

Sharing data on a global scale: how
records submitted to the NBN Atlas are
used globally through GBIF

Tim Hirsch | Deputy Director



GBIF

Global Biodiversity
Information Facility

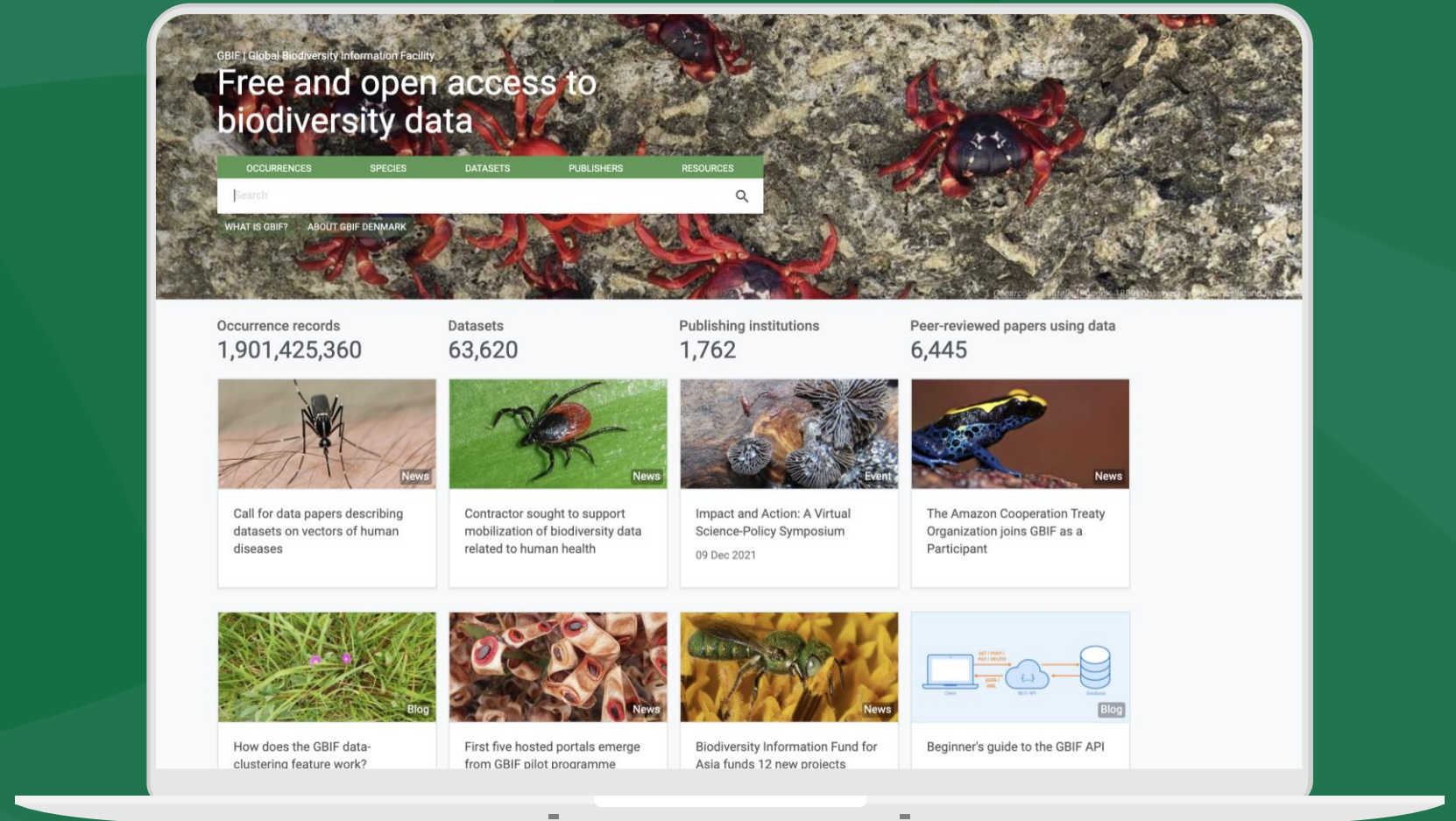
WHAT IS GBIF?

Intergovernmental network
and research
infrastructure

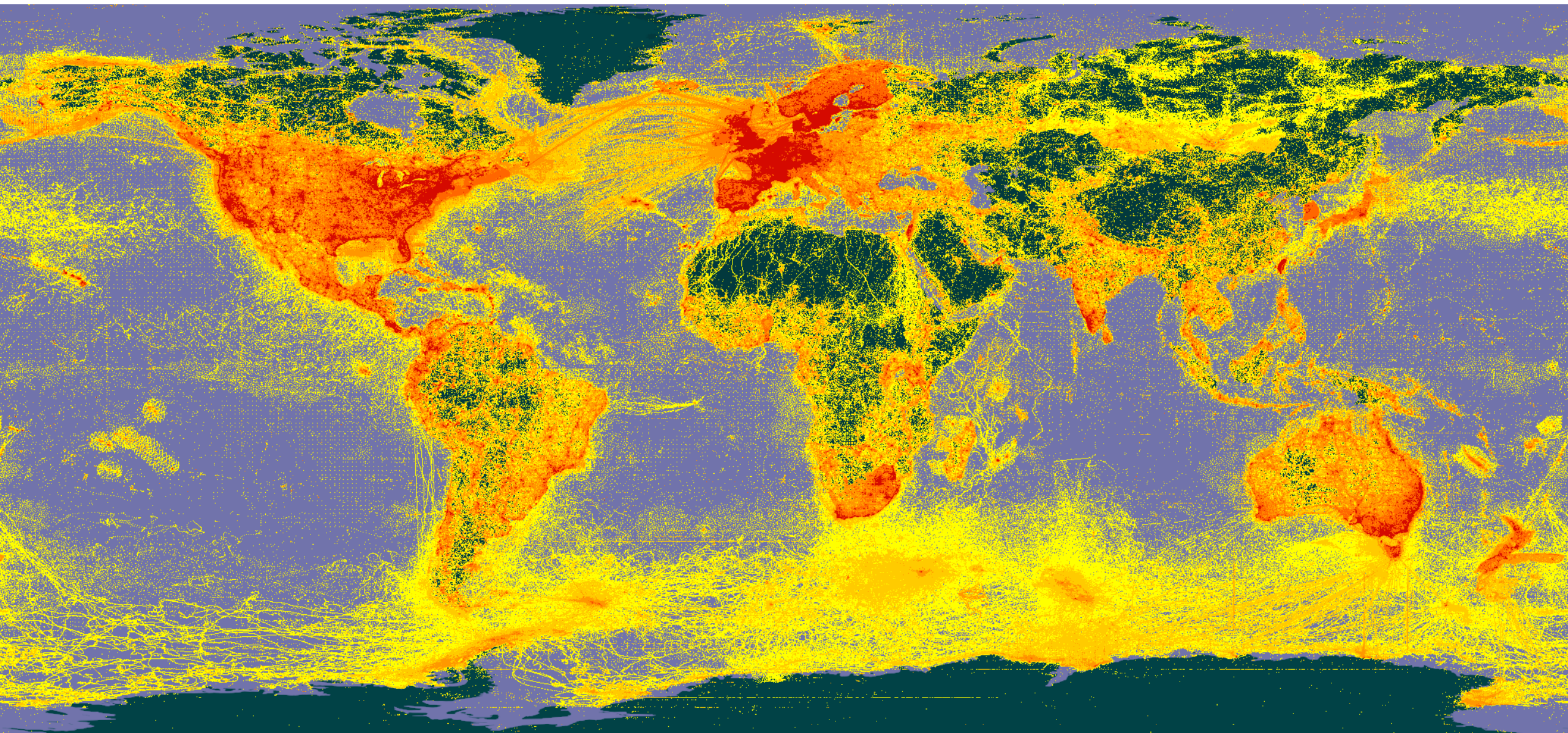
Provides anyone,
anywhere, free and open
access to data about all
types of life on Earth

Voluntary collaboration
through Memorandum of
Understanding

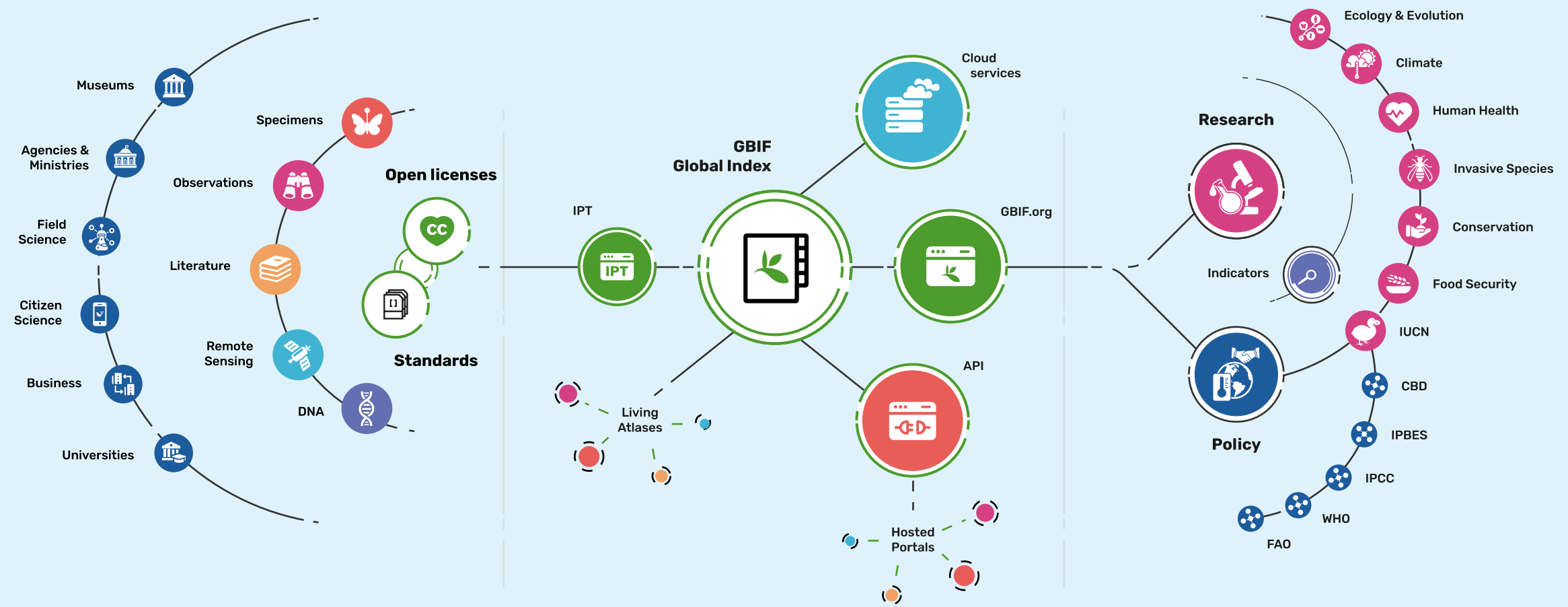
Participant nodes,
Secretariat in Copenhagen,
DK



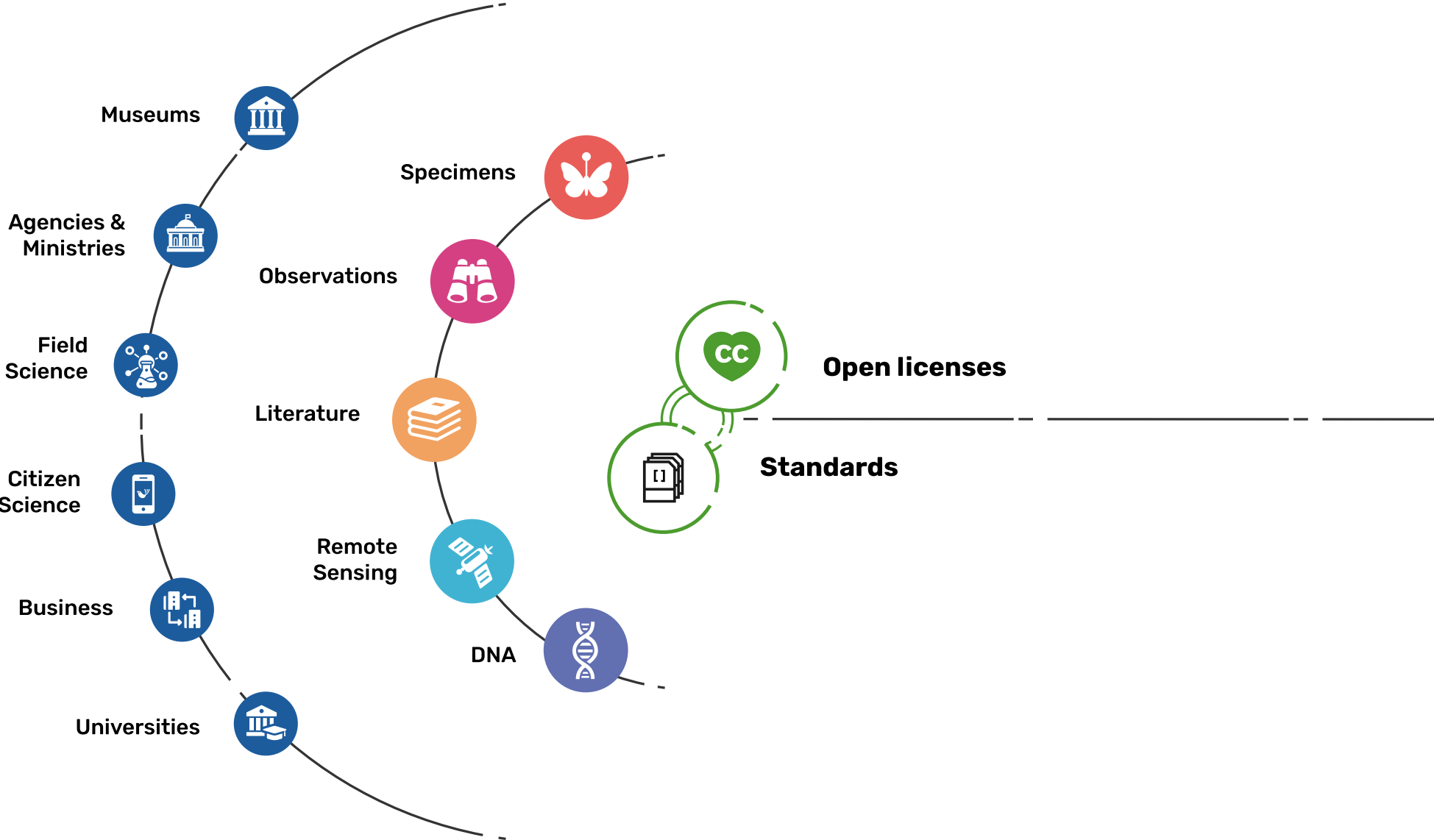
DATA FROM THE GBIF NETWORK 30 Sept 2021



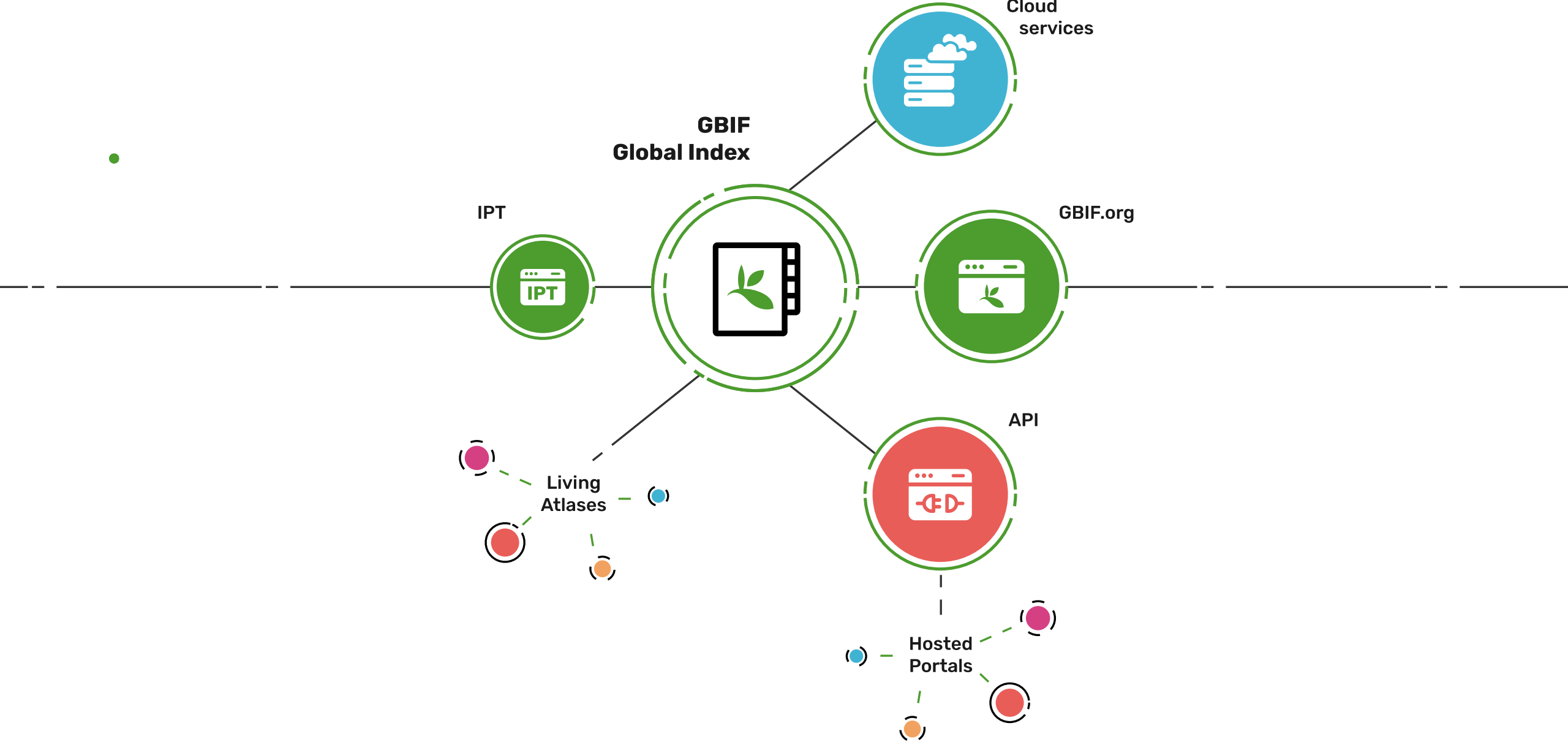
PROVIDING BIODIVERSITY EVIDENCE FOR RESEARCH AND POLICY



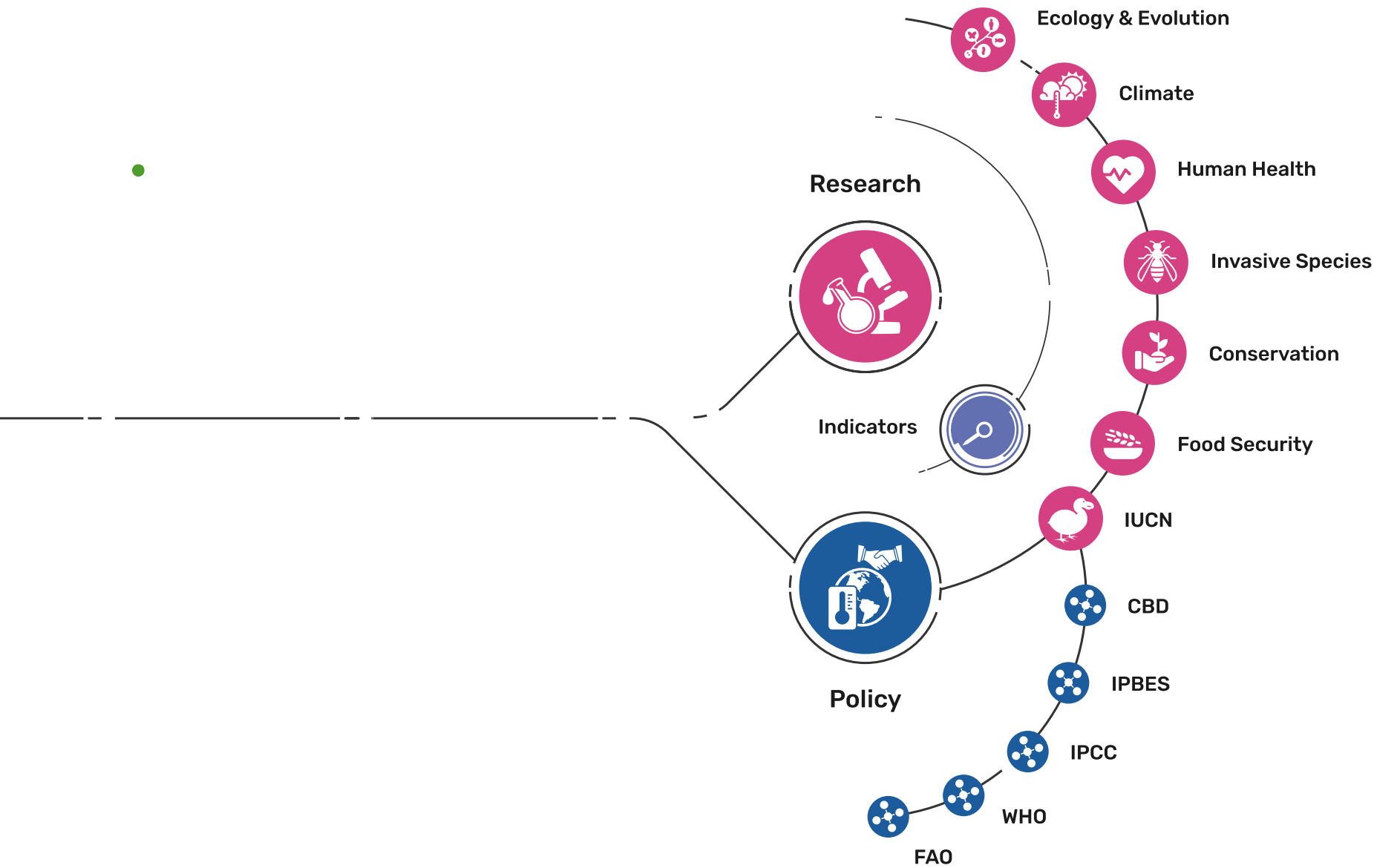
SOURCES OF BIODIVERSITY EVIDENCE



ACCESS TO BIODIVERSITY EVIDENCE



USES OF BIODIVERSITY EVIDENCE



RESEARCH USES OF DATA FROM THE GBIF NETWORK SUPPORTING RESEARCH AND SUSTAINABLE DEVELOPMENT



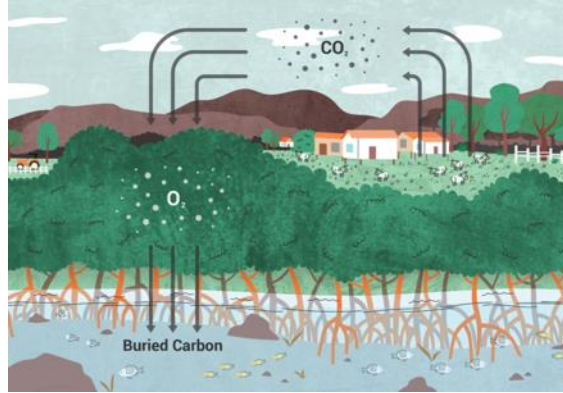
Conservation

- Protected areas
- Key biodiversity areas
- Threatened species
- Monitoring and targeting invasive species



Food security

- Crop wild relatives
- *In situ* and *ex situ* conservation of genetic diversity
- Pollination by wild species
- Fisheries planning



Climate change

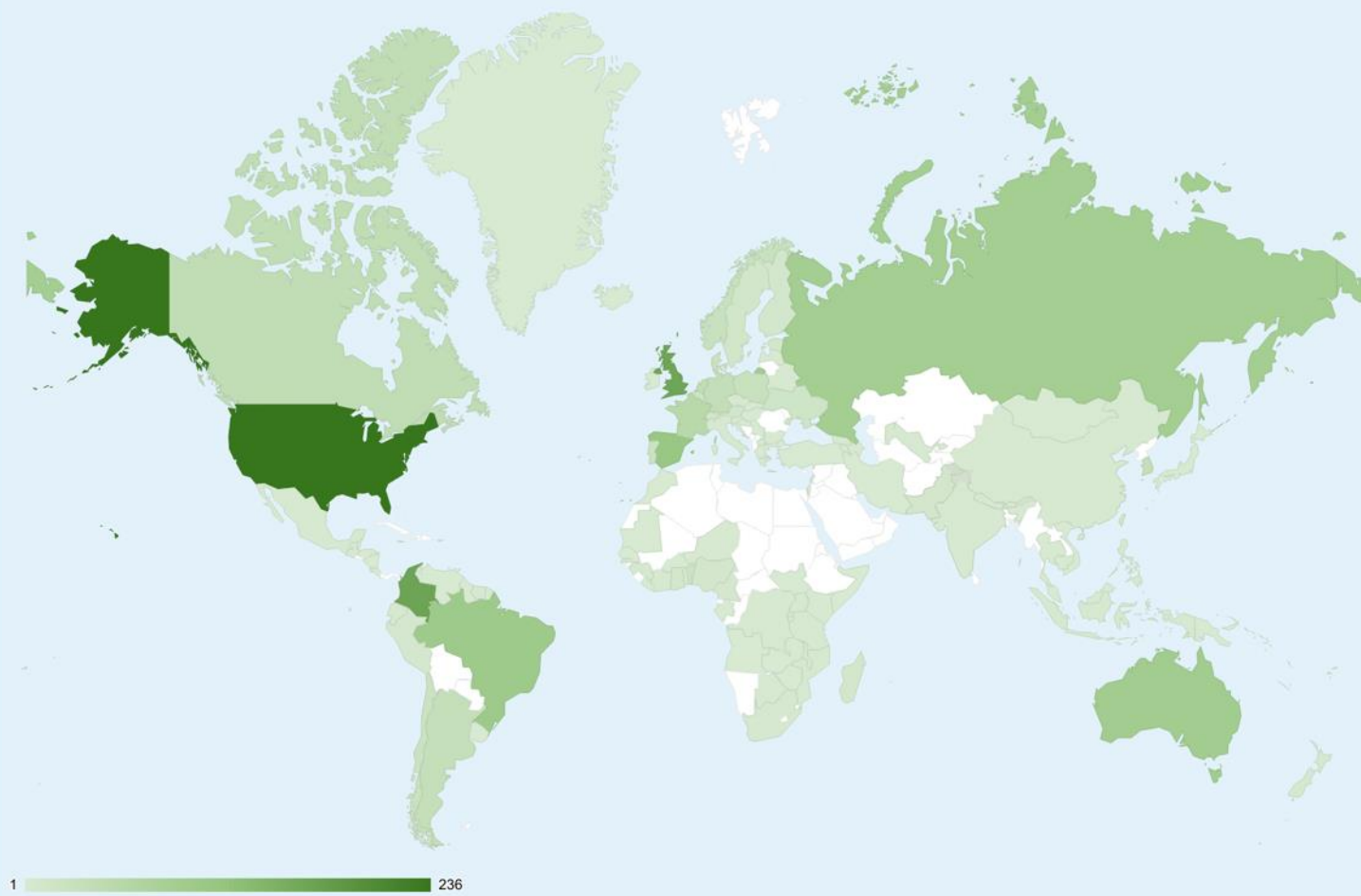
- Modelling impacts on species ranges
- Adaptation strategies
- Mitigation benefits, risks



Human health

- Tracking disease risk based on shifting distribution of vectors, hosts and reservoirs
- Medicinal plants
- Hazards e.g. snakebite

GBIF NETWORK OF DATA PUBLISHING INSTITUTIONS 30 Sept 2021



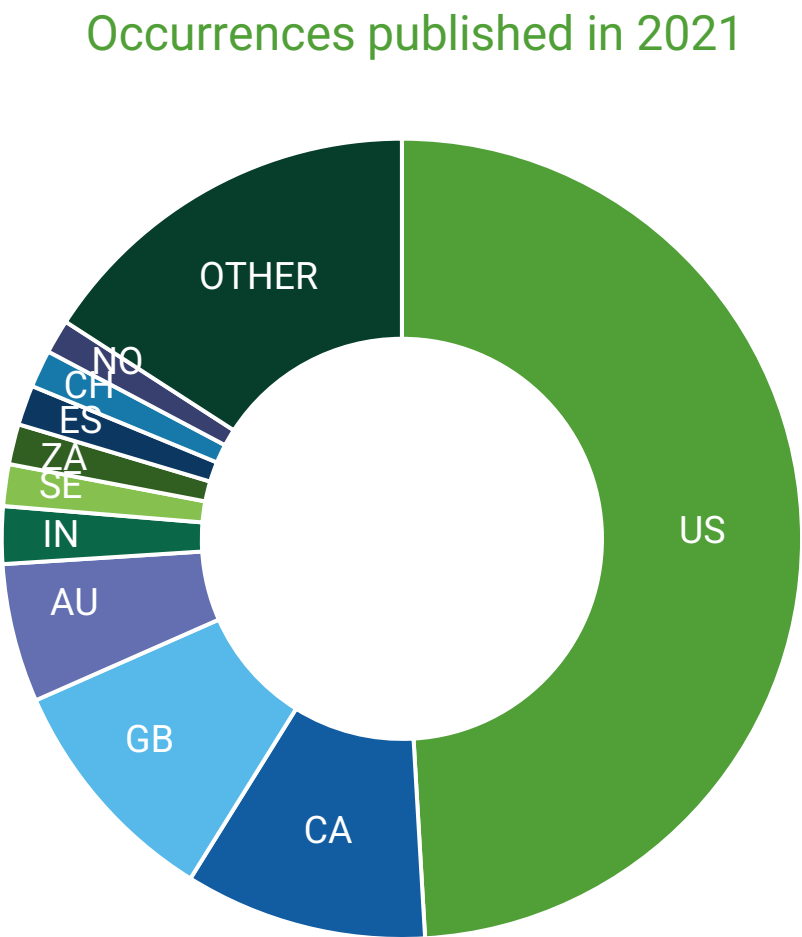
125 countries with institutions sharing data through GBIF

Top 10 countries: number of data publishers		
1	United States	236
2	Colombia	166
3	United Kingdom	164
4	Spain	109
5	Brazil	100
6	Australia	93
7	Russian Federation	89
8	France	55
9	Canada	41
10	Germany	38
10	Netherlands	38

OCCURRENCES PUBLISHED BY COUNTRY

Year-to-date, 30 Sept 2021

Year-to-date		2021 to date	2020 total	2020 rank
1	United States	123,949,249	104,951,678	1
2	Canada	24,721,754	13,595,190	5
3	United Kingdom	24,058,962	19,375,254	2
4	Australia	14,152,637	6,458,840	11
5	India	5,849,494	4,860,801	12
6	Sweden	4,263,134	10,821,710	8
7	South Africa	4,104,573	1,707,223	18
8	Spain	4,075,780	12,829,298	7
9	Switzerland	3,829,111	9,028,709	9
10	Norway	3,469,498	2,813,393	10
OTHER COUNTRIES + AREAS		40,095,779	82,194,433	
TOTAL		252,569,971	268,831,632	

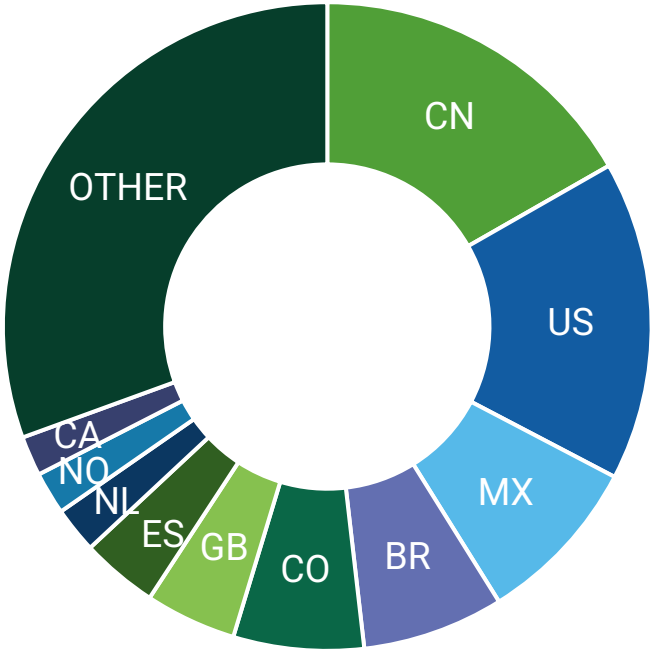


DATA DOWNLOAD REQUESTS

Year-to-date, 30 Sept 2021

Year-to-date		2021 to date	2020 total	2020 rank
1	China	32,414	26,785	2
2	United States	24,552	29,392	1
3	Mexico	16,352	24,123	3
4	Brazil	13,669	16,274	4
5	Colombia	12,597	13,501	5
6	United Kingdom	8,803	9,610	7
7	Spain	7,400	8,981	8
8	Netherlands	4,431	2,215	21
9	Norway	4,111	1,691	24
10	Canada	3,833	5,316	11
OTHER COUNTRIES + AREAS		59,162	72,153	
TOTAL		193,619	224,402	

Download requests
by country, island or territory



187 countries, islands & territories where users have requested downloads (+5)

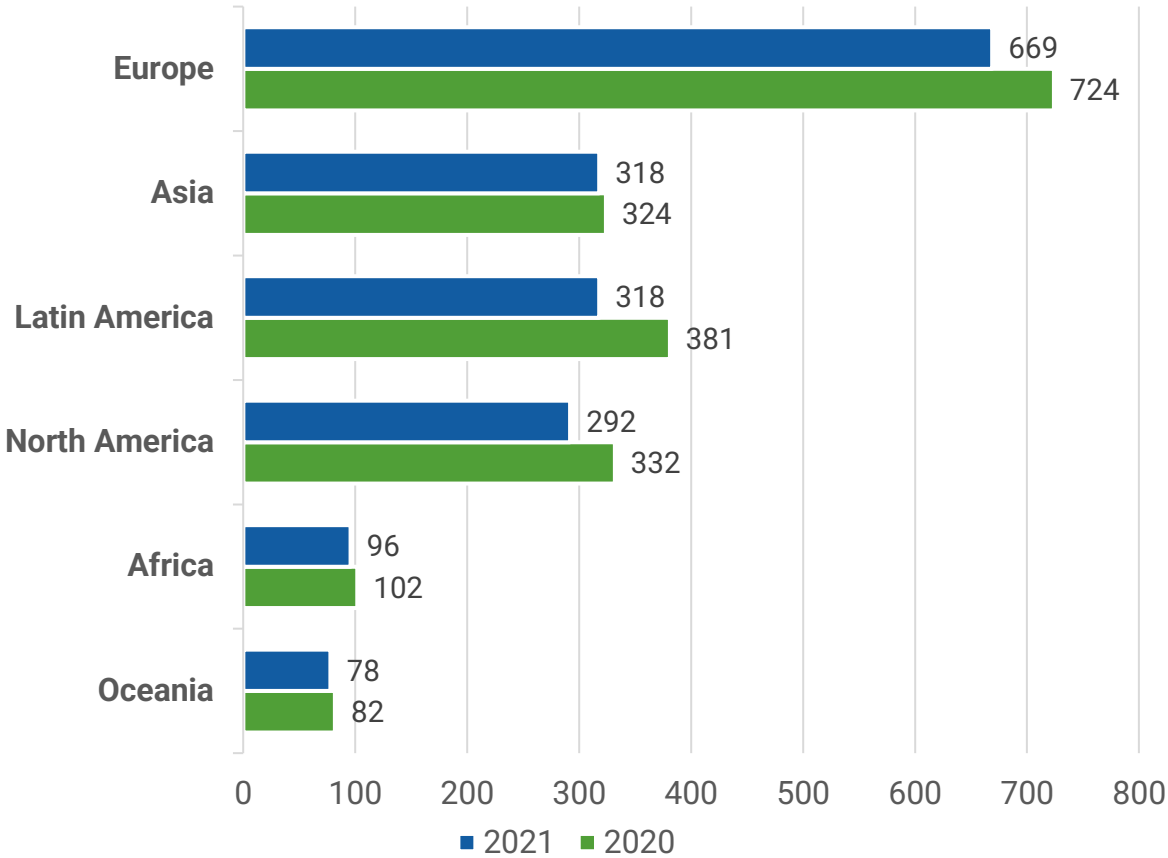
DATA USE IN PEER-REVIEWED JOURNALS

Year-to-date, 30 Sept 2021

Peer-reviewed uses by country

Year-to-date		2021 to date	2020 total	2020 rank
1	United States	245	268	1
2	China	159	168	2
3	Brazil	102	123	3
4	Germany	97	85	6
5	Mexico	94	93	5
5	United Kingdom	94	109	4
7	Spain	70	77	7
8	Australia	54	56	9
9	France	50	53	10
10	Canada	47	64	8

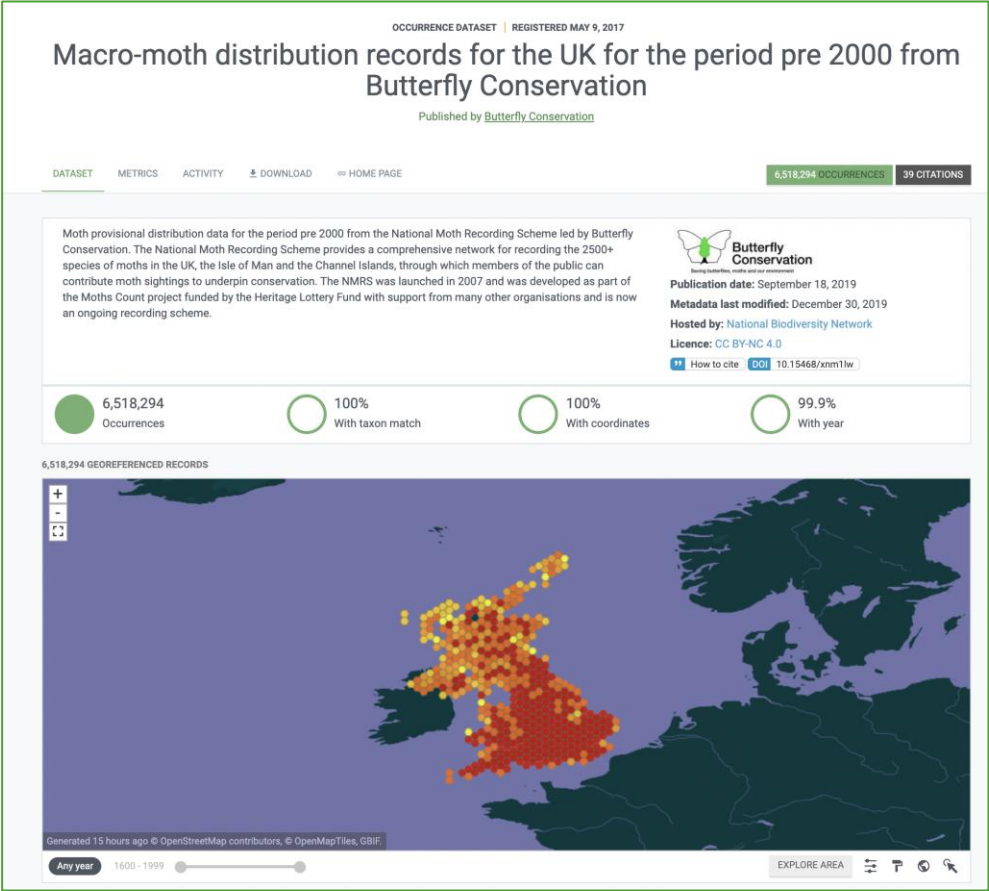
Peer-reviewed uses by region



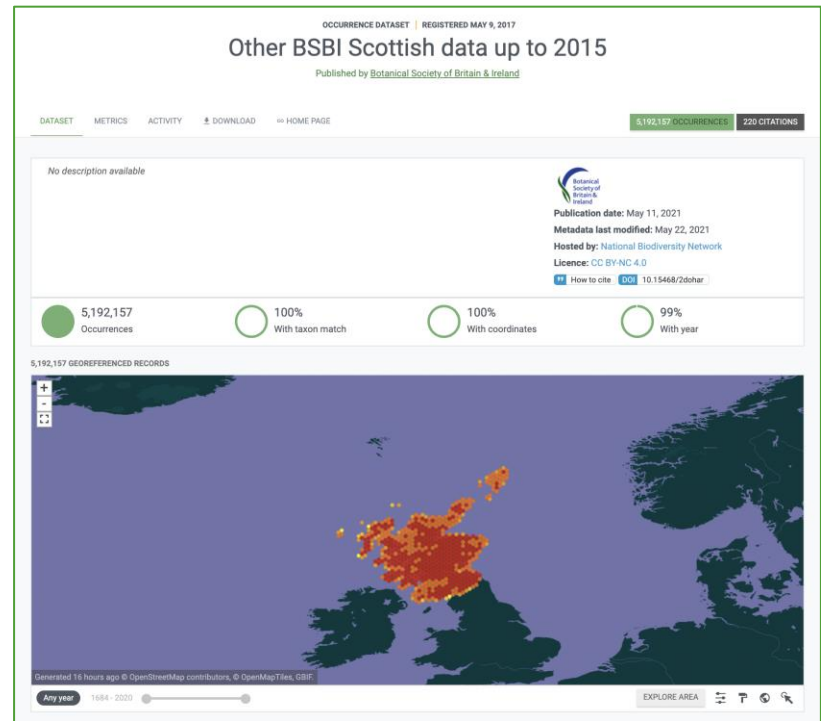
UK DATA PUBLISHING OVERVIEW



GLOBAL USES OF UK DATA



GLOBAL USES OF UK DATA



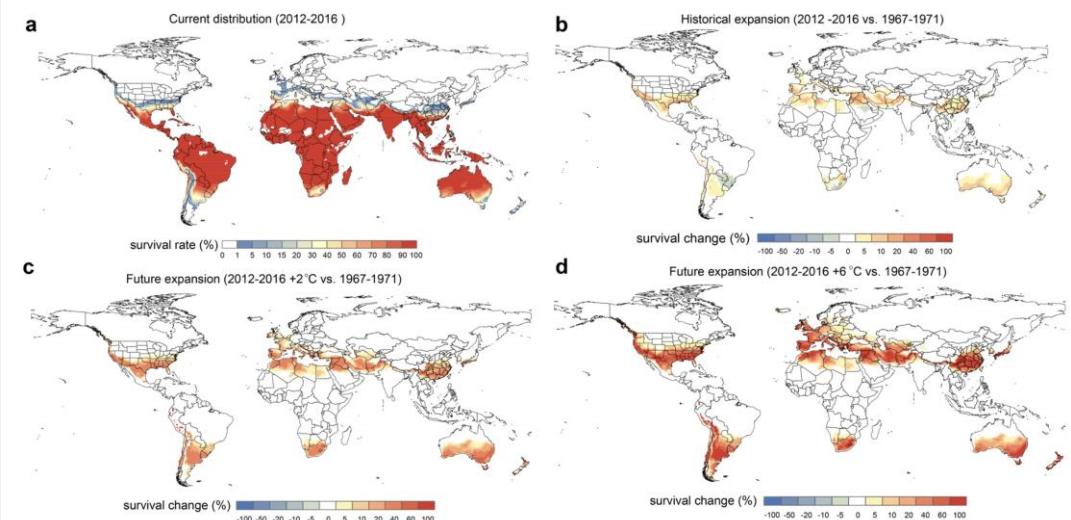
Climate warming promotes pesticide resistance through expanding overwintering range of a global pest Literature

Ma, C. Zhang, W. Peng, Y. Zhao, F. Chang, X. Xing, K. ... - (2021) Nature Communications
Climate change has the potential to change the distribution of pests globally and their resistance to pesticides, thereby threatening global food security in the 21st century. However, predicting where these changes occur and how they will influence current pest control efforts is a challenge. Using...

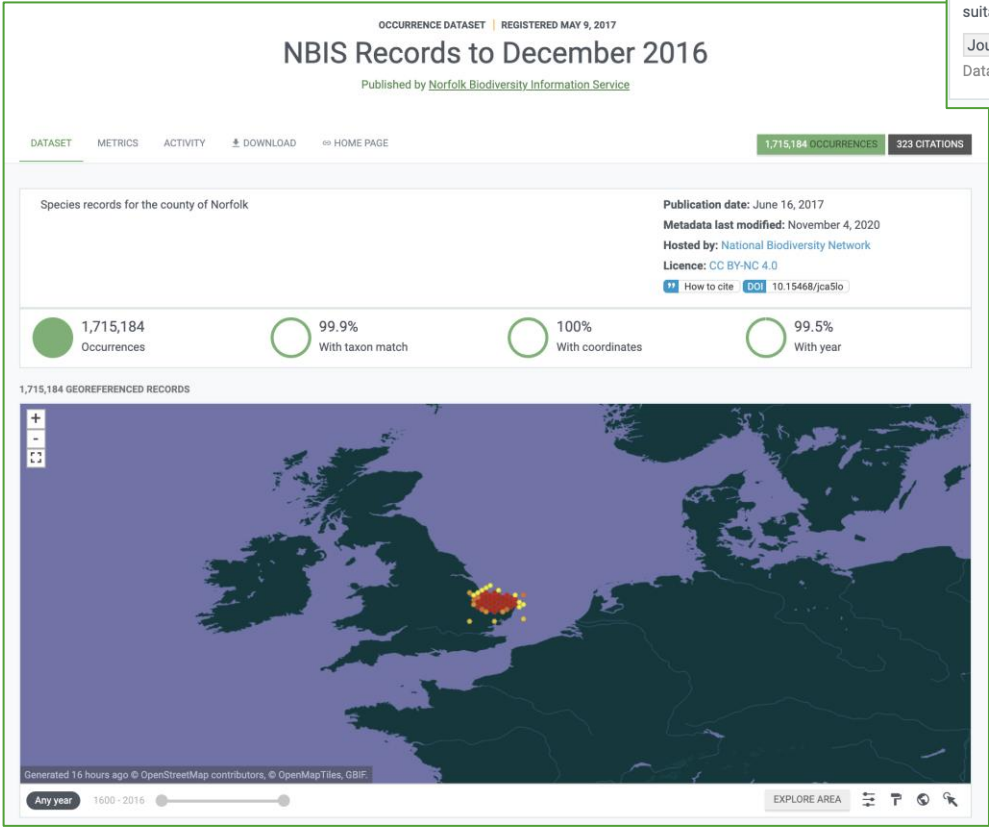
Journal article Open access Peer-reviewed
Data referenced in study DOI 10.15468/dl.huhr6t DOI 10.15468/dl.nxzvww DOI 10.15468/dl.q482md
DOI 10.15468/dl.qfasq5 DOI 10.15468/dl.s6fu8r DOI 10.15468/dl.u9cw4y DOI 10.15468/dl.w2r5rq

Fig. 3: Predicted global overwintering survival of the diamondback moth.

From: Climate warming promotes pesticide resistance through expanding overwintering range of a global pest



GLOBAL USES OF UK DATA

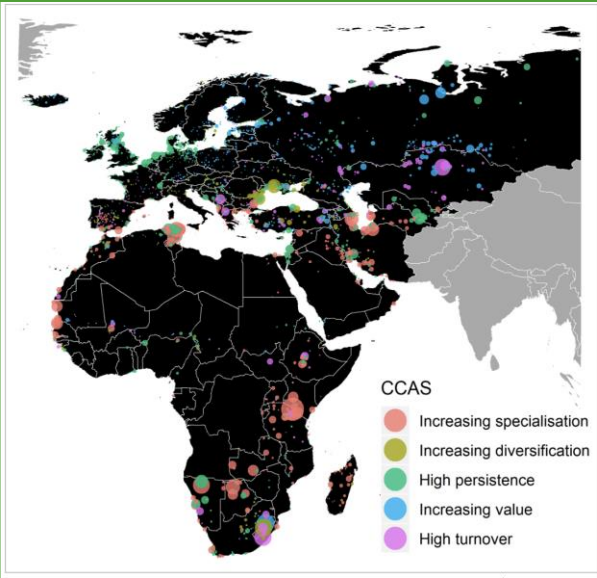


Setting priorities for climate change adaptation of Critical Sites in the Africa-Eurasian waterbird flyways [↗](#)

Literature

Breiner, F. Anand, M. Butchart, S. Flörke, M. Fluet-Chouinard, E. Guisan, A. ... - (2021) *Global Change Biology*
Despite their importance for biodiversity and ecosystem services, wetlands are among the most threatened ecosystems globally. The conservation of many migratory waterbirds depends on the conservation of a network of key sites along their flyways. However, the suitability of these sites is changing u...

[Journal article](#) [Peer-reviewed](#)
Data referenced in study [DOI](#) [10.15468/dl.rtkm8s](#)




Censo de aves acuáticas nidificantes de la Comunidad Autónoma del País Vasco	1k
Breitkopfbecken (Berlin-Reinickendorf)	6
Bachrenaturierung Littfe	6
NBIS Records to December 2016	404k
Mooswald (Freiburg)	27
Birdrace-Halsbandschnäpper-Stuttgart	36

GBIF DEVELOPMENT AREA : HOSTED PORTALS FOR REGIONS, COUNTRIES, INSTITUTIONS

NEWS | 21 OCTOBER 2021

First five hosted portals emerge from GBIF pilot programme

Simple, customizable websites lower the technical thresholds for display of and access to relevant segments of GBIF-mediated biodiversity data at regional, national, institutional and thematic levels



Coastal wattle (*Acacia cyclops*), South Australia—just one of the nearly 23,000 species of Fabaceae featured in the Legume Data Portal. Photo 2019 Mike Burrell via Naturalist Research-grade Observations, licensed under CC BY-NC 4.0.


SIB Colombia

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BIODIVERSIDAD PARA TODOS


crear · compartir · transformar

CONSULTAR




14,164,811

Registros biológicos




1,665

Conjuntos de datos




4919

Fichas de especies




286

Listas de chequeo




169


Socios publicadores



Red SIB Colombia
Alianza sector empresarial



Ciclo de formación 2021
Biovirtual



Convocatorias
Reconocimiento SNCTI

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Online database of the Natural History Museum Rotterdam

Search the digitized collection of the Natural History Museum Rotterdam which contains 356,425 specimen records of which 22,627 with photo(s)


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Text search Scientific name Catalogue number Locality Water body Year Country Basis of record more

Table Gallery Map Download

319,969 results with coordinates



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THANK YOU!

thirsch@gbif.org

