Introduction to GBIF participation in Asia and the Biodiversity Information Fund for Asia (BIFA) programme

Tim Hirsch | Deputy Director

GBIF | Global Biodiversity Information Facility

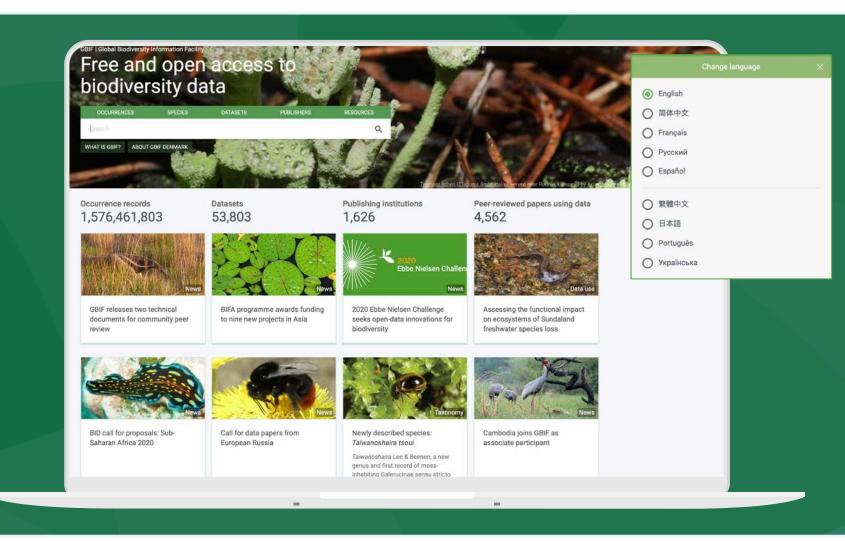Photo: Koh Yao Noi, Thailand. Tim Hirsch, 2019

WHAT IS GBIF?

Intergovernmental network and research infrastructure

Provides anyone, anywhere, free and open access to data about all types of life on Earth
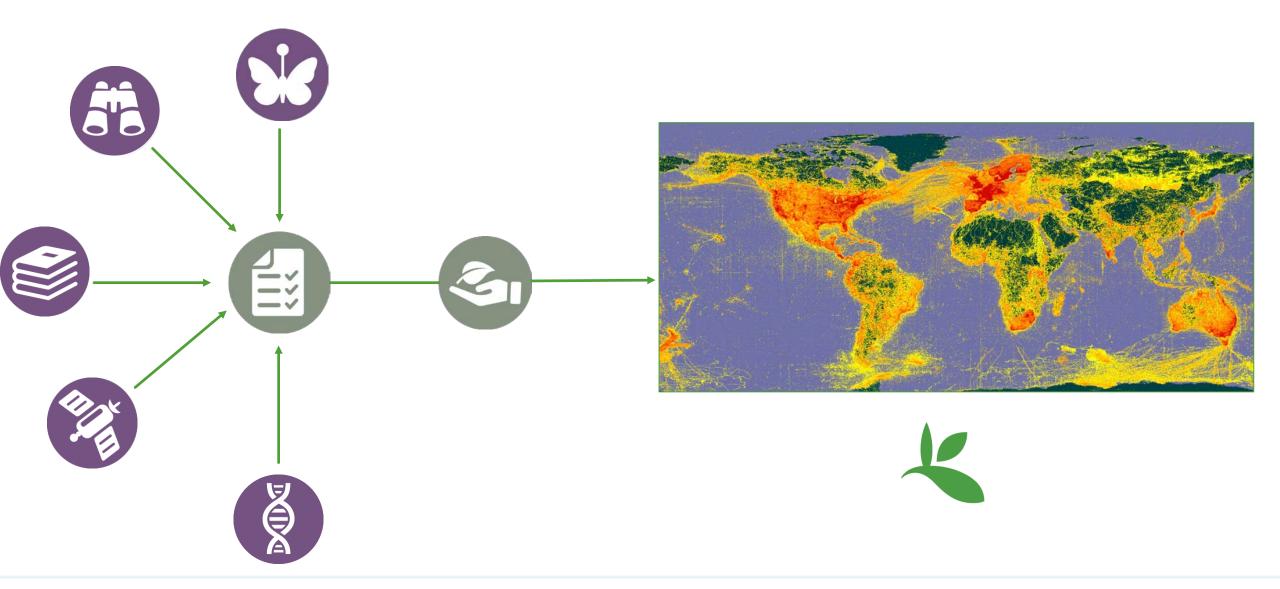
Voluntary collaboration through Memorandum of Understanding

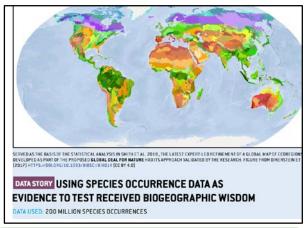Participant nodes, Secretariat in Copenhagen, DK

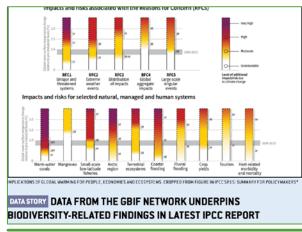# A WINDOW ON EVIDENCE ABOUT WHERE SPECIES HAVE LIVED, AND WHEN

A DATA RESOURCE TO SUPPORT RESEARCH AND SUSTAINABLE DEVELOPMENT

DATA STORY USING SPECIES OCCURRENCE DATA AS EVIDENCE TO TEST RECEIVED BIOGEOGRAPHIC WISDOM
DATA USED: 200 MILLION SPECIES OCCURRENCES

DATA STORY DEVELOPING AN INDICATOR FOR SUSTAINABLE DEVELOPMENT GOALS & BIODIVERSITY TARGETS USING OPEN DATA

DATA STORY DATA FROM THE GBIF NETWORK UNDERPINS BIODIVERSITY-RELATED FINDINGS IN LATEST IPCC REPORT

DATA STORY FLYING FOXES PREDICT NIPAH VIRUS TRANSMISSION RISK
DATA USED: 47,942 SPECIES OCCURRENCES

Conservation

- Protected areas
- Threatened species
- Invasive species risk

Food Security

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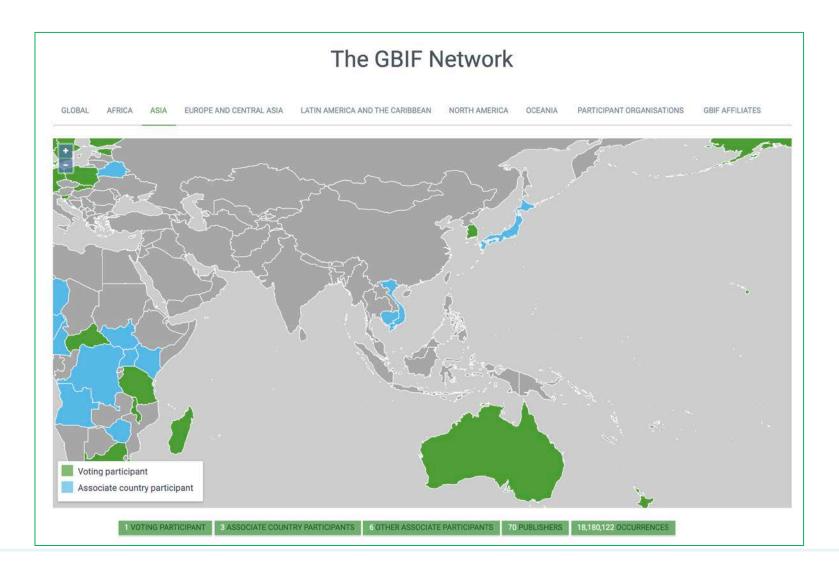- Fisheries planning

Climate change

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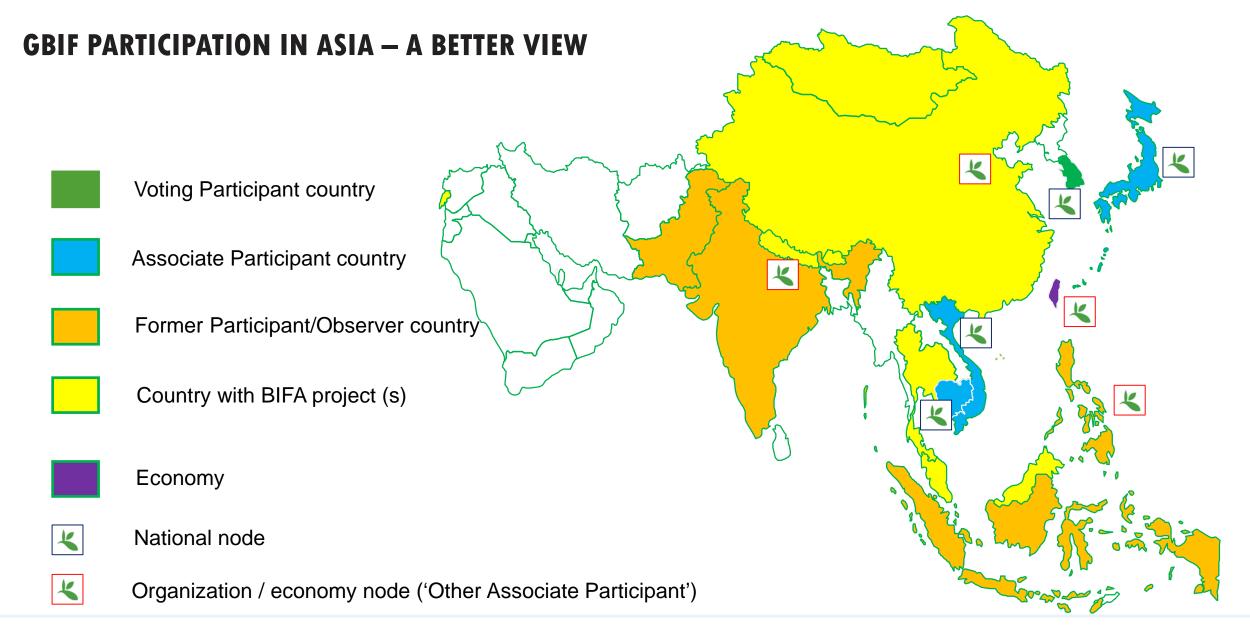- Mitigation benefits, risks

Human health

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

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GBIF PARTICIPATION IN ASIA – THE OFFICIAL VIEW

GBIF PARTICIPATION IN ASIA – A BETTER VIEW

- Voting Participant country
- Associate Participant country
- Former Participant/Observer country
- Country with BIFA project (s)
- Economy
- National node
- Organization / economy node ('Other Associate Participant')

BIFA programme awards funding to nine new projects in Asia

Projects selected under the Biodiversity Information Fund for Asia will promote the mobilization and use of biodiversity data from Asian collections and ecological monitoring

Prickly water lily (*Euryale ferox*) observed in Xiaoxingkai Lake, Heilongjiang, China by John Howes. Photo via iNaturalist (CC BY-N...
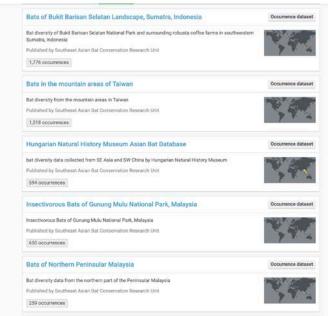
Ministry of the Environment, Japan 環境省

2020 BIFA project grantees

Project	Country of project lead	Funding from BIFA	Cofunding
Digitizing and data basing of bee specimens in Thailand	Thailand	€ 13,888	€ 13,888
Enriching the Bhutan Biodiversity Portal through digitization and mobilization of specimen collections	Bhutan	€ 7,952	€ 9,072
Supporting conservation through mobilizing ecological data from Kalimantan, Indonesia	Indonesia	€ 14,985	€ 4,828
Mobilizing Indonesian butterfly collections at the Museum Zoologi Bogor (II)	Indonesia	€ 14,953	€ 15,516
Digitization of specimens at the University of the Philippines Los Baños Museum of Natural History	Philippines	€ 14,992	€ 5,233
Digitization of mycological collections in Nepal	Nepal	€ 14,750	€ 8,500
Mobilizing invertebrate monitoring data in South-East Asia	China	€ 14,127	€ 81,102
Monitoring the diversity and distribution of whales in Vietnamese waters	Viet Nam	€ 14,783	€ 14,585
Cleaning and digitizing plant specimen records from Heilongjiang Province, China	China	€ 7,399	€ 11,015

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NEW DATASETS FROM ASIA

DATA USE IN PEER-REVIEWED JOURNALS 31 May 2020

Peer-reviewed uses by country

Year-to-date			2019 rank
1	United States	107	1
2	China	57	2
3	Brazil	54	3
4	United Kingdom	47	4
5	Mexico	42	5
6	Germany	41	6
7	Spain	37	8
8	Canada	29	10
9	Australia	21	7
10	France	19	9

Peer-reviewed uses by region

Europe: 310 (2020), 597 (2019)
Latin America: 170 (2020), 255 (2019)
North America: 136 (2020), 261 (2019)
Asia: 124 (2020), 220 (2019)
Africa: 37 (2020), 58 (2019)
Oceania: 24 (2020), 78 (2019)

■ 2020 ■ 2019

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GBIF.ORG WEB TRAFFIC BY COUNTRY

Country	Acquisition		
	Users ↓	New Users	Sessions
	1,733,266 % of Total: 100.00% (1,733,266)	1,724,873 % of Total: 100.13% (1,722,564)	3,270,378 % of Total: 100.00% (3,270,378)
1. 🇺🇸 United States	193,460 (10.99%)	191,119 (11.08%)	321,811 (9.84%)
2. 🇲🇽 Mexico	138,610 (7.88%)	138,002 (8.00%)	232,593 (7.11%)
3. 🇨🇴 Colombia	107,281 (6.10%)	105,168 (6.10%)	194,774 (5.96%)
4. 🇪🇸 Spain	92,302 (5.24%)	90,060 (5.22%)	173,018 (5.29%)
5. 🇧🇷 Brazil	87,223 (4.96%)	85,134 (4.94%)	157,769 (4.82%)
6. 🇫🇷 France	75,397 (4.28%)	73,871 (4.28%)	136,266 (4.17%)
7. 🇮🇳 India	68,102 (3.87%)	66,789 (3.87%)	141,416 (4.32%)
8. 🇩🇪 Germany	58,886 (3.35%)	58,486 (3.39%)	108,622 (3.32%)
9. 🇬🇧 United Kingdom	58,449 (3.32%)	57,081 (3.31%)	111,748 (3.42%)
10. 🇮🇩 Indonesia	42,778 (2.43%)	42,757 (2.48%)	88,275 (2.70%)
11. 🇮🇹 Italy	38,193 (2.17%)	37,327 (2.16%)	66,608 (2.04%)
12. 🇯🇵 Japan	37,140 (2.11%)	36,152 (2.10%)	66,831 (2.04%)
13. 🇨🇦 Canada	31,849 (1.81%)	31,409 (1.82%)	61,519 (1.88%)
14. 🇨🇳 China	30,898 (1.76%)	29,243 (1.70%)	75,959 (2.32%)
15. 🇵🇪 Peru	28,824 (1.64%)	28,314 (1.64%)	55,044 (1.68%)
16. 🇦🇷 Argentina	26,645 (1.51%)	26,143 (1.52%)	45,058 (1.38%)
17. 🇳🇱 Netherlands	26,144 (1.49%)	25,087 (1.45%)	49,714 (1.52%)
18. 🇷🇺 Russia	25,401 (1.44%)	24,819 (1.44%)	65,157 (1.99%)
19. 🇦🇺 Australia	25,154 (1.43%)	24,551 (1.42%)	43,327 (1.32%)
20. 🇵🇭 Philippines	24,604 (1.40%)	24,202 (1.40%)	41,778 (1.28%)

All Users
100.00% Users

+ Add Segment

19 Jul 2019 - 19 Jul 2020

Map Overlay   Explorer

Summary   Site Usage   Goal Set 1   E-commerce

Users

1   193,460

GBIF
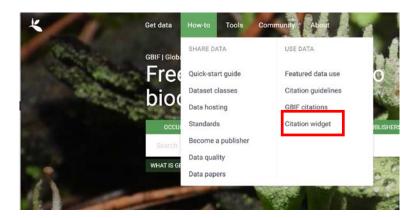
DEMONSTRATING RESEARCH VALUE OF GBIF DATA MOBILIZATION TO DATA PUBLISHERS

20-YEAR REVIEW OF GBIF: RECOMMENDATIONS SPECIFIC TO ASIA

R5, Eastern Participation (p.122): Build Participation in the East. This is a long-term activity, but flexibility and creativity should be employed through short-term measures, which would show progress and build good will for full Participation in GBIF, particularly in Asia.

R18, Asian Participation (p.127): To establish a permanent foothold in Asia, GBIF should consider a branch office in an Asian country which is, like Denmark, small but wealthy enough to support hosting, politically (relatively) neutral, multilingual, and safe.

NEWS | 4 MAY 2020

Twenty years of GBIF: Independent review charts successes and challenges

Review by International Science Council's Committee on Data (CODATA) makes comprehensive recommendations to maintain GBIF's relevance and standing

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OUTREACH TO THE PRIVATE SECTOR
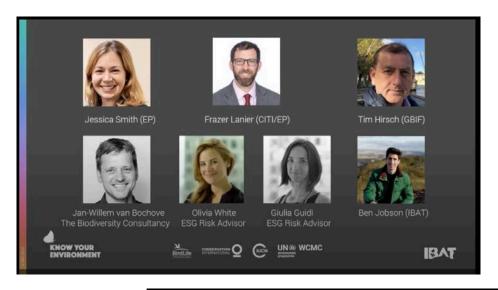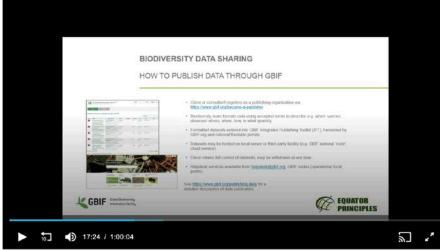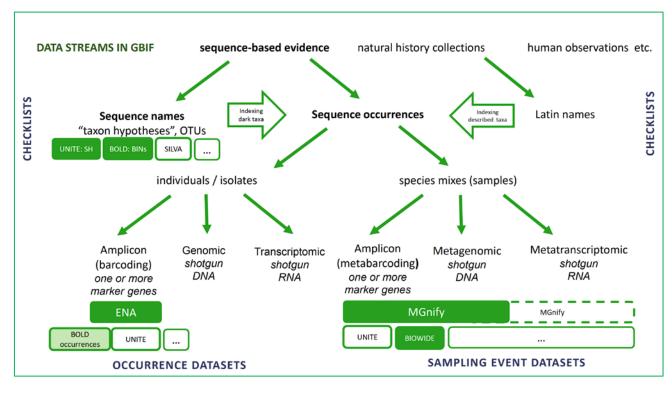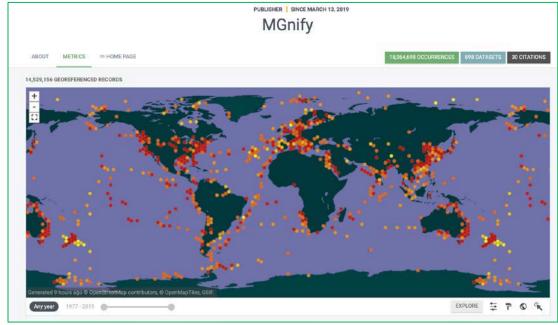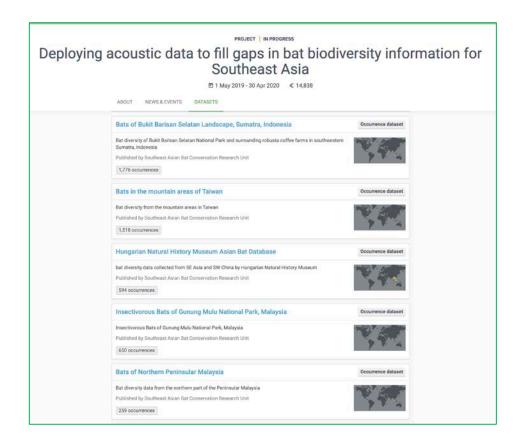
GUIDANCE ON PUBLISHING SEQUENCE-DERIVED DATA IN GBIF (COMING SOON!)

ENHANCING GBIF'S VALUE TO SUPPORT HUMAN DISEASE RESEARCH

- Expert task group on mobilizing data for zoonotic diseases starting work August 2020

THANK YOU

thirsch@gbif.org

GBIF

GBIF Nodes in Asia: Collaborations and plans

2020.7.20.

Tsuyoshi Hosoya

National Museum of Nature and Science,

Node Manager GBIF Japan

Regional Representative, GBIF Asia

Key points

Activity in the past

Regional strategy

BIFA

Recent development

2nd Asian Nodes Workshop highlights / general remarks (2010, partially cited)

1. The region, the continent Asia is very diverse, also in the context of GBIF. This heterogeneity poses some challenges in terms of collaboration and communication.

2. Despite its potential, the representation of the region in GBIF is **not** very strong. Relevant causes for this is that there are only two voting members of GBIF in Asia, and there is not a single full time GBIF node manager in the continent, lack of a national mandate or budget are also common issues for GBIF nodes.

3. There was a consensus about keeping contacts and starting activities at the regional level. However how to move forward and what level of formalization is needed remain issues open for discussion.

Report on Regional Workshop of the GBIF Participant Nodes in Asia

Asian Regional Meeting (1)

1. 2009.9. Thailand (1st)
2. 2010.11. India (2nd)
3. 2012.3. Japan (3rd)

   Sheila Vergara (ACB) elected as an Asian
Representative

   Nakul Chettri (ICIMOD) elected as a deputy Rep.

4. 2012.6. Taiwan (4th)

   Strategy composed; with IPT workshp

Regional Strategy, Asia (2013-2016)

Strategy 1: Build network of data holders and providers in the region by sharing information on GBIF and regional nodes informatics infrastructure as well as information on existing thematic databases such as FishBase, IBIN, ILTER, species group networks.

Strategy 2: Popularize the data paper incentive through development of metadata catalogues and corresponding datasets.

Strategy 3: Explore (funding) options for **mobilising legacy data** housed in museums and herbaria and (mechanism) for repatriation of biodiversity data from Asia housed in other countries.

Strategy 4: Strengthen help desk facility at regional nodes to **ensure the use of DwC-A standard** for generating new biodiversity data (metadata, occurrences, checklist) and to better mobilise the publishing of data through GBIF IPT platform.

Scientific activities

1. Making species checklist at national level, including invasive, Red List, endemic species and migratory birds.
   - Discovery of many unlisted names in GBIF.
   - Integration found to be difficult due to the difference of updating timing.
   - Partial lists of endangered species provided from Chinese Taipei and Japan.

2. Updating fish databases to assess fish biodiversity loss and risk in Asia.
   - Data published through ACB.

List of participants in Asia as of June 2020

Voting

Korea

Associate

Cambodia, India, Indonesia, Japan, Pakistan, Philippines, Viet Nam
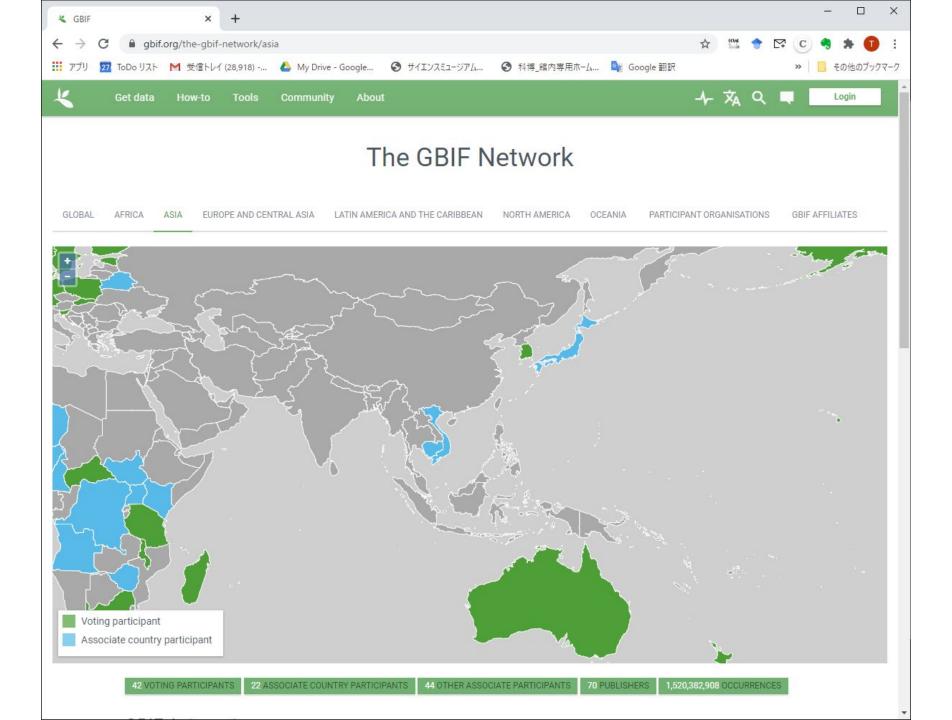
Other Associate Participant

ACB (ASEAN Center of Biodiversity)

CAS (Chinese Academy of Science)

Chinese Taipei

ICIMOD (International Centre for Integrated Mountain Development)

Asian Regional Meeting (2)

5. 2014.7. Japan (5th)

   T. Hosoya (JP) : Representative.

   Y.H. Wang (C.T.) : Deputy Rep.

6. 2015.6. Taiwan (6th)

   BIFA discussed.

7. 2016.6. Philippines (7th)

   New regional strategy.

   Reps. elected for another 2 yrs.

Asian Regional Meeting (3)

8. 2017.6. VietNam (8th)
   VietNam joined!
9. 2018.9. ICIMOD (9th)
   (CT) : Chiejen "Burk" Ko (Rep.)
   (JP) : T. Hosoya (Deputy)
10. 2019.7. VietNam (10th)
   +Data mobilization WS
11. 2020.7. Zoom (11th)
   +Data mobilization WS

GBIF Strategic Plan (2017-2022)

1. Deliver relevant data
2. Improve data quality
3. Fill data gaps
4. Enhance biodiversity informatics infrastructure
5. Empower global network

Regional Strategy, Asia (2017-2022)

I. Empower Global Network

   1. Promote capacity building among relevant participants.

   2. Reduce language barrier.

   3. Increase outreach / education (to non-member countries).

   4. Seek for funding for stable and proactive activity.

II. Enhance Biodiversity Informatics Infrastructure

   5. Promote setting up IPT server.

   6. Promoting fundamental information for biodiversity analysis.

III. Fill Data Gaps

   7. Analyze data gaps.

   8. Promote engagement of common citizens.

   9. Mobilize new data types.

   10. Accelerate digitization and provision of legacy data.

IV. Improve Data Quality

   11. Analyze the data at hand to objectively evaluate the status.
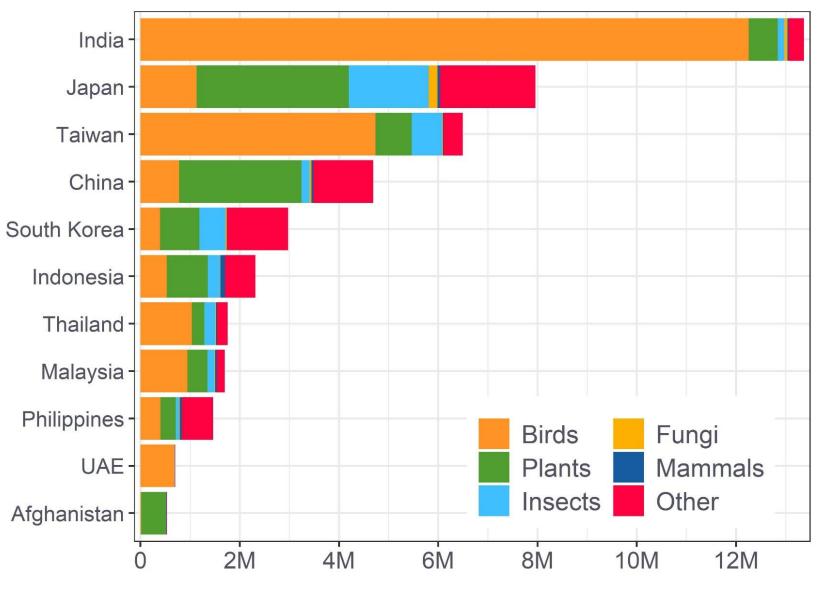
BIFA (Since 2015)
Biodiversity Information Fund for Asia

1. Fund provided from Japanese government through Ministry of Environment, Japan.
2. Used for the development of Biodiversity informatics of Asia in GBIF context.
3. Steered by the Steering Committee (JP Gov. + Asian Rep.+ GBIFS), with Evaluation Board.

- The fund supports data publication from non-GBIF participants.
- Funding supplied annually for 5 times already, contributed in increase of data from Asia.

Asia

Number of occurrences about country/area for popular groups
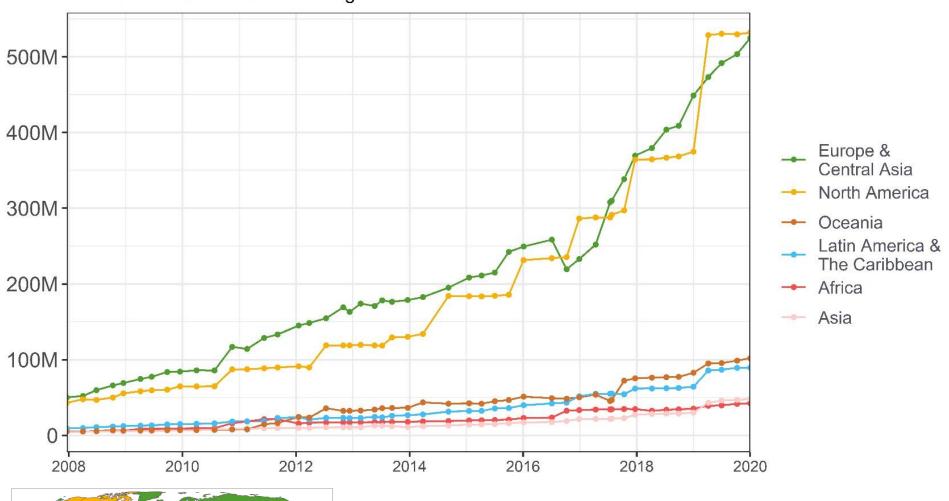
Number of Occurrences

Number of Occurrences about region on GBIF
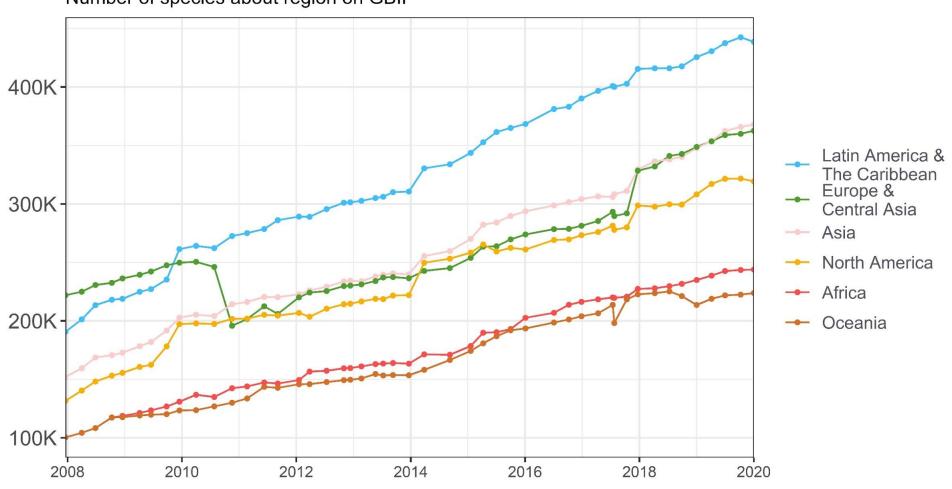
Number of Species on GBIF

Number of species about region on GBIF

Legend:
- Latin America & The Caribbean
- Europe & Central Asia
- Asia
- North America
- Africa
- Oceania

Looking at the bright side:
- Data publication increasing!
- New participants and data publishers!
- Use cases increasing!
- Opportunities of capacity building increasing!

But we still need to work on:
- Language barrier
- Stable funding
- IT support
- Regional/Global collaboration
- Open data, data recycling

Challenges: Still few data published

- Identification of data holders
- Incentives
- Use cases to express the importance and usefulness of the integrated data
- Language barrier
- Capacity building
- Funding
- IT support
- Regional/Global collaboration
- Open data, data recycling

Cambodia's decision to join GBIF

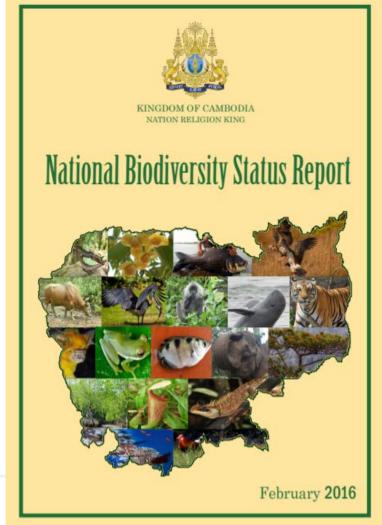- Cambodia protected area system covers more than 48 per cent of the country's land area (6th National Report);

- Cambodia identified the needs for increased capacity to organize and facilitate access to data on Cambodia's rich biodiversity;

- GSSD/MoE is in the process of building a national biodiversity information system (NBIS); and

- Establishing a GBIF node is seen as a way of supporting that activity.

GBIF
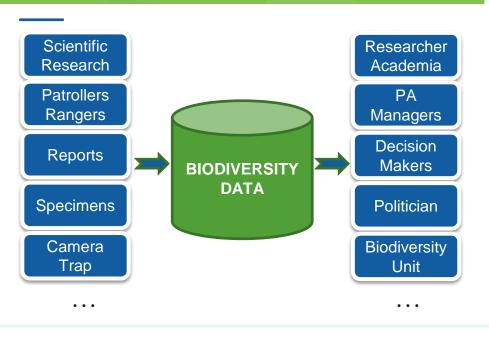
Biodiversity Data Mobilization - plans and progress

- Biodiversity data has been collected from line ministries, NGOs partners, academic institution, researchers etc. and shared on Cambodia CHM Website;

- The latest Cambodian biodiversity status report (GSSD/MoE, 2016) showed the taxon records of 3113 plant, 162 mammals, 601 birds, 1357 fishes, 173 reptiles, 72 amphibians and 671 invertebrates;

- The status report is on the process of updating, while, data gathering, and information management system is under development; and

- The GBIF is a platform of considering.

KINGDOM OF CAMBODIA
NATION RELIGION KING

National Biodiversity Status Report

February 2016

GBIF

Users of Biodiversity Data in Cambodia


```
Scientific Research
Patrollers Rangers
Reports          →    BIODIVERSITY DATA    →    Researcher Academia
Specimens                                        PA Managers
Camera Trap                                       Decision Makers
. . .                                             Politician
                                                  Biodiversity Unit
                                                  . . .
```
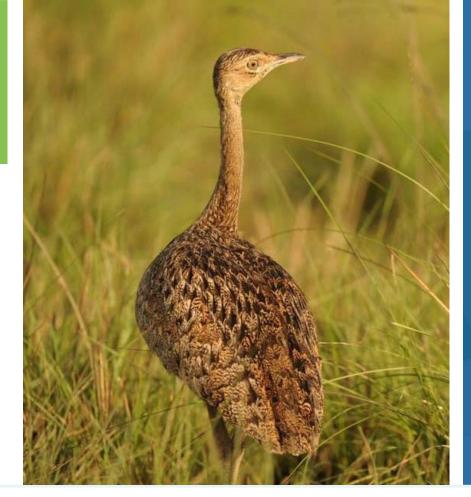
GBIF

Vision for Cambodia's participation in GBIF

- To establish a standard and comprehensive biodiversity database system with capacity to record, maintain, and manage species data and information;

- To use data and information for country's sustainable development with priorities on biological resources and ecosystem conservation and management; and

- GBIF is the appropriate international biodiversity network, aiming for biodiversity data sharing and accessing.

Project objectives

SE Asian bats (~400 spp.) comprise c. 28% of global count but contribute < 2.5 % of GBIF data (1998~2020 period)

1. To mobilize existing species data embedded in acoustic recordings
2. To popularize open science and data science to SE Asian bat society

Left: Trefoil horseshoe bat (*Rhinolophus trifoliatus*); **Right-up**: Halequin bat (*Scotomanes ornatus*); **right-bottom**: Black-capped fruit bat (*Chironax melanocephalus*)

GBIF

Project architecture

Formatting
- DwC
- GUANO

→

- CC-BY license
- Unique identifier
- ABCD sharing policy
- SEBACRU policy

Asian Bat Call Database
- **Species occurrence data attached with reference recordings of bat calls**

SEABCRU database
- 40k clean data from literatures, museums & GBIF
- **2,000-2,500 new data from ABCD**

Fawn leaf-nosed bat (*Hipposideros cervinus*) from Malaysia, photo by *Adrià López-Baucells* (CC BY-NC 4.0)

Main activities

- A kick-off meeting prior to the project was hold in Feb. 2019
- Advertising the project in 3 workshops in Thailand in July 2019
- Main workshop for data cleaning and assembling in Malaysia in Dec. 2019
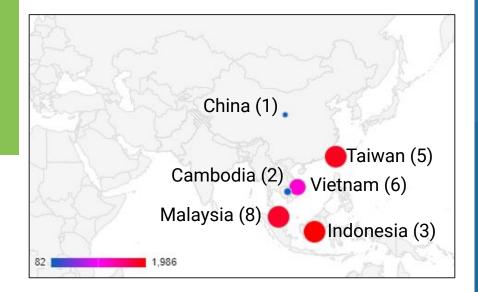- A webinar is scheduled in Aug. 2020

2019 SE ABCD & BI Workshop, Bangi, Malaysia, photo by *MBCRU* (CC BY-NC 4.0)
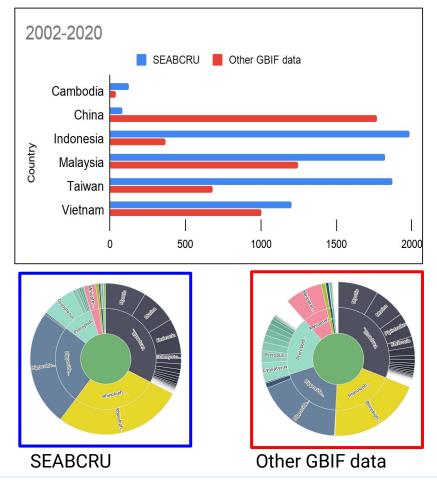
Results

- 22 datasets from 18 research teams
- 7,097 records of 179 species from 5 Asian countries from 2002 to 2020
- 3,432 reference calls

Number of records and dataset involved per country/area from SEBACRU in the GBIF database (https://www.gbif.org/publisher/768e0109-68c6-4611-b8be-df2ae01aa470/metrics)

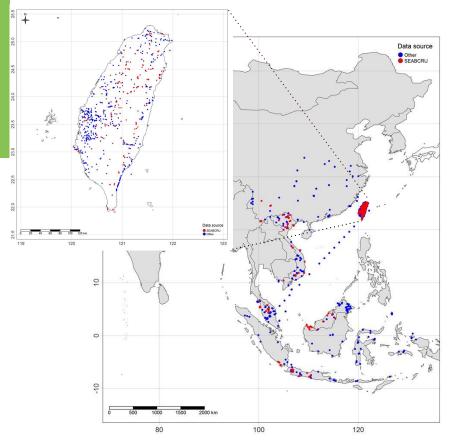# Project impacts and data relevance

- Increase 139% of bat data records in GBIF (5,105 from other publishers) for 2002-2020
- Except China, our project largely improve data quantity for each country (120-540%)
- Good genus coverage
- c. 93.5% is at species level

2002-2020

Legend: ■ SEABCRU ■ Other GBIF data

SEABCRU

Other GBIF data

Project impacts and data relevance

- > 92% is georeferenced

- Largely fill spatial gaps of GBIF data
- We provide a case that transboundary network could serve as an effective regional node for GBIF

Distribution of 2002-2020 bat records from SEABCRU and other GBIF publishers, map by *Le Tuan Quang*

Benefits of getting involved in GBIF (BIFA)

1. To engaging individual-, university-, country-based collections to our regional databases and GBIF platform
2. To identify the current data gaps
3. To facilitate implementation of acoustic techniques to support bat research

Digitizing butterflies of Singapore & Peninsular Malaysia BIFA4_050

Wei Song HWANG

Lee Kong Chian Natural History Museum,

National University of Singapore

GBIF | Global Biodiversity Information Facility

Biodiversity Information Fund for Asia (BIFA)

環境省

Project objectives

Butterflies of the Southeast Asian Islands Consortium Project

Mobilize 10,000 museum butterfly specimen housed in the Lee Kong Chian Natural History Museum (NUS)

- Label transcriptions
- Specimen imaging (dorsal & ventral)
- Georeferencing

Represents ~1,200 species (25% Oriental butterfly diversity), 2.4x European butterfly diversity

GBIF

Main activities and results
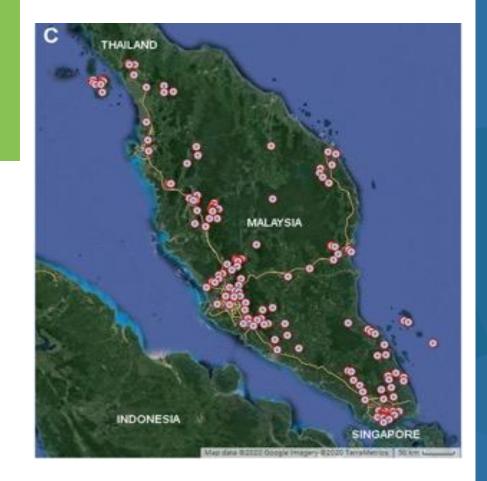
- **6** Butterfly Families Occurrence datasets generated

Total:

- **12,702** specimens transcribed

- **1,435** species & subspecies recorded

- **187** localities

- **10,104** specimens imaged (as of 17 Jul)

Project impacts and data relevance

- Increased butterfly species representation for the region by >90%

- Georeferenced dataset (1936 – 1998) bridged gap between historical and recent collections

- Identified 398 species rare/very rare (28% of total diversity) >> conservation assessment needed

Project impacts and data relevance
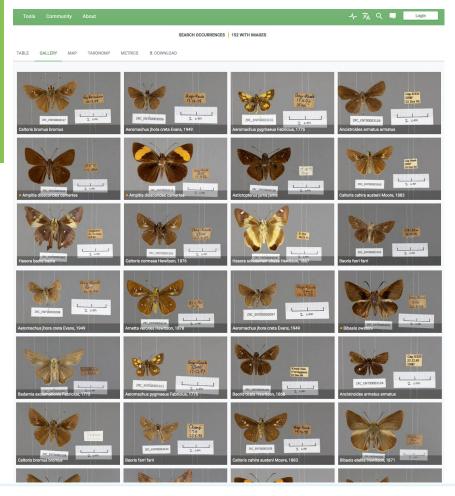
- Operationalized our digitization workflow

- Developed image-recognition OCR file-naming algorithm protocol

- Training of 4 interns (co-funded by LKCNHM)

- Virtual collection for taxonomic research (598 download events)

Benefits of getting involved in GBIF

1. Dataset publicly accessible
2. GBIF training workshop
3. GBIF IT infrastructure & services

Acknowledgements

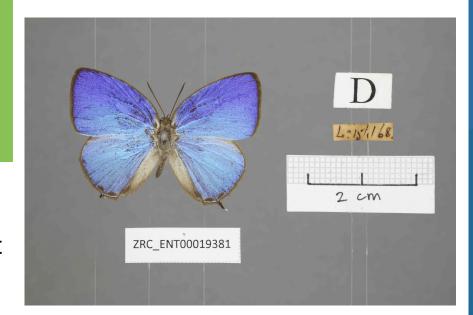# Digitizing butterflies of Singapore & Peninsular Malaysia BIFA4_050

Wei Song HWANG

Lee Kong Chian Natural History Museum,

National University of Singapore

GBIF | Global Biodiversity Information Facility

Biodiversity Information Fund for Asia (BIFA)

環境省

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Acknowledgements

Data mobilization of Indonesian butterfly collections at Museum Zoologi Bogor, Indonesia

Djunijanti Peggie - Research Center for Biology, Indonesian Institute of Sciences

GBIF | Global Biodiversity Information Facility

Biodiversity Information Fund for Asia (BIFA)

Project objectives

- improve MZB butterfly collections and data management to benefit any future research of Indonesian butterflies
- have well-curated MZB butterfly specimens in database for easy access
- provide registered and georeferenced collection data to GBIF
- enable the usage of specimen data for further purpose such as conservation policy
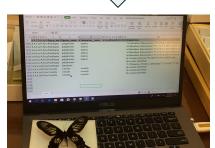
Main activities and results

- Specimen ID & validation to species & subspecies level
- Specimen data registration + QR code and photo-taking
- Data checking, geo-referencing, data cleaning, data mapping to Darwin core → publish to GBIF
- Target 7000 entries → over 9,700 entries of all identified specimens were mobilized.
- Workshop attended by 40 participants - butterfly enthusiasts and colleagues of other labs. Scheme for data mobilization was introduced using the take-home leaflet.

Project impacts and data relevance

The availability of the data will benefit decision makers in assessing the importance and rarity status of certain species of butterflies, related to International Union for Conservation of Nature and Natural Resources (IUCN) and Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Additionally, observation records contributed by butterfly enthusiasts:

http://www.gbif.org/dataset/4d236e9c-fa04-4a94-9356-382c9f7c84c0

List of Indonesian butterfly datasets uploaded to GBIF as of 16 July 2020

Dataset of	GBIF Link	Date of upload	Number of specimens
Atrophaneura	https://www.gbif.org/dataset/6676b3f8-e389-4911-aa09-2e04f964a419	29-10-2019	129
Chilasa	https://www.gbif.org/dataset/d13e5b4c-e838-4244-8ac1-dfe1d75e2f48	22-10-2019	74
Cressida	https://www.gbif.org/dataset/2ce88946-0fb0-413a-b513-e87d735a0e29	24-10-2019	7
Graphium	https://www.gbif.org/dataset/2aad3bc7-4765-40ea-b478-3ac3cb53ff72	03-02-2020	2498
Lamproptera	https://www.gbif.org/dataset/09a6c040-a452-4f8f-b32b-d7762aa6bc85	04-12-2019	143
Losaria	https://www.gbif.org/dataset/f53a51f9-ad06-465e-97fd-37ea81a9f732	06-12-2019	162
Meandrusa	https://www.gbif.org/dataset/46b22f62-bd4f-4157-8a57-f97cf22fda9e	24-10-2019	16
Ornithoptera	https://www.gbif.org/dataset/ed6df385-67ec-4872-ad25-e6e76ca2dcb1	04-02-2020	322
Pachliopta	https://www.gbif.org/dataset/ab67e429-389c-43a7-8799-36c67ece82d6	17-12-2019	624
Papilio	https://www.gbif.org/dataset/24a02aae-d6b8-40c8-8f90-64eb3e780f2b	10-03-2020	4066
Trogonoptera	https://www.gbif.org/dataset/3839d127-ff17-4477-9069-2b0746d4bc83	29-10-2019	41
Troides	https://www.gbif.org/dataset/76471ac1-dde9-4b57-aa77-f305503bc4db	06-03-2020	746
Cethosia myrina	https://www.gbif.org/dataset/d0122ed5-6ed8-430e-86ee-b4d45a6bc2bb	15-07-2020	27
Hebomoia	https://www.gbif.org/dataset/a71c3da3-4cf3-48f2-a468-f2c0b3189db2	14-07-2020	402
Idea	http://www.gbif.org/dataset/e40070cf-6626-4cd0-8e85-cfe6067aecb0	16-07-2020	481
		Total	9738

Benefits of getting involved in GBIF

Catalog book

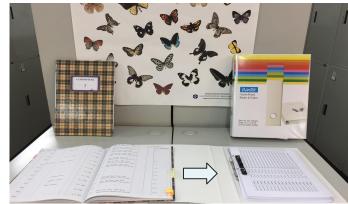The BIFA program administered by GBIF has been a wonderful support for us to improve our collection and data access. Involvement in GBIF has been a great opportunity to learn and to develop data system and to gain further insights.

Unlike some other grants, BIFA-GBIF has nurtured us along the way and geared us with all necessary support system. The BIFA workshop is superb, and all other communications organized and facilitated have been very helpful to keep us on track and fully committed.

Project partners (Dr. Christoph Häuser of Museum für Naturkunde, Berlin, Germany; Tina Loo of Naturalis, Leiden, the Netherlands; InaBIF) have also been supportive.

Project objectives

To resolve taxonomic ambiguities of Indian reptiles and amphibians and understand distribution using morphological, geographic and ecological information.

Create digital database collating information about collector, identifier, repository details, field notes, published literature etc.

Map species distribution based on species occurrence records.

Create database linking species-specific images with the catalogue to help future researchers.

Cnemaspis amboliensis
HOLOTYPE BNHS 2458

10 mm

20 mm

GBIF

Main activities and results

Digitized over 10,000 verbatim data from registers for the reptile and amphibian specimens in the collection.

Published updated catalogues for reptile and amphibian type specimens in GBIF with over 750 occurrence records.

Published catalogue of sea snakes with over 230 occurrence records for 30 species.

Workshops – Taxonomy, specimen photography & image processing and georeferencing
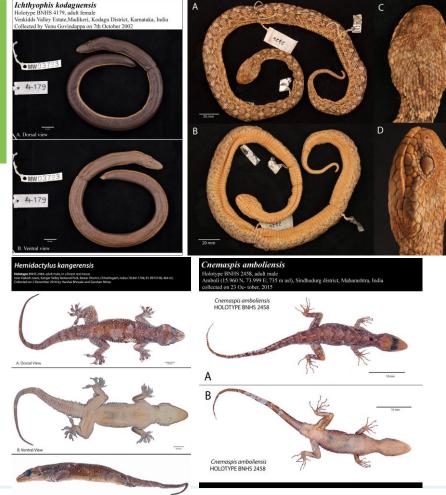
GBIF

Project impacts and data relevance

The project significantly highlighted the amount of undocumented data that lies in museum registers especially for species considered data deficient

Digitized and published occurrence records can be used for conservation assessments

Images and observations on museum specimens will help in proper taxonomic identification of cryptic species

Benefits of getting involved in GBIF

Improved overall understanding of significance of biodiversity data capture and sharing through BIFA workshop

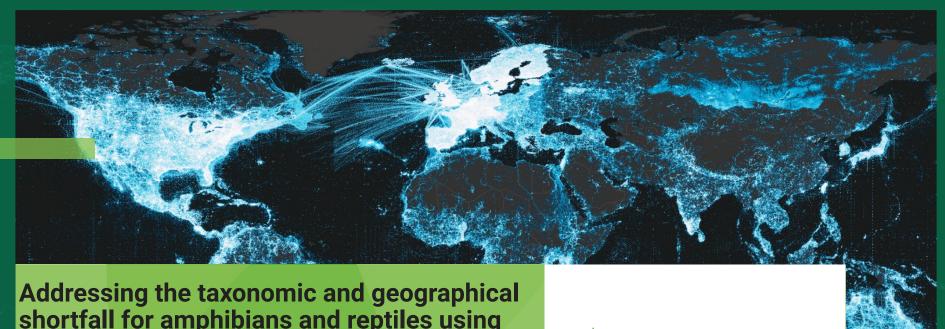Interaction with other participants and mentors helped in learning specific tools and for future collaborations

Understanding the GBIF platform and frameworks like Darwin core helped in designing long-term digitization project and collaboration with other regional museums

Publishing data through GBIF will help in international recognition and further use of information necessary for conservation policy

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GBIF

BIFA4-055
A continuous data mobilization of Vietnamese bryophyte and lichen collections

Luong Thien Tam | University of Science (Ho Chi Minh city, Vietnam)
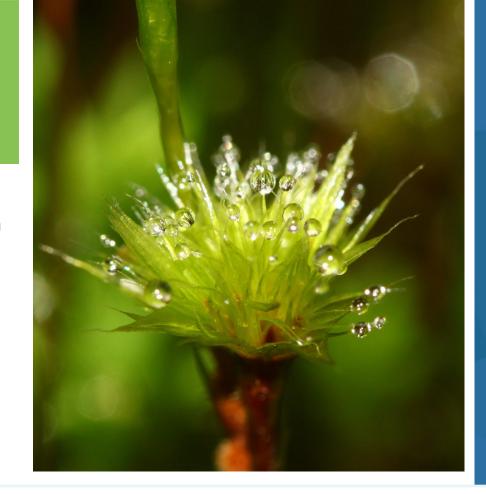
Project objectives

- Continuing mobilizing species information from the cryptogam collections of the Herbarium PC, EGR, TTN and PHH to GBIF.

- Advance research and help to complete the data of known bryophyte and lichen observations in Vietnam.

- Seminar & Workshop arranged will improve skills and knowledge of local researcher community on GBIF data mobilization.

GBIF

Main activities and results

Seminar & Workshop on "GBIF & open data in biodiversity study"

- 15th– 17th July 2019

- Participant: 43 (Seminar-outreach session), 20 (Workshop, practical training session)

- After the workshop, most of the workshop participant (15 out of 17) said that they would use GBIF's data for their studies and be able to perform related skills about biodiversity data.

GBIF

Main activities and results

Visiting Paris for digitizing and databasing specimens

- "Vietnamese bryophytes and lichens collection in PC" incorporated in the main dataset Cryptogamy Collection at MNHN-Paris: ~4000-5000 records

- On March 2020, 2772 Vietnam specimens corresponding to 942 taxa, including 674 types specimens of 338 taxa had been computerized.

GBIF

Main activities and results

Visiting Eger for digitizing and databasing specimens

- Pulled out Vietnamese specimens, labelled, scanned

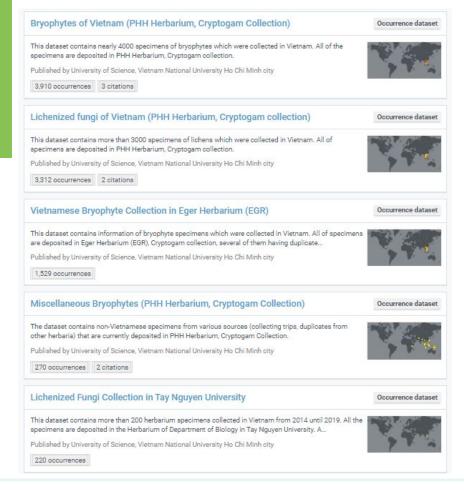- Looked up for collecting information and divided into duplicates for PHH and TUR Herbarium.

- updated identification by Prof. Pocs Tamas, Dr. Sanna Huttunen (from TUR)

GBIF

Main activities and results

- 4 new datasets in the BIFA4 projects with more than 2000 records, and ~1400-1500 images

- also updated 3 datasets from the BIFA3_032 project

Bryophytes of Vietnam (PHH Herbarium, Cryptogam Collection)
Occurrence dataset

This dataset contains nearly 4000 specimens of bryophytes which were collected in Vietnam. All of the specimens are deposited in PHH Herbarium, Cryptogam collection.

Published by University of Science, Vietnam National University Ho Chi Minh city

3,910 occurrences   3 citations

Lichenized fungi of Vietnam (PHH Herbarium, Cryptogam collection)
Occurrence dataset

This dataset contains more than 3000 specimens of lichens which were collected in Vietnam. All of specimens are deposited in PHH Herbarium, Cryptogam collection.

Published by University of Science, Vietnam National University Ho Chi Minh city

3,312 occurrences   2 citations

Vietnamese Bryophyte Collection in Eger Herbarium (EGR)
Occurrence dataset

This dataset contains information of bryophyte specimens which were collected in Vietnam. All of specimens are deposited in Eger Herbarium (EGR), Cryptogam collection, several of them having duplicate...

Published by University of Science, Vietnam National University Ho Chi Minh city

1,529 occurrences

Miscellaneous Bryophytes (PHH Herbarium, Cryptogam Collection)
Occurrence dataset

The dataset contains non-Vietnamese specimens from various sources (collecting trips, duplicates from other herbaria) that are currently deposited in PHH Herbarium, Cryptogam Collection.

Published by University of Science, Vietnam National University Ho Chi Minh city

270 occurrences   2 citations

Lichenized Fungi Collection in Tay Nguyen University
Occurrence dataset

This dataset contains more than 200 herbarium specimens collected in Vietnam from 2014 until 2019. All the specimens are deposited in the Herbarium of Department of Biology in Tay Nguyen University. A...

Published by University of Science, Vietnam National University Ho Chi Minh city

220 occurrences
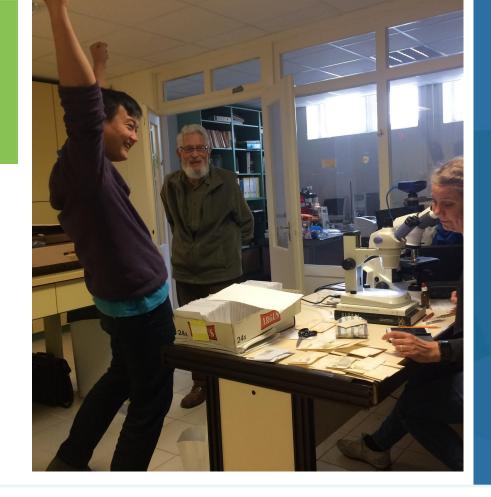
GBIF

Project impacts and data relevance

- First steps to a long-term aim for a checklist & flora of Vietnam bryophytes & lichens

- Georeference and imaged historical records

- The first publisher in Vietnam => attracted attention from the community.
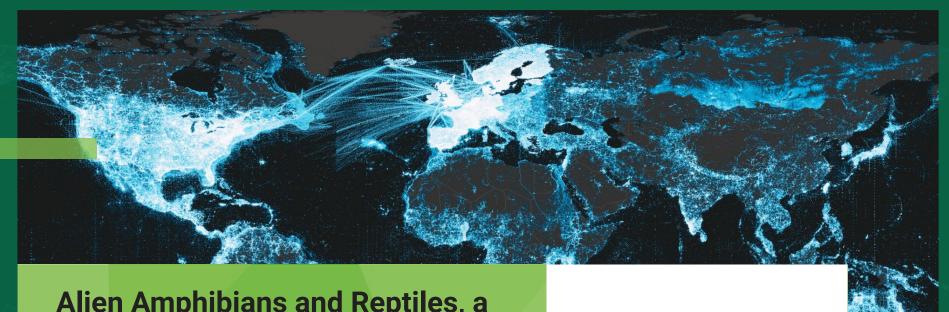

GBIF

Benefits of getting involved in GBIF

- Supports from the GBIF Team and other experts in bryophytes and lichens from all over the world, especially in identification, which is one of the biggest challenges.

- More publications & cooperation opportunities.

- Vietnamese bryophytes and lichens are now visible (without using hand lens)

GBIF

Alien Amphibians and Reptiles, a Threat to Philippine Biosecurity

Developing a National Invasive Alien Amphibian and Reptile Species Inventory and Occurrence Database and an Observation and Monitoring System

GBIF — Global Biodiversity Information Facility

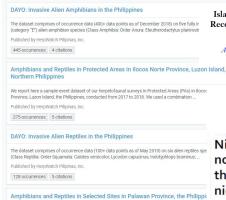**Biodiversity Information Fund for Asia (BIFA)**

環境省

Project objectives

(1) Assembling historical and geographical data from literature and natural history collections;

(2) Generating species occurrence and sampling-event data;

(3) Reconstruct invasion histories and develop 'Pest Risk Maps';

(4) Developing an observation and monitoring system;

(5) Information campaigns and training workshops

Main activities and results

(1) Occurrence and sampling-event datasets;

(2) Data papers and data use scientific articles;

(3) Information campaigns;

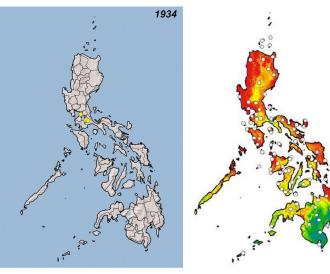(4) DAYO: observation and monitoring system.

Project impacts and data relevance

(1) Encourage local natural history institutions to mobilize their data and use mobilized biodiversity data;

(2) Advancing research on invasive alien and native amphibians and reptiles in the Philippines;

(3) Fulfilling international commitments to biodiversity conservation and sustainability.

Alien Species Crisis:
Assessing the Ecological Impacts of Invasive Alien Species of Amphibians and Reptiles in the Philippines

"Research Manual on IAS Amphibians and Reptiles in the Philippines"

1934

Rhinella marina
Cane toad

Invasion Status:
Fully Invasive

nature
COMMUNICATIONS

ARTICLE
https://doi.org/10.1038/s41467-020-16719-2   OPEN

Animal invaders threaten protected areas worldwide

Xuan Liu [1⊠], Tim M. Blackburn [2,3], Tianjian Song [1,4], Xuyu Wang [5], Cong Huang [6] & Yiming Li [1,4⊠]

GBIF

Benefits of getting involved in GBIF

(1) Strengthen and expand the local network of natural history institutions;

(2) Expand our international network;
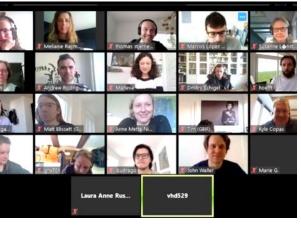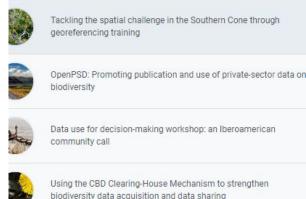
(3) Leverage for support from the national government;

Staying engaged in GBIF and BIFA

Mélianie Raymond GBIF Secretariat

GBIF | Global Biodiversity Information Facility

Biodiversity Information Fund for Asia (BIFA)

環境省

WHAT'S NEXT?

Online data mobilization workshop

- Support for 2020 BIFA projects and node teams

GBIF community webinars

- Regular updates on GBIF activities targeting nodes and publishers

GBIF Capacity Enhancement Support Programme

- 2020 projects start in August

- Dates for next call announced in December

GBIF representation at CBD events

- Side events at COP15

WHAT'S NEXT?

GBIF 2021 regional meetings

- In-person meeting for Asia?

BIFA 2021

- New call for proposals expected in 2021

- Announcement towards end of 2020
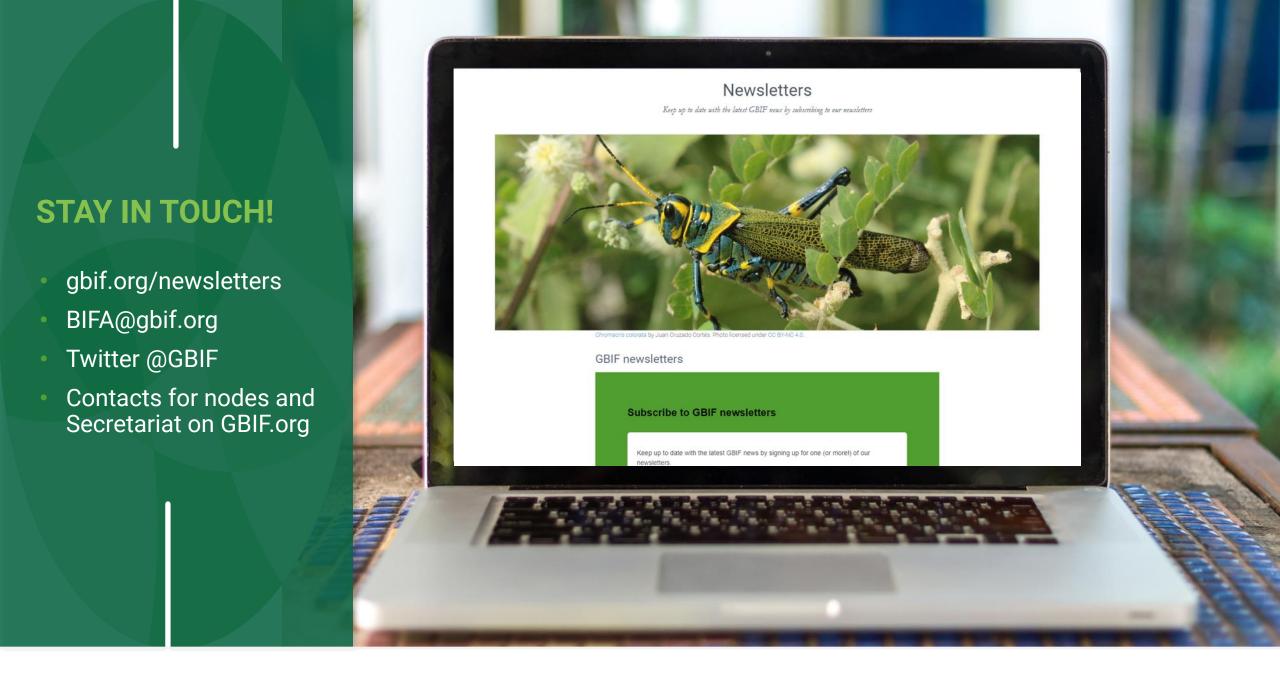
Regional data publishing support

- Contact helpdesk@gbif.org

Become a GBIF Participant country or organization

- www.gbif.org/ become-member

- Contact thirsch@gbif.org

STAY IN TOUCH!

- gbif.org/newsletters
- BIFA@gbif.org
- Twitter @GBIF
- Contacts for nodes and Secretariat on GBIF.org

www.gbif.org/newsletters

THANK YOU

mraymond@gbif.org

GBIF