

Mobilising the Namibian faunal and floral collections and improving national open data engagement

Programme: BID

Project ID: BID-AF2020-099-NAC

Project lead organization: National Museum of Namibia

Project implementation period: 1/4/2021 - 31/3/2023

Report approved: 8/3/2022

Narrative Midterm report

Executive Summary

The first and most important achievement of this project, was to facilitate the establishment of the GBIF Namibia Node. The project activities are anticipated to have key impact on the effectiveness of the new node.

The NMNW (or NMN - we use the international standard acronym NMNW for the remainder of the document) is in the process of entering and international agreement for Namibia's IPT to be regionally hosted, through which these databases will be published. If this goal is achieved, a new multinational partnership will be formed among neighboring nodes, which will likely lead to a productive future for research and conservation.

Despite several setbacks related to the COVID Pandemic, the digitization process and stakeholder engagement activities are well underway. To date, one major dataset (NMNW Scorpiones) completed and published, adding 20 new country- and/or species-records to GBIF. Various Other datasets are well underway, and it is likely that more records will be published than initially proposed, many of them highly relevant for species conservation and research.

The stakeholder engagement thus far conducted was overwhelmingly positive, with key individuals in all of the country's major data-holding and data-generating institutions having expressed interest to be involved in the Node's activities and support future collaborative projects. Further engagement focusing on the use of the newly availed data will soon follow. The process to establish a national steering committee including some key stakeholders is also underway. These processes are anticipated to have a massive positive impact on the structural capacity and overall activity of the GBIF Namibia Node.

Progress against milestones

Has your project published at least one dataset through GBIF.org?: Yes

Dataset published:

Dataset DOI

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Has at least one member of your project team received certification following the BID capacity enhancement workshop?: No

Rationale: Two team members have completed the training in good time, but have not yet received their certification: Mr Nanguai Karuaera, who submitted Use Cases 2 and 3 on 18 Jul 2021; Ms Quanita Daniels who submitted Use Cases 2 and 3 on 16 Jul 2021.

Report on Activities

Activity progress summary

Government engagement to initiate Namibian GBIF membership: This process was completed in July 2021, as a multi-ministerial cooperation between the Ministry of Environment, Forestry and Tourism (MEFT) and the Ministry of Education, Arts and Culture (MoEAC). The core team has been formed, and are in the progress of setting various node-building activities in place.

Specimen data verification and digitisation: The institutional staff and student interns have been working on this since the start date of the project, while newly hired database technicians and the specialist consultant have been working on this aspect since December 2021. Several thousands of records have been digitised from the catalog books in Entomology, Arachnid/Myriapod and Herpetology collections from the NMNW, but still need to be cleaned. Specimen identifications, data verification, re-sorting and first-time cataloguing within the Entomology collection is in progress. The Botanical data, NE Namibia from the NBRI is in progress. The data has been exported from their database based on spatial polygons, and several cleaning and verification steps have already been carried out. A possible addition to the proposed datasets is the Ichthyology collection (NMNW), for which most specimens have been repackaged catalogued, which were added to the existing digitised spreadsheet, and the plan is to add this dataset

The progress of this activity was delayed due to various factors leading to a late hiring of the technicians and experts, and a possible extension to the project timeline would aid in improving the output from this activity.

Electronic data cleaning and standardisation: The Arachnids database (NMNW) was fully cleaned and converted into DarwinCore format for publication. The Herpetology and Entomology collections databases (NMNW) are being added to and cleaned, although several discrepancies still need to be solved by verifying with specimens in the collection. The Eastern Namibia botanical dataset is already digitised, but cleaning and verification is still in progress. **The current status of the datasets are indicating that a larger number of records will likely be published than was initially proposed.**

This activity was somewhat delayed due to the late hiring of the technicians, although minimum requirements of the project should still be attainable.

GBIF publication: This has not yet been achieved, partly due to a COVID-related delayed start of the project activities. **The first dataset for publication is complete.** However, since the process to become a member of GBIF had progressed ahead of schedule, it was decided to publish these datasets through the Namibian Node. The official agreements to accomplish this requires some additional time. Namibia does not yet have a valid IPT to publish datasets through, but these agreements are in process. Conversations between SANBI-GBIF and GBIF Namibia have already progressed in this regard, and the formal request to be hosted on the SANBI-GBIF servers is being sent to the SANBI CEO. Thereafter, the NMNW and NBRI will register as publishers through this IPT, and publish the datasets as soon as this step is cleared.

Although the mid-term deliverables could not be met in this regard, it is anticipated that several datasets will still be published by the project end date. However, an extension of the project end-date would increase the number of records and/or datasets that will be published.

Training of trainers: data-gathering: This workshop has not yet been held, although the target institutions have already been engaged on our first workshop, and via some informal meetings and emails.

Capacity-building exchange visits: Due to the COVID Pandemic, this portion of the project may not be

realised. However, exchanges with other GBIF participant nodes have already taken place via email and Zoom, and these exchanges will continue.

Government stakeholder engagement on open data: This workshop has not yet taken place, but various Government stakeholders are being engaged about the GBIF activities and deliverables via informal meetings, and through the project partner agreements herein.

An additional project partner has formally been added in this regard: the Directorate of Scientific Services (DSS) - see attachment.

Open data use workshops: This workshop(s) has not yet been held.

Reassessment and documentation: Will be completed near the end of the project, although documentation is being gathered on the activities.

New Activity: Setting up Specify Database for the NMNW Collections

Currently, the National Museum of Namibia (NMNW) data is kept on several spreadsheets, with only one collection having been placed on a relational database. A new standardised, integrated database is being built using the Specify platform, and is being stored on a small server at the NMNW. This will greatly increase the long-term feedback of quality, clean, standardised data from the Museum collections to publication onto GBIF.

Completed activities

Activity: Government engagement to initiate Namibian GBIF membership

Description: Namibia has joined GBIF as an Associate Participant

Start Date - End Date: 1/4/2021 - 5/7/2021

Verification Sources: <https://www.gbif.org/news/5AM6goSjLovDPHSHDRoX9M/namibia-joins-gbif-as-associate-participant>

Report on Deliverables

Deliverables progress summary

One dataset was completed and published: the Scorpiones Dataset (falling under the Arthropods Collection Data). None of the other datasets are completed, but they are in progress, several improvements have already been made, and many records and improvements have been added to the existing datasets.

The delay in the initial publication onto GBIF is unlikely to affect the project as a whole, since dataset cleaning and completion will carry on as planned. However, the delayed start of some of the data-cleaning, verification, and digitisation activities are likely to negatively affect the number of records and datasets that will be published onto GBIF by the end of the project. These delays were caused by COVID-related closure or reduced operating capacity of several key institutions and key individuals which were sick with COVID during the early project implementation period. The planned date of publication for several datasets will likely be only at the very end of the project timeline.

Use-cases and best practices document has not yet been compiled, but we plan to compile this after the training of trainers workshops, as much of the use-cases will come from these stakeholders.

The first workshop has been held, introducing the new Node to most major academic, research, and conservation stakeholders. We covered some technical aspects and gauged interest in (a) participating in node activities, chiefly data publication, and (b) participating in the node Steering Committee. We provide photos, a list of attendees, the program, and a sign-in sheet for verification. The remaining workshops are somewhat

delayed, and only anticipated to start in March 2022. Some of the planned workshops may need a slight extension to the project deadline to be completed. This is likely to affect the project in terms of reducing its impact on the visibility and active participation of stakeholders within the country - or at least by delaying this impact.

Progress towards deliverables

Dataset deliverables

Plant Checklist for NE Namibia

Dataset type: Checklist

Dataset scope: All plant species recorded for the Kavango West, Kavango East and Zambezi Regions presently

Number of records: 400

Data holder: National Botanical Research Institute

Data host institution: National Botanical Research Institute

% complete: 0%

Status update: ref

DOI:

Expected date of publication: 2022-12-31

Arthropod Collections data

Dataset type: Occurrences

Dataset scope: Arachnid and insect specimens from Namibia and neighbouring countries

Number of records: 15,000

Data holder: National Museum of Namibia

Data host institution: National Museum of Namibia

% complete: 25%

Status update: The various Arachnid collections that are relatively cleaned and verified, but still need a few cleaning and data formatting steps, accounts for 13,923 records. The Insects data currently digitised accounts for >3,000 records, but some will be removed due to insufficient data for records missing from the collection. Data verification, identification of some specimens, and adding of additional specimens, is currently in progress via two technicians, the collection manager, and a consultant.

DOI:

Expected date of publication: 2022-12-31

Herpetology Collections Data

Dataset type: Occurrences

Dataset scope: Reptile specimens from Namibia and neighboring countries

Number of records: 1,957

Data holder: National Museum of Namibia

Data host institution: National Museum of Namibia

% complete: 50%

Status update: Dataset digitised and cleaned, but verification of problem records and partial reformatting still required.

DOI:

Expected date of publication: 2022-09-30

Botanical data: NE Namibia

Dataset type: Occurrences

Dataset scope: Plant specimen data from NE Namibia

Number of records: 8,973

Data holder: National Botanical Research Institute

Data host institution: National Botanical Research Institute

% complete: 25%

Status update: Records have been exported and categorised; specimens are being removed from the collection for certification; data-standardising and verification in progress

DOI:

Expected date of publication: 2022-10-31

Arthropod Collections Data: Scorpiones

Dataset type: Occurrences

Dataset scope: Scorpions specimens from 78 species, ten genera and four families including 20 Namibian country records published for the first time on GBIF, collected mostly from Namibia, but also from Botswana, Angola, and South Africa, from 1957 to recent times.

Number of records: 3,567

Data holder: National Museum of Namibia

Data host institution: National Museum of Namibia

% complete: 100%

Status update: Published

DOI: <https://doi.org/10.15468/gmn5t4>

Expected date of publication:

Other deliverables

Events

Workshop: Launching GBIF Namibia

Dates: 2021-11-17 - 2021-11-17

Organizing institution: National Museum of Namibia; National Botanical Research Institute

Country: Namibia

Number of participants: 25

Comments: This was a modification of the planned set of workshops, seeing as the Namibian Node had recently started. We invited key individuals from our two universities, major conservation and research NGO's, and from the relevant ministries or government councils to attend.

The aim of this workshop was to promote GBIF with the major stakeholders, especially in terms of data-holders and -users, and to make the nation aware of the planned activities of the node over the coming years. We also gauged interest of these stakeholders in becoming part of the node activities, and we are maintaining contact with the interested parties via emails and meetings post-conference.

Despite many Namibian institutions being skeptical of data-sharing and international bodies "interfering" in local research or conservation, the launching of the new node was exceedingly well-received. Several of the key individuals from the major research and conservation institutions have expressed their interest in working with the Node in future, in terms of contributing data, launching collaborative projects, and aiding with national decisions as part of the node in future.

Website or sources of verification: Photos; attendance list; program; presentations or other verification sources can be requested

Communications and visibility

This project came at an opportune time, just as the Namibian Node is being launched. It has been, and will be, instrumental in building the new node, promoting it, and helping provide some of the first major node outputs

in terms of datasets published.

Several datasets have been completed and are being completed, including many poorly known taxa in dire need of spatial data to promote their conservation and research. The institutions holding this data are benefiting via marginal added capacity and training, and considerable improvement of the collections data and the data processes that will be carried on into the future. Finally, this project is improving the perceived and practical value of these institutions, which are providing high-value datasets for public use.

Most of the promotion is currently taking place through direct communication with strategic stakeholders. However, more interaction with the general public is anticipated once some datasets have been published and some collaborative activities are in place.

Monitoring and evaluation

Monitoring and evaluation findings

One of the major goals was achieved: establishing the Namibian GBIF Node. The introductory workshop was completed, and attended by many key stakeholders, including senior academics from the three Namibian Universities, a CEO and key scientists from major data-holding and -publishing NGO's, and various senior government officials in key ministries (see attached guest list). Attachments include photographs, a program, and a list of the attendees. The impact of this workshop and many individual discussions with key stakeholders, has been positive in terms of the promotion of GBIF within Namibia. Open data has been viewed with great suspicion among many institutions and scientists in the past, and a focus on presenting the new Node and its activities as beneficial for Namibia was focused on and was well-received. The stakeholder engagement activities is expected to have real data-publication and -use outcomes in the coming years, as interested members become involved in the node activities.

Digitisation, data-cleaning and -verification activities are well underway, and the first dataset was completed and published. However, the project timeline has been severely delayed by the COVID pandemic and various official processes. Despite delays, the datasets being digitised are substantial and highly relevant, as is the institutional capacity being built up by the project. Several of these datasets will be larger than initially proposed.

While we do not wish to change the minimum set project deliverables at this time, an extension to the project timeline would greatly improve the chances of success, the number of records published, and the impact of this project. More specifically, the effective spending of the funds would be negatively influenced by a shorter timeline.

Impact of COVID-19 pandemic on project implementation

The main project partner institutions, in particular the institutions running the project activities (NMNW and NBRI), had been closed for extended times during the project implementation period. Both major ministries (Ministry of Education, Arts and Culture; Ministry of Environment, Forestry and Tourism) had also been at reduced capacity many times. Banks and various institutions on which the project depends had been closed or at reduced capacity. Several of the key staff members running the project activities (consisting of two to five people) had contracted COVID during this period. These circumstances have severely delayed the activities directly, and indirectly by preventing the organisation of permissions, signatures, and agreements necessary to run the project. For instance, the clearance to open a bank account for the funding to be channeled to, was considerably complicated and delayed by these circumstances. Some of the grant conditions, particularly the co-purchase of IT equipment and non-coverage of banking fees, have also been difficult and very time-consuming to overcome within the institutional operational frameworks, considering COVID-related impacts on institutional efficiency. These delays have considerably impacted the project implementation, and is likely to reduce the number of records that can be published and the number of stakeholder engagement activities that can be completed within the project period.

GBIF leads the Biodiversity Information for Development (BID), a programme funded by the European Union. The programme provides supplementary support for activities addressing the needs of regional researchers and policymakers through mobilization and use of biodiversity data.

