

Supporting Conservation Through Mobilizing Ecological Data from Kalimantan, Indonesia

Programme:BIFA

Project ID: BIFA5_017

Project lead organization:Yayasan Borneo Nature Indonesia

Project implementation period:1/7/2020 - 31/12/2022

Report approved: 21/4/2023

Narrative Final report

Executive Summary

Despite unexpected challenges encountered from the COVID-19 pandemic and other sources, we successfully completed project activities to deliver three published datasets from our partner institutions (Borneo Nature Foundation/BNF and University Gadjah Mada/UGM), prepared six further datasets to publication readiness and trained five early career scientists from the region in data mobilisation (with two awarded Advanced badges and three becoming mentors). This latter deliverable reflected a strategic decision early in the project period to increase the number of UGM team members working on the project, to both support distribution of workloads and provide training opportunities to local, early career scientists. In so doing, we produced satisfactory outcomes under difficult circumstances, laying the foundations for future delivery of further dataset publication from both our teams and training by our teams to other organisations in future. Post-project, we plan to publish the outstanding six already prepared datasets as soon as circumstances permit and to publish a data paper linked to these. We further expect our focus on regional capacity building to continue to deliver important benefits into the future, allowing our team to publish further datasets arising from future projects, and to train other local organisations and researchers to do the same.

Progress against milestones

Has your project completed all planned activities?: No

Rationale: There are four reasons why we were unable to complete all activities as planned: (1) our project started 4 months into the COVID-19 pandemic, severely affected our work. This forced all in-person training etc. to shift online and causing a disruptive shift to WFH, slowing project communications and progress. This was exacerbated by team members requiring time off for self-isolation, personal and family sickness. (2) Team training took longer than originally anticipated, owing to a decision to employ more UGM staff members, which necessitated a two-step training process before initiating data processing. (3) After the team began work on the datasets, it became apparent that the data preparation and publication process was more time consuming than originally envisaged, resulting in us being able to process fewer datasets than planned. And (4) local considerations have delayed publication of some datasets, which we now plan to publish as soon as possible post-project.

Has your project produced all deliverables?: No

Rationale: Producing all originally planned deliverables required completion of originally proposed activities; thus our previous response also applies here. We plan to complete outstanding dataset publication ASAP post-project, once appropriate local considerations are resolved. While we have been unable to produce all originally planned deliverables, we have achieved important unanticipated deliverables. In particular, our decision to employ 4 part-time staff from UGM to lead data preparation and publication (rather than employing just 1 person through BNF) had the important benefit of engaging more early career Indonesian scientists in the project and training them. This is evidenced by all team members being awarded the GBIF Biodiversity Data Mobilisation badge, with 1 BNF and 1 UGM team member awarded the Advanced level badge, and 3 team members acting as mentors for the GBIF Data Mobilisation Course 2021. This enhances longer-term regional awareness and capacity for data mobilisation.

Report on Activities

Activity implementation summary

While we have not been able to complete all activities as originally planned for the reasons detailed in our responses to the questions above, we have nevertheless worked hard on implementing project activities and would consider the project to be broadly successful in this regard. Key achievements include training one BNF scientist to advanced/mentor level, two UGM staff to advanced/mentor level and two UGM staff to standard level; establishing GBIF website homepages for both BNF and UGM; publishing two datasets for BNF and one for UGM; and effectively socialising the project with local government and conservation partners. The training of four early career scientific staff from UGM was a new activity not envisaged in our original proposal submission, which added substantial benefits to both our project and more broadly in terms of increasing long-term local capacity for data mobilisation within Indonesia. Delay in publishing an additional six BNF datasets has been experienced, owing to unexpected local considerations. These datasets have been prepared for publication and we intend to complete publication of these as soon as possible after the current project period.

Completed activities

Activity name: BNF data submission

Description: Create BNF homepage on GBIF site

Start Date - End Date: 1/6/2019 - 5/2/2023

Verification Sources: <https://www.gbif.org/publisher/3c79e95c-816d-4585-92c1-b0fa233d2e86>

Activity name: BNF data submission

Description: Mammals of Sebangau NP checklist dataset publication

Start Date - End Date: 1/12/2020 - 12/2/2021

Verification Sources: <https://www.gbif.org/dataset/afdd8aa3-056a-4c36-90e6-2f20f2b6dd46>

Activity name: BNF data submission

Description: Odonata of heath forest occurrence dataset publication

Start Date - End Date: 15/9/2022 - 23/1/2023

Verification Sources: <https://www.gbif.org/dataset/861c1ecb-764b-4d89-864b-b913a58fae0a>

Activity name: Project socialisation

Description: Socialise project and GBIF with local government and other conservation managers

Start Date - End Date: 1/10/2020 - 31/12/2022

Verification Sources: Socialisation discussions conducted during multiple, various in-person and online meetings, often alongside discussions about other topics between BNF, UGM and local government agencies / conservation managers. Formal minutes of these meetings were not normally kept and thus no official verification source can be provided here.

Activity name: Support submissions

Description: GBIF Biodiversity Data Mobilisation training (BNF x1)

Start Date - End Date: 1/7/2020 - 1/1/2021

Verification Sources: Standard and Advanced level badges awarded to Namrata Anrirudh, who was also awarded Mentor status (verification through GBIF records).

Activity name: Support submissions

Description: GBIF Biodiversity Data Mobilisation training (UGM x4)

Start Date - End Date: 2/1/2021 - 31/3/2021

Verification Sources: Standard level badges awarded to Farah Dini Rachmawati, Krisma Dyah Pitaloka, Dennis Albihad and Febrian Edi Nugroho. Farah Dini Rachmawati also awarded Advanced level badge; and Farah Dini Rachmawati and Krisma Dyah Pitaloka awarded mentor status (verification through GBIF records).

Activity name: Support submissions

Description: Create UGM Wildlife Laboratory homepage on GBIF site

Start Date - End Date: 11/3/2021 - 11/1/2022

Verification Sources: <https://www.gbif.org/publisher/18935ef6-83f1-4f1e-a0db-85e1ecbe223a>

Activity name: Support submissions

Description: Biodiversity of Kalimantan checklist dataset publication

Start Date - End Date: 26/5/2022 - 26/9/2022

Verification Sources: <https://www.gbif.org/dataset/9ae18c0d-418e-4be3-be77-2818afe61675>

Activity name: Support submissions

Description: GBIF Biodiversity Data Mobilisation Course Asia mentoring

Start Date - End Date: 9/11/2021 - 12/11/2021

Verification Sources: Verification through GBIF records.

Report on Deliverables

Production of Deliverables - Summary

While we did not achieve our original deliverable targets in terms of numbers of datasets/records to be published during the project period, we nevertheless completed publication of three high-quality datasets from our two institutions that provided novel (taxonomic/geographic) contributions to the availability of data from the region on the GBIF platform. Our original deliverables projection was highly ambitious and was, we realised after beginning the project and starting to prepare datasets, unrealistic to deliver given the time required to prepare and publish individual datasets. This was further compounded by disruptions resulting from the COVID-19 pandemic (see report section below) and our decision to restructure the team to increase the number of early-career scientists from the region working on the project from one to five. This latter decision arguably slowed work on dataset preparation during the earliest part of the project, as more time was diverted towards training, but improved time efficiency during later parts of the project, and substantially improved our deliverables in terms of local capacity enhancement and improving long-term (post-)project sustainability.

Publication of six further datasets and a planned data paper relating to these was envisaged to be completed by the end of the project period, but has been delayed owing to local considerations. These datasets are almost fully prepared and so will be published as soon as this is resolved. Upon completion of this, a data paper will be completed and submitted for publication.

Production of deliverables

Title: GBIF Biodiversity Data Mobilisation training – Standard level

Type: Other

Description: Completed by one BNF scientist (Namrata Anirudh) and four UGM scientists (Farah Dini Rachmawati, Krisma Dyah Pitaloka, Dennis Albihad and Febrian Edi Nugroho)

Sources of verification: Badge awarded

Title: GBIF Biodiversity Data Mobilisation training – Advanced level

Type: Other

Description: Completed by one BNF scientist (Namrata Anirudh) and one UGM scientist (Farah Dini Rachmawati)

Sources of verification: Badge awarded

Title: GBIF Biodiversity Data Mobilisation Mentor recognition

Type: Other

Description: Completed by one BNF scientist (Namrata Anirudh) and two UGM staff (Farah Dini Rachmawati and Krisma Dyah Pitaloka). These three attended the Data Mobilisation Course 2021 as mentors, helping train new individuals and institutions.

Sources of verification: GBIF records

Title: Mammals of the Natural Laboratory of Peat-Swamp Forest, Sebangau National Park, Central Kalimantan, Indonesia

Type: Dataset

Status update: Complete

Dataset scope: Ground-dwelling mammals from Sebangau National Park, Indonesian Borneo. Checklist dataset}

Expected number of records: 67

Data holder: BNF

Data host institution: VertNet

Sampling method: Camera trapping

% complete: 100

DOI: 10.15468/bgkmfu

Expected date of publication:

Title: Odonata of a heath (kerangas) dominated mosaic forest in Central Kalimantan, Indonesia

Type: Dataset

Status update: Complete

Dataset scope: Odonata from the Mungku Baru Education Forest, Indonesian Borneo. Occurrence dataset }

Expected number of records: 305

Data holder: BNF

Data host institution: VertNet

Sampling method: Visual encounter with sweep netting along line transects

% complete: 100

DOI: 10.15468/r4yhhr

Expected date of publication:

Title: Biodiversity of Kalimantan, Indonesia

Type: Dataset

Status update: Complete

Dataset scope: Flora and fauna in Central, East, North and West Kalimantan, Indonesia. Checklist dataset}

Expected number of records: 166

Data holder: UGM

Data host institution: VertNet

Sampling method: Review of dissertation abstracts from UGM Faculty of Forestry students from 1992-2020

% complete: 100

DOI: 10.15468/ys6e4b

Expected date of publication:

Title: Ants of the Natural Laboratory of Peat-Swamp Forest, Sebangau National Park, Central Kalimantan, Indonesia

Type: Dataset

Status update: In process

Dataset scope: Ants from Sebangau National Park, Indonesian Borneo. Sampling event}

Expected number of records: 2908

Data holder: BNF

Data host institution: VertNet

Sampling method: Honey-baited traps.

% complete: 95

DOI:

Expected date of publication: 2023-08-31

Title: Fish of the Natural Laboratory of Peat-Swamp Forest, Sebangau National Park, Central Kalimantan, Indonesia

Type: Dataset

Status update: In process

Dataset scope: Fish from Sebangau National Park, Indonesian Borneo. Sampling event}

Expected number of records: 2405

Data holder: BNF

Data host institution: VertNet

Sampling method: Baited river traps

% complete: 95

DOI:

Expected date of publication: 2023-08-31

Title: Butterflies of the Natural Laboratory of Peat-Swamp Forest, Sebangau National Park, Central Kalimantan, Indonesia

Type: Dataset

Status update: In process

Dataset scope: Butterflies from Sebangau National Park, Indonesian Borneo. Sampling event}
Expected number of records: 6686
Data holder: BNF
Data host institution: VertNet
Sampling method: Fruit-baited canopy traps
% complete: 95
DOI:
Expected date of publication: 2023-08-31

Title: Odonata of the Natural Laboratory of Peat-Swamp Forest, Sebangau National Park, Central Kalimantan, Indonesia

Type: Dataset

Status update: In process
Dataset scope: Odonata from Sebangau National Park, Indonesian Borneo. Sampling event}
Expected number of records: 11714
Data holder: BNF
Data host institution: VertNet
Sampling method: Visual encounter with sweep netting along line transects
% complete: 95
DOI:
Expected date of publication: 2023-08-31

Title: Birds of the Natural Laboratory of Peat-Swamp Forest, Sebangau National Park, Central Kalimantan, Indonesia

Type: Dataset

Status update: In process
Dataset scope: Birds from Sebangau National Park, Indonesian Borneo. Sampling event}
Expected number of records: 5894
Data holder: BNF
Data host institution: VertNet
Sampling method: Visual and sound encounter along line transects
% complete: 95
DOI:
Expected date of publication: 2023-08-31

Title: Herpetofauna of the Natural Laboratory of Peat-Swamp Forest, Sebangau National Park, Central Kalimantan, Indonesia

Type: Dataset

Status update: In process
Dataset scope: Herpetofauna from Sebangau National Park, Indonesian Borneo. Sampling event}
Expected number of records: 685
Data holder: BNF
Data host institution: VertNet
Sampling method:
% complete: 60
DOI:
Expected date of publication: 2023-08-31

Impact of COVID-19 pandemic on project implementation

Our project started 4 months into the COVID-19 pandemic, which therefore severely affected our work. Pandemic restrictions and our own organisational safeguarding policies to protect our teams and the wider population forced all in-person training etc. to shift online. This caused a disruptive shift to work from home, slowing project communications and progress. This was exacerbated by team members requiring time off for self-isolation, personal and family sickness. In the latter parts of the project, restrictions began to be lifted and some travel was possible for UGM team members to visit Palangka Raya.

Events

Online training course

Dates: 2021-01-02 - 2021-03-31

Organizing institution: BNF

Country: Indonesia

Number of participants: 4

Comments: Online course delivered by BNF scientist to four UGM staff, training them in use of the GBIF platform and data mobilisation techniques. This led to the awarding of a Standard level badge to three UGM team members, and an Advanced level badge to one UGM team member, with two UGM team members also being recognised as mentors and attending the Data Mobilisation Course Asia 2021.

Website or sources of verification: See attached photo

Communications and visibility

In the course of our activities, we have communicated widely with external institutions, including both collaborating universities in Indonesia and abroad, and local government. In particular, our published and in preparation datasets are co-owned by researchers/students from a variety of academic institutions (including Universities of Exeter, Leicester and Maastricht abroad, and Universities of Palangka Raya and Muhammadiyah Palangkaraya in Indonesia), with whom the GBIF platform has been socialised. This, plus these institutions' experience gained in publishing datasets with us, should significantly increase their use of, awareness raising around and likelihood of publishing future datasets to the GBIF platform. Furthermore, in establishing a new publisher's page for the UGM Wildlife Laboratory, we have helped ingrain awareness and use of the platform in one of Indonesia's leading research universities in the long term, including within the senior Faculty management level.

Monitoring and evaluation

Final Evaluation

Overall, given the challenges encountered, we would consider the project to be a success, albeit from a somewhat different perspective regarding deliverables than originally envisaged. While we did not achieve our original targets in terms of numbers of datasets/records to be published during the project period, we nevertheless completed publication of three high-quality datasets from our two institutions that provided novel (taxonomic/geographic) contributions to the availability of data from the region on the GBIF platform. To achieve this, we created GBIF publisher pages for both partners on the project (BNF and UGM). Furthermore, we prepared an additional six extensive datasets that are currently awaiting publication and will further expand the scope of GBIF datasets available for the region. We also trained a far greater number of local, early career scientists in data mobilisation than originally envisaged (5 vs. 1), with three of these themselves becoming mentors and assisting with training of new GBIF projects at the Data Mobilisation Course Asia 2021. This has not only provided a strong personnel foundation for this project, but also provides major long-term benefits in terms of within-region data mobilisation capacity.

Project implementation plans were severely impacted by the onset of the COVID-19 pandemic, coinciding around the start of this project. This delayed and disrupted training and activities, as we all strived to adapt to new ways of working and to cope with the professional and personal challenges posed by the pandemic. Despite this, we were able to successfully move all internal team training online, and correspond remotely with relevant partners and collaborators to acquire, prepare and publish datasets. While this did make work more challenging and slowed implementation of some activities, one benefit of this disruption and shift to fully online working was to reduce our expenditure on travel and events. With GBIF approval, this, in turn, enabled us to extend our project period and the amount of time our team members could spend working on the project, which turned out to be necessary given the realisation that dataset preparation was a more time-consuming process than originally envisaged.

Senior project management proceeded as anticipated, with Dr Harrison from BNF International and Dr Imron from UGM leading coordination and providing supervision to team members. Our implementation team was, however, expanded to provide learning and work opportunities to a greater number of early career scientists from UGM, who worked under the supervision of and were trained by a BNF scientist. Difficulties in initiating training during the pandemic notwithstanding, this arrangement worked very well, with the BNF and UGM scientists all achieving Standard level data mobilisation badges, two of the team achieving Advanced level badges and three becoming mentors; and the team successfully publishing three datasets and delivering six others to the brink of publication.

We outline our primary lessons learned and planned post-project activities in the subsequent two sections below. Our main recommendation for the GBIF Secretariat would be to provide more guidance for project grant applicants regarding the level of (time) investment required to fully prepare and publish datasets on the platform. While this will obviously vary substantially based on the dataset type and characteristics, and the capabilities of workers involved, some guidance regarding typical amounts of time required may help project grant applicants in planning their applications and ensuring targets are realistic.

Best Practices and Lessons Learned

Lessons learned included realisation that significant amounts of time are required to prepare datasets for publication on the GBIF platform (substantially more than originally anticipated during proposal preparation). This has important implications in terms of planning for dataset publication, particularly for ambitious projects aiming to publish multiple datasets within a short timeframe. Where possible, we also recommend as best practice for other projects to train multiple team members in data mobilisation techniques, as we did during this project. While this inevitably adds extra time for completing initial training and team coordination, and may therefore impact short-term data mobilisation goals, it has the important benefits of improving project resilience and sustainability (e.g., if a staff member is sick for a prolonged period or leaves the project). Further, especially where focused on local, early career scientific staff, it helps establish a firmer foundation of within-country capacity for data mobilisation, including enhancing future in-country training provision.

Post Project Activity(ies)

Initial post-project activities will focus on completing publication of the outstanding six BNF datasets already prepared and awaiting publication. Following this, we intend to publish at least one data paper, compiling the different datasets available through our wider team from Sebangau National Park. Secondly, building on the training and badges acquired by our current team members, we will plan to publish any suitable new datasets that arise in future on the GBIF platform. Finally, we aim to conduct wider training both within our teams to better secure our long-term internal capacity and with local collaborators to enable them to publish their own datasets independently.

Sustainability plans

We will build on the results of this project firstly through publishing the six currently in preparation datasets, representing thousands of records, as soon as is practicable. Moreover, through training both a BNF scientist and four early career UGM staff in data mobilisation techniques, and establishing both BNF and UGM as publishing organisations on the GBIF platform, we have established a firm foundation for ensuring the long-term sustainability of this project. This will facilitate publication of suitable future datasets from our institutions on the GBIF platform, allow us to train additional team members from our and other institutions in data mobilisation as desired, and enable these skills to be carried on to other institutions if/when team members move on. BNF and UGM have established a long-term research collaboration underpinned by an MoU, involving partnering on multiple projects and student supervision, and we therefore expect more suitable “GBIF datasets” to arise in future. Similarly, we expect current research being led by members of our project team to generate a new large-scale mammal dataset to be published on the GBIF platform in collaboration with a new Indonesian partner institution (University Indonesia). The implementation and impact of these activities will be monitored in the same way as for previous project activities.

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