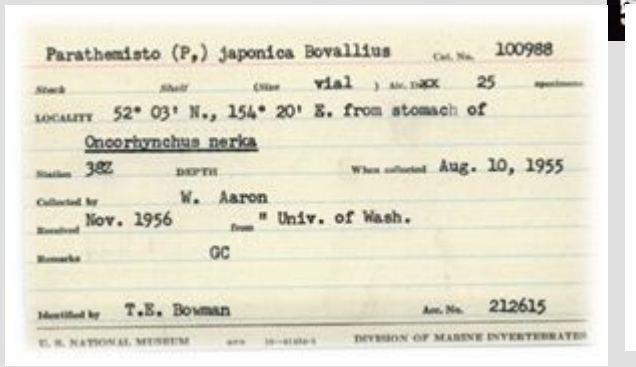


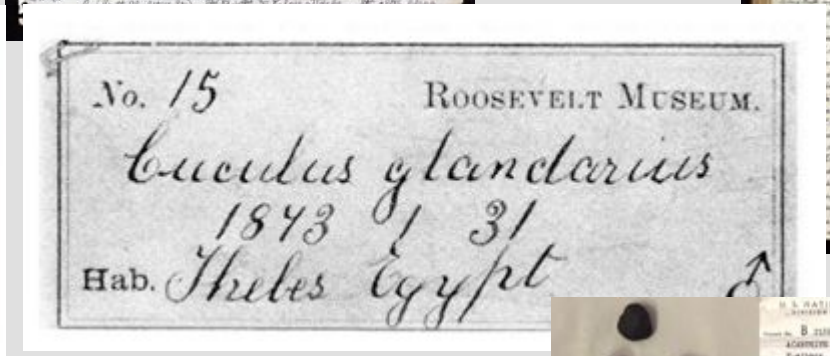
Introduction

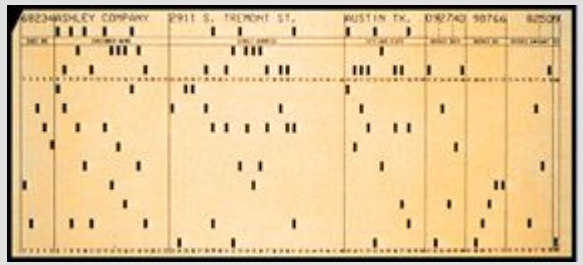
1800

- Museum collections
  - No proper structure
  - Hand written
  - Poor information



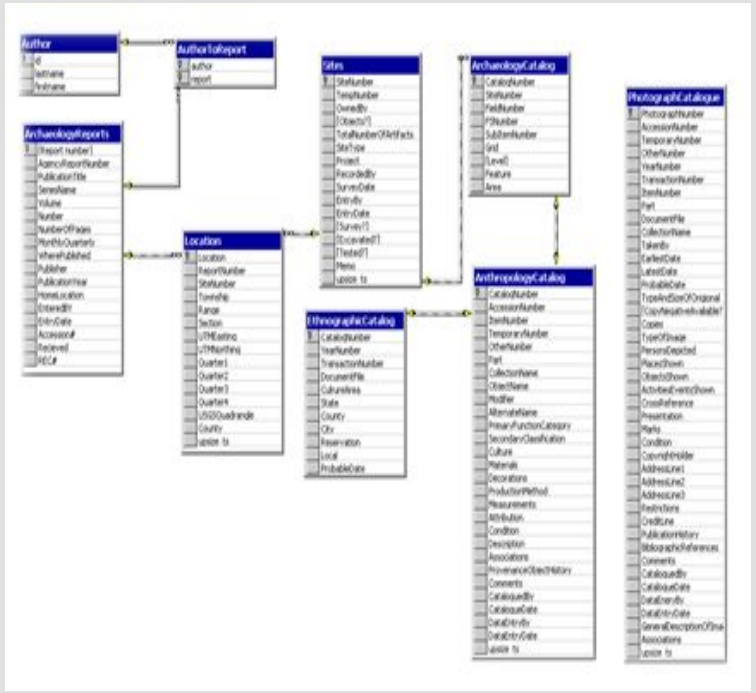


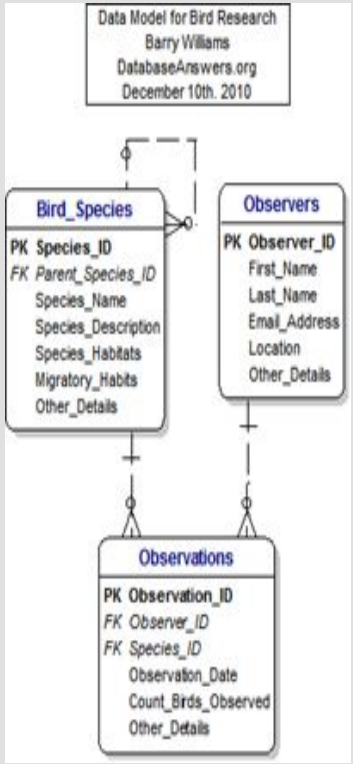


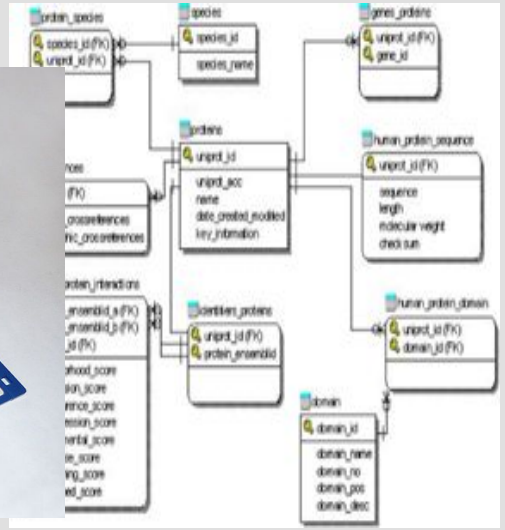


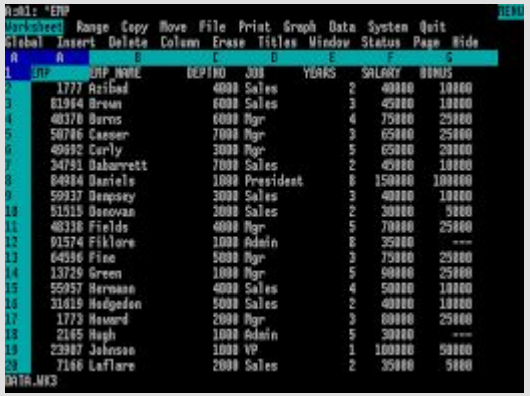
1982

- Use of computers & databases
  - LOTUS 123
  - ViSICALC









Introduction

1985

- **TDWG** was founded in 1985 as the Taxonomic Databases Working Group
- Formed as an international collaboration to promote the wider and more effective **dissemination of information** about biological organisms.
  - Initially focusing on plant taxonomic databases

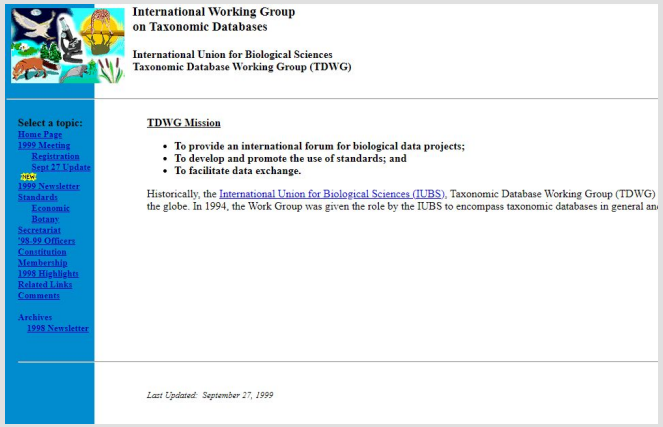
1991

- 1994 it expanded its scope to cover all taxonomic databases and changed its name to **Taxonomic Databases Working Group (TDWG)**.
- In 2006 the group decided to change their name to emphasise their focus was on standards for **sharing biodiversity data**, rather than on taxonomy or the databases themselves.
- The name became **Biodiversity Informations Standards** (TDWG).

The association currently:

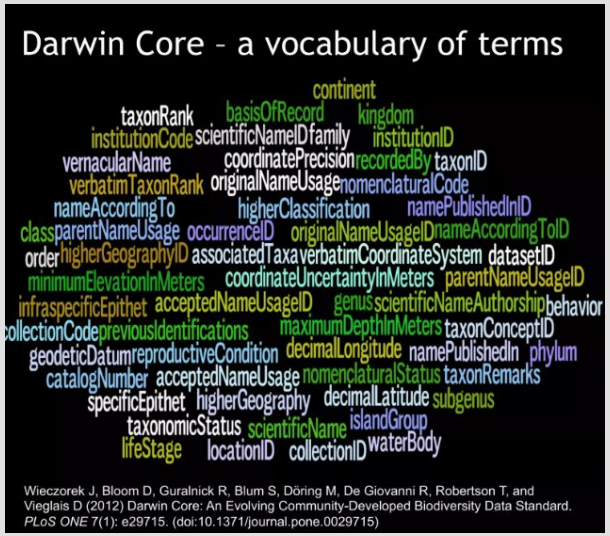
1994

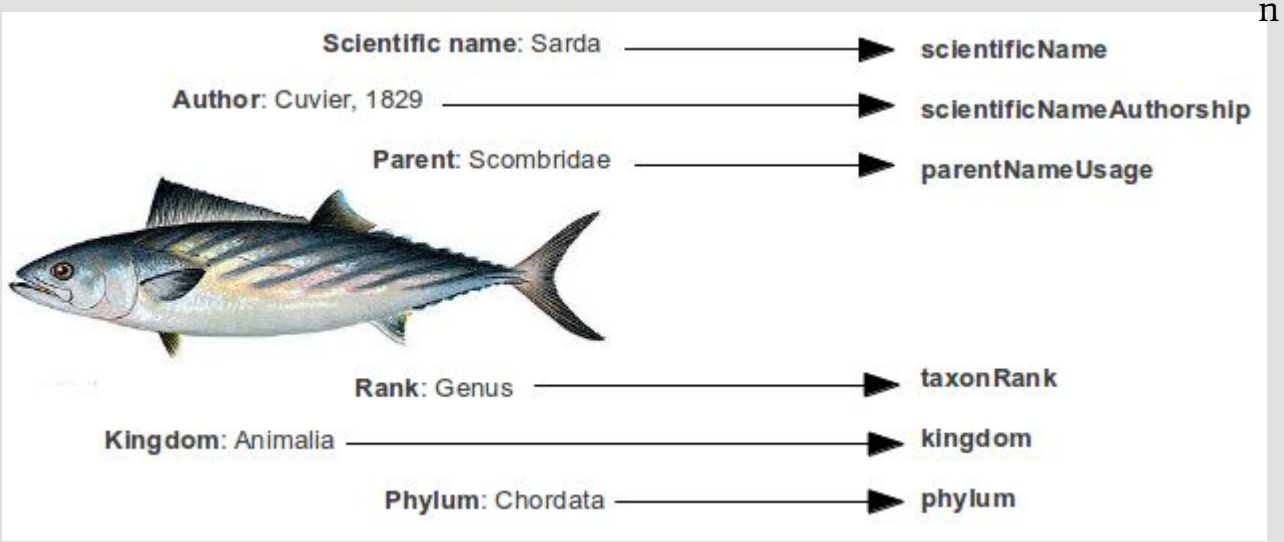
- **Develops, adopts, and promotes standards** and guidelines for the recording, discovery, exchange, and integration of data about organisms,
- **Promotes the use of these standards** and guidelines through the most appropriate and effective means, and
- **Acts as a forum for discussion** about biodiversity informatics standards



1998

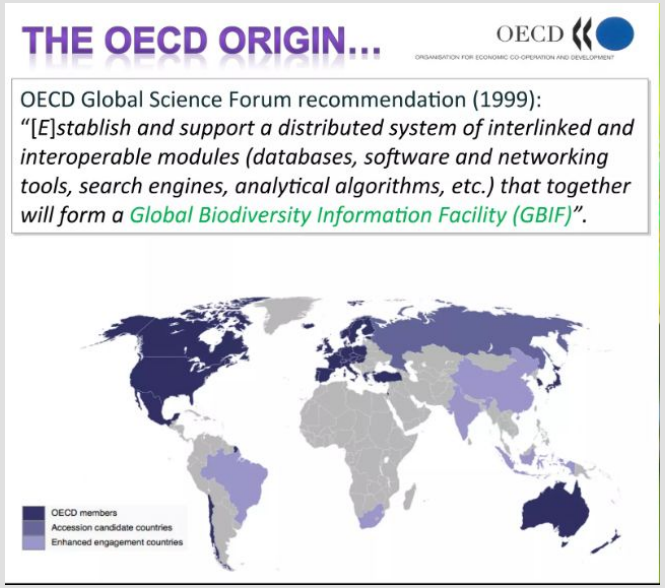
- **Darwin Core (DwC)** was originally created as a Z39.50 profile by the Z39.50 Biology Implementers Group (ZBIG)
- The name "Darwin Core" was first coined by Allen Allison at the first meeting of the ZBIG held at the University of Kansas in 1998 while commenting on the profile's conceptual similarity with **Dublin Core**.
- The Darwin Core is a **body of standards** intended to facilitate the **sharing of information** about **biological diversity**.
- The DwC includes a **glossary of terms**
- Each DwC term includes **a definition** and discussions meant to promote the **consistent use** of the terms across applications and disciplines.

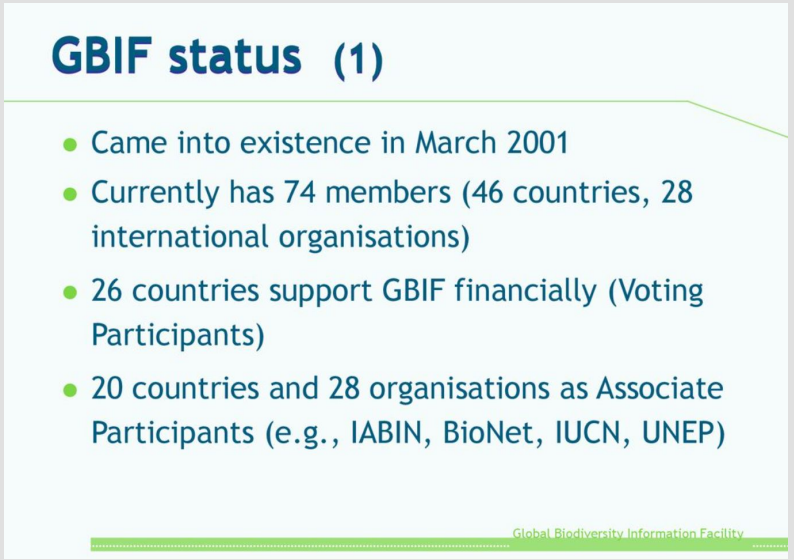




1999

- **GBIF** (The Global Biodiversity Information Facility) arose from a 1999 recommendation by the Biodiversity Informatics Subgroup of the Organization for Economic Cooperation and Development's (**OESO - OECD**) Megascience Forum.
- This report concluded that "**An international mechanism is needed to make biodiversity data and information accessible worldwide**"
- **Belgium** was one of the founding members of GBIF
- The **Belgian GBIF node** was established in 2001 and became part of the Belgian Biodiversity Platform in 2005
- Start of **VLIZ & marine datacenter & OBIS (Ocean Biodiversity Information System)**



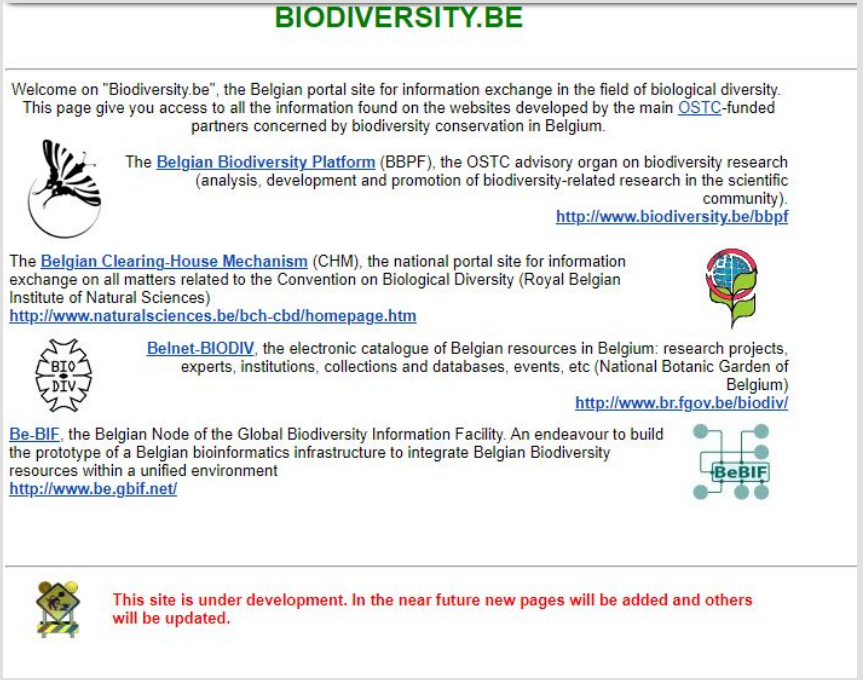


GBIF.org

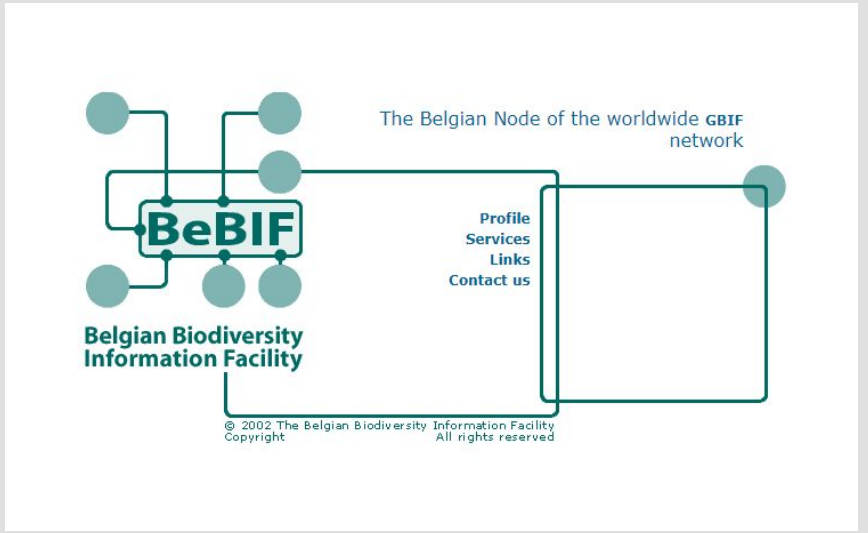
building the infrastructure

2001

- The **Belgian Biodiversity Platform** was established in 2001
- The Belgian Node of GBIF (**BEBIF**) was established in 2002
- In 2003 the BEBIF node was merged with the Belgian Biodiversity Platform



2002



building the infrastructure

2002

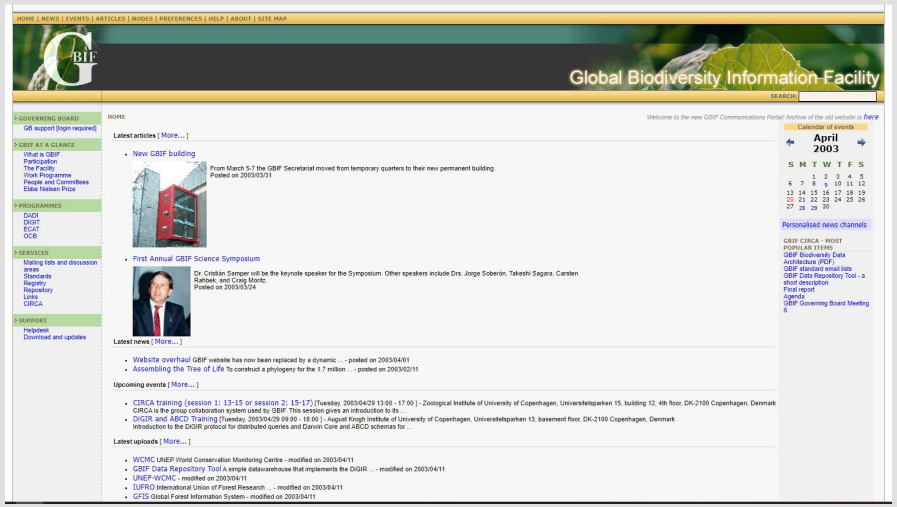
- GBIF is an **international network** of participant data holders dedicated to:

Making the world's biodiversity data **freely and universally available** via the Internet

Sharing primary scientific **biodiversity data** to benefit society, science and a sustainable future

2003

- GBIF is an **intergovernmental initiative** whose formal members—known as '**Participants**'—consist of **countries**, economies and international **organizations**, each of which signs the GBIF **Memorandum of Understanding** (MOU) and agrees to collaborate in advancing **free and open access** to biodiversity data.



- Under the terms of the MOU, each participant designates a "**node**" responsible for coordinating GBIF-related activities within a given country or organization, often including management of their own network of data-sharing institutions or "publishers".

2004

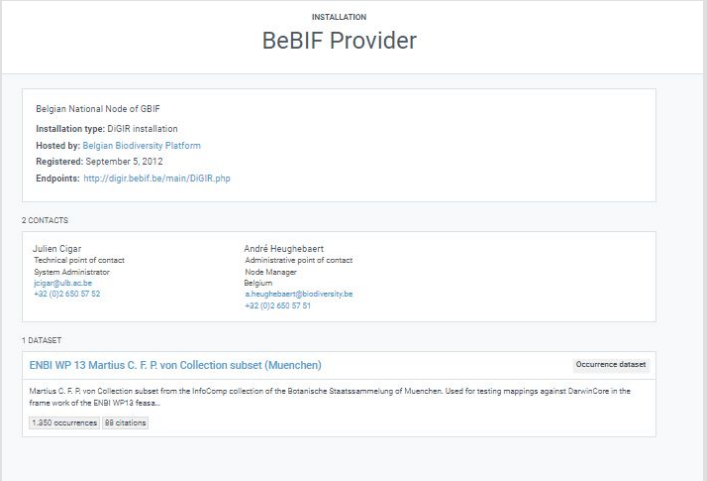
- First datasets published by the Belgian BEBIF/ Belgian Biodiversity Platform
- 1 Belgian Publisher

2005

GBIF status (2)

- As of 15 March 2005, its data portal (www.gbif.net) served >65 million specimen and observation records from >70 data providers
  - Hope to serve 100 million records by 12/05
- Portal also has more than 600,000 species names provided by more than 25 names providers

Global Biodiversity Information Facility



building the infrastructure

2005

- The Belgian Biodiversity Platform is the **GBIF node** for Belgium, based in the ULB
- First GBIF Governing board in Brussels, Belgium
- The GBIF secretariat has set up a consultation process on his **prototype data portal**.
- Data publication from Belgium is active
  - Mainly **digitization calls** (2006-2012)
- GBIF data is mostly **specimen/collection data**

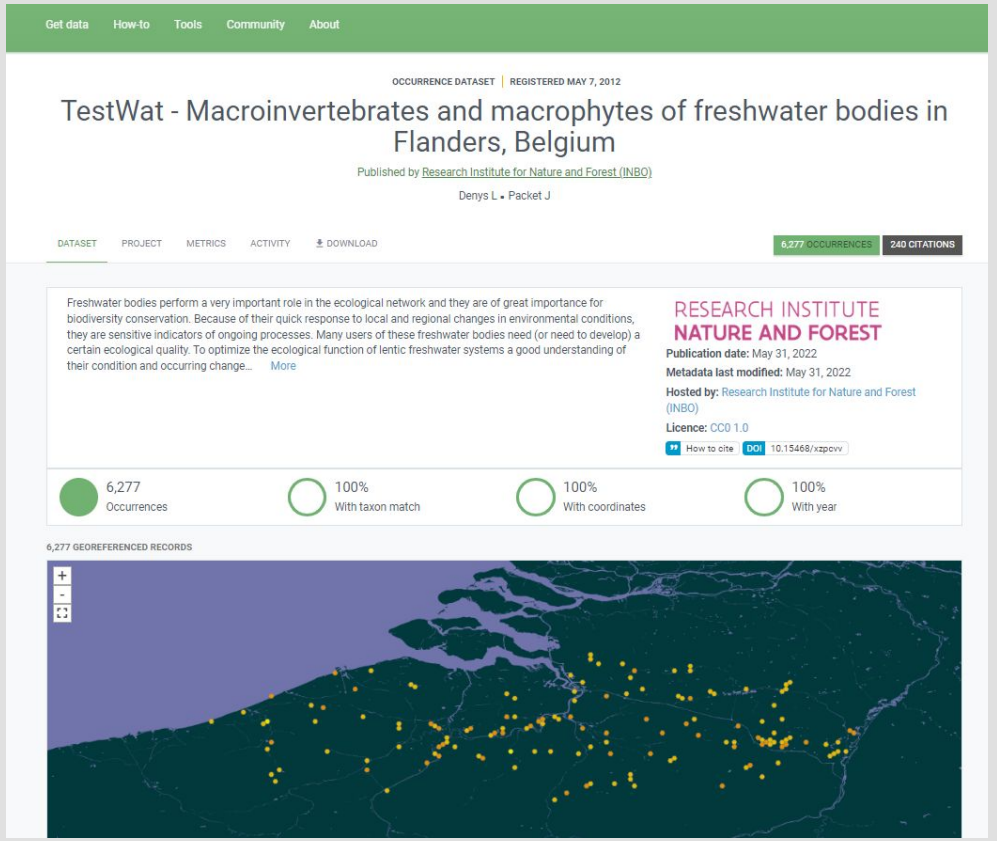
building the infrastructure

2009

- The data team at the Belgian Biodiversity Platform is growing and more decentralized
  - 3 FTE in ULB
  - 1 FTE in INBO
- More and more **observation data** (INBO)
- INBO becomes data publisher for GBIF
- Many scientists are **reluctant** towards data publication <-> some are enthusiast or **curious**

2010

- First dataset on GBIF was published for Flanders



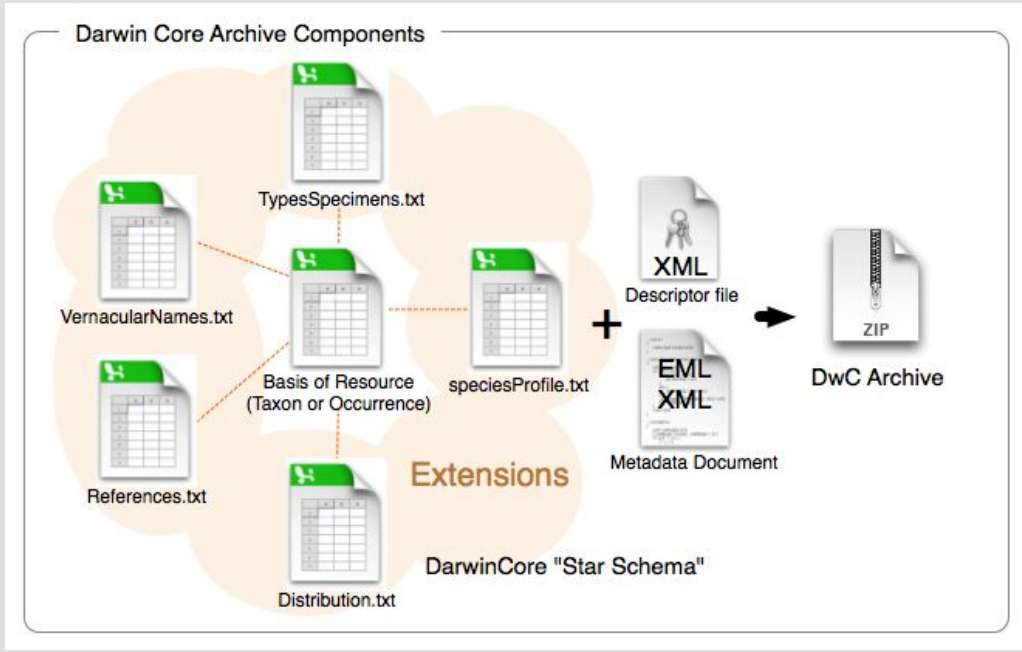
building the network

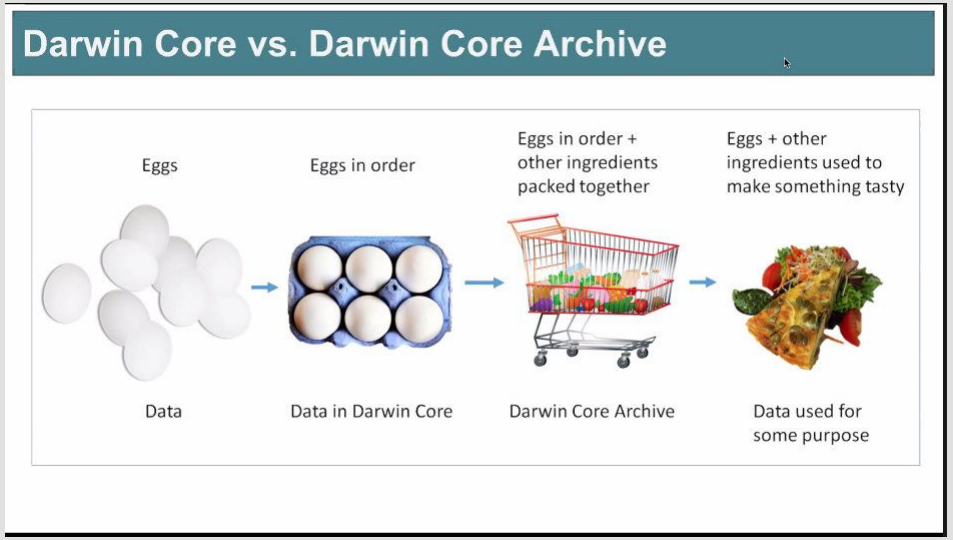
2009

- Data published in DwC-A (Darwin Core Archive)
  - Star scheme
  - Core file → occurrences
  - Extension
    - vernacular names
    - Measurements or Fact
    - …
  - XML descriptor file
  - XML EML (Ecological Metadata Language)

2010

- Data in GBIF portal is
  - Interoperable
  - Findable
  - Accessible
  - Reusable





building the infrastructure

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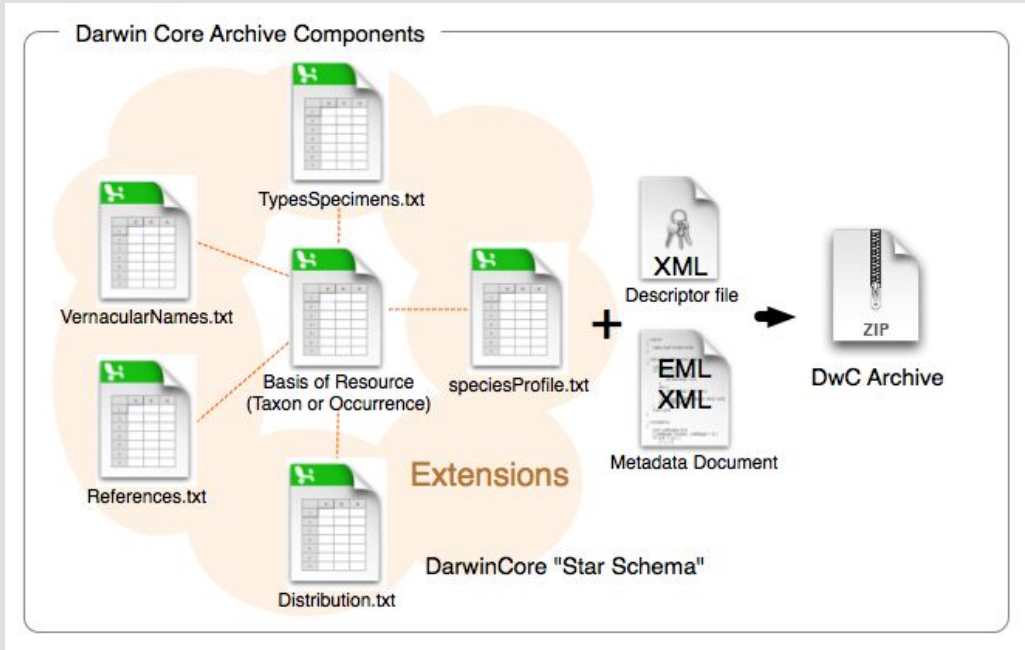
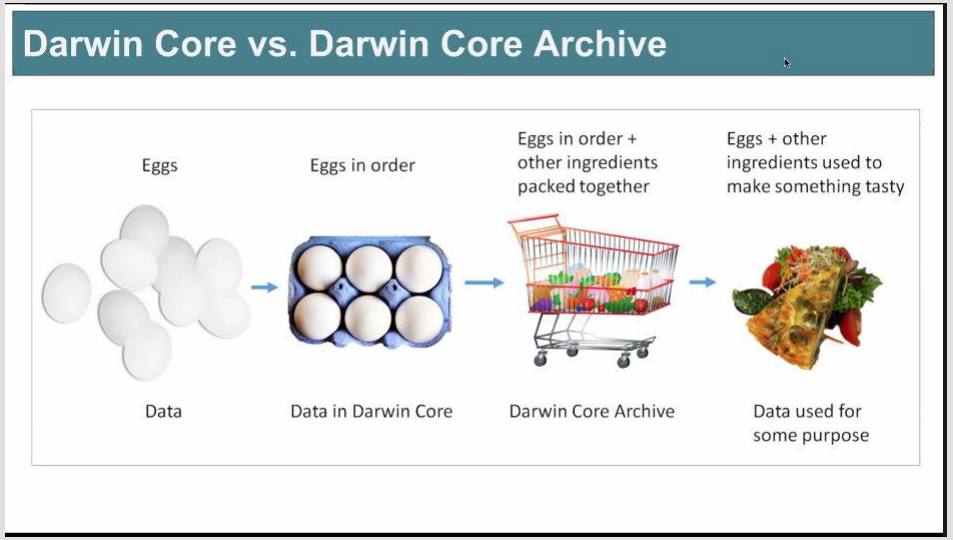
Findable Accessible Interoperable Reusable





building the infrastructure

2012

- Publication of more and more datasets through INBO
- First Datapaper published
  - Florabank1 (3 500 000 records)
- BBPF starts creating tailor made portals
- IFBL Portal online
  - some media coverage
  - servers burned

NEWS RELEASE 23-MAY-2012

New tool for visualizing the dist
of vascular plants in Belgium

Business Announcement

PENSOFT PUBLISHERS

The Belgian Biodiversity Platform has just released a new website "IFBL Data Portal, Explore Flora Checklists of Belgium". It aggregates about 23,000 checklists of vascular plants in Belgium, compiled since 1939. Users can search a database of over 2.5 million observations of over 2,800 different species. The website will be updated on a monthly basis, in cooperation with the Florabank database.

This website is a result of the cooperation between the Belgian Biodiversity Platform, Flo.Wer, the National Botanic Garden of Belgium and the Research Institute for Nature and Forest (INBO). The data originates from two digitization projects funded by the Belgian Biodiversity Platform Australia.

IMAGE: THIS IS A PEEK AT THE FLORABANK WEBSITE. view more ›

CREDIT: FLORABANK

PhytoKeys

Data Paper

Florabank1: a grid-based database on vascular plant distribution in the northern part of Belgium (Flanders and the Brussels Capital region)

Abstract

Florabank1 is a database that contains distributional data on the wild flora (indigenous species, archeophytes and naturalised aliens) of Flanders and the Brussels Capital Region. It holds about 3 million records of vascular plants, dating from 1800 till present. Furthermore, it includes ecological data on vascular plant species, redlist category information, Ellenberg values, legal status, global distribution, seed bank etc. The database is an initiative of "Flo.Wer" (www.planterwerkgroep.be), the Research Institute for Nature and Forest (INBO: www.inbo.be) and the National Botanic Garden of Belgium (www.br.fgov.be). Florabank aims at centralizing botanical distribution data gathered by both professional and amateur botanists and to make these data available to the benefit of nature conservation, policy and scientific research.

GBIF COMMUNITY

Globally-hosted data integrated into Australian national portal

The Atlas of Living Australia (ALA) has integrated more than a million records of Australian biodiversity, drawn from collections published through GBIF by institutions in other countries.

The records now exposed in the ALA national portal are from over 300 datasets hosted in 11 countries. They range from Australian plant records held in the United Kingdom's Royal Botanic Gardens, Kew and the Hong Kong University Herbarium; to zoological specimens in Poland and the United States.

The integration enables users of the ALA portal to combine the records held overseas with Australian-hosted data, for use in online tools to explore and analyse Australian biodiversity. The tools include distribution modelling with Australian environmental layers, data slicing to direct queries on regional data, data quality processing, and viewing the data against national species lists.

lgian flora

The Belgian Biodiversity Platform, which hosts the GBIF node for Belgium, has developed a new website of the country's flora. The site gathers 23,000 checklists of vascular plants in Belgium, compiled since 1939. Over 2.5 million observation records of more than 2,800 species are available on the portal, making it a powerful tool to visualize the distribution of vascular plants in Belgium.

The IFBL website was developed by the Belgian Biodiversity Platform, Flo.Wer, the National Botanic Garden of Belgium and the Research Institute for Nature and Forest (INBO). Currently, the portal brings together data from the Atlas of Belgian and Luxembourg Flora, and from Florabank, a database of the wild flora of Flanders and the Brussels region, and it will be updated every month.

The Florabank1 database has been described in a new data paper, based on a GBIF metadata document, and published in the open access journal PhytoKeys.

Institutions dealing with data on vascular plants in Belgium may contact Nicolas Noé (n.noe@biodiversity.be) to publish their data through the IFBL data portal.

building the network

2012

- First Flemish open data day

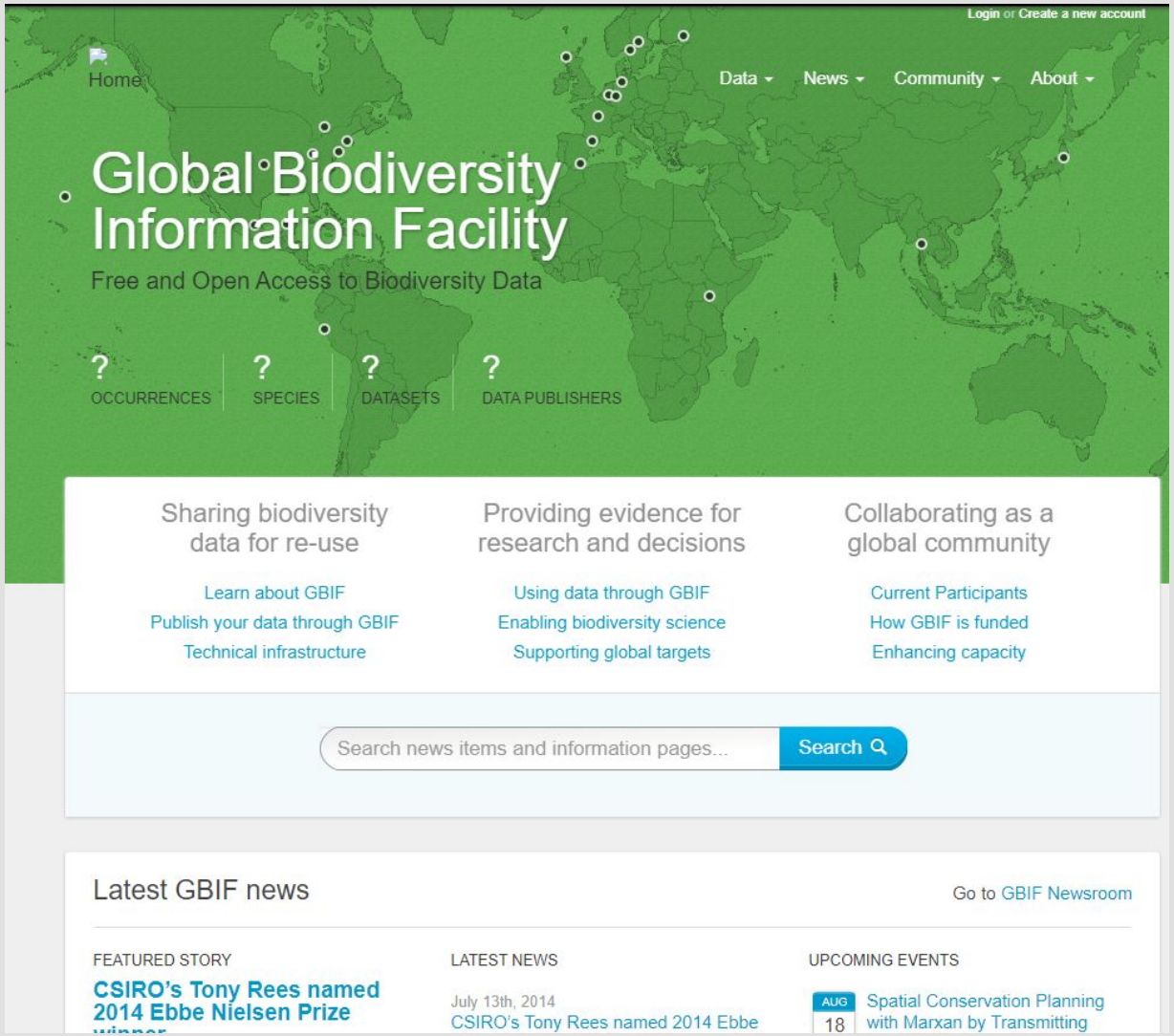
PROGRAMMA OPEN DATA DAG - 15 JUNI 2012

	OPEN DATA – VAN STRATEGIE TO PRAKTIJK			APPS FOR FLANDERS
08.00 - 09.00	Inschrijvingen - Koffie			
09.00- 10.00	Keynote: Andrew Stott (UK) - Open Data: best practices in Europe and key challenges facing the European Union Plenaire sessie - Citadel on the Move: Geert Mareels, Andrew Stott, Julia Glidden Enabling Smart City Services through Open Data, Mobile Applications and Common Data Formats			
10.00 - 10.45	Workshop *Ton Zijlstra en Paul Suijkerbuijk (Nederland)* **Het gaat goed met open data in Nederland!** **Het gaat slecht met open data in Nederland!** Een groeiend data portaal (data.overheid.nl), actieve stadsbesturen, goed georganiseerde activisten, ministeries die belangrijke datasets vrij beschikbaar maken, het gaat heel goed met open data in Nederland. Werkzaamheden en budgetten onder druk, het risico dat het bij veelbelovende eerste stappen blijft; een nuchtere kijk op open data in Nederland, de kansen, bedreigingen, resultaten en beloften. Vergelijkbare situatie in Vlaanderen?	Workshop *Tanguy De Lestre (Agoria)* **Overheidsinformatie, een goudmijn voor ondernemers?** Open overheidsdata en hergebruik: - Welke combinatie van datasets is nuttig voor hergebruik door de privé-sector? - Welke diensten worden er gevraagd zoals unieke informatieketten voor overheidsinformatie? (i-vlaanderen) - Hoe open data in mijn business model situeren?	Workshop *Katleen Janssen (KUL Leuven)* **Het huidige wettelijke kader in Vlaanderen voor open data.** Deze workshop zal ingaan op het huidige wettelijke kader in Vlaanderen met betrekking tot open data, met focus op de wetgeving inzake toegang tot, en hergebruik van overheidsinformatie. De kansen, valkuilen en gevolgen van de nieuwe PSI richtlijnen voorgesteld door de Europese Commissie worden besproken. Het licentiebeleid met betrekking tot het extern beschikbaar stellen van overheidsinformatie krijgt ook bijzondere aandacht in deze workshop.	HACKATON: *Coördinator: Pieter Colpaert, (OKFN)*
10.45 - 11.15	Koffie en mogelijkheid tot netwerken			
11.15 - 12.00	Workshop *Pieter Van Ostaeyen (De Lijn)* **De Lijn en open data.** De Lijn stelt meer en meer data ter beschikking aan derde partijen en streeft hoe langer hoe meer naar het hergebruik van deze data in 3rd party apps. Voorbeelden hiervan zijn Scotty.be en iRAIL.	Workshop *Yves Verbeken (HP)* **Open data; systeem- en technische architecturale aspecten.** Veel organisaties willen wel met open data aan de slag, maar weten niet precies hoe dat moet. Vaak ook zijn er vragen over de technische aspecten van open data. In deze workshop bespreken wij een mogelijke aanpak en referentie architectuur voor consistente ontsluiting gegevens van bronsysteem tot een Open Data platform.	Workshop *Eddy Van der Stock (V-ICT-OR)* *Filip Meuris (Intercommunale Leiedal)* **Open data; hoe start ik in mijn bestuur?** Leiedal en V-ICT-OR tonen aan hoe lokale besturen maximaal kunnen participeren in de open-informatiesamenleving. De projecten OSLO en Citadel on the Move tonen aan hoe open standaarden een sleutelrol spelen in de ontsluiting van data bij lokale besturen. Verder verwachten we dat Linked Open Data een extra economische impuls kan opleveren, een praktijktoets vanuit het Europese project "Opening Up" (OUP).	HACKATON
12.00 - 13.00	Lunch			
13.00 - 14.15	Keynote: Chris Taggart (UK) - Open Data in the UK and the World, Status & Lessons Learned Plenaire sessie Chris Taggart (UK) - Andrew Stott (UK) - Bart Rousseau (Stad Gent) / Chair: Julia Glidden (UK) Open Discussion: How to apply lessons learned from the UK and the world Following on from Chris Taggart's keynotes about lessons learned from the UK and global open data communities, this plenary session and discussion will address how those lessons can be applied to the situation in Flanders and Belgium, to allow them to avoid some of the common pitfalls.			
14.15 - 14.45	Koffie en mogelijkheid tot netwerken			
14.45 - 15.30	Workshop *Ton Zijlstra en Paul Suijkerbuijk (Nederland)* **Het gaat goed met open data in Nederland!** **Het gaat slecht met open data in Nederland!** Een groeiend data portaal (data.overheid.nl), actieve stadsbesturen, goed georganiseerde activisten, ministeries die belangrijke datasets vrij beschikbaar maken, het gaat heel goed met open data in Nederland. Werkzaamheden en budgetten onder druk, het risico dat het bij veelbelovende eerste stappen blijft; een nuchtere kijk op open data in Nederland, de kansen, bedreigingen, resultaten en beloften. Vergelijkbare situatie in Vlaanderen?	Workshop *Bart Rousseau (Stad Gent)* *Raf Buyle (V-ICT-OR)* **Open data; ja natuurlijk!** Maar wat zit er in voor mijn organisatie? Open data is hot. Internationale voorbeelden tonen aan dat Open Data-initiatieven werken en in een behoefte voorzien. Maar wat zit er in voor mijn organisatie? Wat moet je ervoor doen en wat krijg je ervoor terug? Deze interactieve workshop brengt het verhaal van 5 sprekers die actief zijn binnen lokale overheden en hun visie en praktijkervaringen delen, waaronder Bart Rosseau die schetst hoe Open data het verschil maakt voor de Stad Gent.	Workshop *Katleen Janssen (KUL Leuven)* **Het huidige wettelijke kader in Vlaanderen voor open data.** Deze workshop zal ingaan op het huidige wettelijke kader in Vlaanderen met betrekking tot open data, met focus op de wetgeving inzake toegang tot, en hergebruik van overheidsinformatie. De kansen, valkuilen en gevolgen van de nieuwe PSI richtlijnen voorgesteld door de Europese Commissie worden besproken. Het licentiebeleid met betrekking tot het extern beschikbaar stellen van overheidsinformatie krijgt ook bijzondere aandacht in deze workshop.	HACKATON
15.30 - 16.45	Wrap-up, Conclusies uit de workshops, Resultaten hackaton			
16.45 - 17.00	Afsluitwoord - Minister Geert Bourgeois			
17.00 - ...	Receptie en mogelijkheid tot netwerken			

building the network

2014

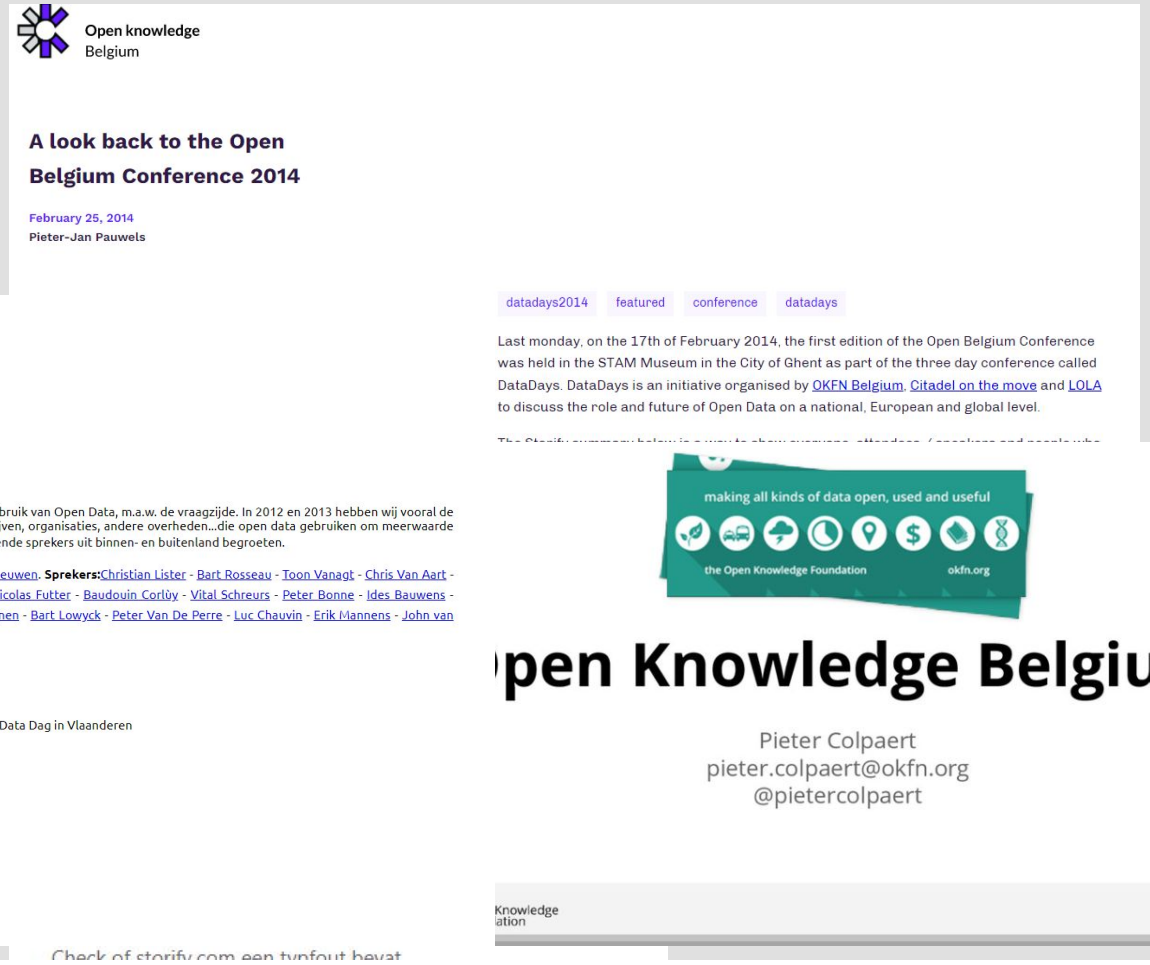
- Launch of the new GBIF web portal
- Launch of the GBIF API



building the infrastructure

2014

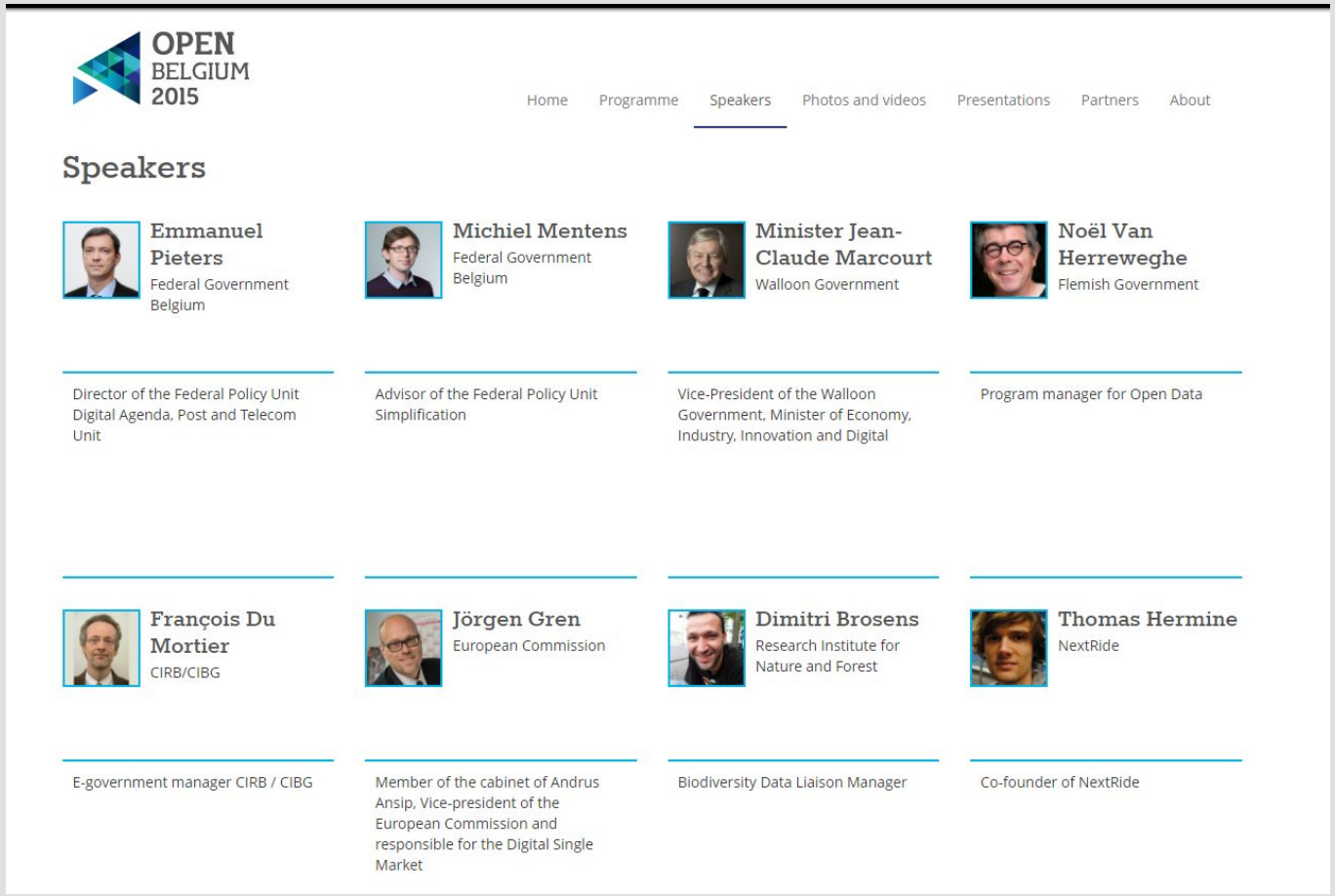
- Open Belgium 2014
- Open Data dag



building the network

2015

- Open Belgium 2015
- Both worlds meet

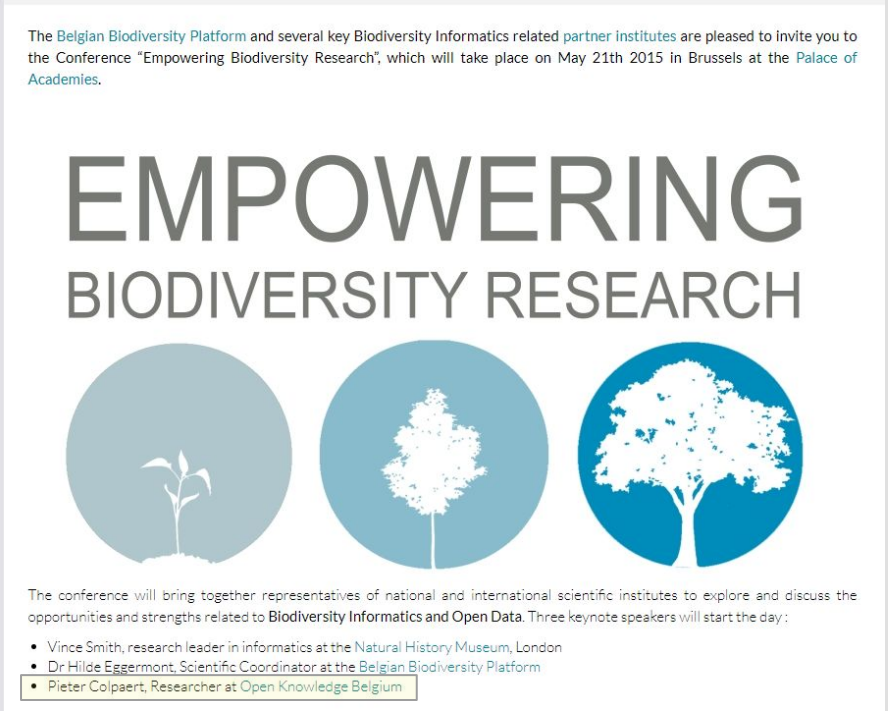


building the network

2015

- **Empowering Biodiversity Research conference 2015**
  - For an **scientific** audience
  - What **tools** are available
  - What **projects** are starting

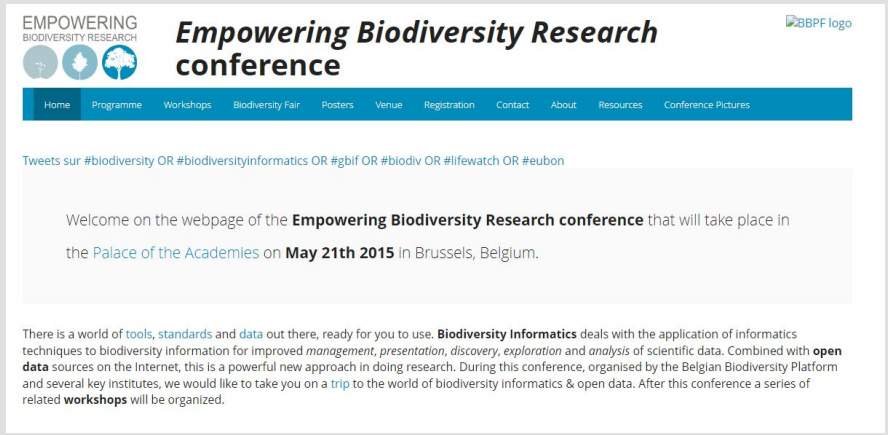
- There is a world of **tools, standards** and **data** out there, ready for you to use. Biodiversity Informatics deals with the application of informatics techniques to biodiversity information for improved **management**, presentation, **discovery**, **exploration** and **analysis** of scientific data. Combined with open data sources on the Internet, this is a powerful new approach in doing research. During this conference, organised by the Belgian Biodiversity Platform and **several key institutes**, we would like to take you on a trip to the world of **biodiversity informatics & open data.**


The Belgian Biodiversity Platform and several key Biodiversity Informatics related partner institutes are pleased to invite you to the Conference "Empowering Biodiversity Research", which will take place on May 21th 2015 in Brussels at the Palace of Academies.

EMPOWERING
BIODIVERSITY RESEARCH

The conference will bring together representatives of national and international scientific institutes to explore and discuss the opportunities and strengths related to **Biodiversity Informatics and Open Data**. Three keynote speakers will start the day :

- Vince Smith, research leader in informatics at the Natural History Museum, London
- Dr Hilde Eggermont, Scientific Coordinator at the Belgian Biodiversity Platform
- Pieter Colpaert, Researcher at Open Knowledge Belgium


EMPOWERING BIODIVERSITY RESEARCH

***Empowering Biodiversity Research* conference**

BBPF logo

Home | Programme | Workshops | Biodiversity Fair | Posters | Venue | Registration | Contact | About | Resources | Conference Pictures

Tweets sur #biodiversity OR #biodiversityinformatics OR #gbif OR #biodiv OR #lifewatch OR #eubon

Welcome on the webpage of the **Empowering Biodiversity Research conference** that will take place in the Palace of the Academies on **May 21th 2015** in Brussels, Belgium.

There is a world of tools, standards and data out there, ready for you to use. **Biodiversity Informatics** deals with the application of informatics techniques to biodiversity information for improved *management*, *presentation*, *discovery*, *exploration* and *analysis* of scientific data. Combined with **open data** sources on the Internet, this is a powerful new approach in doing research. During this conference, organised by the Belgian Biodiversity Platform and several key institutes, we would like to take you on a trip to the world of biodiversity informatics & open data. After this conference a series of related **workshops** will be organized.

building the network

RESEARCH INSTITUTE NATURE AND FOREST · belspo · Meise Botanic Garden · Biodiversity.be · AFRICA museum · museum · LifeWatch BELGIUM · VLIZ

2016

GBIF Global Biodiversity Information Facility

Country Report

Belgium

12-month report ending 31 December 2016

This report provides a series of summary charts, statistics and other details about the mobilization and use of open-access species data through the GBIF network at global and national scales. These metrics represent change over the past 12 months, unless otherwise noted. Taken together, the elements of this report can help guide and measure progress toward the information needs for national and international commitments on biodiversity and sustainable development.

> Access and usage

*Figure 1. Number of peer-reviewed publications citing use of **global** GBIF-mediated data*

2022

GBIF Global Biodiversity Information Facility

Activity report

generated January 2022

Belgium

This report provides a series of summary charts, statistics and other details about the mobilization and use of open-access species data through the GBIF network, relating to users and participating institutions in Belgium. These metrics show status at the time of report generation, unless otherwise noted. Taken together, the elements of this report can help guide and measure progress toward the information needs for biodiversity research, as well as for national commitments on biodiversity and sustainable development.

▸ Access and usage

data publishing

2016

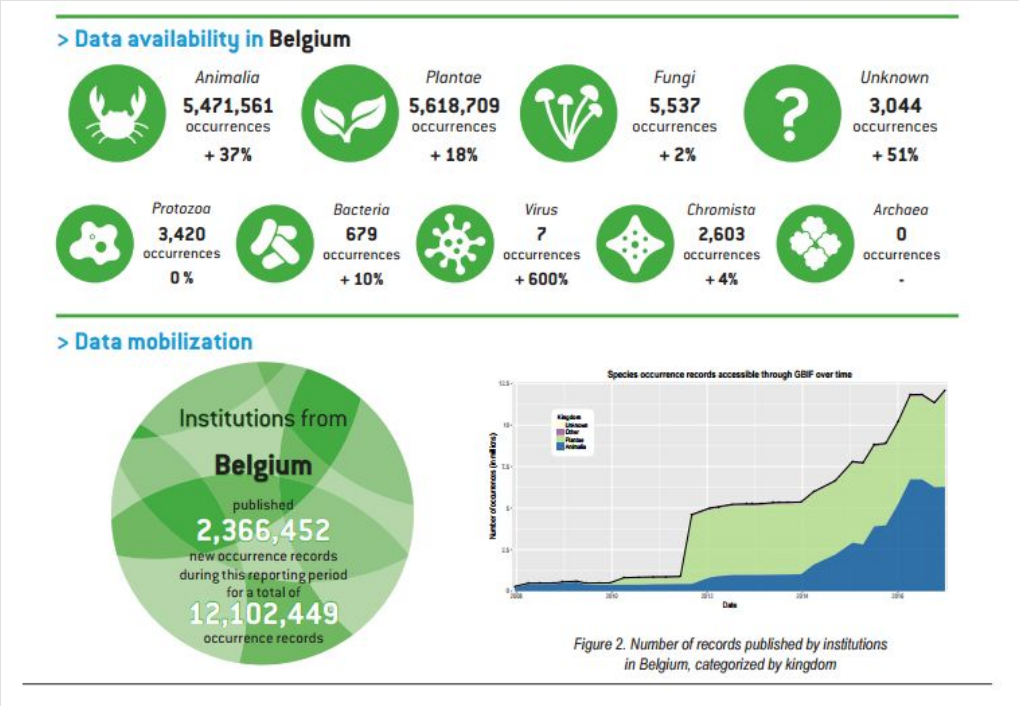
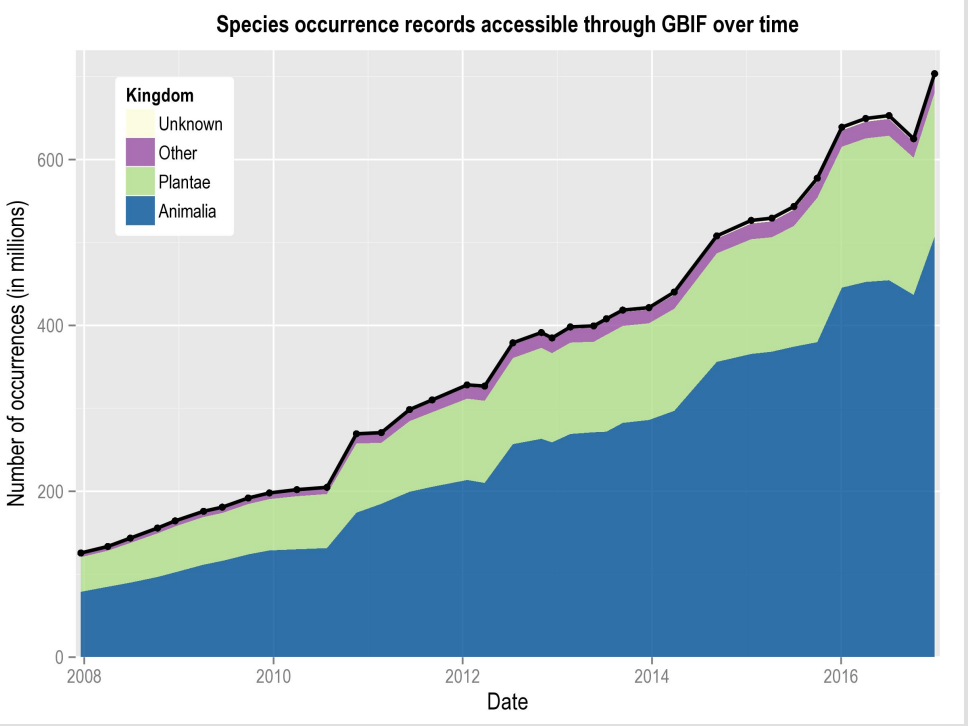
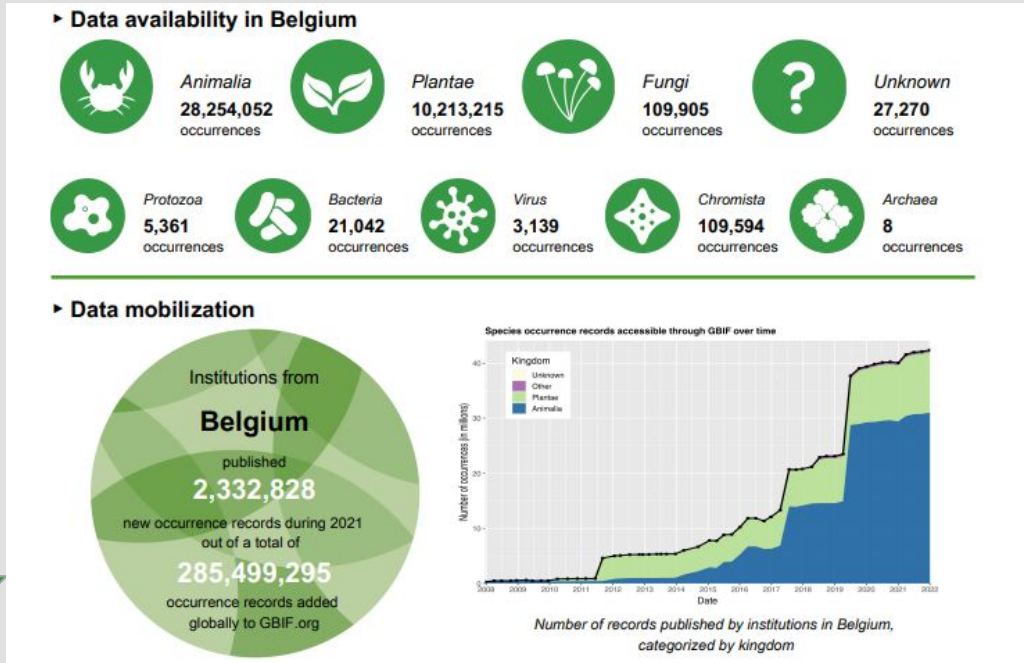


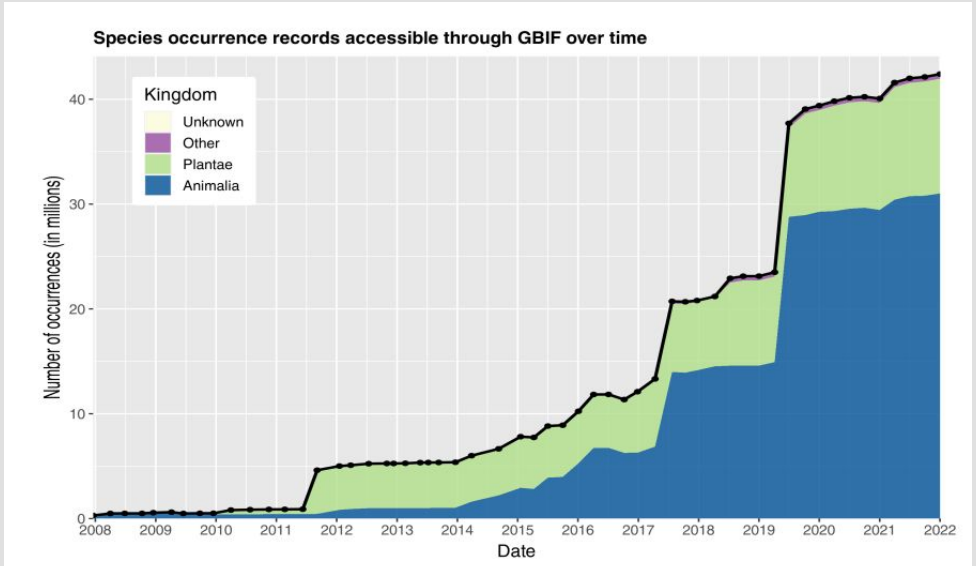
Figure 2. Number of records published by institutions in Belgium, categorized by kingdom



2022



Number of records published by institutions in Belgium, categorized by kingdom

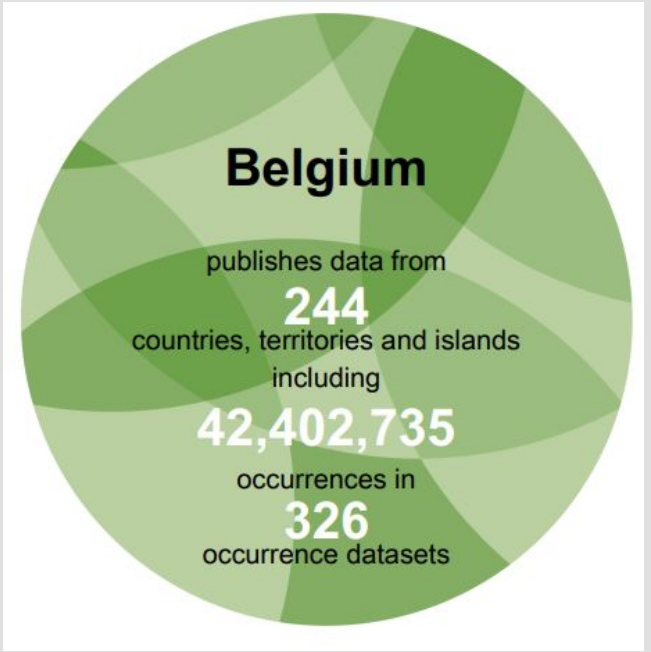


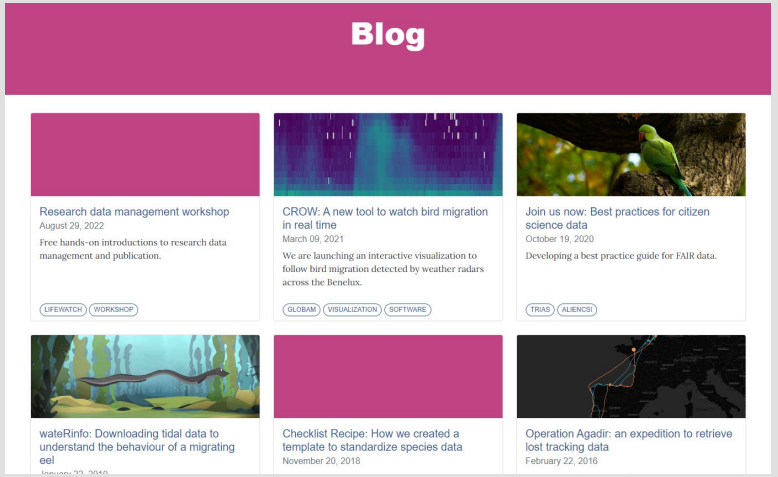
Number of records published by institutions in Belgium, categorized by kingdom

data publishing

2009

- 1 FTE in INBO on data publication
- 2 FTE in BBPF on data publication and biodiversity informatics
- Vliz Marine Data center…

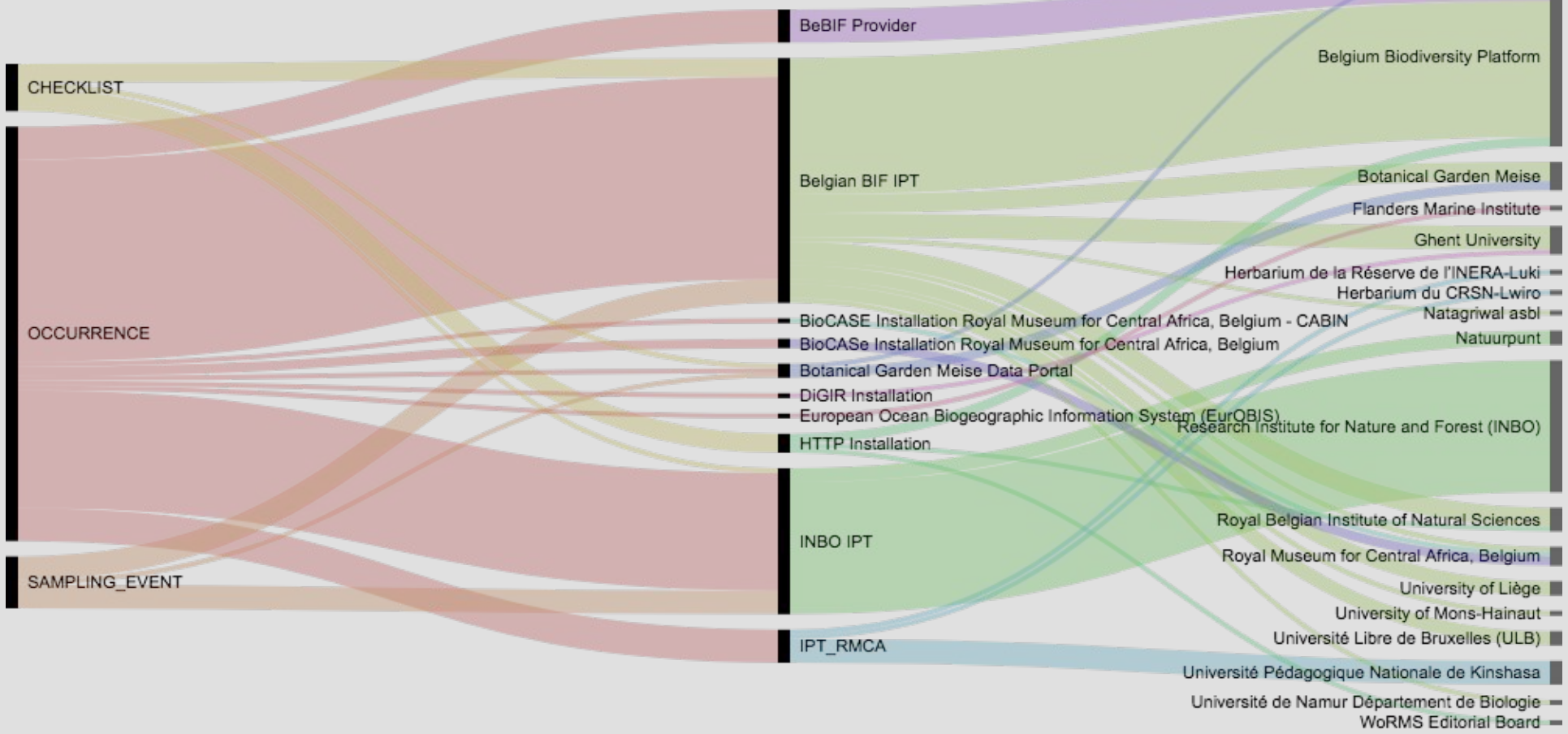




- several teams in INBO/ VLIZ/ RBINS/ AfricaMuseum/ Botanic Garden Meise… do have data publication and biodiversity informatics in their portfolio

2022

2016



2022

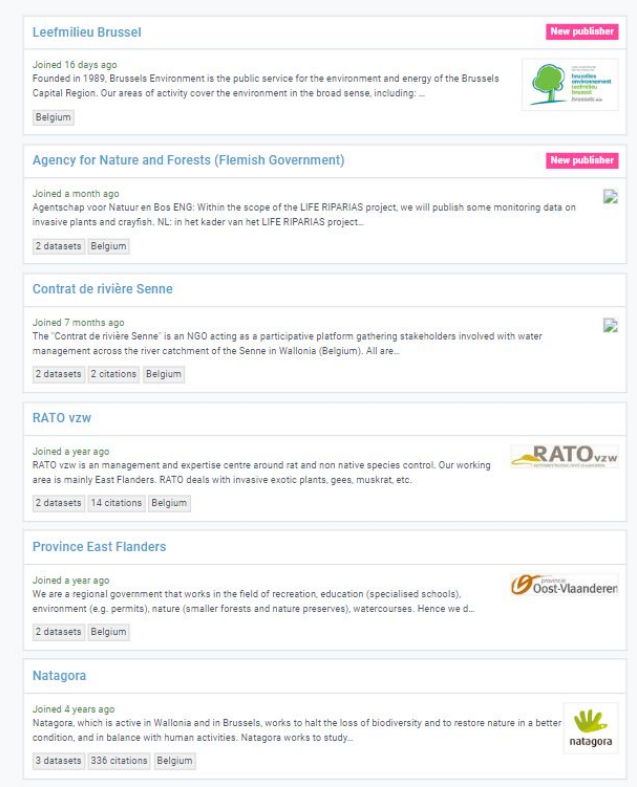
data publishing

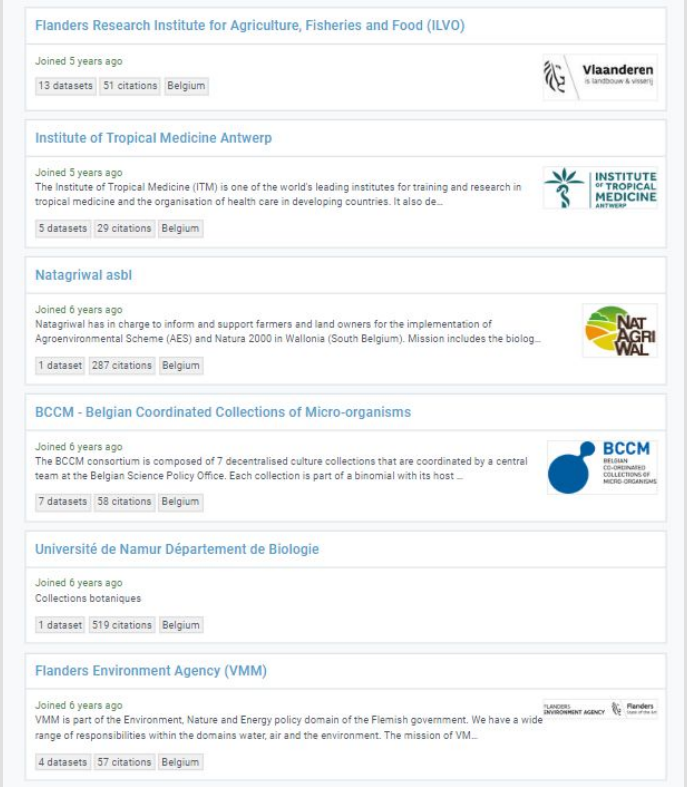
2004

2022

- The Belgian Biodiversity Platform is the only GBIF publisher in Belgium

  - 25 Organisations are GBIF publisher in Belgium
    - institutions & universities
    - NGO’s / private companies
    - Museums
    - Governmental agencies…

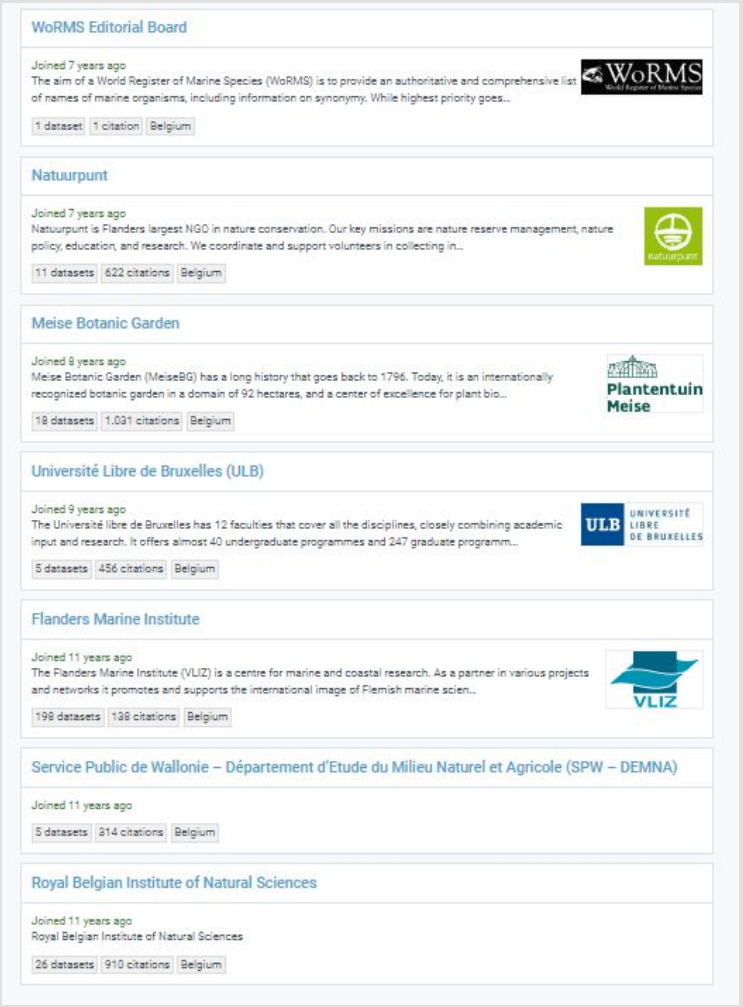


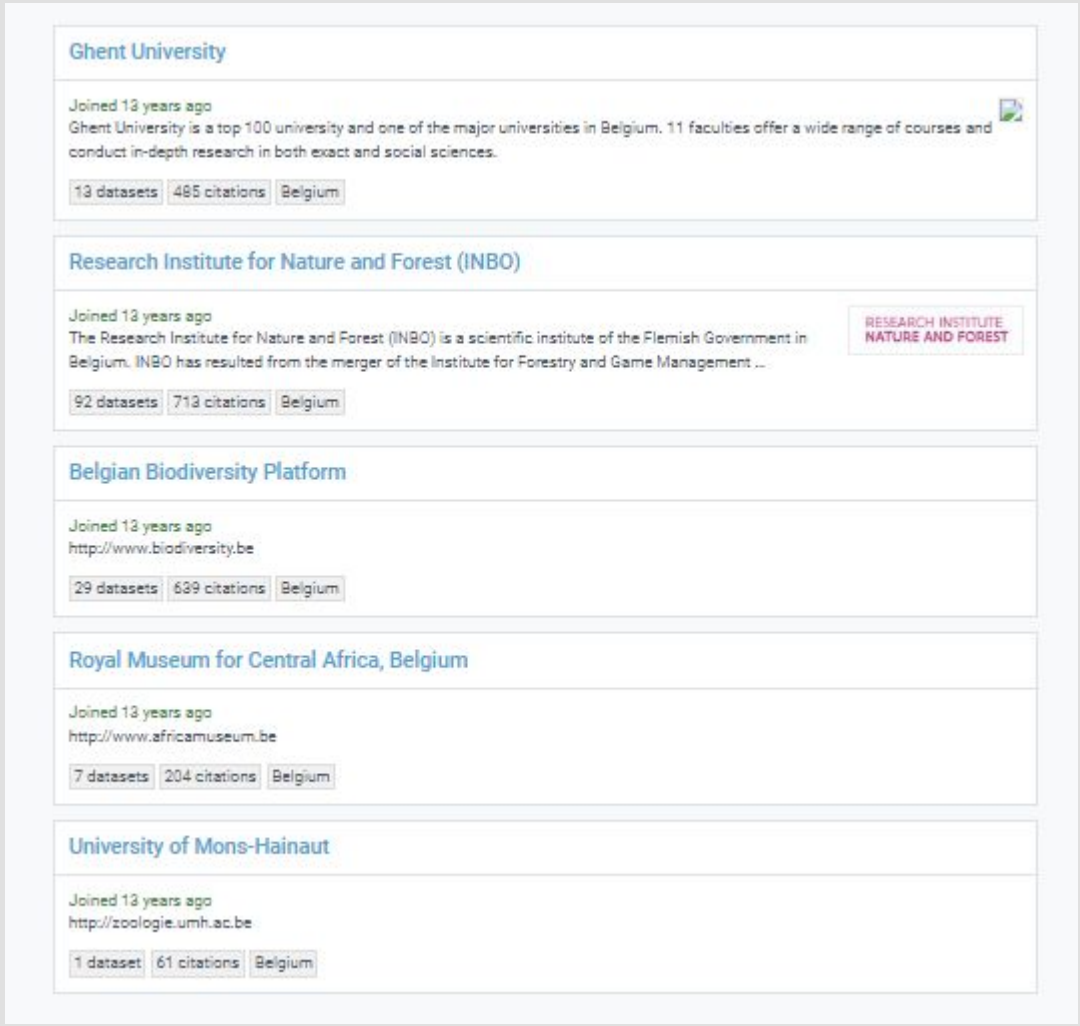


building the network

2004

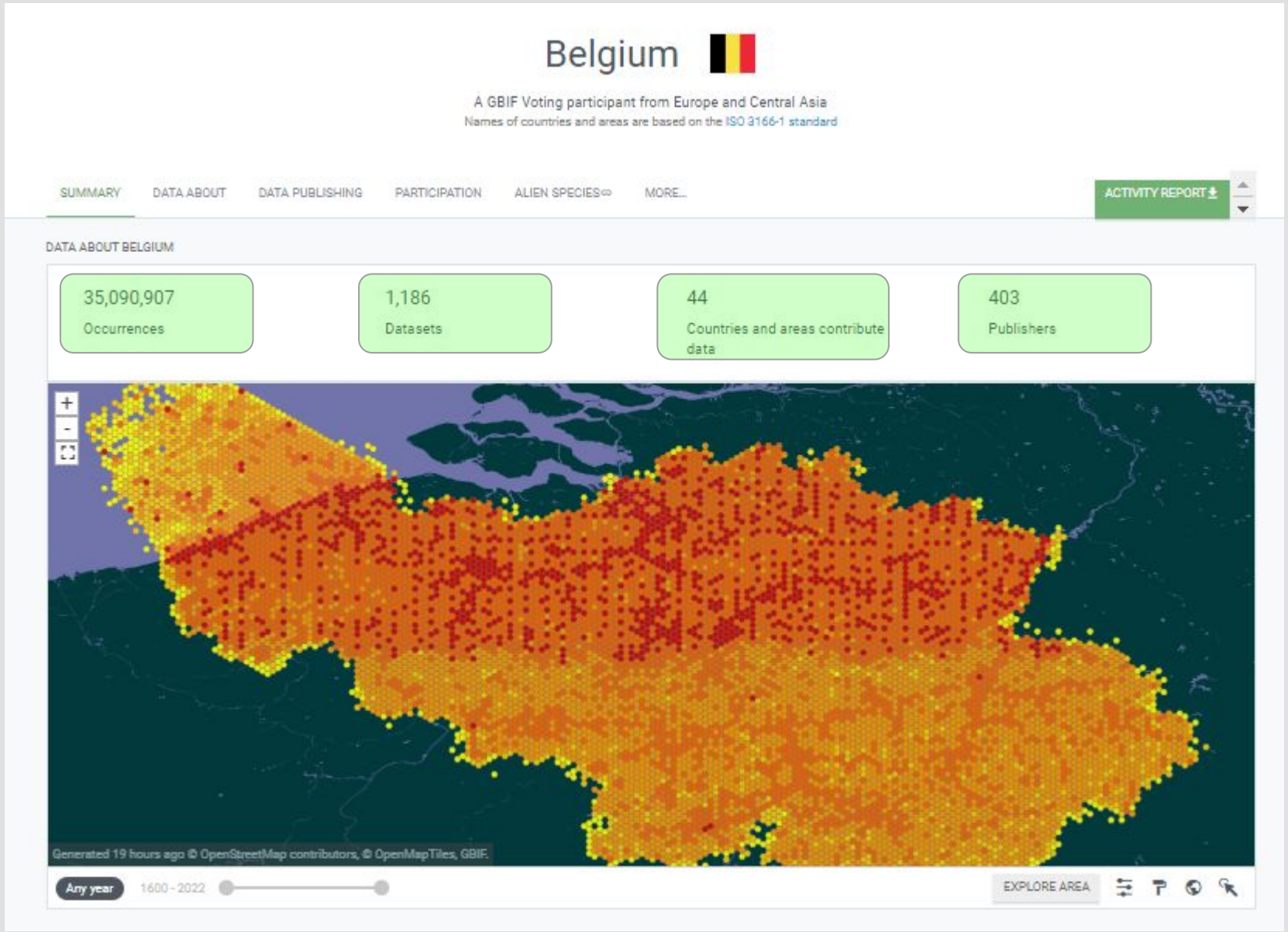
2022





building the network

2022



data publishing

2022

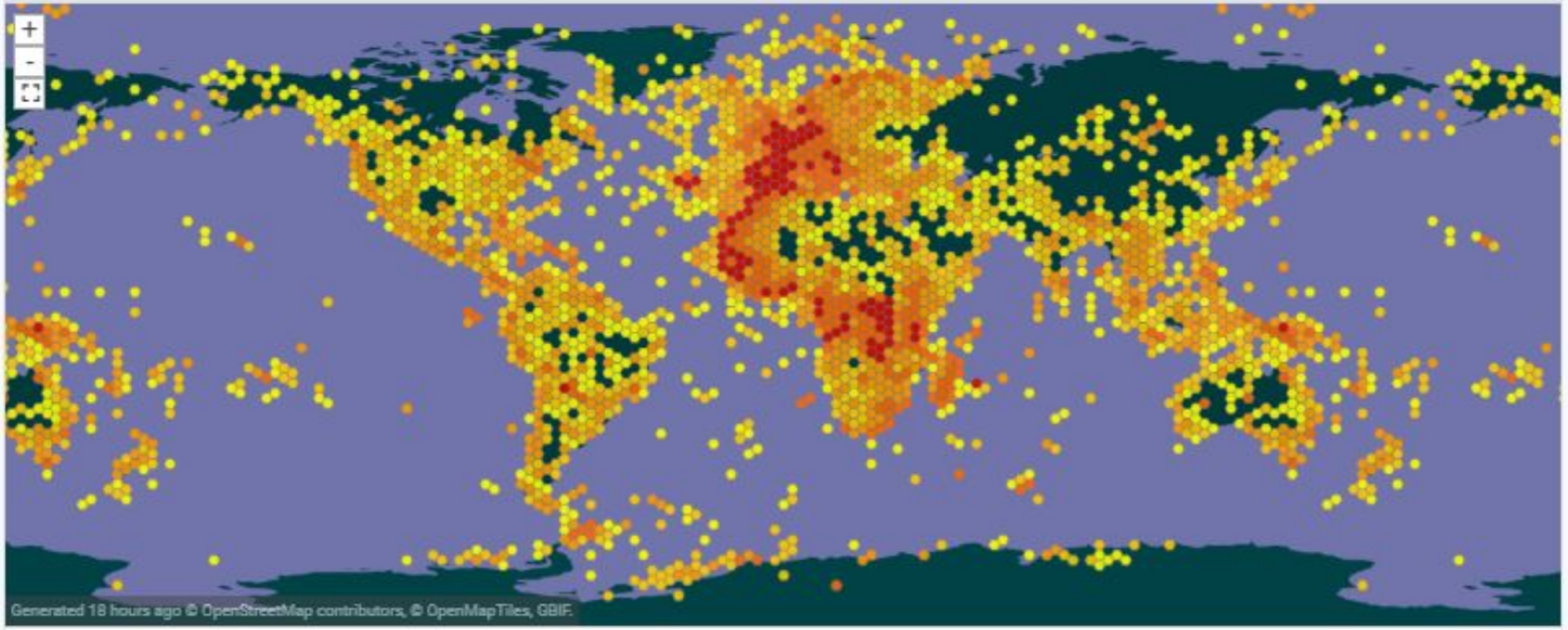
DATA FROM BELGIUM

39,952,190
Published occurrences

455
Published datasets

245
Countries and areas covered by data from Belgium

25
Publishers from Belgium



PARTICIPANT SUMMARY

Member status: Voting
GBIF participant since: 2001
GBIF region: Europe and Central Asia
Head of delegation: André Heughebaert

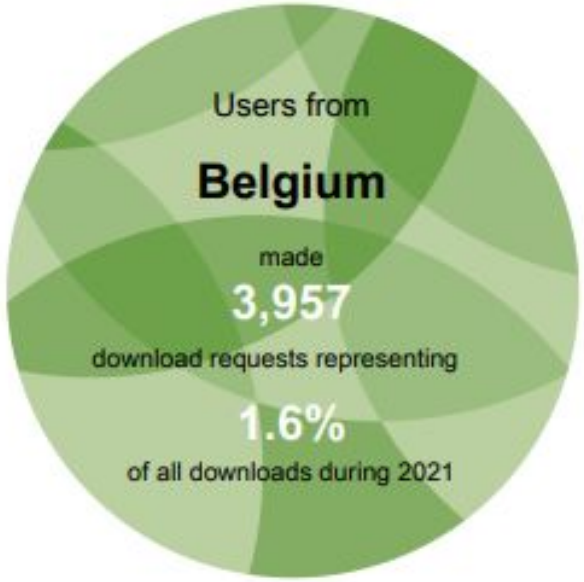
Node name: Belgian Biodiversity Platform
Node established: 2001
Website: http://www.biodiversity.be
Participant node manager: Dimitri Brosens

data publishing

2022

Access and usage

Data downloads on GBIF.org from users in Belgium

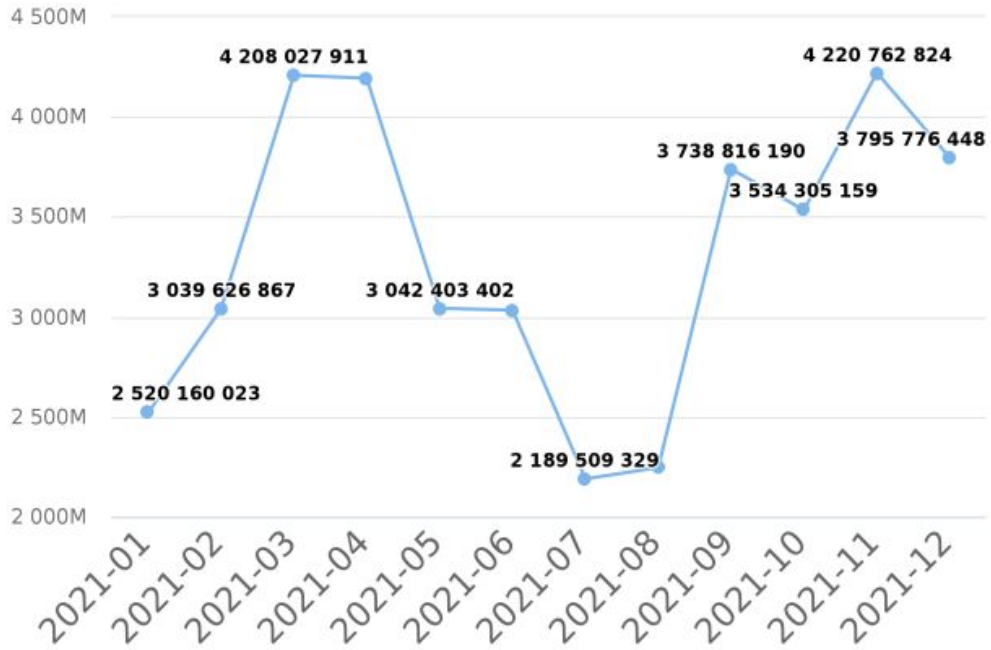


Monthly downloads requested by users in Belgium

using the data

2022

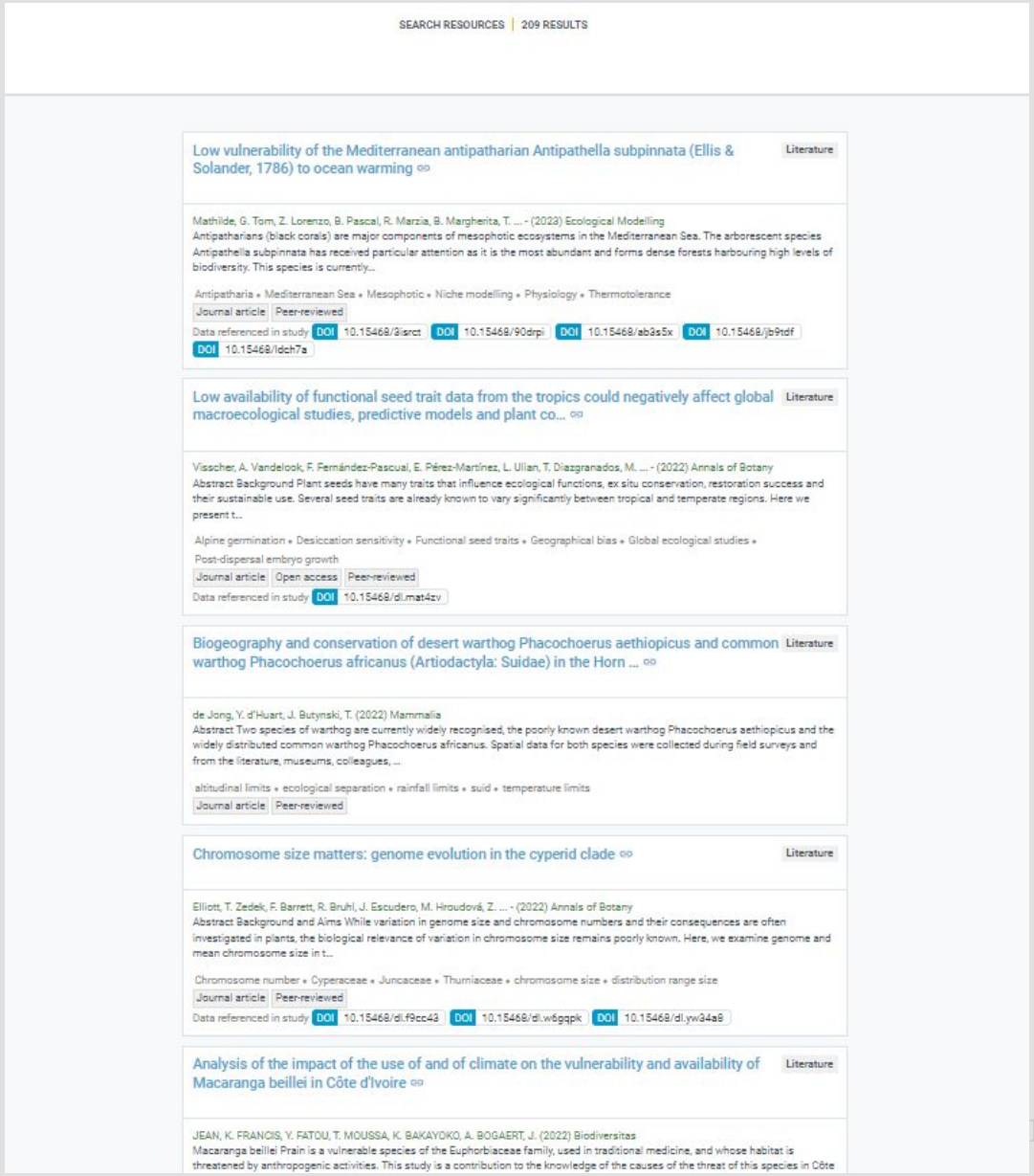
Occurrence records downloaded from GBIF.org, published by institutions in Belgium



Number of occurrence records downloaded via GBIF.org published by institutions in Belgium

using the data

- 207 Peer reviewed publications on GBIF mediated data with researchers/authors from Belgium since 2000
- More than 8000 in total



2022

using the data

2022

- **Empowering Biodiversity Research conference II 2022**
  - For an **scientific** audience
  - What **tools** are available
  - What **projects** have done

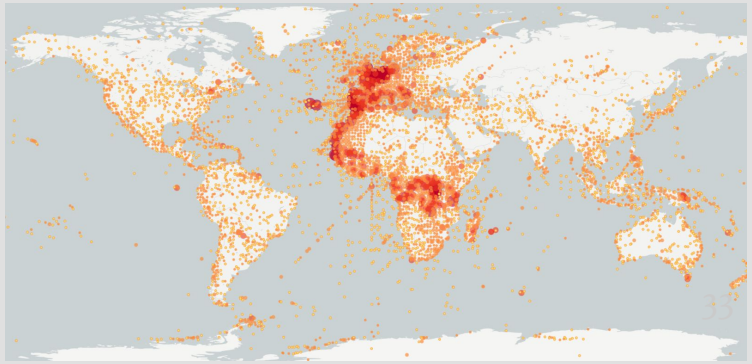
building the network

2022

- 35 090907 occurrences in Belgium
- 39 952190 occurrences globally from Belgium
- 25 Data publishers
- 455 published datasets
- Amazing growth in number of GBIF related projects
- More than 200 Peer reviewed articles with Belgian authors
- Increasing number of scientists dealing with biodiversity informatics
- a Belgian community on biodiversity informatics

…

…



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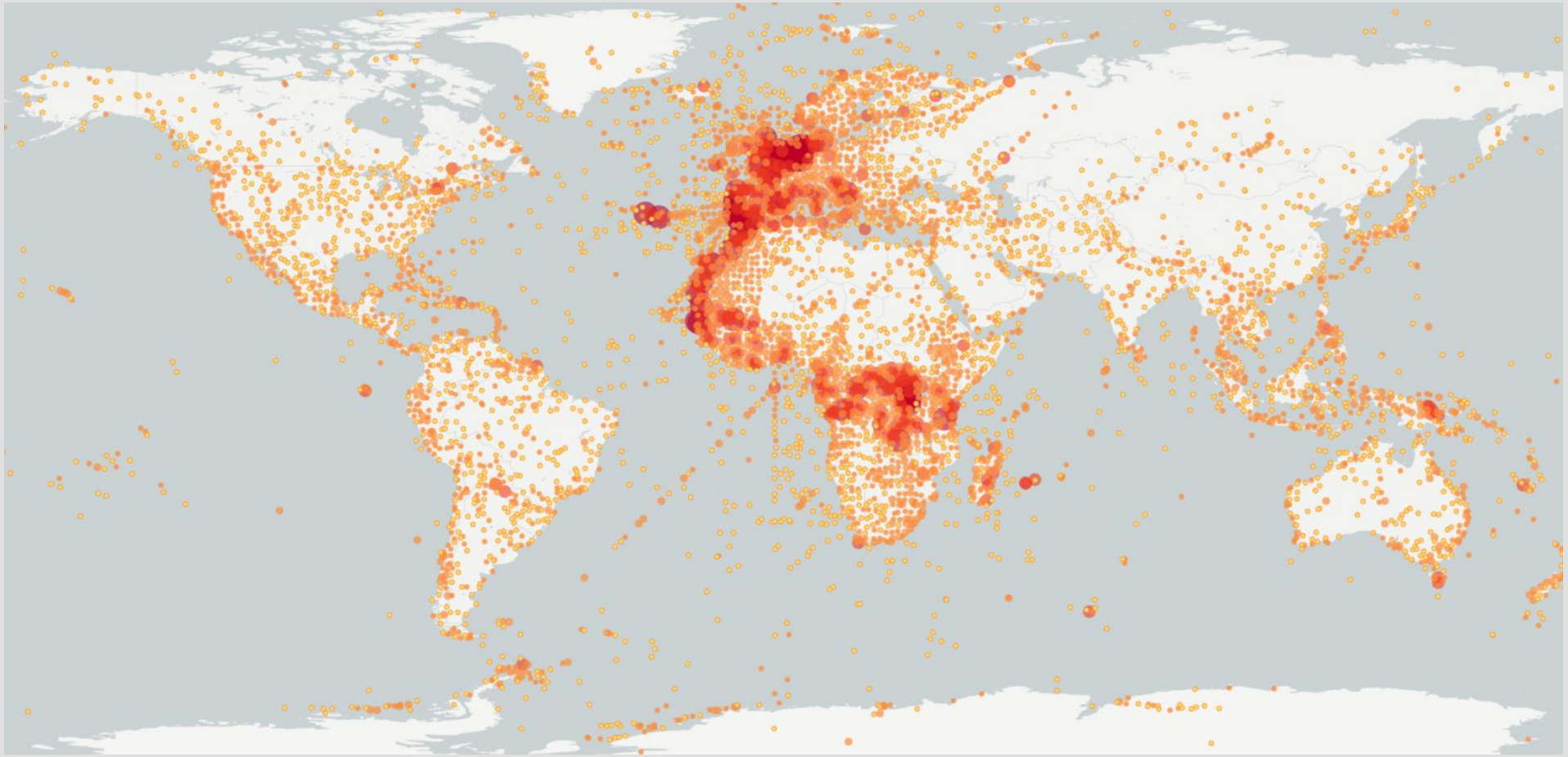

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Thank you!
Thank all who published data!
Thank all who is using the data!
And a special thanks to the web archive!