**⟫ BID**

# BID Africa 1 – Small Grant Template
# Final narrative report

*Remember that all project activities <u>should be completed</u> within the implementation period of your project. The evaluation period must focus on final reporting and evaluation of your project.*

## *Instructions*

- Fill the template below with relevant information. If no result has been achieved on a specific point, **please indicate the reason of the delay and expected date of completion.** Use the information included in your project Full proposal (reproduced in annex III.a. of your BID contract) as a baseline from which to complete this template

- The information provided below must correspond to the financial information that appears in the financial report

- Sources of verification are for example links to relevant digital documents, news/newsletters, brochures, copies of agreements with data holding institutions, workshop related documents, pictures, etc. **Please provide access to all mentioned sources of verification** by either providing the link or sending a copy of the documents.

- This report must <u>first</u> be sent as a **Word document** to [BID@GBIF.org](mailto:BID@GBIF.org) and be pre-approved by GBIFS

- Once this report is pre-approved in writing by GBIFS, it must be signed by the BID project coordinator and sent by post to:

  The Global Biodiversity Information Facility Secretariat (GBIFS)

  Universitetsparken 15


  DK-2100 Copenhagen Ø
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*Template*


# 1. Table of Contents

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# 2. Project Information

### 2.1. Principal investigator and grant coordinator: Institution/network/agency name:

Botswana Wildlife Management Association

### 2.2. Principal investigator name and role:

Monica Morrison, Organiser

### 2.3. BID proposal identifier:

BID-AF-2015-0014-SMA

### 2.4. Project title:

Data Rescue for the Records of the Botswana Wildlife Management Association

### 2.5. Start date and end date of the reporting period:

1/12/2016 – 31/08/2017

### 2.6. Country(ies) in which the activities take place:

Botswana

# 3. Overview of results

### 3.1. Executive summary

*Give a short summary of the activities implemented and the outcomes of the project for the whole implementation period (no more than 500 words maximum).*

The hunting records project was completed by the end of August 2017 with the publishing of elephant trophy datasets and production of an archival finding aid for the BWMA's records. Determining the correct mapping of data to match Darwin Core terms, and technical issues with University of Botswana servers, caused some delays in the collection processing work, but collaborative teamwork built strong biodiversity data mobilisation capacity.

Following completion of the the BID online course, in February 2017 the two trained team members worked with the Okavango Research Institute's GIS Laboratory to install the IPT on an ORI server to prepare for the publishing process with a third team member from the library. Development of the mapping work took place in March and April, eventually with assistance from Zimbabwean mentor, Kudzai Mafuwe. Experimentation and practice with the mapping and publishing process continued until late June 2017. The project successfully published its first dataset in July, 2017.

In the meantime, drafting of the archival finding aid for the collection's records that had been transferred to the Okavango Research Institute's Library was completed, and two awareness workshops were held in Maun on March 27th and in Gaborone on 21st May 2017.

Server and network issues caused delays in publishing the remaining elephant trophy datasets, and transfer of some datasets from the owner is outstanding. The Okavango Research Institute is, however, committeed to continuing the transfer, processing and publishing work, and to adding value to the existing finding aids.

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A continued challenge was that team members from the Department of Wildlife and National Parks, an important potential user of the materials, were mostly not free from their duties to allow them to participate in the technical work of the project, but they regularly acknowledged updates of the project work and participated in the two awareness workshops.

### 3.2. Progress against expected milestones:

| Expected milestones/activities | Completed? Yes/No | Explanatory notes | Sources of verification |
|---|---|---|---|
| Completed capacity self-assessment questionnaire for data holding institutions (http://www.gbif.org/resource/82785) | Yes | | Document |
| The instituton that will publish your data is registered with GBIF.org For registered data publishers see: http://www.gbif.org/publisher/search | Yes | | Document |
| The data users identified in the full proposal have documented their intended use of the mobilized data and provided early feedback | Yes | Participants at workshops indicated interest in using the data, asking when it would be accessible. Team will send them notification when all elephant tropy datasets have been published. | Workshop reports |
| All mobilized data has been published to GBIF.org | | Elephant trophy datasets in process and to be published by 8 September 2017. | Datasets on GBIF site |
| All published data meet the minimum requirements outlined in the Data Quality Requirements available at http://bid.gbif.org/en/community/data-quality/ | | | Datasets on GBIF site |
| The training outcomes of the project have been documented, including the number of people receiving certification through the BID Capacity Enhancement workshops, the number of people trained in nationally organized events, and the evaluation of the impacts of these training activities | Yes, partly | Two team members completed training but connectivity and trainer shortcomings failed to produce all required documentation. Have requested that the trainees retake the final question set. | GBIF BID training system |
| Final capacity self-assessments have been completed with sustainability plans | Yes | | Documents |
| All uses of the mobilized data have been documented | Yes | To date | Documents |
| Best practices and lessons learned have been documented | Yes | | Lessons learned document |

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### 3.3. Project deliverables and activities

*Refer to the table in section 2.2 "Deliverables, activities and reporting criteria" of your BID full proposal. Provide updates on the status of each of planned deliverables. We remind you that all deliverables should be completed at the time of drafting this report (end of implementation period). In the event of unexpected delay, please provide detailed explanatory notes and indicate planned completion date. Add as many rows as needed.*

| Deliverable | Related activity | Completed ? Yes/No | Explanatory notes | Sources of verification |
|---|---|---|---|---|
| Inventory and finding aid for BWMA records completed and priority records for digitization identified | Records inventory; listing and categorisation of records and data types; production of finding aid | Yes | Excel spreadsheets and Word document used; no archival software available team challenged to isolate priority records | Documents |
| Inventory of biological specimens | Specimen inventory: listing and categorisation of specimens: resources metadata in GBIF | Inventory 100 % complete | Specimens listed, but categorisation and resources metadata work pending move to permanent specimen storage. Processing of data and publishing to GBIF to follow in 2018 once specimen storage organised | UB ORI Library Finding Aid document |
| BWMA records inventoried, boxed and prepared for transfer to identified repository | Physical processing of collection | Yes | | Documents |
| Selection of metadata | Determination of metadata to be captured | Yes | Mapping to Darwin Core completed | GBIF site |
| Finding aid to records collection completed | Records finding aid detailed analysis of records collection to identify possible candidates for future data capture | Yes | Finding aid completed. No archival software available so team challenged to isolate priority records for further work. | Finding Aid |
| Dataset transfer procedures finalised | Dataset transfer procedures: Procedures and instructions for mapping datasets developed and clarified | Yes | | Processed datasets |
| Trophy and other research data submitted to GBIF system | Data capture application of metadata: Application of metadata, and mapping and | Partly | Antelope and predator datasets still to be transferred from owner. | List of records submitted to GBIF system |

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| Deliverable | Related activity | Completed ? Yes/No | Explanatory notes | Sources of verification |
|---|---|---|---|---|
| | transfer of existing data to GBIF system | | | |
| Guidelines for ongoing stewardship of the collections | Sustainability plan: Development of recommendations for preservation and ongoing maintenance of collections | Yes | | Sustainability plan |

## 3.4. Datasets published on GBIF.org

*If the dataset is not yet published, please indicate detailed explanation about causes of delays". Add as many rows as needed.*

| Dataset title | Publishing institution | DOI or URL/Planned hosting institution | Date/expected date of publication | Explanatory notes |
|---|---|---|---|---|
| Database of elephant and predator trophy types and measurements, 1995-2013 | Mochaba/BWMA | UBORI host; https://www.gbif.org/project/82758/data-rescue-for-the-records-of-the-botswana-wildlife-management-association#datasets | 31/10/2017 | Corrections (standardisation) to publshed datasets underway and remaining unpublished datasets being processed. Delay due to uncertainty as to how to identify contributors so they would appear in citations |
| Predator tooth and jaw data, 1995-2000s | Mochaba/BWMA | UB ORI | 30/03/2018 | Waiting for transfer from Debbie Peake |
| Antelope trophy measurements (1995-2002) | Mochaba/BWMA | UB ORI | 30/03/2018 | Waiting for transfer from Debbie Peake |
| BWMA records (correspondence, reports) | BWMA | UB ORI | | Metadata only |
| Biological specimens | BWMA | UB ORI | 30/06/2018 | Metadata only; publication to GBIF planned for mid-2018 |

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### 3.5. Examples of use of biodiversity data available through GBIF

*Use the table to document use or planned use of data available through GBIF as part of your project. You may want to refer to the section 2.5 'Plan to support the integration of biodiversity information into policy and decision-making processes' of your BID full proposal.  Please provide the DOI for datasets published on GBIF or data downloaded from GBIF in the "Dataset" column. Briefly describe how the data have been used or are planned to be used in the "Data use" column (ca. 50 words). Provide the date or approximate time frame in months for the use or planned use in the "Date/time frame" column. Please provide links to any documents or webpages documenting the use in the "Sources of verification" column.  Add as many rows as needed.*

| Dataset | Data user | Data use | Date/time frame | Sources of verification | Notes |
|---|---|---|---|---|---|
| Elephant hunting trophy datasets | Researchers, University of Botswana, BIUST, DWNP | Abundance and distribution location data that help identify ecoregions<br>Economic data related to consumptive wildlife use: numbers and species harvested, income generated. Data related to impact of harvesting on population numbers and genetics. | September 2017 - ongoing | Planned | |
| | | | | | |

### 3.6. Events organized as part of the project

*List all the events that have been organized as part of your project. Please provide links to any documents or webpages documenting the use in the "Sources of verification" column.  Add as many rows as needed.*

| Full title | Organizing institution | Dates | Number of participants | Sources of verification |
|---|---|---|---|---|
| Presentation to Do…Follow Research Meetup group | Project/MoediwaKitso | 06/07/2016 | 22 | Summary of event from web site |
| Information sharing meeting with ORI JRS Biodiversity project team | Project/MoediwaKitso | 31/01/2017 | 14 | Presentation |
| Presentation to DWNP | Project/MoediwaKitso | 03/03/2017 | 11 | Presentation |
| Presentation to Botswana International University of Science and Technology STEM Workshop | ORI | 11/04/2017 | 150 | Presentation |
| Awareness Workshop, Maun | Project/MoediwaKitso | 22/03/2017 | 30 | Workshop documents |

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| Full title | Organizing institution | Dates | Number of participants | Sources of verification |
|---|---|---|---|---|
| Awareness Workshop, Gaborone | Project/MoediwaKitso | 10/05/2017 | 37 | Workshop documents |

*This programme is funded by the European Union*

# 4. Implementation of BID project activities

*Refer to section 2.2 "Deliverables, activities and reporting criteria" in your BID full proposal. Provide updates on each of the activities using the reporting criteria and other sources of verification as appropriate.*
*Sources of verification are for example links to relevant digital document, news, newsletter, brochures, copies of agreements with data holding institutions, workshop related documents, pictures, etc.*

## 4.1. Goal 1: Increase available biodiversity data, within and beyond the grant period

*Activity 1 name:*

Records inventory

### Description of any implementation during the reporting period

Listing and categorisation of records and data types

### Sources of verification

Finding aid

*Activity 2 name:*

Specimen inventory

### Description of any implementation during the reporting period

Listing and categorisation of specimens

### Sources of verification

Finding aid

*Activity 3 name:*

Collection processing.

### Description of any implementation during the reporting period

Physical processing of collection

### Sources of verification

Finding aid

*Activity 4 name:*

Metadata selection

### Description of any implementation during the reporting period

Determination of metadata to be captured

### Sources of verification

Published datasets

*Activity 5 name:*

Records finding aid

### Description of any implementation during the reporting period

Detailed description of records collection

### Sources of verification

Finding aid



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## Activity 6 name:

Dataset transfer

## Description of any implementation during the reporting period

Procedures and instructions for mapping datasets developed and clarified

## Sources of verification

Published datasets

## Activity 7 name:

Data capture application of metadata

## Description of any implementation during the reporting period

Application of metadata, and mapping and transfer of existing data to GBIF system

## Sources of verification

Published datasets

## Activity 8 name:

Sustainability plan

## Description of any implementation during the reporting period

Development of recommendations for preservation and ongoing maintenance of collections

## Sources of verification

Plan

## Goal 2: Apply biodiversity data in response to conservation priorities

## Activity 1 name:

Stakeholder workshop 1

## Description of any implementation during the reporting period

Half day workshop in Maun to present work and promote use among scientists and practitioners, including government and tourism private sector research users.

## Sources of verification

Workshop summary

## Activity 2 name:

Stakeholder workshop 2

## Description of any implementation during the reporting period

Half day workshop in Gaborone to present work and promote use among scientists and practitioners, including government and tourism private sector research users.

## Sources of verification

Workshop summary

## Activity 2 name:

Inclusion of links to GBIF records in the Government of Botswana's online Environmental Information System (EIS). Documents in this online resource are used to support development of Environmental Impact Assessments and management plans.

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### Description of any implementation during the reporting period

The EIS is still undergoing re-development by the Government of Botswana and is not yet available for addition of links. It has not been possible to determine when the EIS will be relaunched.

### Sources of verification

EIS

## 5. Updated calendar for the BID project implementation and evaluation period

*The calendar should be completed in the same way as in the Full Project Proposal, but should include any expected changes. Provide reasons for any expected changes in section 5.1 'Explanatory Notes'.*

| Implementation period (maximum 12 months, starting 1 June 2016 at the earliest) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Implementation period start date and end date 01/06/2016 | 01/07/16 to 30/06/2017 | | | | | | | | | | | | |
| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Notes |
| Mid-term evaluation & reporting | | | | | | X | | | | | | | |
| Records inventory | X | | | | | | | | | | | | |
| Specimen inventory | | X | | | | | | | | | | | |
| Collection processing | | | X | X | | | | | | | | | |
| Metadata selection | | | X | X | X | X | X | X | | | | | |
| Records finding aid | | | | | | X | X | X | | | | | |
| Dataset transfer procedures | | | | | | | | X | X | X | | | |
| Data capture and application of metadata | | | | | | | | | X | X | X | X | Datasets not yet transferred to ORI will be processed by 2018 |
| Sustainability plan | | | | | | | | | | | X | | |
| Stakeholder workshop1 | | | | | | | | | X | | | | |
| Stakeholder workshop2 | | | | | | | | | | X | | | |
| Links to EIS | | | | | | | | | | | | X | Depending on availability of EIS |

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| Evaluation period (maximum 6 months, ending 31 December 2017 at the latest) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Evaluation period start date and end date (dd/mm/yy) | | | | | | | |
| Activity | 1 | 2 | 3 | 4 | 5 | 6 | Notes |
| <Activity name> | | | | | | | |
| <Activity name> | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## 5.1. Explanatory notes:

# 6. Sustainability plans

*Explain the approach that will be taken to ensure the sustainability of the project's results after the end of your project (500 words maximum)*

During the project, the BWMA's hard copy records were inventoried and a finding aid produced. Elephant trophy datasets were processed and published to the GBIF's online resource.

The end of the project did not complete the data mobilisation and information management work.

Other datasets still to be transferred, processed and published are:

- Predator tooth and jaw data, 1995-2000s

- Antelope trophy measurements (1995-2002)

- Biological specimens, in the form of elephant jaws retained by the taxidermist for estimating the age of the animals. Other biological specimens already transferred to the ORI Library with the hard copy files need to be described and published to the GBIF.

## 6.1. Sustainability Plans

This project was primarily an effort to rescue and preserve the records and data of the BWMA in the face of the hunting industry moratorium. This goal has been achieved. The project work has also stimulated interest in further use of the resources, and in more data mobilisation work that should reinforce the value of maintaining the knowledge infrastructure required to ensure the work's contribution to Botswana's biodiversity.

Mrs Peake and the ORI Library have committed to completing the work defined by the project. When all datasets are processed and published, global access to the data will be sustained through the GBIF online resource.

The hard copy records of the BWMA, now boxed and stored in a temporary location in the library, will be preserved as part of the ORI Library's archives, and can be made available under the terms of the Deed of Gift. Further indexing of the hard copy collection can reveal more contextual information for the data that has been published.

## 6.2. Recommendations

Four requirements for sustainability and future use of the collections are noted here.

1. **Physical storage facilities** for ORI's records and biological collections. ORI's Library's storage capacity has been limited for some time. At the beginning of the GBIF project, it was anticipated that several used portacabins would be transferred from the University's Main Campus to Maun, and be used to accommodate the new collection of records, as well as biological specimens that have been up until now kept in the Library's storage space. Transfer of the buildings was not possible during the term of the project. Efforts should be made to acquire this additional space, and the shelving and climate control needed to preserve the collections and keep them in order.

2. **Web-based awareness tools.** The richness of the University of Botswana's archival collections needs exposure. Description of the project has been included on ORI's web site. A record for the library catalogue is being prepared to alert possible users to the existence of the collection. It is recommended that exposure of the University Library's archival collections through a dedicated web page be a priority. Such a web resource would make a link to the datasets in the GBIF possible.

3. **Archival software.** An important requirement for sustainability of the archival collection is use of a finding aid database. The ORI Library was at one time using CANTAB software developed by Cambridge University Archives, based on Microsoft Access, but that application is no longer supported, and is not working on ORI Library computers. This puts existing indexed collections at risk, and prevents indexing of new collections like BWMA's hunting records. In the past few years, database tools for managing archives have much improved. As a matter of urgency, the University Library needs to acquire one of these, and put a migration strategy in place to ensure that digitized and indexed collections are available on permanent basis.

4. **Technology resources.** Ongoing work with archival and data collections requires constant learning about new technology tools. IT support dedicated to the library function should be considered, and upgrades for GIS and other data servers and applications included in the University's infrastructure planning and resource mobilisation.

# 7. Beneficiaries/affiliated entities and other cooperation

## 7.1. Relationship with project partners

*Please describe the relationship between your project coordinating team/institution and your project partners, and with any other organisations involved in implementing your BID project.*

A strong spirit of cooperation among the project partners in the face of technical and logistical challenges was responsible for the success of this project. This was shown by patience and responsiveness of the BWMA's Secretary in the iterative process of collection transfer, the consistent support of the Director and academic staff of the Okavango Research Institute throughout the project, especially in ensuring that the outreach workshops were effective, and in the self-driven internal cooperation and peer support of the ORI Library, ORI GIS, and Moedi wa Kitso team members. The University of Botswana Library at Main Campus and Maun Technical College provided facilities and support for workshops. Motivational and capacity building assistance from mentor Ms Kudzai Mafuwe of the Zimbabwe Museums was a key ingredient in this mix. An important partner, the DWNP, was restricted in its ability to participate practically in the data mobilisation work, but facilitated the process when it could, and ensured that the Department was represented at meetings and workshops.

## 7.2. Links to other projects and actions

*Where applicable, outline any links and synergies you have developed with other actions, e.g. GBIF nodes, other BID funded projects, etc. If your organization has received previous grants in view of strengthening the same target group, how far has your BID project been able to build upon/complement the previous project(s) ?*

There was one other GBIF project with Botswana involvement: the National Museum's participation in the regional *Insect Atlas* development. Two projects did not directly interact or share learning during the project period but, especially as the two projects shared a mentor, there will be future interaction related to technical matters.

During the project period, ORI won a grant from the JRS Biodiversity Foundation to assist the Institute's monitoring and evaluation unit to further mobilise data in the organisation's research collections. The hunting records team provided their experience and advice to the new project.

# 8. Visibility

*Please refer to the [BID guidelines](#)*

## 8.1. Visibility of the BID project

*How is the visibility of your BID project being ensured?*

### Short summary

A press release circulated to news outlets in the region announced the startup of the project. The project team took advantage of events related to wildlife research and management to share information about the project: for example, Debbie Peake has spoken about the work at the Maun-based Do…Follow Research Meetup, and distributed a flyer at the CITES COP 17 meeting in Johannesburg. ORI team members presented the project at a national STE workshop organised by the Botswana International University of Science and Technology. Posts on Twitter highlighted project milestones. The two workshops successfully communicated the work to relevant stakeholders at local and national levels.

The hunting debate is highly political, which, along with the narrow focus of the materials, posed some challenges for exposure of the project, especially in government circles.

### Sources of verification

Attached PDF.

## 8.2. Visibility of the EU contribution

*How is the visibility of the EU contribution being ensured within your project implementation?*

*This programme is funded by the [European Union](#)*

## Short summary

An indication of support of the EU was included in all outreach and workshop materials. The EU office in Botswana had not been aware of the project until a representative attended the Gaborone workshop.

## Sources of verification

Attached materials in PDF.

**BID**                                                                **GBIF**

Signature

Name of the contact person for the BID Project: Monica Morrison

Date report sent by email in Word format to [bid@gbif.org](mailto:bid@gbif.org) for pre-approval: 31 August 2017

Date report sent by post to GBIF Secretariat: _____

*This programme is funded by the [European Union](European Union)*

# 9. **Annexes**

Maun Workshop compilation

Gaborone Workshop compilation

Self-Assessment

Lessons Learned

Outreach Documentation

Expense Summary Page

Financial Report

Receipts