

Capacity development for mobilization and use of Biodiversity Information Development (BID) data on endangered bird species in Kenya

Programme: BID
Project ID: BID-AF2020-014-NAC
Project lead organization: Strathmore University
Project implementation period: 5/4/2021 - 27/3/2023
Report approved: 6/4/2022

Narrative Midterm report

Executive Summary

The project achieved two training workshops as planned for year 1, TOT I and TOT II creating a community of practice including masters and PhD graduate students, early-career scientists, conservation managers and established scientists at local universities engaging in developing manuscripts through the students graduate work. The students are using BID data in their research work. They were trained on data acquisition and publishing on GBIF and have been able to download GBIF data for their ongoing research.

The three main objectives of the project have progressed as below:

1. 15 Fellows in the project were trained on the development of policy briefs during TOT. Each fellow is progressing with developing a policy brief based on analysis of the BID data as an objective of their thesis. Policy dimension is integrated in every thesis for 2 PhDs and 2 Masters fellows.
2. Fellows have downloaded data from the GBIF portal (data download link attached) for their graduate research and are progressing with analysis. The early-career scientists are offering academic guidance for co-authorship.
3. Four conservation managers were admitted as BID fellows and went through the TOT I on protocols for collecting policy-relevant data through citizen science and worked along with the graduate students in designing the policy issues to review in their research.

Monitoring and evaluation

1. Progress based on achievement of milestones, successful delivery of TOT 1 and TOT 2, publishing of a dataset and data download from GBIF
2. Manuscript progress of the graduate fellows through supervision
3. Level of participation of the fellows and delivery of research milestones aligned to the deliverables including data downloads by the fellows from the GBIF portal. Fellows have shared the links

Progress against milestones

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

Dataset published:

Dataset	DOI
Global Raptor Impact Network (GRIN) data on raptor observations in Kenya for the period 2013-2021	10.15468/m8jxcu

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

Rationale: Use case 2 submitted by [David Chiawo] on 18/7/2021

Use case 3 submitted by [David Chiawo] on 18/7/2021

Use case 2 submitted by [Libby Ellwood] on 18/7/2021

Use case 3 submitted by [Libby Ellwood] on 18/7/2021

Waiting for the result of the certification process

Report on Activities

Activity progress summary

Activities proposed for mid-term have been achieved; Two TOTs were successfully conducted. However, the starting dates for year 1 were delayed from April to May for TOT1 and July to September 2021. Logistical planning was successful and the call for BID fellows was distributed online across the partner institutions' websites in Kenya. Fellows were recruited competitively across the universities in Kenya.

BID-C was established to support graduate students with the publishing of journal articles and the development of policy briefs as was proposed.

Logistical planning for year 2 is delayed to mid-February 2022 instead of January 2022 after the close of mid-term reporting. The reporting process has engaged partners in charge of planning. No impact will this have as TOT I-2 will start as was proposed.

Data mobilization was achieved by publishing 1 dataset of GBIF IPT. 15 BID fellows were trained on data mobilization and publishing in TOT I-1. 14 progressed to TOT II-1 for the training of peer-review publishing from GBIF data. Graduate fellows are focused on two areas - the manuscript development SDM and development of policy briefs.

Completed activities

Activity: Logistical planning-1

Description: Development and release of Call documents for BID Fellows

Start Date - End Date: 10/4/2021 - 23/4/2021

Verification Sources: 1. Online meeting zoom screenshots.

2. Meeting outcome notes
3. Notices for call of planning meeting.
4. Call links on partner websites

Activity: Logistical planning-1

Description: Selection of BID Fellows 2021

Start Date - End Date: 23/4/2022 - 13/5/2021

Verification Sources: List of BID fellows 2021

Activity: Technical planning

Description: Development of training manuals for TOT I-1 on data mobilization and identification of data sources

Start Date - End Date: 10/4/2021 - 10/5/2021

Verification Sources: Training manuals

Activity: Logistical Planning for accommodation of BID fellows for TOT I-1

Description: This involved logistical Planning for Accommodation, transport and workshop administration.

Start Date - End Date: 10/5/2021 - 21/5/2021

Verification Sources: 1. Correspondence with suppliers e.g. accommodation invoices.

Activity: BID capacity enhancement workshop

Description: 03-14 MAY: preparatory course activities (online self-paced; Section I)

18-21 MAY: virtual workshop (Zoom sessions and online self-paced; Section II)

24 MAY - 27 JUNE: certification exercises (online self-paced; Section III)

Start Date - End Date: 3/5/2021 - 27/6/2021

Verification Sources: 1. Submission of use cases 2 and 3

Certification of two members, David and Libby is pending from GBIF side.

Activity: TOT I-1: Data Mobilization

Description: data digitization and publishing on GBIF IPT. Protocols for collecting policy-relevant data through citizen science.

Start Date - End Date: 24/5/2021 - 27/5/2021

Verification Sources: Time table/training schedule

Activity: TOT I-1

Description: Data publishing

-Raptors Occurrence Data in

Kenya

Start Date - End Date: 1/6/2021 - 15/1/2022

Verification Sources: Link of published data

<https://www.gbif.org/dataset/e7534aa4-4d12-4be7-a3d2-5cd38ab6b8a4#description>

Activity: TOT II-1: Publishing from GBIF data

Description: Training on publishing peer-reviewed papers from BID data for 1st cohort. Species Niche Modelling tools. Training on publishing conservation policy briefs from BID data for 1st cohort.

Start Date - End Date: 7/9/2022 - 10/9/2021

Verification Sources: Time Table/Training schedule

Activity: TOT II-1: Publishing from GBIF data

Description: Downloading datasets from GBIF portal for use in analysis to develop publication articles

Start Date - End Date: 1/9/2021 - 13/11/2021

Verification Sources: Links to the downloaded datasets

<https://doi.org/10.15468/dl.ppjcsz>

<https://doi.org/10.15468/dl.ztmndb>

<https://doi.org/10.15468/dl.hzyp6v>

<https://doi.org/10.15468/dl.ddg55a>

Report on Deliverables

Deliverables progress summary

11 699 data records on raptors have been digitized and published on the GBIF portal and are currently in use by one of the PhD BID fellows to publish a peer review article.

Development manuscripts for publishing of peer review articles on endangered birds in Kenya are ongoing. 4 peer-review articles and policy briefs are ongoing by the graduate fellows supervised by the early careers; 8 out of the planned 10 due to 1 dropped case.

Training workshops TOTI-1 AND TOT II-1 were successfully delivered verifiable from the training scheduled and signed participant registers.

Achieving the estimated records for mid-term is delayed, due to the specialized nature of the type of data targeted (endangered bird species). A new plan is in place to engage specific researchers working on specific endangered species for new data records by March 2022 and for activity of cohort 2.

Publishing of peer review articles is taking time due to the quality of output expected for PhD and MSc level research and the level of statistical knowledge of students in the R programme. However, the extended timeline for the preparation of manuscripts for publishing is not a surprise to the project team, and we have developed a plan to address this. The project will work with an early career statistician, with expertise in R, to be among the facilitators and an advisor to the fellows to assist in the generation of outputs for the articles for publishing. This is done within the facilitation and supervision framework project. Projected time of submission of the articles to publishers is May 2022 for cohort 1 fellows. Verification will be titles of the articles and submission correspondence. The publishing period was envisioned to spill into 2022 for cohort 1 and is well covered in the supervision plan in the project. Completion of the 4 policy briefs relies on the analysis output. The release of the 4 policy briefs is projected also to May 2022 for the same cohort 1.

Bringing in the statistician as one of the early careers and a facilitator in the project in 2022 will help resolve any publishing delays by providing the graduate fellows additional support and education for the analytical portions of their research.

On documentation and sustainability on the community of practice on BID data use and mobilization of biodiversity data and publicly of the project. The BID-C research center is already established at Strathmore University motivated by the BID grant verifiable through YouTube and Website links.

Improvements to enhance delivery

1. Bringing in a statistician to enhance statistical output for the peer review articles to shorten the publishing process.
2. Working with individual data owners on endangered species to enhance data records to publish

New deliverables

1. Created a presentation highlighting this project and the BID approach for biodiversity conservation in Africa which can be used at future conservation conferences
2. Thesis titles based on BID project
3. Peer review article titles submitted to journals for publishing, this could be a quick measure of delivery pending the publication article that could take longer.

Progress towards deliverables

Dataset deliverables

Data Mobilization

Dataset type: Occurrences

Dataset scope: raptor observations in Kenya for the period 2013-2021

Number of records: 11,669

Data holder: Peregrin Fund (Global Raptor Impact Network (GRIN))

Data host institution: National Museums of Kenya

% complete: 40%

Status update: Published

DOI: 10.15468/m8jxcu

Expected date of publication:

Other deliverables

Publication

Description: Publishing peer review articles and policy briefs

% complete: 60%

Status update: Data analysis Manuscript preparation

Sources of verification: Manuscript titles Policy brief titles Niche distribution and predictive modeling of risks by overhead power lines to Raptors in Kenya Species Distribution Modeling and Threat Analysis of Grey-Crowned Crane (*Balearica regulorum*) in the Niche Hotspots of Nairobi Metropolitan Area Modeling the spatial distribution of the Grey crowned cranes in Kenya Nesting Site Selection and Breeding Success of Ruppell's Vulture (*Gyps rueppellii*) in Hell's Gate National Park, Kenya

Training workshop

Description: Two training workshops Training workshop I-1 Training workshop II-1

% complete: 100%

Status update: Completed

Sources of verification: Training time table/schedule Fellows signed register

Documentation

Description: Documenting activities of BID from a new research center motivated by the grant, Center for Biodiversity Information Development (BID-C)

% complete: 90%

Status update: formation of the center completed-BID-C in place. Details of the projected being updated on the BID-C webpage.

Sources of verification: BID-C webpage <https://sth.strathmore.edu/research/centre-for-biodiversity-information-development-bid-c/> YouTube documentary <https://www.youtube.com/watch?v=YirLweN4uw0>

Events

Training workshop TOT I-1

Dates: 2021-05-24 - 2021-05-27

Organizing institution: Strathmore University

Country: Kenya

Number of participants: 19

Comments: Number of participants included BID fellows and BID partners

Website or sources of verification: Photos

Events

Training workshop TOT II-1

Dates: 2021-09-07 - 2021-09-10

Organizing institution: Strathmore University

Country: Kenya

Number of participants: 18

Comments: Both BID fellows and BID partners as facilitators.

A hybrid event with physical and online component

Website or sources of verification: Photos

Communications and visibility

Communicating results through the BID-C website.

Dissemination by publishing on peer-review journals. Published papers from the use of BID data will be shared on ResearchGate and LinkedIn, and GBIF tagged.

BID fellows profile for visibility on BID-C website.

Documenting results on the BID-C website.

Use of LinkedIn, tagging partners, and GBIF.

One BID fellow will present results at an international conference and will be linked to the BID-C webpage. <https://sth.strathmore.edu/research/centre-for-biodiversity-information-development-bid-c/>

To list on project page;

1. 2021 Call for BID fellows: <https://strathmore.edu/biodiversity-information-development-bid-fellows-2021/> which was also shared broadly

<https://strathmore.edu/biodiversity-information-development-bid-fellows-2021/>

<http://www.ku.ac.ke/index.php/ku/item/2003-call-for-applications-biodiversity-information-development-bid-fellows-2021>

<https://www.uonbi.ac.ke/news/call-applications-biodiversity-information-development-bid-fellows-2021>

<https://www.linkedin.com/feed/update/urn:li:activity:6790276660634632192/>

2. 2021 BID fellows profiles.

3. 2021 workshop photos.

4. Published dataset: <https://www.gbif.org/dataset/e7534aa4-4d12-4be7-a3d2-5cd38ab6b8a4#description>

5. YouTube documentary, https://youtu.be/_hekS4bjaq4

6. BID-C web page advances activities of BID project, with plans to go beyond the two years,

<https://sth.strathmore.edu/research/centre-for-biodiversity-information-development-bid-c/>

Monitoring and evaluation

Monitoring and evaluation findings

No major changes are expected in the plan.

Some improvements will be implemented to enhance delivery;

1. Limited occurrence data on endangered birds are owned by conservancy managers, therefore, a plan to collaborate with individual scientists who own the data for access to publish to increase the records. A weakness is that the area of focus is specialized and the data is not easily accessible.
2. Bringing in an early career statistician competent in R as a facilitator to support fellows and develop strong outputs faster for efficiency of peer-review publishing.

The Center for Biodiversity information development (BID-C) has already been created and is championing the project at Strathmore University.

Strathmore University takes the lead and manages the operations, and major decisions with the running of the project are made collegially through partners meetings. Strathmore University oversees the project through BID-C.

Maintaining a hybrid system that supported some stakeholders to attend the TOTs due to COVID-19.

The delivery of TOT I-1 and TOT II-1 were successful.

Data publishing delivery up to 40% for year 1. The data use is at the manuscript development stage.

The importance of collaborating with local universities will continue for data use by graduate students in thesis work.

Relevance to graduates, early careers on career development. Training on data sharing and collecting policy-relevant were applicable to conservation managers. A study by one of the BID fellows on electrocution hotspots of raptors in Kenya using BID data is in context with the rising cases on overhead powerlines.

Support from the Kenya GBIF node and the BID support desk.

Impact of COVID-19 pandemic on project implementation

1. As a result of the ongoing COVID pandemic, the 2 workshops conducted were delayed and rescheduled to May and September. In addition to this, we were able to implement hybrid workshops, where some participants who were unable to travel attended the workshop sessions virtually. International partners were also able to engage and facilitate some sessions virtually.
 2. The BID Fellows – Graduate students (PhD and masters) were able to work with the assigned BID supervisors and their university supervisors, ensuring the use of BID data are recognized at their universities for both PhD and master research and theses writing.
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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.

