

# **Biodiversity Information for Development (BID) Regional Engagement Webinar for Latin America and Caribbean**

*Tuesday 19 May 2020 14:00 UTC, 2 hour Zoom webinar*

Registration required:

[https://us02web.zoom.us/webinar/register/WN\\_2m6E9866RFa8VsGOefA-IA](https://us02web.zoom.us/webinar/register/WN_2m6E9866RFa8VsGOefA-IA)

Presentations will be in English. Participants can ask questions in English and Spanish

## **Agenda**

### **Welcome messages**

Joe Miller, GBIF Executive Secretary, and Chantal Marijnissen, Head of Unit DEVCO.C2 – Environment, Natural Resources, Water, European Commission

### **Session 1 – Introduction to GBIF and the BID programme**

Tim Hirsch, Deputy Director, GBIF Secretariat

### **Session 2 – GBIF Participation in the Latin America and Caribbean region**

Anabela Plos, LAC Regional Representative

### **Session 3 – Regional collaboration through the GBIF capacity enhancement support programme**

Francisco Pando, Ciencia y Tecnología para el Desarrollo

### **Session 4 – Short talks from BID project teams**

Elma Kay (Belize), Marcia Ford (Jamaica), Paul Ouboter (Suriname)

### **Session 5 – Presentation on the Tropical Andes Observatory**

Miguel Fernandez, NatureServe

### **Session 6 – Panel session**

Chair: Tim Hirsch; Panel: Anabela Plos, Paula Zermoglio, Dairo Escobar, Francisco Pando, Andrew Rodrigues, Maheva Bagard Laursen, Mélianie Raymond

### **Session 7: How to stay engaged in GBIF and BID in the future**

Mélianie Raymond, GBIF Secretariat

The BID programme is funded by the  
[European Union](#) and co-funded by [GBIF](#)





## Introduction to GBIF and the Biodiversity Information for Development (BID) programme

Tim Hirsch | Deputy Director

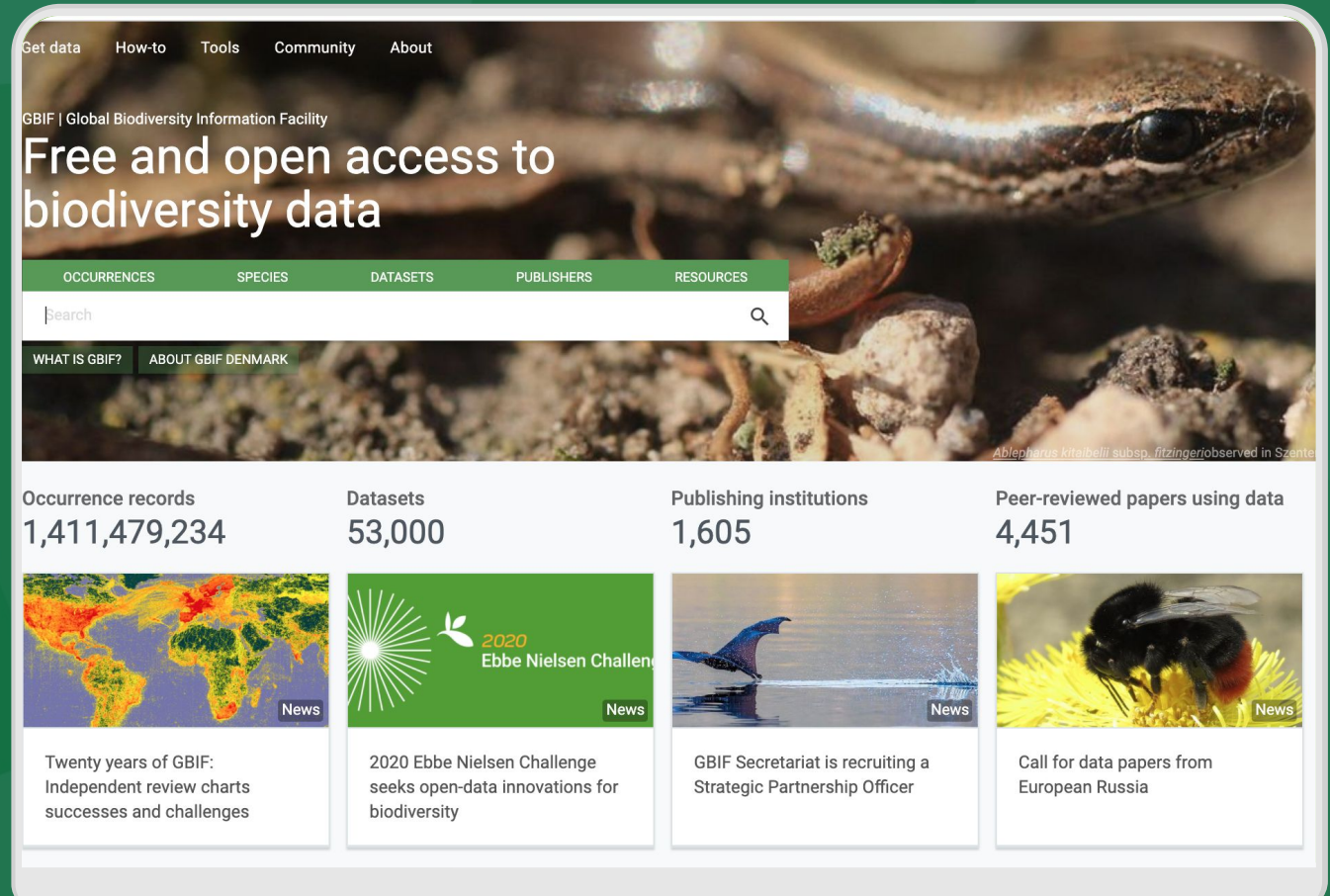


# WHAT IS GBIF?

Intergovernmental network and research infrastructure

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

Collaboration through voluntary Memorandum of Understanding, Participant nodes

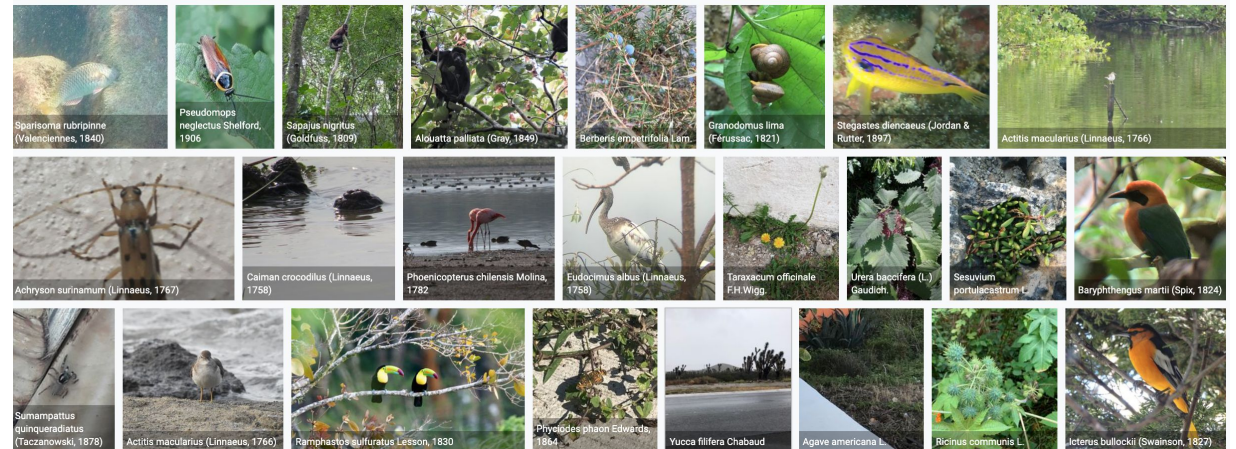
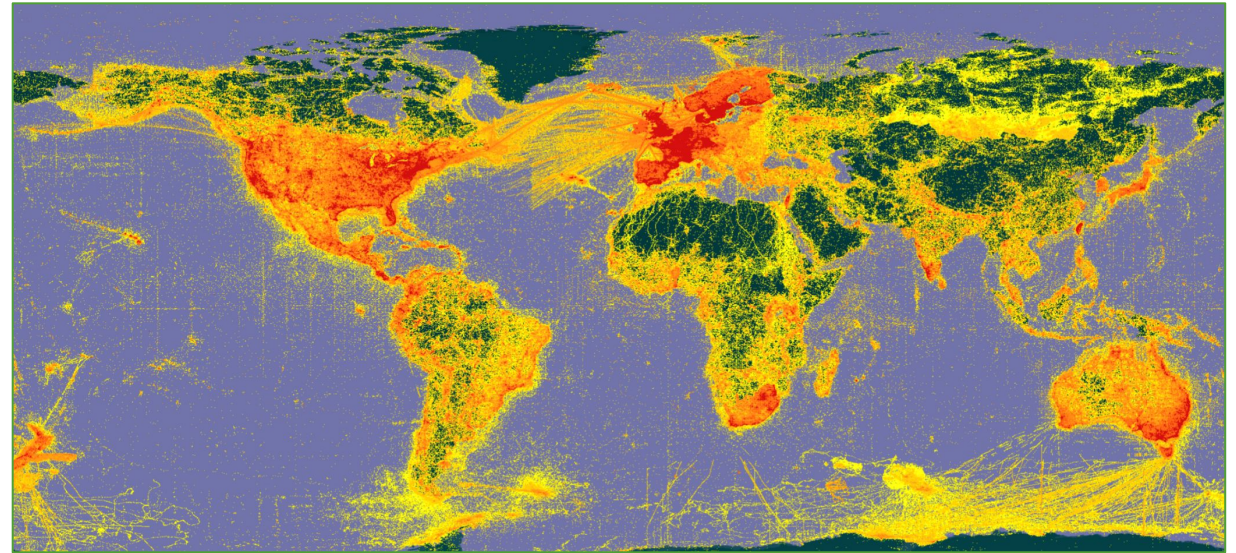


# A WINDOW ON EVIDENCE ABOUT WHERE SPECIES LIVED, AND WHEN

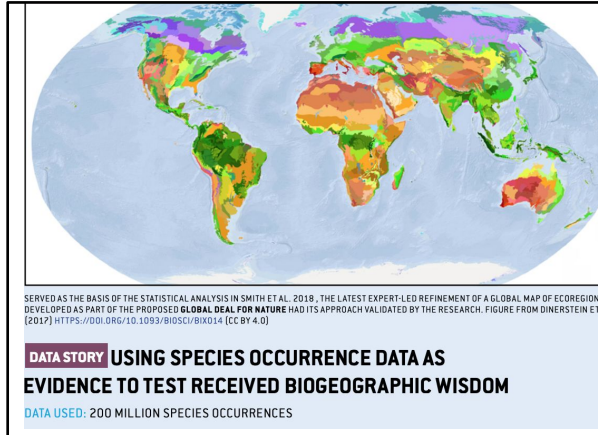
Data from:

- Natural history collections
- Research studies
- Monitoring programmes
- Citizens' observations
- Literature
- DNA sampling
- Others...

Shared using common data standards to enable full interoperability and instant retrieval



# APPLIED USES OF GBIF-MEDIATED DATA FOR SUSTAINABLE DEVELOPMENT



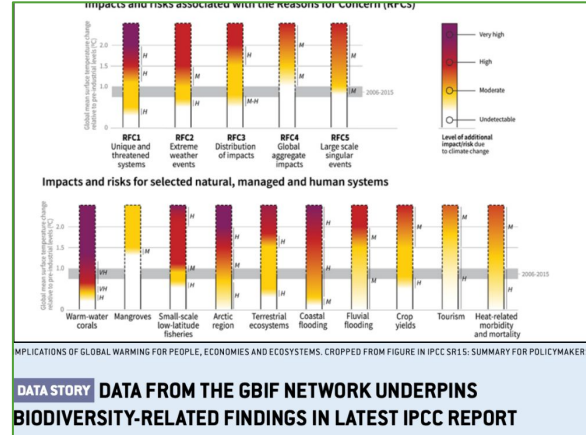
## Conservation

- Protected areas
- Threatened species
- Invasive species risk



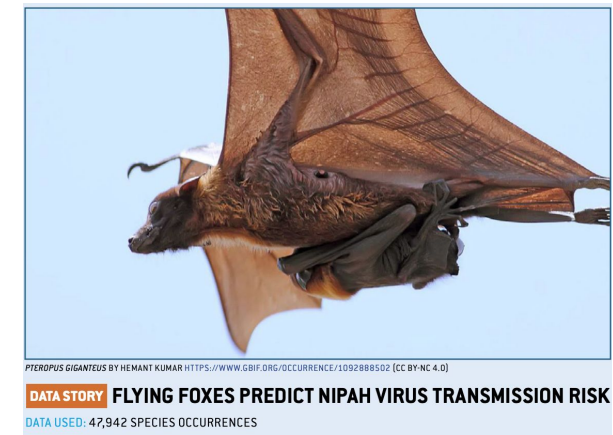
## Food Security

- Crop wild relatives
- *In situ, ex situ* conservation of genetic diversity
- Fisheries planning



## Climate change

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



## Human health

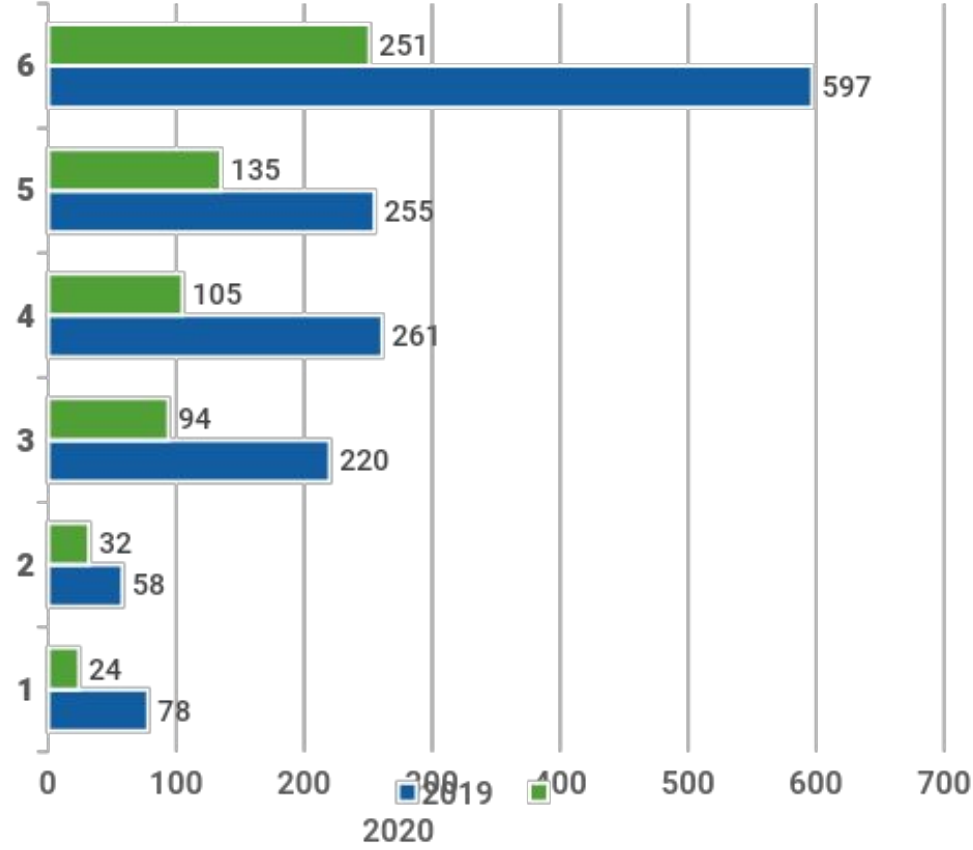
- Disease risk based on occurrence of vectors, hosts, reservoirs
- Medicinal plants
- Hazards e.g. snakebite

# DATA USE IN PEER-REVIEWED JOURNALS 30 April 2020

Peer-reviewed uses by country

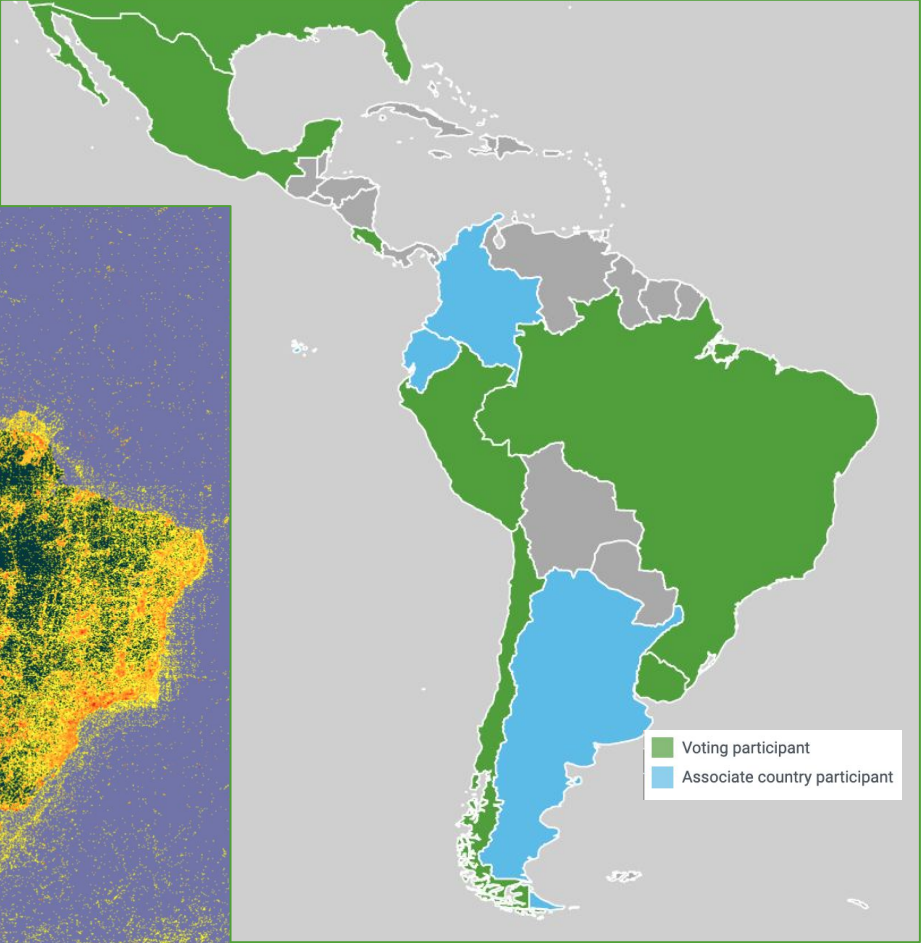
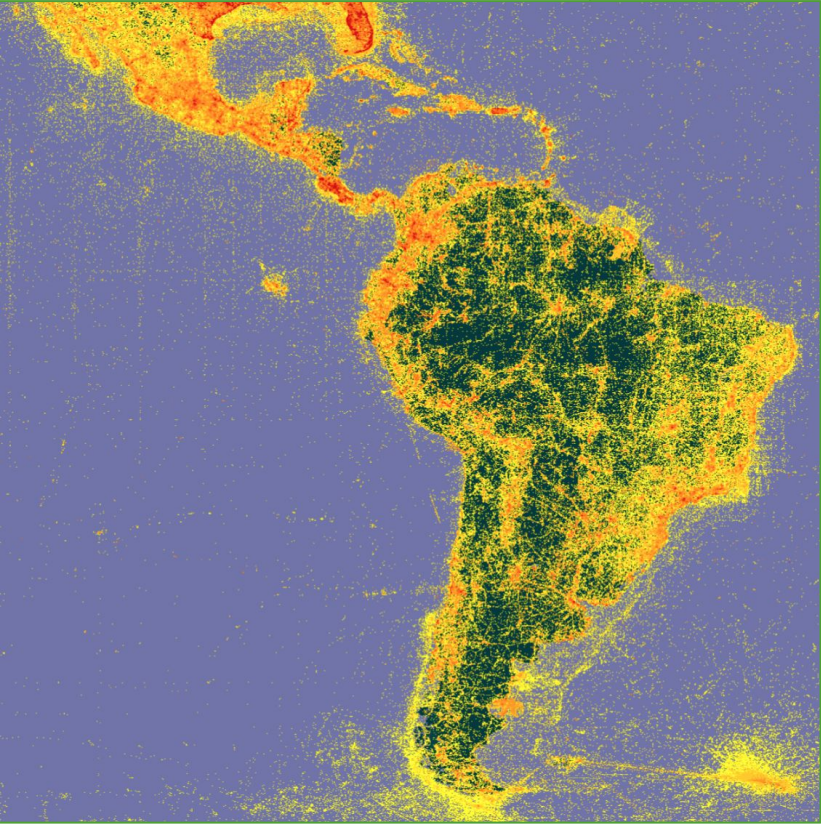
| Year-to-date |                | 2019 rank |    |
|--------------|----------------|-----------|----|
| 1            | United States  | 81        | 1  |
| 2            | Brazil         | 44        | 3  |
| 3            | China          | 43        | 2  |
| 4            | United Kingdom | 40        | 4  |
| 5            | Spain          | 31        | 8  |
| 6            | Germany        | 30        | 6  |
| 7            | Mexico         | 27        | 5  |
| 8            | Canada         | 24        | 10 |
| 9            | France         | 15        | 9  |
| 10           | Australia      | 14        | 7  |

Peer-reviewed uses by region



# GBIF IN LATIN AMERICA AND THE CARIBBEAN

6 VOTING PARTICIPANTS    3 ASSOCIATE COUNTRY PARTICIPANTS    1 OTHER ASSOCIATE PARTICIPANT    351 PUBLISHERS    56,758,098 OCCURRENCES








| Participant                            | Membership                    |
|--|-------------------------------|
| Andean Network of BioNET-INTERNATIONAL | Other associate participant   |
| Argentina                              | Associate country participant |
| Brazil                                 | Voting participant            |
| Chile                                  | Voting participant            |
| Colombia                               | Associate country participant |
| Costa Rica                             | Voting participant            |
| Ecuador                                | Associate country participant |
| Mexico                                 | Voting participant            |
| Peru                                   | Voting participant            |
| Uruguay                                | Voting participant            |

| Representatives  |                      |             |
|--|----------------------|-------------|
| Role   | Name                 | Participant |
| Nodes regional representative Latin America and the Caribbean        | Plos, Anabela        | Argentina   |
| Nodes regional representative deputy Latin America and the Caribbean | Amaya Montano, Leisy | Chile       |

# CAPACITY ENHANCEMENT IN GBIF



- Annual call funded from GBIF core budget
- Exclusive to GBIF participating nodes
- Aims to address needs identified by GBIF Participants, facilitates knowledge transfer and collaboration at regional and global levels
- Supports mentoring, regional events, advocacy, documentation, promotion of data use
- 11 projects led by Latin America nodes since 2014, €166k grant funds with €238k co-funding

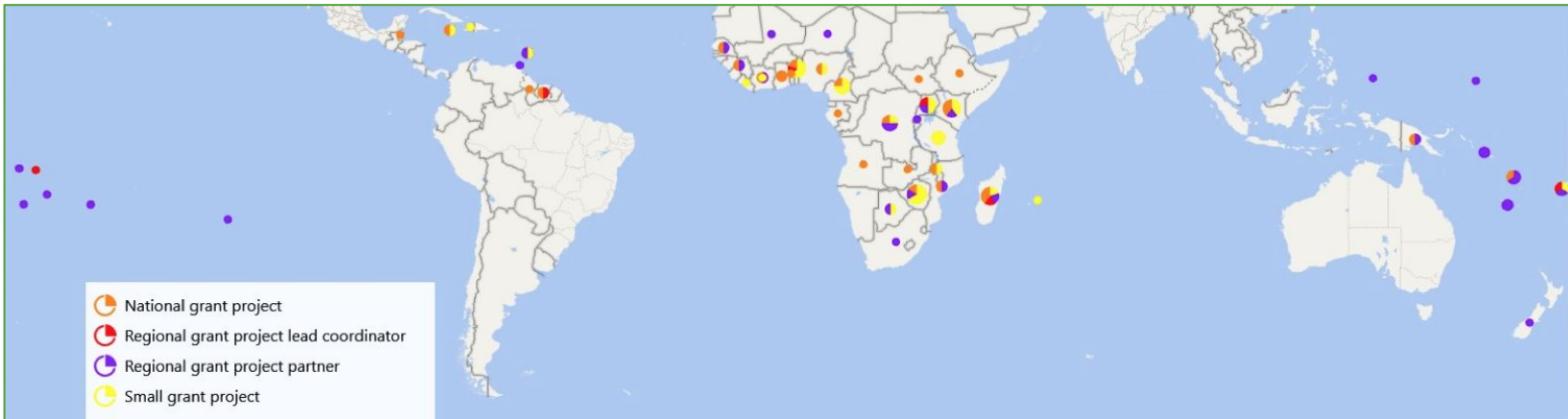
|   |   |              |
|---|---|--------------|
|    | Data use for decision-making workshop: an Iberoamerican community call                              | June 1, 2019 |
|    | Tackling the spatial challenge in the Southern Cone through georeferencing training                 | June 1, 2019 |
|   | OpenPSD: Promoting publication and use of private-sector data on biodiversity                       | June 1, 2019 |
|  | Using the CBD Clearing-House Mechanism to strengthen biodiversity data acquisition and data sharing | June 1, 2019 |
|  | Strengthening Zimbabwe's GBIF node through mentoring by GBIF Spain                                  | June 1, 2019 |











# BIODIVERSITY INFORMATION FOR DEVELOPMENT (BID) PROGRAMME

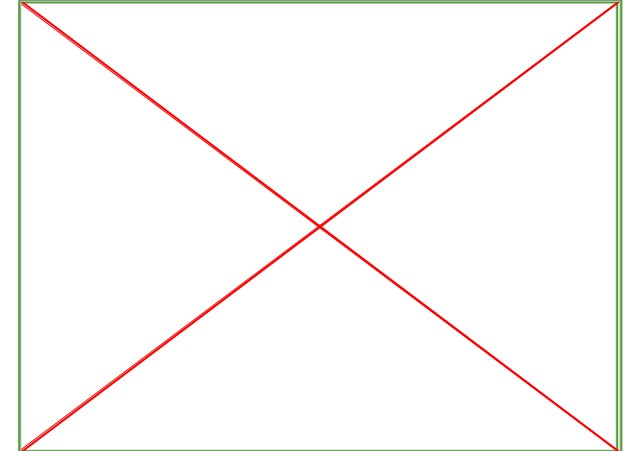
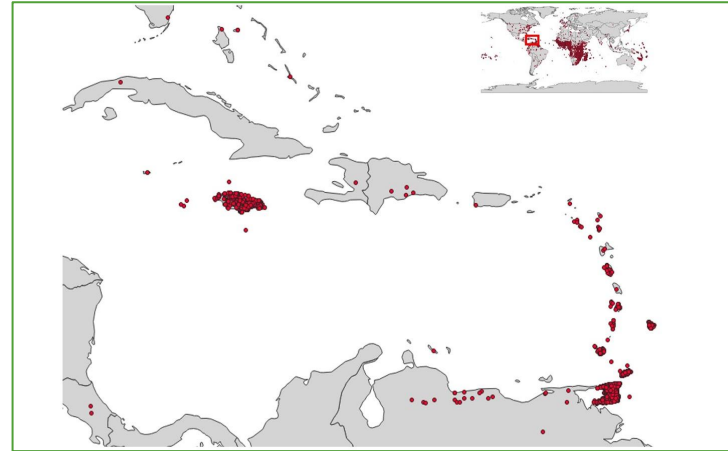
**Overall objective:** Improved management of natural capital for human well-being; through increased application of biodiversity information as evidence for decision making

- Initial €3,9 million grant under the EuropeAid Biodiversity for Life (B4Life) flagship umbrella programme, €1m in-kind contribution from GBIF
- First phase 2015-2019: Funded 63 projects in sub-Saharan Africa, Caribbean and Pacific (ACP) countries
- Regional capacity enhancement workshops trained project teams in biodiversity data mobilization and use
- Extension agreed to 2023, €1.6m budget top-up



# BID IN THE CARIBBEAN: FIRST-PHASE OUTCOMES

|  |  |                |
|--|--|----------------|
|    | Advancing Jamaican biodiversity data products and information services                               | National grant |
|    | Improving biodiversity data accessibility in Trinidad & Tobago, Barbados and Suriname                | Regional grant |
|    | Capacity building for biodiversity data sharing through the Caribbean Coastal Data Centre in Jamaica | Small grant    |
|    | Improving natural resources management in Belize by mobilizing biodiversity data                     | National grant |
|    | Developing biodiversity informatics in Haiti for better conservation management                      | Small grant    |
|    | Tracking the red lionfish invasion in Barbados   | Small grant    |
|  | Improve accessibility of Surinamese biodiversity data through digitizing and partnerships            | National grant |
|  | Enhancing Guyana's national biodiversity information system database                                 | National grant |



- 8 funded projects covering 9 Caribbean countries
- 81 datasets published in GBIF.org
- 15 Caribbean institutions publishing biodiversity data
- Growing community of practice in biodiversity informatics
- Mentoring and training involving wider LAC region



# BID IN THE CARIBBEAN: SECOND-PHASE PLANS

- Call for proposals launched in September 2020
- Eligible countries expanded to:
  - All Caribbean island states
  - S. American countries with Caribbean coastline
  - All Mesoamerican countries (Central America + Mexico)
  - EU overseas territories as partners in regional projects



# BID IN THE CARIBBEAN: SECOND-PHASE PLANS

Four grant types:

- **Regional data mobilization grant:** establishing or strengthening international collaborations to increase biodiversity data mobilization addressing regional sustainable development needs
  - Funding limit: €120,000 (3 or more countries); €60,000 (2 countries)
- **National data mobilization grant:** establishing or strengthening national biodiversity information facilities and increasing biodiversity data mobilization to respond to national priorities
  - Funding limit: €40,000
- **Institution-level data mobilization grant:** mobilizing data relevant for sustainable development
  - Funding limit: €20,000
- **Data-use grant:** building on existing relationships between biodiversity data-holding institutions and decision makers, and providing data solutions that respond to a specific policy need
  - Funding limit: €60,000



# BID IN THE CARIBBEAN: SECOND-PHASE PLANS

## Timetable:

- **May 2020:** Pre-announcement of BID extension in all regions
- **August 2020:** Pre-announcement of BID Caribbean 2020 call
- **September 2020:** Call for concept notes (3 months)
- **February 2021:** Selected applicants invited to submit full proposals (2 months)
- **May/June 2021:** Selection of funded projects
- **July 2021-July 2023:** Project implementation period
- **August 2021 (TBC):** Regional capacity enhancement workshop



# THANK YOU

Tim Hirsch  
thirsch@gbif.org



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





## GBIF participation in the Latin American and Caribbean Region



**GBIF**

Global Biodiversity  
Information Facility

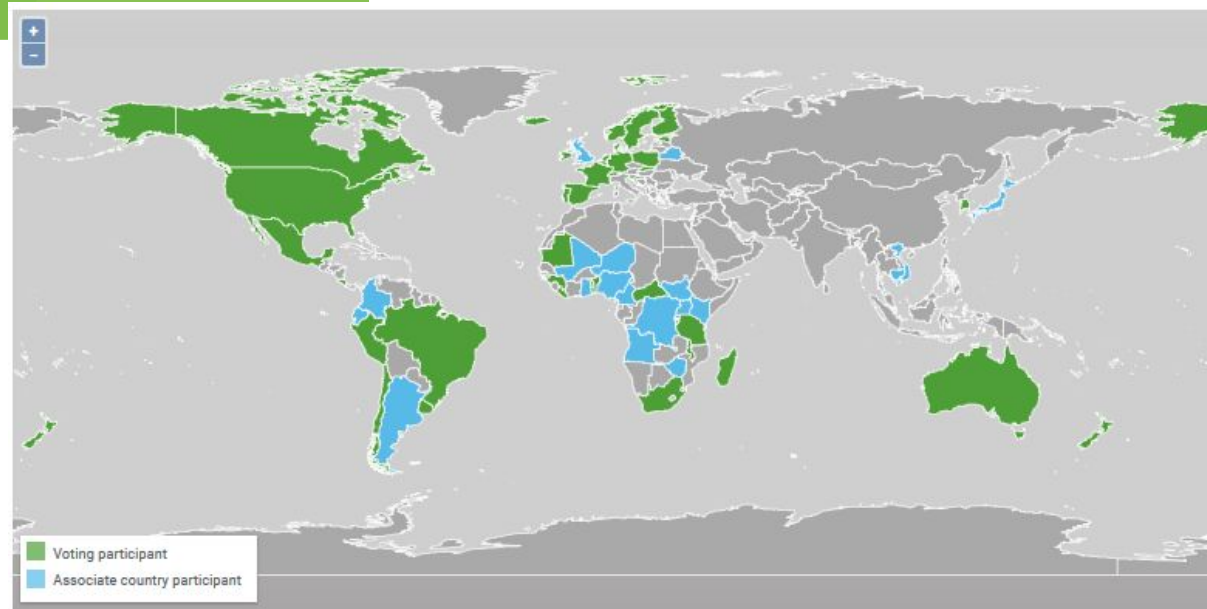
Anabela Plos, NM GBIF Argentina and LAC regional representative

# The GBIF Network

41 VOTING PARTICIPANTS

19 ASSOCIATE COUNTRY PARTICIPANTS

38 OTHER ASSOCIATE PARTICIPANTS



Occurrence records  
1.411.495.968

Datasets  
53.014

Publishing institutions  
1.606

Peer-reviewed papers using data  
4.451



# Latin American and the Caribbean

6 VOTING PARTICIPANTS

3 ASSOCIATE COUNTRY PARTICIPANTS

1 OTHER ASSOCIATE PARTICIPANT

351 PUBLISHERS

56,758,098 OCCURRENCES



# Latin American and the Caribbean

| Role ▾   | Name                          | Participant  |          |             |            |
|--|-------------------------------|--------------|----------|-------------|------------|
| Nodes regional representative Latin America and the Caribbean        | <b>Plos, Anabela</b>          | Argentina    |          |             |            |
| Nodes regional representative deputy Latin America and the Caribbean | <b>Amaya Montano, Leisy</b>   | Chile        |          |             |            |
| <b>10 participants</b>   |                               |              |          |             |            |
| Participant ▾  | Membership ▾                  | Member since | Datasets | Occurrences | Publishers |
| <a href="#">Andean Network of BioNET-INTERNATIONAL</a>               | Other associate participant   | 2007         | 0        | 0           | 0          |
| <a href="#">Argentina</a>  | Associate country participant | 2002         | 277      | 4,266,630   | 47         |
| <a href="#">Brazil</a>   | Voting participant            | 2012         | 404      | 12,033,863  | 103        |
| <a href="#">Chile</a>  | Voting participant            | 2009         | 35       | 1,742,843   | 32         |
| <a href="#">Colombia</a>   | Associate country participant | 2003         | 1,198    | 10,534,513  | 139        |
| <a href="#">Costa Rica</a>   | Voting participant            | 2001         | 17       | 9,651,135   | 6          |
| <a href="#">Ecuador</a>  | Associate country participant | 2016         | 8        | 2,830,697   | 7          |
| <a href="#">Mexico</a>   | Voting participant            | 2001         | 961      | 12,938,722  | 4          |
| <a href="#">Peru</a>   | Voting participant            | 2002         | 10       | 2,501,217   | 9          |
| <a href="#">Uruguay</a>  | Voting participant            | 2009         | 3        | 258,478     | 4          |

# GBIF programs on the LAC region

## For GBIF Participants (MoU)

- Capacity Enhancement Support Programme (CESP)
- Young Research Awards

## For the Caribbean

- Biodiversity Information for Development (BID)

## For all

- Ebbe Nielsen Challenge



Palomita (*Codonorchis lessonii*) Ushuaia, AR. Gomzin (CC-BY-NC)

# CESP Programme

The Secretariat has opened annual calls for proposals under CESP since 2014.

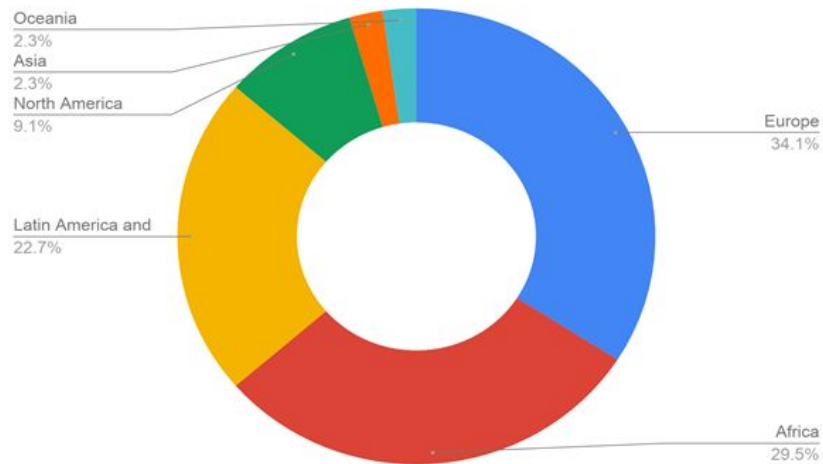
The **33 CESP** projects funded in the period **2014-2019** received a total of **€ 410,940** of core funds, and leveraged an estimated further € 629,482 in co-funding from the participants involved, making the combined total investment in the projects

**€ 1,040,422.**



Pehuén (*Araucaria araucana*) Copahue,  
AR. Michelle Delaloye (CC-BY-NC)

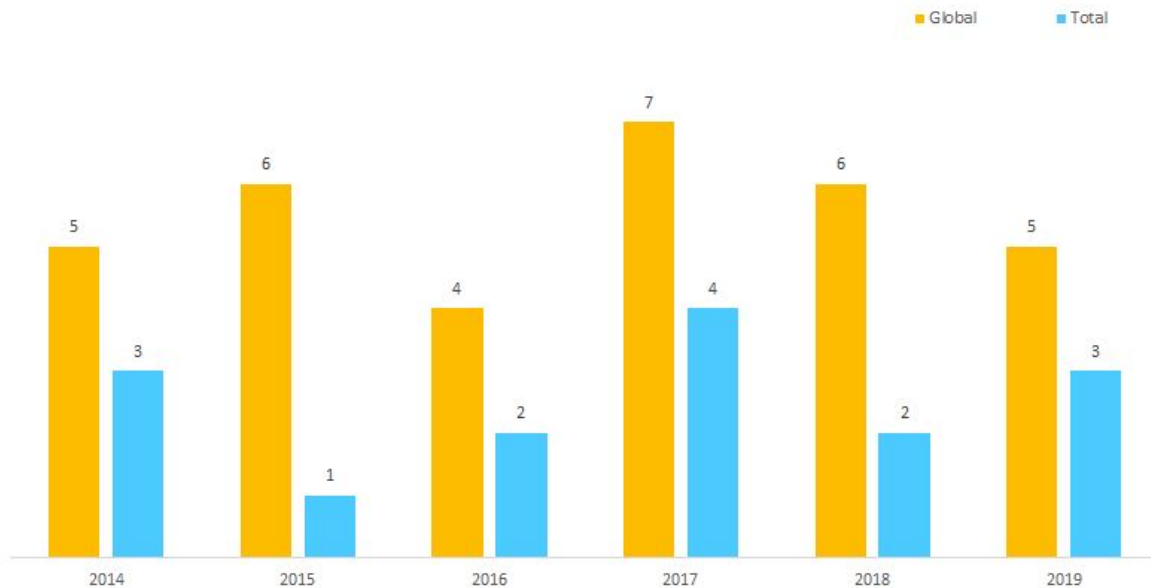
# CESP Programme



The CESP projects have involved 44 Participants (46% of all GBIF Participants) from all six regions in GBIF.



# CESP Programme



15 CESP projects on the LAC region



# Young Researchers Award

## Young Researchers Award

*This annual award aims to foster innovation in the use and mobilization of biodiversity data shared through the GBIF network.*



2017 Young Researchers Award winner Nora Escribano, in the stacks at the Museum of Zoology, University of Navarra, Spain.

# Young Researchers Award

Since 2010, 2 awards by year.

9 of 18 awards for the LAC region

- Argentina
- Brazil
- Colombia
- Mexico
- Venezuela



Capybara (*Hydrochoerus hydrochaeris*) PN El Palmar, AR. Constanza Molinari (CC-BY-NC)





Regional project: 1    National projects: 3    Small projects: 4

€ 312,000 to eight projects in seven Caribbean countries

# Ebbe Nielsen Challenge

2020 Ebbe Nielsen Challenge seeks open-data innovations for biodiversity

*Deadline for GBIF's annual open-ended incentive prize: 27 July 2020*



# Ebbe Nielsen Challenge

Since 2015

2 awards for the LAC region

- Brazil
- Colombia



Mara (*Dolichotis patagonicus*) Utracán, AR. G.M. Alonso (CC-BY-NC)





A CESP project: Increasing capacities to  
develop National Species Checklists in the  
Latin America and the Caribbean Region

Francisco Pando, CYTED Node manager / CSIC - Spain



**GBIF**

Global Biodiversity  
Information Facility

8ª Reunión Regional de Nodos LAC  
May 2020

## CONTEXT

Species checklists **are a key component** of any biodiversity information system.

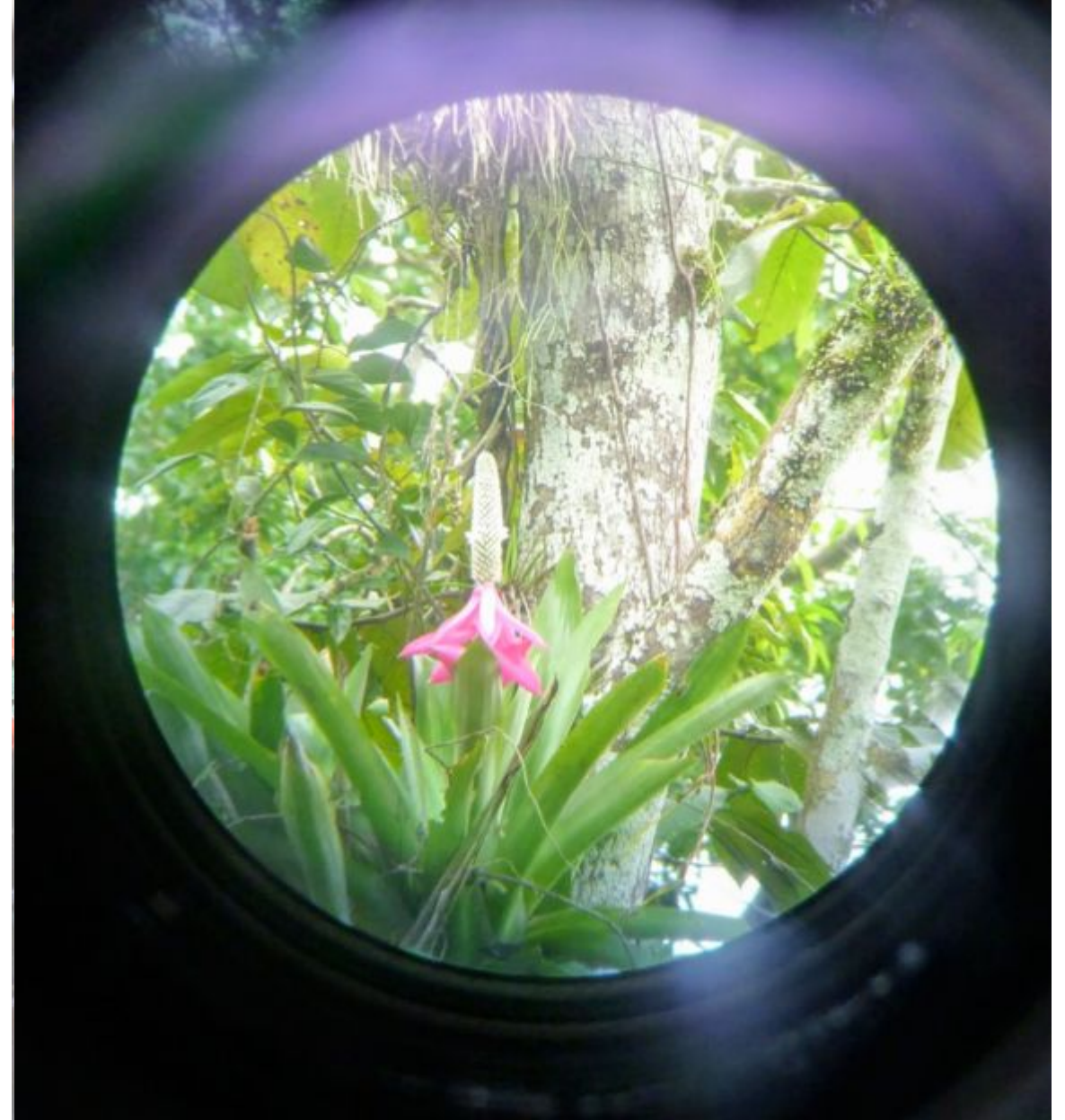
Species checklists **are needed for many activities**, scientific and otherwise (management, policy making, citizen science, etc.).

Species checklists **are diverse**: In scale (local, national, regional), thematic (invasive, endemic, medicinal species, vernacular names), etc.

Species checklists know-how **is heterogeneous** in the region.

There is **value in having shared methods**, shared checklists at regional level

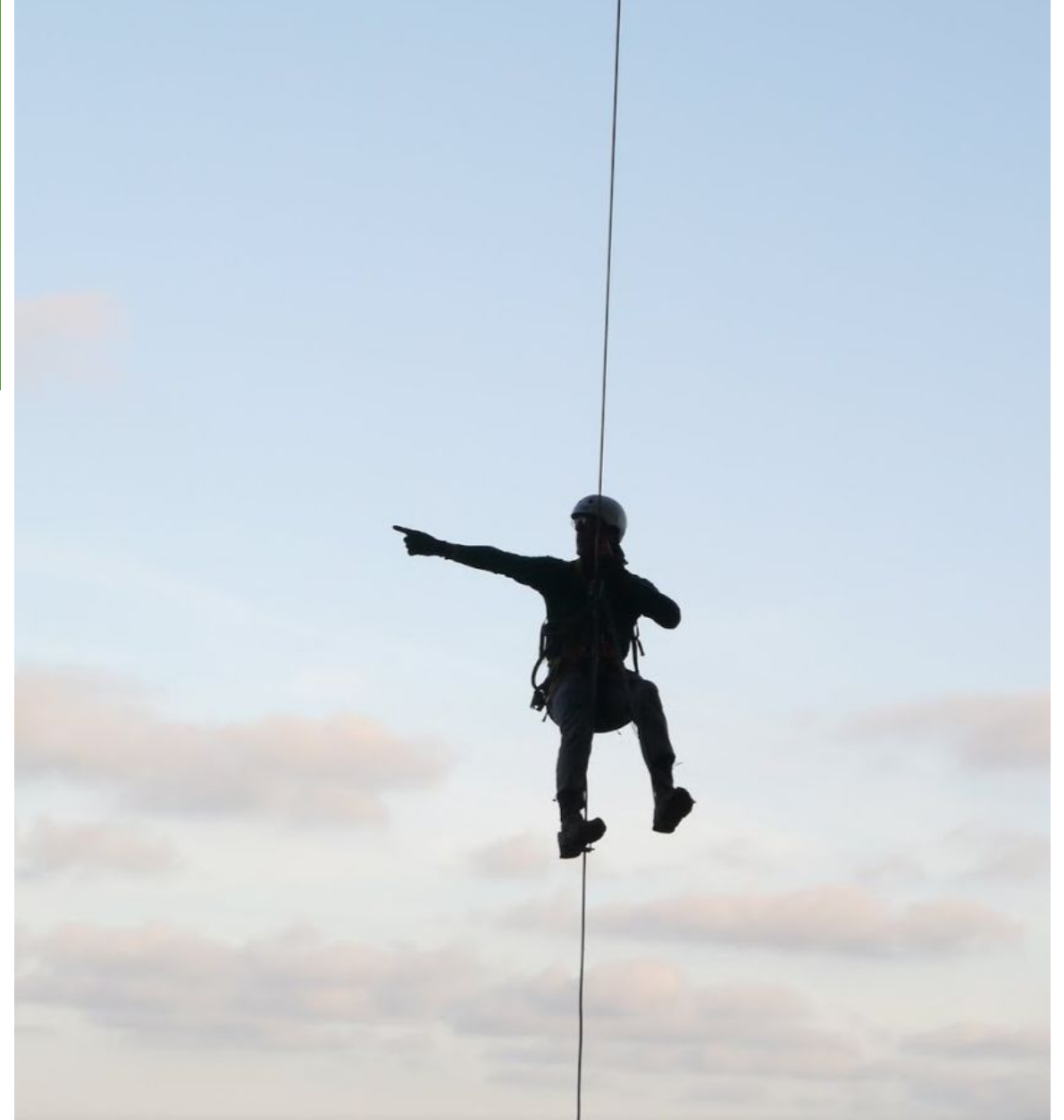
Currently: **no common standards**, compiling a regional list difficult



Costa Rica

# PROJECT OBJECTIVES

1. Define **consensual procedures and requirements** supported by existing and proven tools (e.g. Darwin Core, IPT) that allow the **integration** of different **checklists** built with a shared methodology and homogeneous quality standards. Also, the **validation** of other data sets and support the **generation of value-added data products** (GBIF Implementation Plan 2017-2021, Task 2.b.iii)
2. **Identify** all the activities concerning **checklist** development within the **LAC region** and their convergence points.



# PARTNERS

Anabela Plos (PI). [Argentina](#). MACN-CONICET  
● Leonardo Buitrago, Dairo Escobar. [Colombia](#) ●  
Francisco Pando. [CyTED](#) ● Jose Clavijo. [AndinoNet](#) ●  
Diana Hernández. [México](#) ● Andrea Nunes, Rafaela  
Forzza. [Brazil](#) ● Leisy Amaya. [Chile](#) ● Néstor A.  
Acosta. [Ecuador](#) ● Harol Gutiérrez. [Peru](#) ● Hugo  
Ignacio Coitiño. [Uruguay](#) ● Leslie Melisa Ojeda.  
[Guatemala](#).

9 (8+1) Countries + 2 Organizations



Perú



# MAIN ACTIVITIES AND RESULTS

## *The means:*

- Monthly meetings via Skype
- Workshop (MACN, Buenos Aires, March 12-14. 2019)
- Survey
- Train the trainers actions

## *The results:*

*(tangible)*

- Report (ESP, PRT, ENG)
- Pilot checklists

*(intangible)*

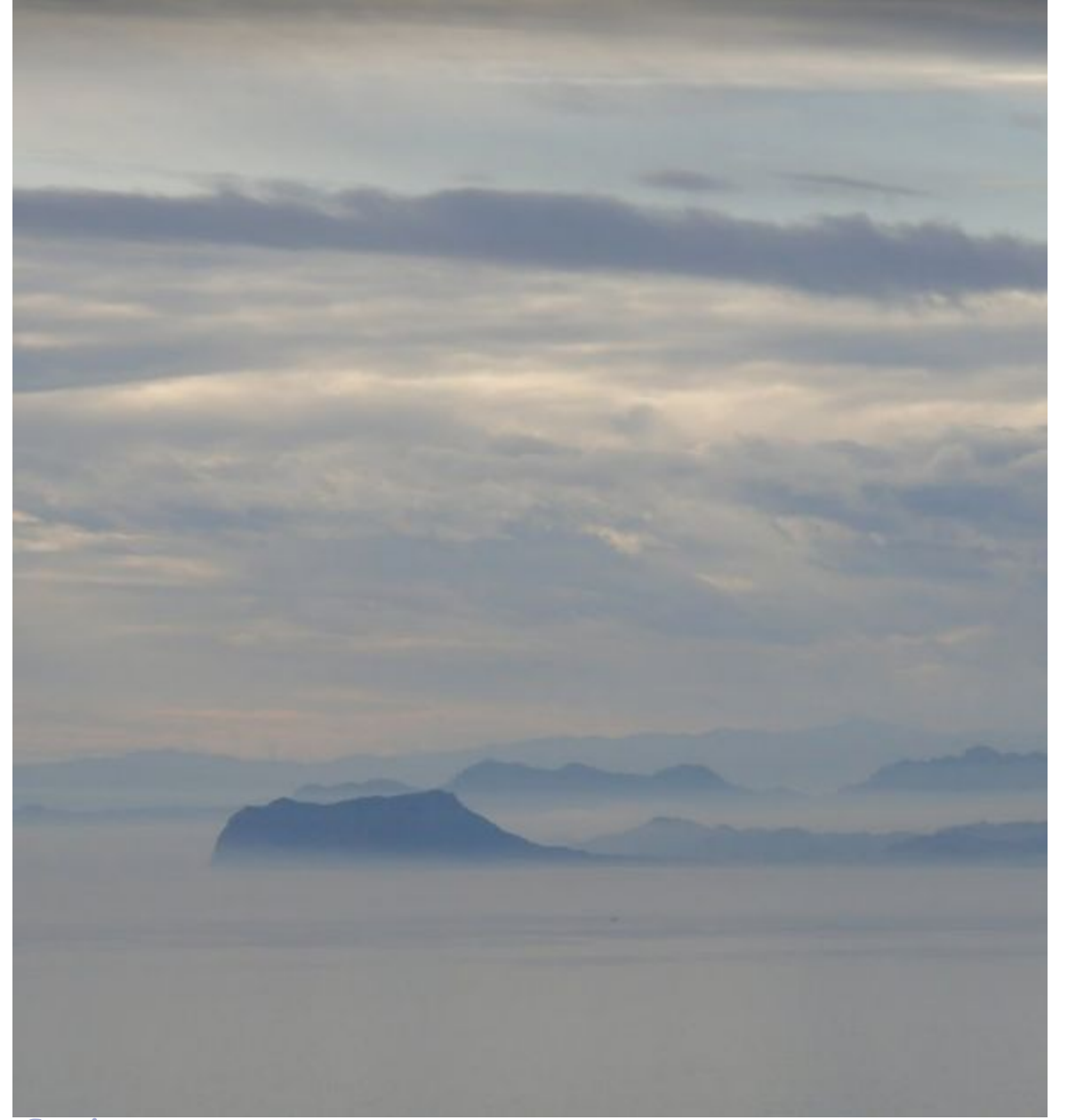
- Mutual learning, consensus building



Argentina

# PROJECT IMPACTS

- A cadre of people with the know-how to develop check-lists and to train students and professionals
- Document of the consensual procedures and requirements in Spanish, Portuguese and English
- An structured approach to checklists types
- A regional overview of species checklists, and associate capacity (Survey & analysis)
- 11 pilot checklists



Spain

## BEST PRACTICES & LESSONS LEARNED

Species checklist are diverse and subjected to many requirements scientific and otherwise. One size does not fit all.

Define clear requirements before pulling together (or even expertise). Recommendations and checklist classification produced.

Extracting species checklists from other sources (specimens, literature) as secondary datasets --as done by Pazi-- may be counter-productive and confusing for the end user and the original authors. Context and proper credit are essential.



Chile

## LAST SLIDE

- Aligned with GBIF Implementation Plan 2017-2021
- Responding to country needs
- Adding value at regional level
- Low cost, high return (but)

More info:

<https://www.gbif.org/es/project/1tM8FmqzlyG MmUilMaaSsl/increasing-capacities-to-develop-national-species-checklists-in-the-latin-america-and-the-caribbean-region#about>

Anabela Plos > [plos@macn.gov.ar](mailto:plos@macn.gov.ar)

Paco Pando > [pando@rjb.csic.es](mailto:pando@rjb.csic.es)



Colombia



# Biodiversity data for improving natural resources management

Elma Kay & Ivanna Waight-Cho, University of Belize Environmental Research Institute



*This programme is funded  
by the European Union*



# Project objectives

- Mobilize approximately 70% of Belize's existing unsystematized bird data through eBird and GBIF
- Analyze and disseminate results to improve natural resources management



# Main activities and results

- 93,207 unsystematized records identified and 31% mobilized
- Data sharing protocols created and agreements implemented with 4 NGO partners
- Partnered with Cornell Lab of Ornithology to deliver data mobilization and data analysis training to 19 and 12 NRM professionals



# Project impacts

- Belize has capacity for mobilizing biodiversity data into global platforms (eBird & GBIF)
- Data quality standards are now clear and in place for bird data
- Collaborative network for bird monitoring and capacity building established





# Best practices & lessons learned

- Best to invest upfront in establishing quality standards for data collection and digitization
- Collaborative networks are needed for sustainability





## Capacity Building for Biodiversity Data Sharing Through the Caribbean Coastal Data Centre, Jamaica

Marcia Creary Ford, Caribbean Coastal Data Centre

University of the West Indies-Centre for Marine Sciences

Mona Campus, Kingston, Jamaica



*This programme is funded  
by the European Union*



# Project objectives

## **Caribbean Coastal Data Centre:**

The Caribbean Coastal Data Centre (CCDC) of the Centre for Marine Sciences (CMS), archives data on the coastal and marine resources for more than 30 countries in the Caribbean. The main areas of focus are the provision of data management services and technical support to coastal and marine projects in Jamaica and the wider Caribbean

## **Project Objectives:**

To enhance the capacity of the CCDC to organize and manage primary biodiversity data about the marine environments of Jamaica and the Caribbean.

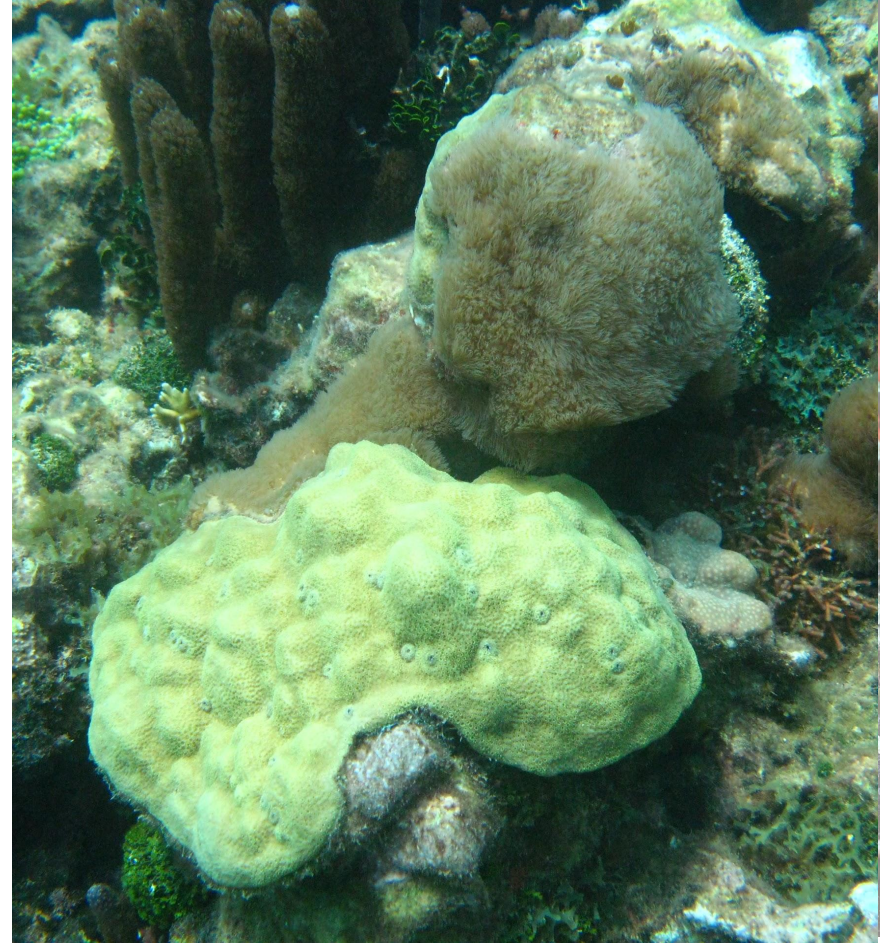
## **Collaboration:**

Discovery Bay Marine Laboratory (DBML)

Port Royal Marine laboratory (PRML)

Alligator Head Marine Laboratory (AHML)

Climate Change Division, Ministry of Economic Growth and Job Creation (CCD-MEGJC)



# Main activities and results

- Data Management Policy and Plan
  - Data holdings and needs
  - CCDC Data Inventory
- Computer System Upgrade
- Stakeholders Consultations/Training Workshops
  - Stakeholders - 13 participants
  - Workshop - 2 ½ days, 11 participants
- Digitize and Publish Data
  - 5 dataset published (corals, fish, mangroves, herbarium)
- Promotion and Feedback
  - UWI Research Data Management Project
  - Jamaica Statistical Society
  - Marine Environmental Data and Information Network (MEDIN), St Lucia
  - Climate Change Focal Point Network Jamaica



# Project impacts

- Better appreciation by stakeholders and workshop participants of the importance of proper data management
- 5 academic staff publications
- 18 Citations
- Digitizing of historic biodiversity data (ongoing)



# Best practices & lessons learned

- Publishing for marine research and monitoring project data is challenging
- Better understanding of what is required to to publish data
- The value of comprehensively documenting metadata
- The value of publishing biodiversity data online





## The 2017/18 Regional BID project of the Caribbean

Paul Ouboter, Institute for Neotropical  
Wildlife and Environmental Studies  
(NeoWild)



*This programme is funded  
by the European Union*



# Project objectives

- Establish and strengthen international collaborations to mobilize biodiversity data
- Increase the amount of biodiversity data of the Caribbean available through GBIF
- Apply biodiversity data in response to conservation priorities





# Main activities and results

- Digitizing collection specimens, field and camera trap records in Trinidad and Tobago, Barbados and Suriname: 69 data sets with 36,547 records published
- Developing a Caribbean Biodiversity portal: The Atlas of living Caribbean online since January 2019 (only data of Trinidad and Tobago, Barbados and Suriname for now)

Caribbean Portal Suriname Portal Trinidad & Tobago Portal Barbados Portal About Contact

**LIVING ATLAS OF THE CARIBBEAN**

**Living Atlas of the Caribbean**

A joint effort to improve biodiversity data accessibility and use in the region

Suriname Trinidad & Tobago Barbados

Data sharing advances scientific research and improves management planning

Barbados Museum & Historical Society Atlas of Living Australia [ala.org.au](http://ala.org.au) GBIF BID

# Project impacts

- Data published on GBIF is used by ourselves and others
- Digitization is continued
- Atlas of Living Caribbean is used by policy makers

The screenshot shows the GBIF dataset page for "NZCS Brownsberg Nature Park Camera trap Monitoring 2013-2015". The page is published by the National Zoological Collection of Suriname (NZCS) and is credited to Paul Ouboter, Dimitri Ouboter, and Vanessa Kadosoe. It features a navigation menu with options like DATASET, PROJECT, METRICS, ACTIVITY, DOWNLOAD, and HOME PAGE. A summary box indicates 6,258 occurrences and 3 citations. A bar chart shows 1 citation in 2019 and 2 citations in 2020. Below this, there are three sections of "Occurrences from this dataset":

- 438 OCCURRENCES FROM THIS DATASET:** DOI: 10.15468/dl.cwmvft, Date: 17 May 2020, Format: Simple, Occurrences: 11,731, Involved datasets: 223. Scientific name: *Puma concolor* (Linnaeus, 1771).
- 6,258 OCCURRENCES FROM THIS DATASET:** DOI: 10.15468/dl.mpgmu5, Date: 16 May 2020, Format: Species list, Records: 3,282,562, Involved datasets: 30,509. No filters used.
- 394 OCCURRENCES FROM THIS DATASET:** DOI: 10.15468/dl.sj9brp, Date: 16 May 2020, Format: Simple, Occurrences: 4,624, Involved datasets: 169. Scientific name: *Panthera onca* (Linnaeus, 1758).

Each section includes a "SHOW" button for more details. The bottom of the page features a photograph of a forest scene.

# Best practices & lessons learned

- Digitizing is successful using a number of externally hired paid assistants, the process slows down when only the institute's staff is available for this activity
- Developing an ALA from scratch is difficult. Therefore the strategy to develop only one for the use of all countries of the Caribbean seems to be the right strategy.

The screenshot shows the 'Living Atlas of Suriname' website. At the top, there are navigation links for 'Caribbean Portal', 'Suriname Portal', 'Trinidad & Tobago Portal', 'Barbados Portal', 'About', and 'Contact'. Below this is a banner image with the text 'Explore Suriname's rich biodiversity through collection specimens and observations'. The main content area features a grid of search and filter options, each with a representative image and a button:

- OCCURRENCE SEARCH** (Image: Frog) - Search the Database for Occurrence Records
- LOCATION SEARCH** (Image: Lake) - Search the Database by Location (In Development)
- CAMERA TRAPS** (Image: Deer) - Browse Camera Trap Data
- CONSERVATION** (Image: Bird) - Endemic Species, Threatened Species, Nationally Protected Species (In Development), Introduced & Invasive Species
- SPECIES IN USE** (Image: Pig) - Game Species (In Development), Fisheries Species (In Development), Timber Species (In Development), Non-timber Forest Species (In Development), Medicinal and Ornamental Plants (In Development), Wildlife Trade (In Development), Cattle & Pets (In Development)
- PESTS & VECTORS** (Image: Spider) - Pests in Agriculture, Pests in Housing (In Development), Vectors of Diseases

In the bottom right corner, there is a red square icon with an upward arrow and the letters 'ID'.

# Plans for the future

- Regional project with more Caribbean countries
- Project will support digitization in participating countries
- Goal is to include as many countries in Atlas of Living Caribbean





# BID Regional Engagement Webinar for Latin America and Caribbean

Miguel Fernandez

**NatureServe**  
Connecting Science With Conservation





# MBON

Marine Biodiversity Observation Network



119 organizations composed of 57 governmental agencies, 23 universities and research institutes, and 39 non-governmental organizations



2000+ participants and 15 global webinars



Key Biodiversity Areas training and workshops  
in Bolivia, Peru, Ecuador and Colombia

# Essential biodiversity variables for mapping and monitoring species populations


Walter Jetz <sup>1\*</sup>, Melodie A. McGeoch <sup>2</sup>, Robert Guralnick <sup>3</sup>, Simon Ferrier<sup>4</sup>, Jan Beck<sup>5</sup>, Mark J. Costello <sup>6</sup>, Miguel Fernandez<sup>7,8,9</sup>, Gary N. Geller<sup>10</sup>, Petr Keil <sup>11</sup>, Cory Merow<sup>1</sup>, Carsten Meyer <sup>11,12</sup>, Frank E. Muller-Karger <sup>13</sup>, Henrique M. Pereira <sup>11,14,15</sup>, Eugenie C. Regan<sup>16</sup>,

OXFORD  
ACADEMIC

BioScience

Overview Articles

## Using Semistructured Surveys to Improve Citizen Science Data for Monitoring Biodiversity

STEVE KELLING, ALISON JOHNSTON, ALETHA BONN, DANIEL FINK, VIVIANA RUIZ-GUTIERREZ, RICK BONNEY, MIGUEL FERNANDEZ, WENDY M. HOCHACHKA, ROMAIN JULLIARD, ROLAND KRAEMER, AND ROBERT GURALNICK 

Biological Conservation 235 (2019) 157–163



ELSEVIER

Contents lists available at ScienceDirect

Biological Conservation

journal homepage: [www.elsevier.com/locate/biocon](http://www.elsevier.com/locate/biocon)



### Mainstreaming biodiversity: A review of national strategies

Penelope R. Whitehorn<sup>a</sup>, Laetitia M. Navarro<sup>b,c</sup>, Matthias Schröder<sup>d,e</sup>, Miguel Fernandez<sup>e,f</sup>, Xavier Rotllan-Puig<sup>g</sup>, Alexandra Marques<sup>h</sup>

<sup>a</sup> Karlsruhe Institute of Technology KIT, Institute of Meteorology and Climate Research Atmospheric Environmental Research (IMK-IFU), Kreuzackbahnstraße 19, 82467 Garmisch-Partenkirchen, Germany

<sup>b</sup> German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Deutscher Platz 5e, 04103 Leipzig, Germany

<sup>c</sup> Institute of Biology, Martin Luther University Halle-Wittenberg, Am Kirchtor 1, 06108 Halle (Saale), Germany

<sup>d</sup> UFZ – Helmholtz Centre for Environmental Research, Department of Ecosystem Services, Department of Computational Landscape Ecology, Permoserstr. 15, 04318 Leipzig, Germany

<sup>e</sup> NatureServe, 4600 N. Fairfax Dr., Arlington, VA 22203, USA

<sup>f</sup> Smithsonian-Mason School of Conservation, Department of Environmental Science & Policy, George Mason University, 400 University Drive, Fairfax, VA 22030, USA

<sup>g</sup> ASTER-Projects, Barri Reboil 9 1r, 08694 Guardiola de Berguedà, Barcelona, Spain

<sup>h</sup> European Commission, Joint Research Centre (JRC), Ispra, Italy





# A change in the paradigm

From asking to listening

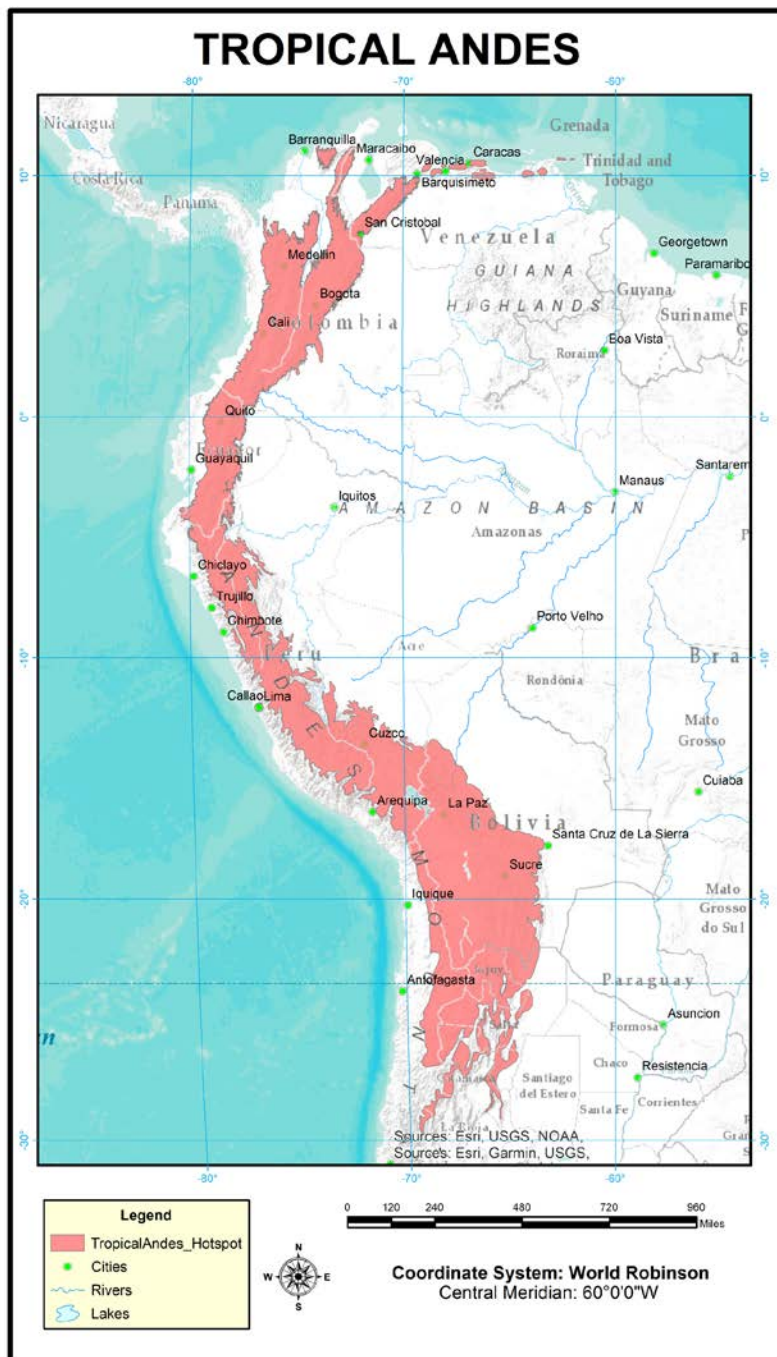


From data control to collaboration and sharing

More data



More accurate monitor and forecasting  
More informed policy-making  
More science and less guesswork



Germany – German Centre for Integrative Biodiversity Research (iDiv – GEO BON)  
 Peru – Asociación para la Conservación de la Cuenca Amazónica (ACCA)  
 Bolivia – The Asociación Boliviana Para la Investigación de Ecosistemas Andino Amazónicos (ACEAA)  
 Ecuador – Instituto Nacional de Biodiversidad (INABIO- EcoCiencia)  
 Spain – The Universidad de Córdoba (UCO)  
 Powered by NatureServe



Complexity level

Data collection

Detecting biodiversity change

- Genetic composition
- Species populations
- Species traits
- Community composition
- Ecosystem function
- Ecosystem structure

Science & Research

Attributing cause to biodiversity change

- Habitat degradation
- Land-use change
- Invasive species
- Climate change
- Overexploitation

Informing public policy & decision making

Reporting on change & attribution

- Key Biodiversity Areas
- Red List of Species & Ecosystems
- Other Global Biodiversity change indicators
- Invasive Species Assessments
- Land tenure trends

Private sector engagement

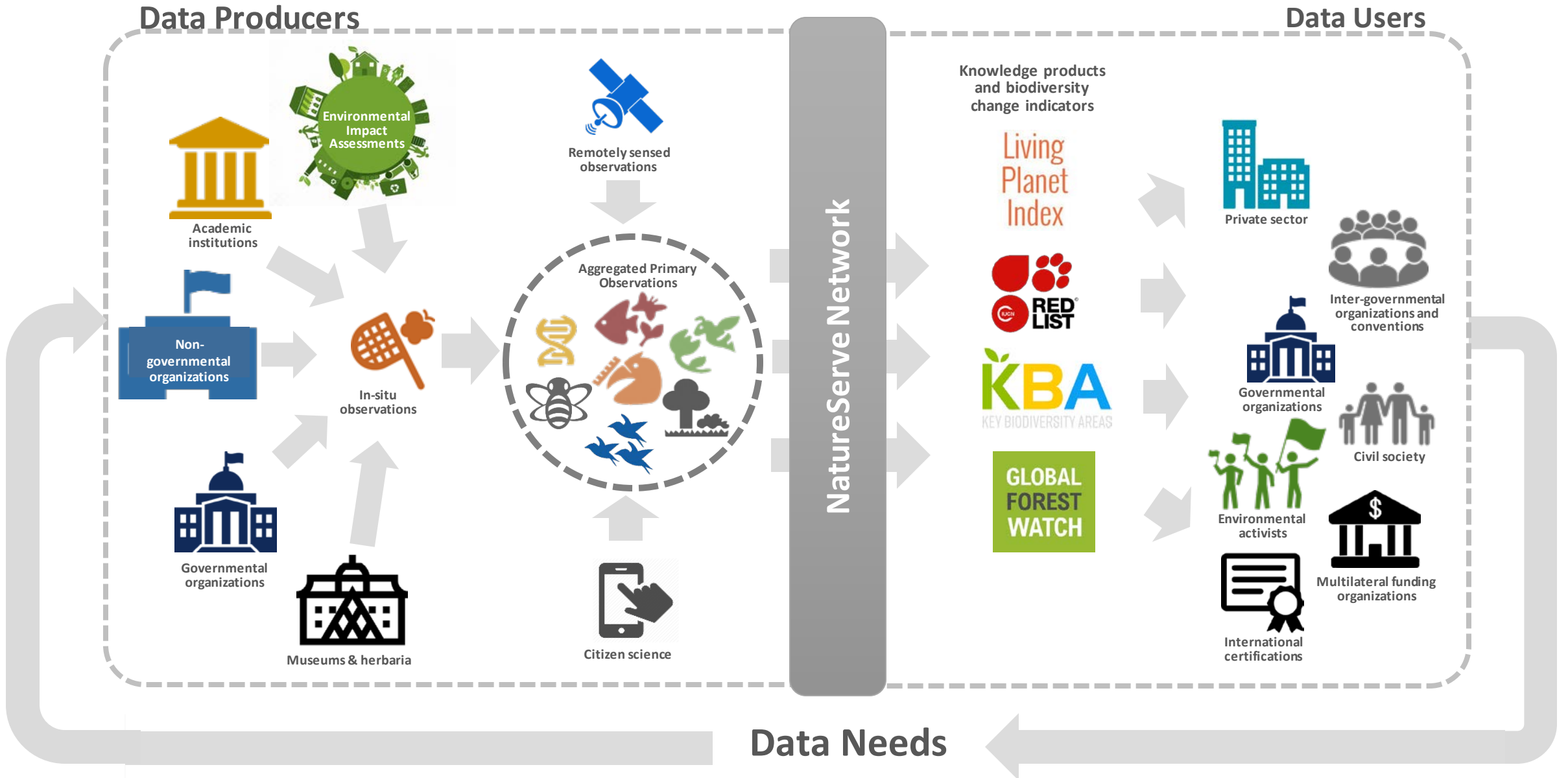
Project change & attribution

- Biodiversity scenarios
- Systems approach
- Models & projections
- Socio-ecological feedbacks

Societal engagement & behavioral change

Information feedback

# Mainstreaming biodiversity information in LAC region



# Meeting the Challenge: Nine Step BON Development Process

## ENGAGEMENT



- ① Create an Authorizing Environment
- ② Establish design and implementation team

## ASSESSMENT



- ③ User needs assessment and choice of regional assessment units
- ④ Inventory of data, tools and platforms

## DESIGN



- ⑤ Focal Ecosystems, Conceptual Models, EBVs and Primary Observations
- ⑥ Data collection Methods
- ⑦ Sampling Framework
- ⑧ Data management, Analysis and Reporting

## ⑨ IMPLEMENTATION



Design and implementation team



Scientific community



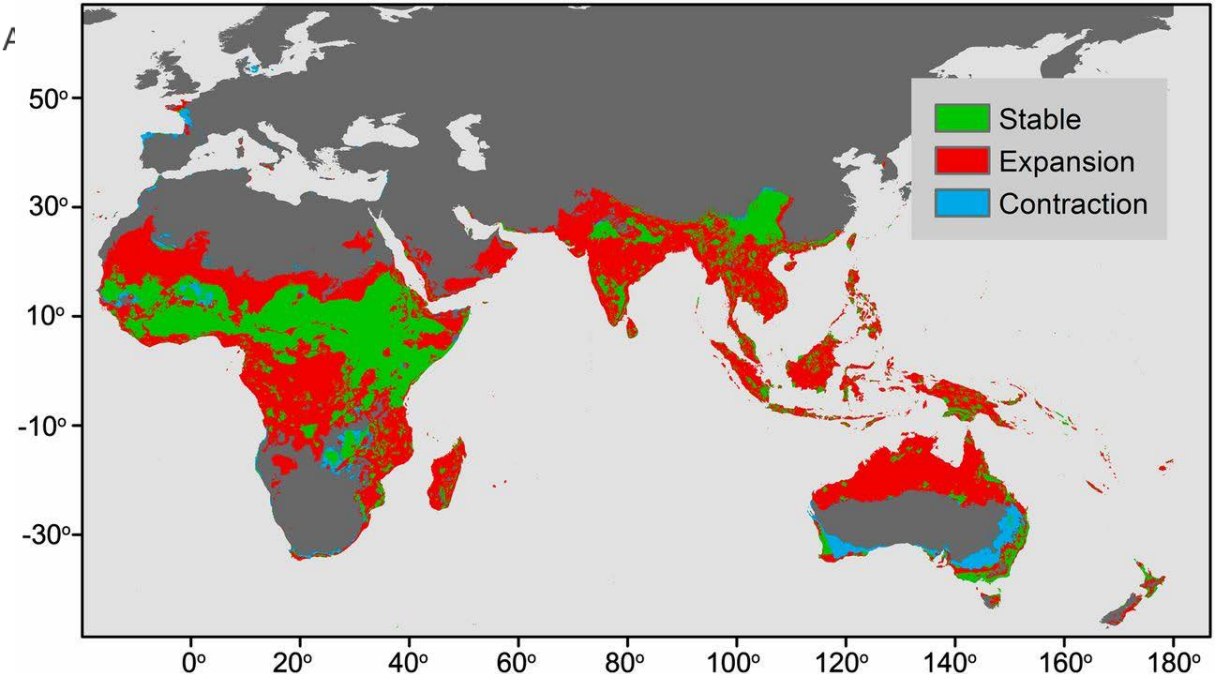
Decision and Policy makers



# Interdisciplinary approaches to understanding disease emergence: The past, present, and future drivers of Nipah virus emergence

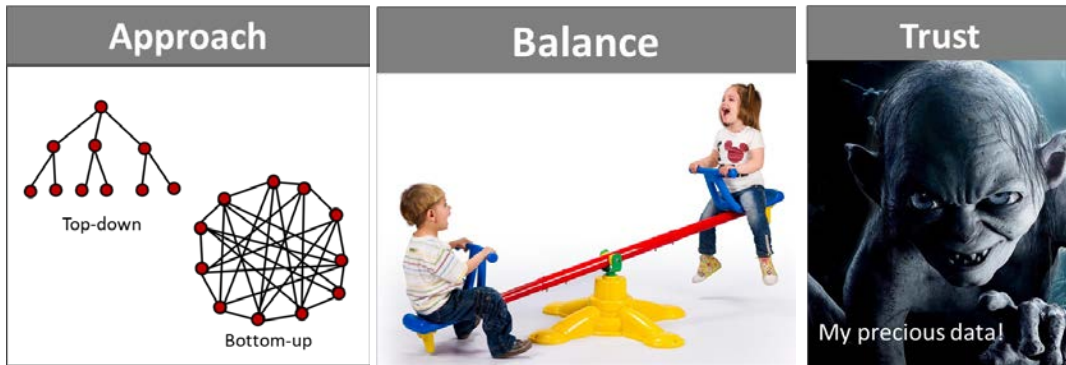
Peter Daszak, Carlos Zambrana-Torrel, Tiffany L. Bogich, Miguel Fernandez, Jonathan H. Epstein, Kris A. Murray, and Healy Hamilton

PNAS February 26, 2013 110 (Supplement 1) 3681-3688; first published *A*  
<https://doi.org/10.1073/pnas.1201243109>



# Financial sustainability

Move beyond projects to programs  
Focus attention on the financial sustainability of network



**POLICYFORUM**

ENVIRONMENT

## Globalization of Conservation: A View from the South

Successful global strategies for biodiversity conservation require increasing reliance on local leadership and major investment in local capacity.

J. P. Rodriguez,<sup>1</sup> A. B. Taber,<sup>2\*</sup> P. Daszak,<sup>2,3</sup> R. Sukumar,<sup>4,5</sup> C. Valladares-Padua,<sup>6</sup> S. Padua,<sup>6</sup> L. F. Aguirre,<sup>7,8</sup> R. A. Medellín,<sup>9</sup> M. Acosta,<sup>10</sup> A. A. Aguirre,<sup>2</sup> C. Bonacic,<sup>11</sup> P. Bordino,<sup>12</sup> J. Bruschini,<sup>2</sup> D. Buchori,<sup>13</sup> S. González,<sup>14</sup> T. Mathew,<sup>5</sup> M. Méndez,<sup>12,15</sup> L. Mugica,<sup>10</sup> L. F. Pacheco,<sup>8,16</sup> A. P. Dobson,<sup>17</sup> M. Pearl<sup>2</sup>

**Science** AAAS



## Staying engaged in GBIF and BID

Mélanie Raymond GBIF Secretariat



**GBIF**

Global Biodiversity  
Information Facility



# WHAT'S NEXT?



## BID call for proposals

- September call for LAC region
- Videos and webinars to support application process

## GBIF community webinars

- Regular updates on GBIF activities targeting nodes and publishers

## GBIF Capacity Enhancement Support Programme

- 2020 projects start in August
- Next call announced in December

## GBIF representation at CBD events

- BID-related side events



# WHAT'S NEXT?



## GBIF 2021 regional meetings

- In-person meeting for LAC in Panama?

## BID Capacity Enhancement workshops 2021

- Data mobilization and data use
- Community mentors

## Regional data publishing support

- Contact [helpdesk@gbif.org](mailto:helpdesk@gbif.org)

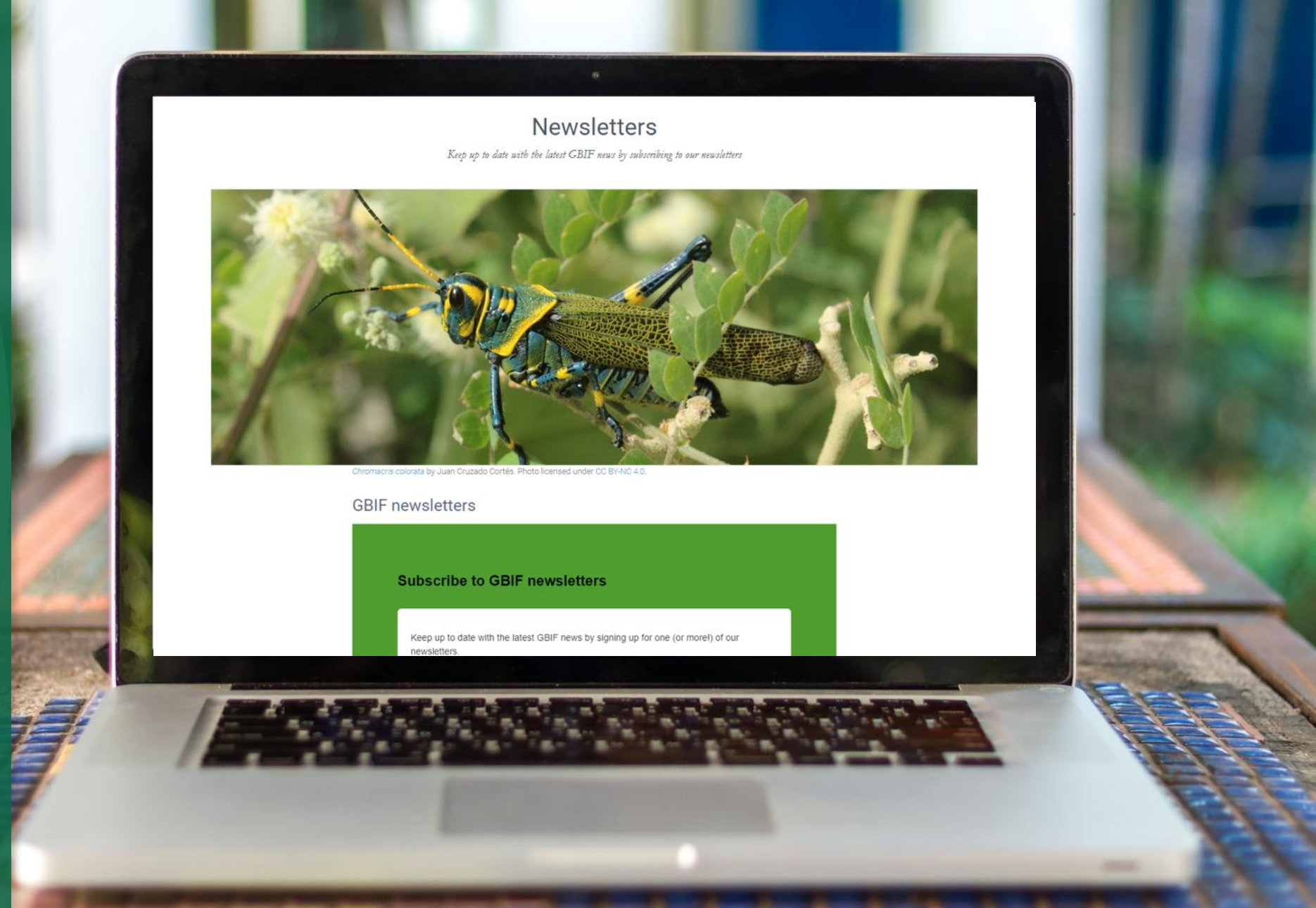
## Become a GBIF Participant country or organization

- [www.gbif.org/become-member](http://www.gbif.org/become-member)
- Contact [thirsch@gbif.org](mailto:thirsch@gbif.org)



## STAY IN TOUCH!

- [gbif.org/newsletters](https://gbif.org/newsletters)
- BID community mailing list
- Twitter @GBIF
- Contacts for nodes and Secretariat on GBIF.org



# THANK YOU

[mraymond@gbif.org](mailto:mraymond@gbif.org)



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

