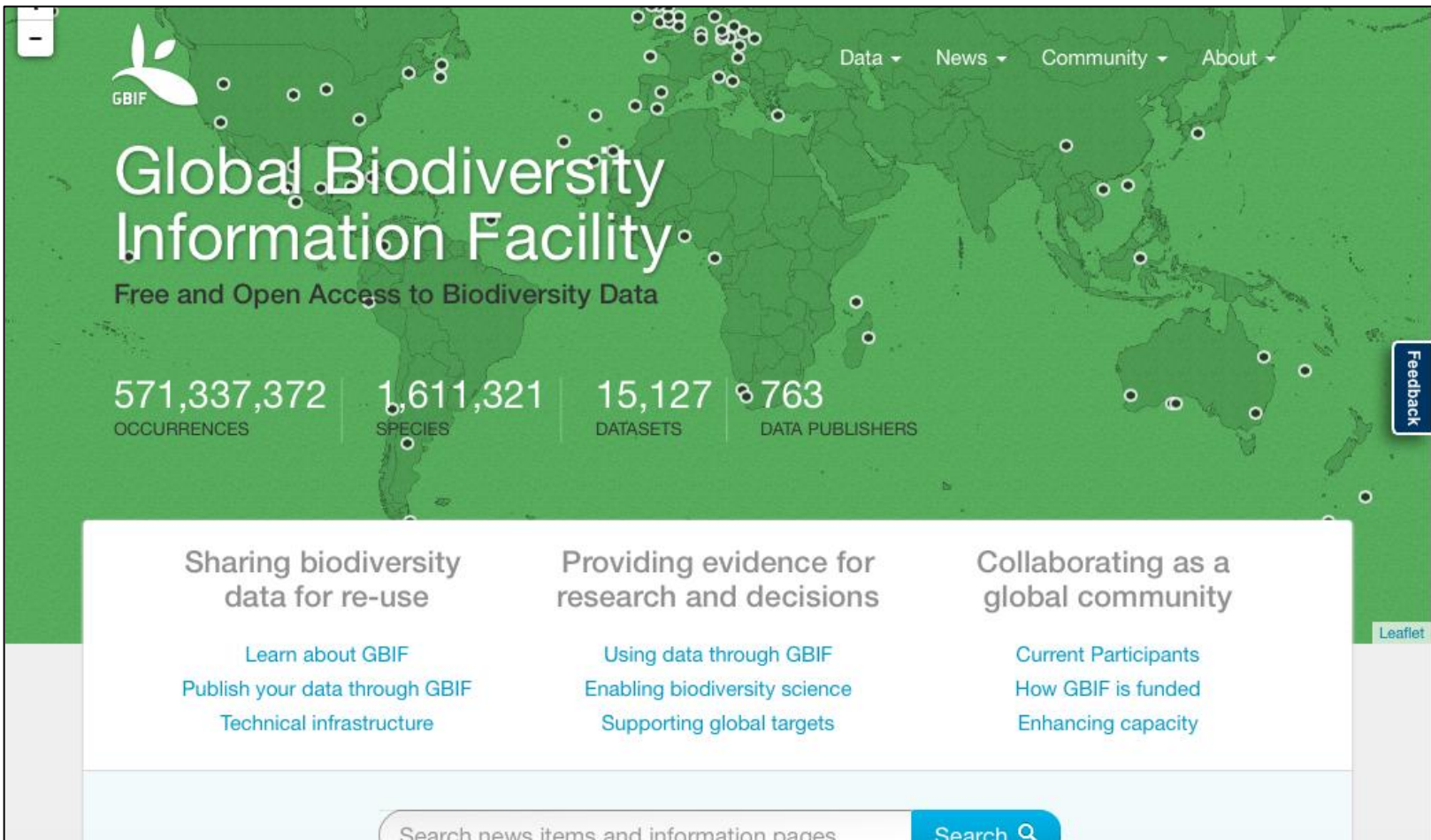


# UNLOCKING BIODIVERSITY DATA FROM ENVIRONMENTAL IMPACT ASSESSMENT

*Tim Hirsch, Deputy Director*  
*Siro Masinde, Programme Officer for Content Mobilization*  
*GBIF Secretariat*

# WHAT IS GBIF?

The image is a screenshot of the GBIF (Global Biodiversity Information Facility) website. The background is a green world map with white dots representing data points. In the top left corner is the GBIF logo, a stylized green leaf. To the right of the logo are navigation links: "Data", "News", "Community", and "About", each with a dropdown arrow. The main heading "Global Biodiversity Information Facility" is in large white text, with the subtitle "Free and Open Access to Biodiversity Data" below it. Below the heading are four statistics: "571,337,372 OCCURRENCES", "1,611,321 SPECIES", "15,127 DATASETS", and "763 DATA PUBLISHERS". Below these statistics are three columns of text describing GBIF's mission: "Sharing biodiversity data for re-use", "Providing evidence for research and decisions", and "Collaborating as a global community". Each column has three sub-points. At the bottom, there is a search bar with the placeholder text "Search news items and information pages..." and a "Search" button with a magnifying glass icon. A "Feedback" button is located on the right side of the map. The "Leaflet" logo is visible in the bottom right corner of the map area.

GBIF

Data ▾ News ▾ Community ▾ About ▾

# Global Biodiversity Information Facility

Free and Open Access to Biodiversity Data

571,337,372 OCCURRENCES | 1,611,321 SPECIES | 15,127 DATASETS | 763 DATA PUBLISHERS

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

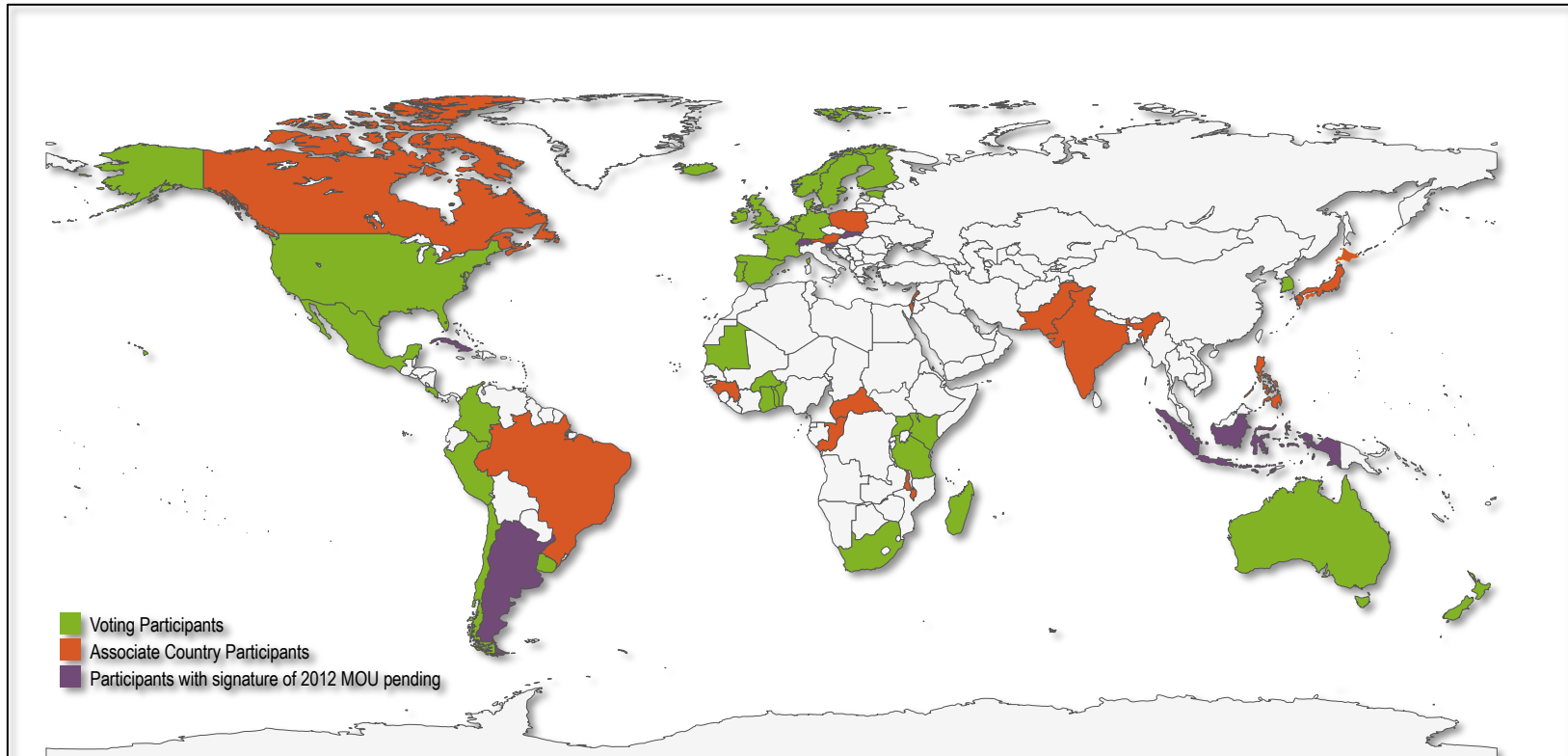
Search news items and information pages... Search

Leaflet

A window on biodiversity evidence over time, informing research and decisions

[www.gbif.org](http://www.gbif.org)

## COUNTRIES PARTICIPATING IN GBIF



- 54 countries, 39 international organizations
- Each Participant signs GBIF non-binding Memorandum of Understanding
- Network of 'nodes' coordinate mobilization of data and collaborate



# TYPES OF DATA SHARED THROUGH GBIF

- Species occurrence records (what, where, when, how, by whom?)
- Checklist data (names)
- Sample-based data
- Metadata



# SOURCES OF DATA SHARED THROUGH GBIF

Collections from  
museums and herbaria



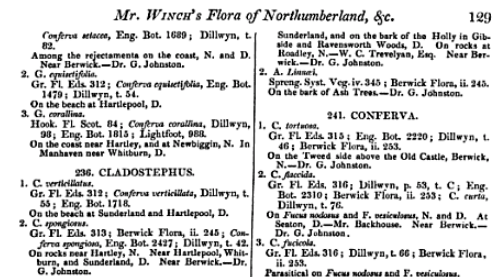
Research projects,  
surveys, inventories



Citizen science  
observations



Data extracted from  
literature



# GBIF BY THE NUMBERS

**570,238,233**

species occurrence records

**15,073**

datasets

**762**

data publishing institutions



# WHY SHARE DIGITAL DATA?

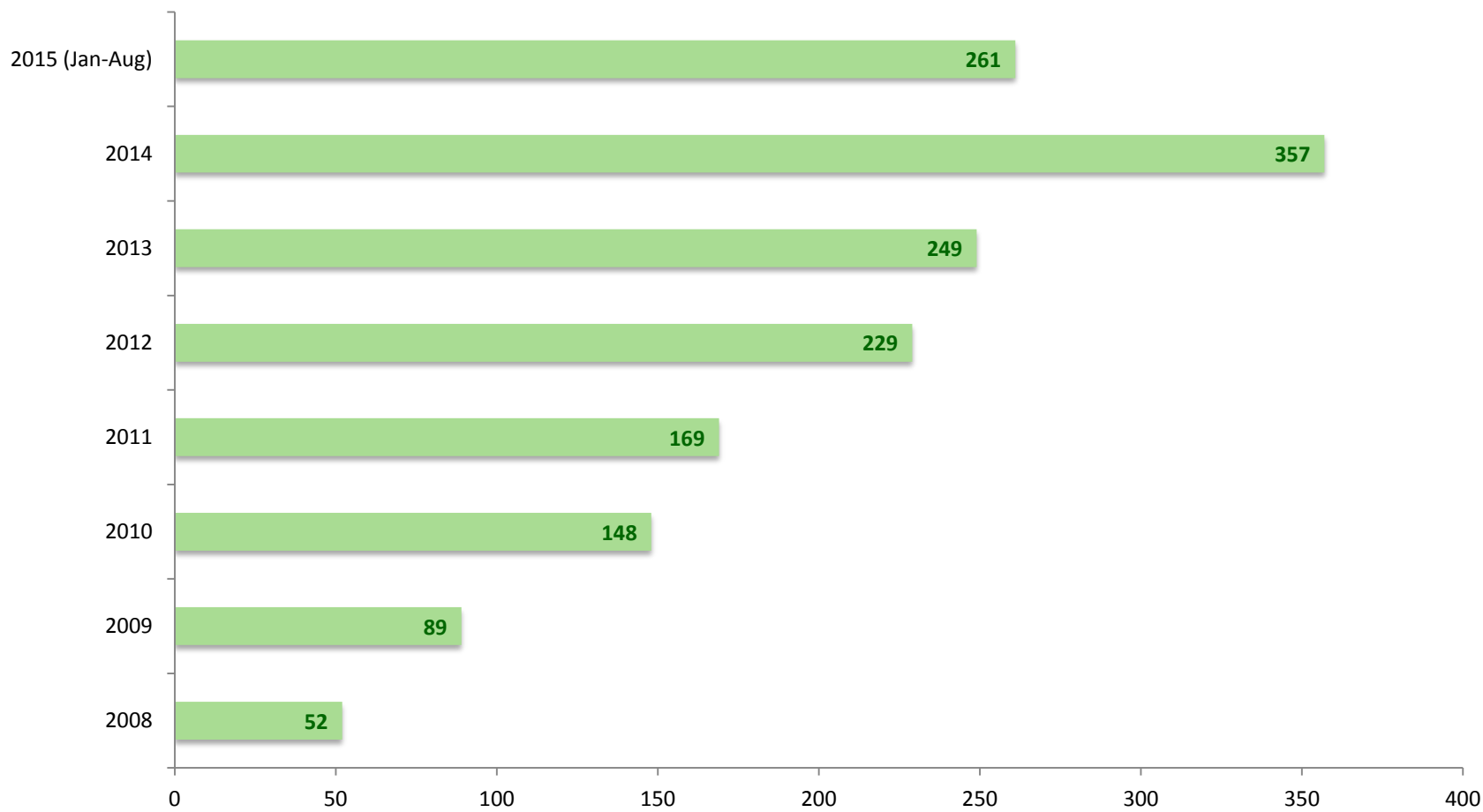
- Visibility, credit for institutions, projects
- Compliance with open data principles, regulations
- Preservation and persistence of data for future re-use
- Contribution to Aichi Targets (Target 19)



The screenshot shows the GBIF dataset page for "Sightings Map of Invasive Plants in Portugal". The header is green with the title "Sightings Map of Invasive Plants in P..." and a subtitle "Occurrence dataset published by CFE - Centre for Functional Ecology, Department of Life Sciences, Univ...". A blue button in the top right corner says "View occurrences" next to the count "4,024 Occurrences". Below the header is a navigation bar with "Information", "Stats", and "Activity" tabs. The main content area has a "Summary" section. On the left, under "FULL TITLE", it says "Sightings Map of Invasive Plants in Portugal". Under "DESCRIPTION", it explains that the dataset is from a Citizen Science platform at [invasoras.pt](http://invasoras.pt), part of the project "Plantas Invasoras: uma ameaça vinda de fora" (Media Ciência nº 16905), developed by researchers from the Centre for Functional Ecology of the University of Coimbra and the Coimbra College of Agriculture of the Polytechnic Institute of Coimbra. Sightings are made by users who register and submit them, either directly on the website (<http://invasoras.pt/en/sightings-map/>) or using an app for Android devices (<http://invasoras.pt/en/download-the-app-for-android/>); only validated sightings are available on the dataset. Validation is made based on photographs submitted along with the sightings. As with all citizen science projects there is some risk of erroneous records. Under "TEMPORAL COVERAGES", it says "Date range: May 22, 2002 - Sep 30, 2014". On the right, there is a logo for "invasoras.pt" with a DOI link "DOI doi:10.15468/ic8tid". Below that, it lists "PUBLISHED BY" as "CFE - Centre for Functional Ecology, Department of Life Sciences, University of Coimbra", "PUBLICATION DATE" as "Dec 17, 2014", "REGISTRATION DATE" as "Dec 17, 2014", and "HOSTED BY" as "Instituto de Investigação Científica Tropical".

# CITATIONS IN PEER-REVIEWED RESEARCH

*Annual number of peer-reviewed publications  
using GBIF-mediated data*



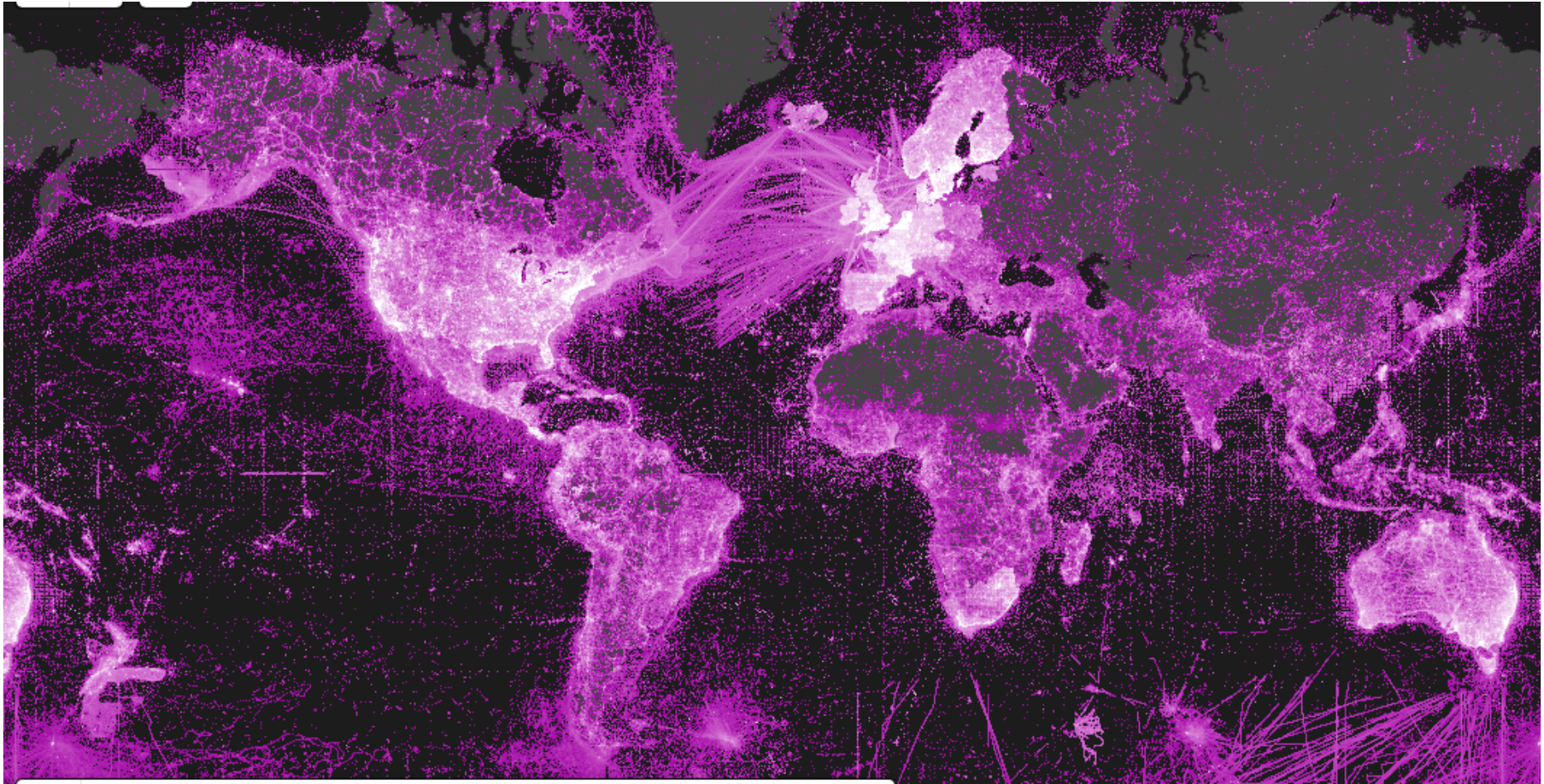


# USE OF SHARED DATA IN RESEARCH



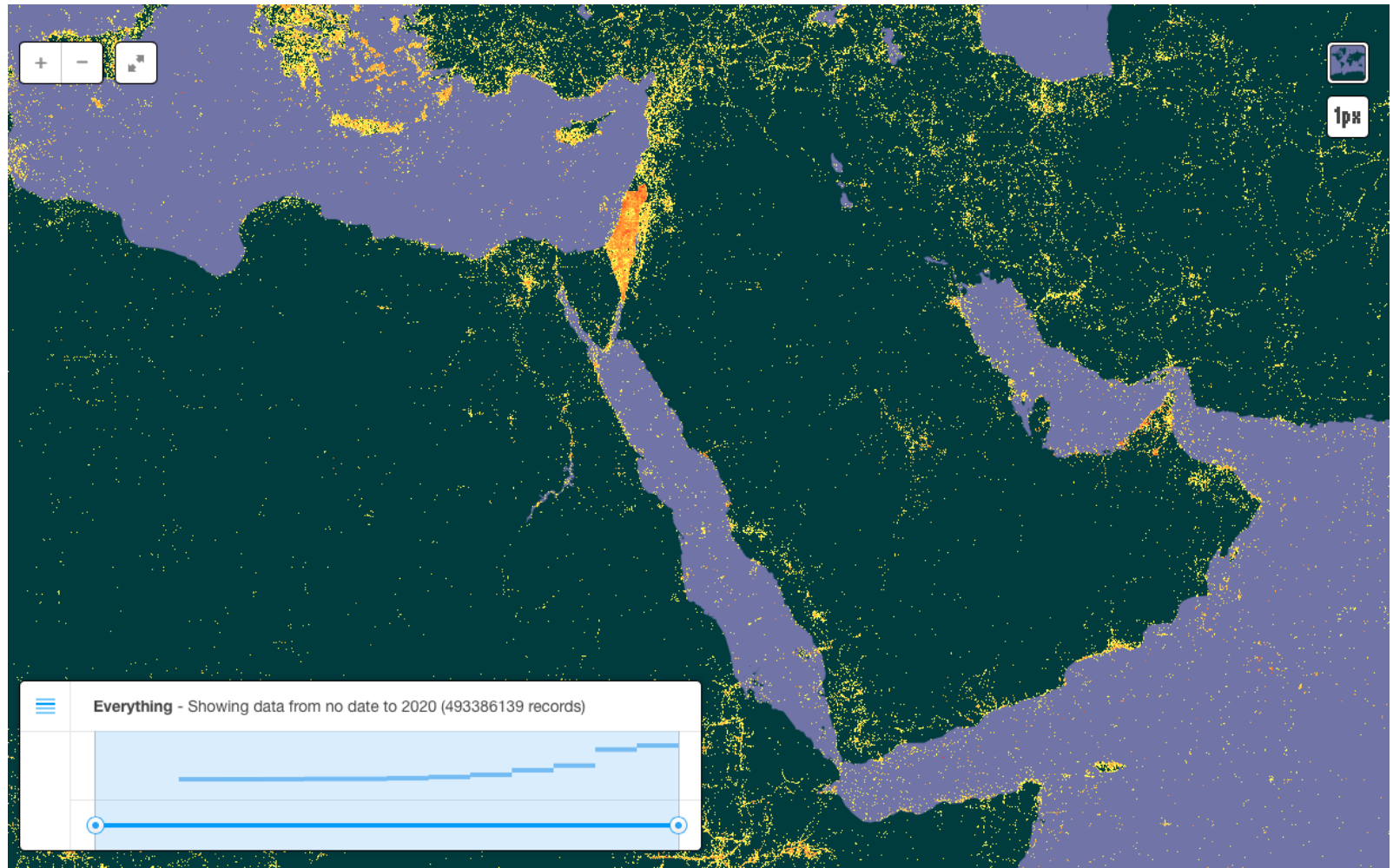
- Invasive alien species
- Impacts of climate change
- Conservation priorities (protected areas, threatened species)
- Agriculture and food security (e.g. crop wild relatives)
- Human health (e.g. disease vectors)
- Understanding of biodiversity patterns (biogeography, macro-ecology, phylogenetics)

# DISTRIBUTION OF DATA





# DISTRIBUTION OF DATA



# 'REPATRIATION' OF DATA

## Oman

Names of countries, territories and islands are based on the United Nations geoscheme for the Middle East.

Summary

Data About

Data Publishing

### Countries, territories or islands publishing data about Oman

- [Germany](#) 53,016 occurrences, 99.09% geo-referenced.
- [United States](#) 34,569 occurrences, 76.74% geo-referenced.
- [United Kingdom](#) 20,896 occurrences, 25.15% geo-referenced.
- [Netherlands](#) 9,223 occurrences, 15.29% geo-referenced.
- [France](#) 1,606 occurrences, 76.71% geo-referenced.
- [Australia](#) 1,595 occurrences, 53.86% geo-referenced.

[View all 23 results...](#)

### Largest occurrence datasets about Oman

- [Neptune Deep-Sea Microfossil Occurrence Database](#)  
13,074 occurrences in Oman out of 500,808 (2.61%).
- [EOD - eBird Observation Dataset](#)  
12,999 occurrences in Oman out of 153,532,169 (0.01%).
- [Royal Botanic Garden Edinburgh Herbarium \(E\)](#)  
8,101 occurrences in Oman out of 714,041 (1.13%).
- [Naturalis Biodiversity Center \(NL\) - Mollusca](#)  
6,687 occurrences in Oman out of 627,220 (1.07%).
- [NODC WOD01 Plankton Database](#)  
6,042 occurrences in Oman out of 1,279,056 (0.47%).
- [Natural History Museum \(London\) Collection Specimens](#)  
5,873 occurrences in Oman out of 2,401,794 (0.24%).

[View records shown on the map](#)



# UNLOCKING THE PAST

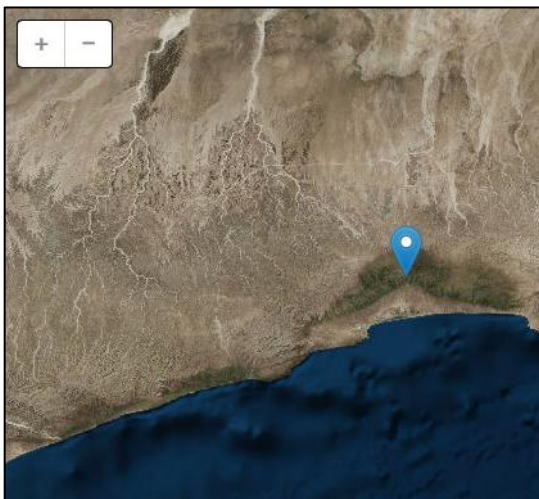
<http://specimens.kew.org/herbarium/K000846471>

Specimen of *Ormocarpum dhofarense* Hillc. & J.B.Gillett recorded on Oct 1, 1943

from Royal Botanic Gardens, Kew - Herbarium Specimens dataset

Information

Verbatim



Leaflet | Esri, DeLorme, FAO, NOAA, DigitalGlobe, GeoEye, I-cubed, USDA, USGS, SwissTopo, and the GIS User Community

## GEOGRAPHIC CLASSIFICATION

Oman

## HABITAT

Hillside in Monsoon forest

## GEOREFERENCING

PROTOCOL

label

## Occurrence details

### RECORDED

Oct 1, 1943 12:00:00 AM by Fitzgerald, D.V.

### RECORD NUMBER

12360

### REMARKS

No. 12360/2

A many-stemmed shrub, corolla yellow

## Source details

### DATA PUBLISHER

[Royal Botanic Gardens, Kew](#)

### OCCURRENCE ID

<http://specimens.kew.org/herbarium/K000846471>

### INSTITUTION CODE

K

### GBIF ID

912638926

### DATASET

[Royal Botanic Gardens, Kew - Herbarium Specimens](#)

### CATALOG NUMBER

K000846471

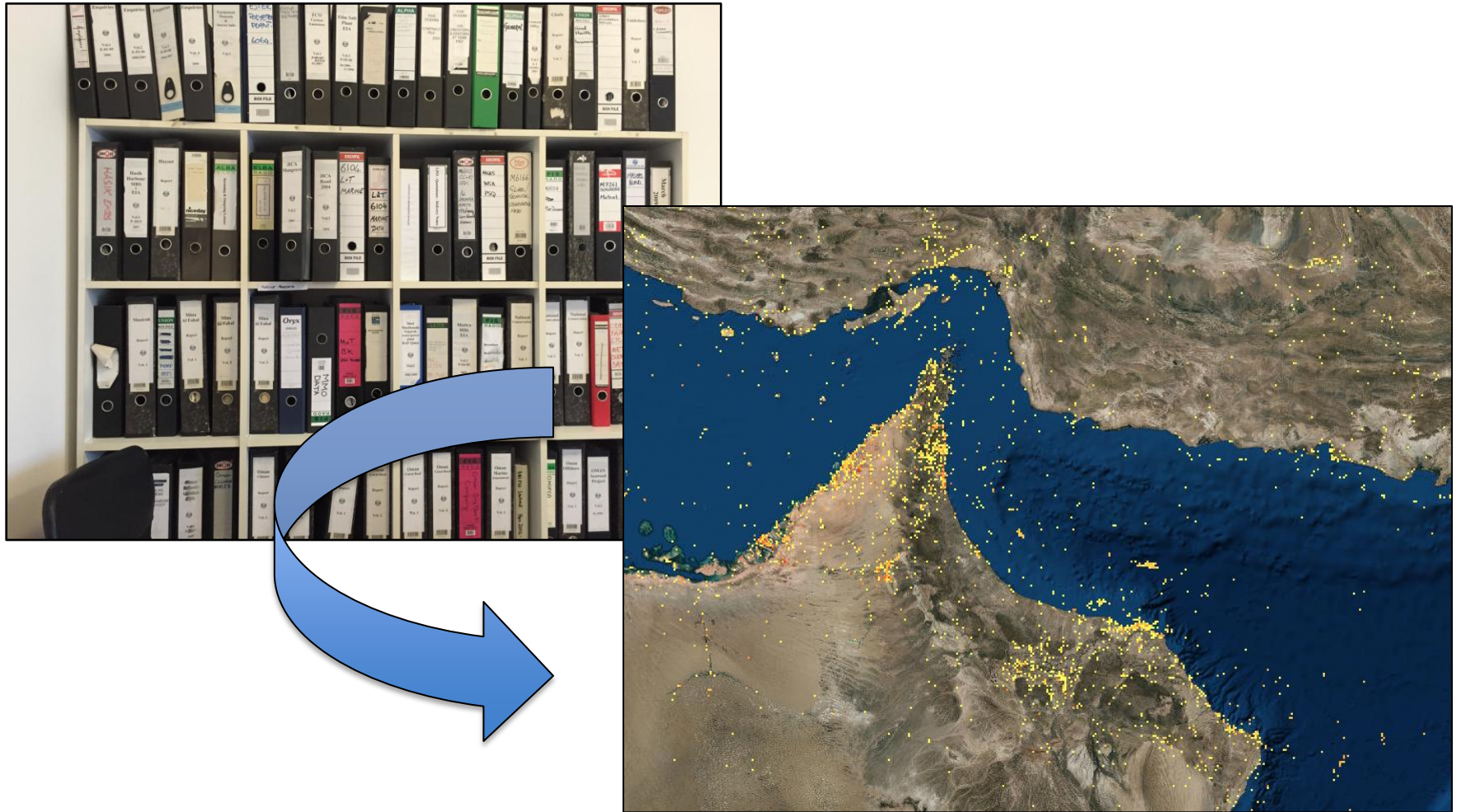
### COLLECTION CODE

Herbarium

### BASIS OF RECORD

Specimen

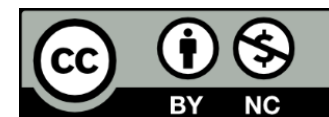
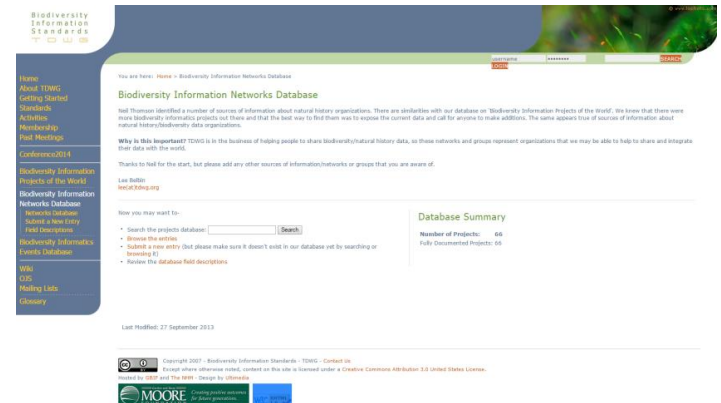
# UNLOCKING THE PRESENT AND FUTURE



# PROJECT AIM

*Preserve data in standard format, share openly, re-use to benefit biodiversity science, conservation and future decisions*

- Preserve primary biodiversity data from EIAs in standard digital formats that enable them to be shared and re-used in future.
- Adding such data to publicly accessible datasets will benefit biodiversity science, conservation and future decisions based on EIA.
- Benefits to NBSAPs



# BACKGROUND

## *Past GBIF & IAIA partnership on improving best practice for publishing primary biodiversity data*

Project builds on previous work to demonstrate to EIA consultants, regulators and private sector clients how publishing EIA-derived datasets through open digital platforms such as [www.gbif.org](http://www.gbif.org) can add greatly to their value by unlocking information for wider application in research and decision making.





# PROJECT FOCUS

## *Promote data sharing among EIA stakeholders in GCC / West Asia*

1. Workshop to demonstrate tools and best practices in biodiversity data publication
2. Pilot data repository to provide a platform for consultants, regulators and clients
3. Updated Best Practice Guide with a step-by-step explanation of the process of data publication and use
4. Distance-learning platform enabling self training in biodiversity data publication and use



# FUNDING AND PARTNERSHIP

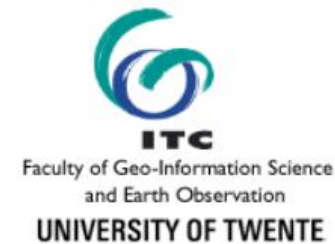
*Seed funding from AGEDI under the Eye on Earth Initiative supporting a partnership led by GBIF*



مبادرة أبوظبي العالمية للبيانات البيئية  
Abu Dhabi Global Environmental Data Initiative



—REFLEQT—



**THANK YOU**

شكرا

**GBIF.ORG**