



BID Africa 1 – Small Grant Template

Final narrative report

Remember that all project activities should be completed 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 first be sent as a **Word document** to GBIF@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
Denmark

Template

1. Table of Contents

1.	Table of Contents	1
2.	Project Information.....	2
3.	Overview of results	2
4.	Implementation of BID project activities	12
5.	Updated calendar for the BID project implementation and evaluation period	14
6.	Sustainability plans	16
7.	Beneficiaries/affiliated entities and other cooperation	17
8.	Visibility	18





2. Project Information

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

National Museums of Kenya and National Environment Management Authority

2.2. Principal investigator name and role: **Dr Charles N. Lange**: Role – Data Mining, Data Management, analysis, reports development and submission to GBIF

2.3. BID proposal identifier: BID-AF2015-0045-SMA

2.4. Project title: Mobilizing freshwater snails' biodiversity datasets for advancing biodiversity knowledge access, conservation and human wellbeing in Kenya

2.5. Start date and end date of the reporting period: 1st December, 2016 – 31st August 2017

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

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).

This project sought to mobilize freshwater snails data from secondary sources mainly focusing on collections at the National Museums of Kenya which is the national repository of natural history collection in Kenya including also data mining from literature. The first key project activity involved data mining from collections at the National Museums of Kenya with the assistance of the Project assistant who is a technician at the National Museums of Kenya. This activity ran parallel with data mining from various literature sources such as published books, research papers and internet (www) including data mining from other institutions collections. Data-sets mined focused mainly on taxon data-sets, occurrence, ecology and abundance data-sets. Data mined particularly from collections was screened by the Project Principal Investigator (PI) for quality control particularly the taxon data-sets before entry into GBIF format database for publication. The data mobilized yielded 57 species comprising of 38236 individuals of freshwater snails (Gastropods). Two (2) species of bivalves captured from literature were also included in the database mainly owing to their conservation status. Among the species recorded, 18 (31.6%) of them are endemic to Kenya. Several other species recorded from the collection at the National Museums of Kenya, are material from other countries and do not occur in Kenya. At least four species are listed Critically Endangered and four others Endangered in the IUCN Red List of Threatened animals. Majority of the species are though listed as Least Concern in the IUCN category. The taxon





(species) database was published in GBIF.org. Most of the taxon names were matched with locality (occurrence data). However, many locality names appear may have been misspelled or present broad range locality names that makes it difficult to present point geodatabase(GPS data). Thus, presenting occurrence database with geodata was a great challenge and hence occurrence data was not published. Nevertheless, efforts are find the best arrangement for presenting the geodata for the various localities assoiated with the species data. The outcome from the project has been a major contribution in improving the knowledge of freshwater snails in Kenya and even Africa. The classification (species) database published present the range of freshwater snails from Kenya and even beyond which form a good reference point on freshwater snails biodiversity. More so, the project contributes in availing information for promoting the understanding and management of potential snails-borne diseases in Kenya through knowledge on the distribution of the potential intermediate hosts snails in the genera *Bulinus* and *Biomphalaria*. The project contributed in ehancing research capacity in Kenya through induction of the research assitant in freshwater snails diagnostics. The project further provided insights for application in designing future research projects on fresheater snails.



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	Completed the assessment questionnaire and send to GBIF secretariat	The completed questionnaire send
The instituton that will publish your data is registered with GBIF.org For registered data publishers see: http://www.gbif.org/publisher/search	yes	See: GBIF.org	www.gbif.org
The data users identified in the full proposal have documented their intended use of the mobilized data and provided early feedback	Yes	The results to be used in the development of the Kenya's National State of Environment Report (SoE) 2015-17	Draft SoE
All mobilized data has been published to GBIF.org	Checklist Done; Occurrence dataset has challenges due with names that cannot exactly be assigned a Geodata or GPS point data. Species data-sets published	See Checklist on www.gbif.org	Publication at www.gbif.org



All published data meet the minimum requirements outlined in the Data Quality Requirements available at http://bid.gbif.org/en/community/data-quality/	Yes	See www.gbif.org	Verify at www.gbif.org
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	Mr. Masinde did the online course and is using the expertise to promote database activities at NEMA CHM	Draft SoE chapter on Biodiversity
Final capacity self-assessments have been completed with sustainability plans	Yes	See send copy of self assessment	Self assessment document send to GBIF
All uses of the mobilized data have been documented	Yes	Draft SoE noted use of mobilized data on freshwater snails and other will be documented too	Draft SoE Chapter on Biodiversity
Best practices and lessons learned have been documented	Yes	This report summary indicates best lessons learnt	This report – see summary section



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
<ul style="list-style-type: none"> Electronic Database 	Museum collections data mining, Screening literature sources & Data entry to electronic database	Yes	Data mining from collection and screening of literature sources successfully undertaken and completed	www.gbif.org data (species data-set) publishing site and copy at NMK database
<ul style="list-style-type: none"> Scientific Publications 	Data Treatment & Manuscript development & submission	Ongoing	The manuscript for publication is at an advanced stage now and expect to submit to a journal for consideration for publication in Early October, 2017	Draft Manuscript can be supplied to GBIF
<ul style="list-style-type: none"> Open access data in GBIF 	Data loaded to GBIF.org	Checklist loaded – occurrence data not yet.	Occurrence data presenting challenges due to challenges with locality names that	Check www.gbif.org for checklist data



			cannot be assigned Geodata or GPS data point precisely	
<ul style="list-style-type: none"> Threatened species distribution maps and reviewed species conservation status 	Threatened species maps development/updating and revised species conservation status proposals.	Yes	Maps for threatened species and species of medical importance done	Map can be shared
<ul style="list-style-type: none"> Data for National Clearing House Mechanism (CHM) office at NEMA. 	CHM data enhancement	Yes	Data forwarded to CHM Manager	Information being organized for loading to Kenyas CHM
<ul style="list-style-type: none"> Data for the State of Environment report (SoE) 	Provision of data for the State of Environment report (SoE) development	Yes	Data in Draft SoE 2015-17	Draft SoE Biodiversity chapter

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
Taxon-data set – Checklist (species)	National Museums of Kenya	GBIF.org	Published on www.gbif.org data publishing site	Data published on GBIF.org
Occurrence datasets	National Museums of Kenya	Work on progress	By end of November, 2017	Many of the the species occurrence





				<p>data presents locality names that can not be assigned precisely to Geodata or GPS data point owing to the way the names are provided. This work therefore require extensive verification which in some cases require visits to given locality names for getting reliable geodata. Some locality names also were either misspelled or non-existence while others present broad names of large geographical areas that cannot precisely be assigned a point GPS data. Thus</p>
--	--	--	--	---





				further extensive verification is necessary which require more time
--	--	--	--	---





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
Describe d names (Taxon Dataset) of freshwater snails and loaded to GBIF	Government agencies such as NEMA, NMK and other , International agencies and Non-Government al Organisations	Research, Environmental Assessments and Biodiversity conservation promotion including management of potential snail borne diseases	Data will be used for the development of the State of Environment report 2015 -17, development of management plans	Sate of Environment report 2015 -2017	The database on checklist (species) and distribution (countries) form a critical foundation for building relevant research projects and targeted biodiversity assessments, including basis for promotion of biodiversity conservation. The information is will also be instrumental in serving public health through improved



					knowledge on distribution of potential vectors of parasites that cause snail-borne diseases and hence disease transmission risks
--	--	--	--	--	--

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
GBIF Supported Freshwater Snails Data Mobilization Workshop at the National Museums of Kenya	National Museums of Kenya	29 th August, 2017	15	List of Participatns
The State of Environment Report 2015-17 (SoE) Drafting workshop at Naivasha, Kenya.	National Environment Management Authority	5 th – 7 th July, 2017	17	List of participants





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 Museum collections data mining:

Description of any implementation during the reporting period

Data Mining from Museum collection mainly at the National Museums of Kenya (NMK) went on successfully and and completed. All freshwater snail datasets (Taxon, specimens, locality and ecological data) were captured from NMK and other institutions collections. The Museum collection recorded a total of 38236 specimens of freshwater snails. On taxon database, 57 species of freshwater snails (gastropods) and 2 species of bivalves were capture.

Sources of verification

Excel database sheets that can be supplied and checklist database loaded to GBIF.org

Activity 2 name: Screening literature sources

Description of any implementation during the reporting period

Relevant data (on freshwater snails) search and retrieval from secondary sources was undertaken from various sources traced (Books, www and scientific publications) and merged with data mined from museum collections. A checklist of 57 gastropods species and two bivalves was compiled from material at museum collection and literature sources. Some material from the museum collection comprised of species collected from other countries. Only species that were not represented in the museum collection but their geographical distribution include Kenya were captured from literature and merged with museum collection species database.

Sources of verification

Excel database on species checklist, specimens records and occurrence (locality data), mid-term progress report and this project narrative final report.

Activity 3 name: Data entry to electronic database

Description of any implementation during the reporting period

Electronic databasing of freshwater snails data successfully completed and is available at NMK.





Source of verification

Freshwater snails database at NMK

4.2. Goal 2: Apply biodiversity data in response to conservation priorities

Activity 1 Threatened species maps development/updating and revised species conservation status proposals.

Description of any implementation during the reporting period

Distribution map for threatened species and vectors of parasitic diseases done. Upon review of threatened species conservation status using the IUCN criteria 3.1. a conclusion that the species conservation status review of 2010, 2016 and 2017 which most of them I was the assessor was still valid.

Sources of verification

Species checklist database loaded at GBIF.org

Activity 2 name: CHM data enhancement

Description of any implementation during the reporting period

Database submitted to CHM manager at NEMA for review and consideration for loading to national CHM

Sources of verification

Acknowledgement of receipt of data from CHM manager

[Add as many activities as given in your full proposal under "Deliverables, activities and reporting criteria" for goal 2]

Activity 3 name: Provision of data for the State of Environment report (SoE) development

Description of any implementation during the reporting period

Data mobilized captured and used in updating the draft SoE 2015-17

Sources of verification

Biodiversity chapter of the State of Environment report 2015-17.





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 (dd/mm/yy)	1 st June 2016 – 31 st August, 2017																									
Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Notes	
Mid-term evaluation & reporting						X																				This report
Mining of Museum data	X	X	X	X	X	X																				Done
Screening literature sources		X	X	X	X	X																				Done
Data entry to electronic database	X	X	X	X	X	X	X	X	x	x	x	x	x	x	x											Done
Data cleaning and treatment								X	X	X	x	x	x	x	x											Done
Development of publication/s									X	X	X	x	x	x	x	x										The manuscript ongoing
Stakeholder forum for project information sharing															x	x										Done
Loading data to GBIF open access platform															x	x	x									Species checklist done; occurrence data verifications ongoing





Evaluation period (maximum 6 months, ending 31 December 2017 at the latest)							
Evaluation period start date and end date (dd/mm/yy)	1 st June – 2017 – 31 st October, 2017						
Activity	1	2	3	4	5	6	Notes
Final financial report development	x	x	X				Report done
Final narrative report development	x	x	x				Report Done
Final financial report submission to GBIF			X				Submitted
Final narrative report development			X				Submitted

5.1. Explanatory notes:

The project was successfully implemented.



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

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)

Freshwater snails' collections mobilization will continue to happen through fieldwork and perhaps donations. The acquired collections will then be mainstreamed to NMK collection data-basing system. The cooperation established between NMK and NEMA will nurture sustainability of this project work through joint programs. NMK through the government of Kenya performance contracting policy has collection acquisition and data-basing as a key performance contract target. Therefore by fast-tracking performance contract requirements, the database will be updated after this project by NMK personnel. As the data volume increases, the database published at GBIF.org will be updated. NEMA through the research collaboration established between NMK and NEMA will continue to access the new information for application in advancing species and wetlands or environment conservation decision making process and policies. NMK through the GBIF node manager will also continue to contribute data to open access.



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.

The National Museums of Kenya (NMK) which was the Lead institution in the project has successfully natured a research collaboration with the National Environment Management Authority (NEMA) and other relevant partners particularly the scientific institutions involving data sharing for advancing environment management. The BID project was instrumental in laying the foundation for this corporation through joint freshwater snails data mobilization for application in advancing biodiversity information knowledge, access and environmental conservation. NMK and NEMA held joint data mobilization from NMK and other institutions extensive collections and shared this data with NEMA for application in promoting environmental management and Development of the State of Environment report 2015-17 among other environmental management undertakings. The laid foundation will continue to be expanded.



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) ?

The National Museums of Kenya in collaboration with institutions in Africa also received other GBIF funding. In particular, the Africa Insect Atlas where NMK invertebrates section collaborated with other African institutions. Freshwater snails data mobilization project shared a lot with the Africa Insects Atlas project working closely in the same collections, sharing experiences and building synergies in data mining from the collections and any challenges that arise we discussed and sought mechanisms for addressing the challenges concurrently. The project learnt experiences also from projects at Kenya Wildlife Services i.e. Mobilizing biodiversity information from Kenya Wildlife Service” and Kenya’s other carnivores. The project PI had an active project on assessing the population status and ecology of an endangered freshwater snail species (*Eussoia inopina*) from Eastern Kenya which was also another point of project link. The project results also forms a basis for establishing further project linkages i.e. new project development and implementation.

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

The project once was approved and funds provided was circulated via NMK (KenBIF node) communication to NMK and associated collaborators via email creating the first project visibility intervention. Further project visibilities were done during two key stakeholder forums, one at the National Museums of Kenya and another one during drafting of the State of Environment report 2015-17 making process. Further long term visibility will happen through the data published on GBIF.org, local NMK database, references to the paper and presentation to conferences which the PI will make in the future including reference to the project in building other future projects on freshwater gastropods in Kenya. The NMK and NEMA education and public communication sections will be used as avenues for increasing the project visibility through these section public programmes (education and other publicity programmes) also in the future

Sources of verification

KenBIF node – can be found at KenBIF communication platforms, www.gbif.org website on funded projects, www.gbif.org project resources for published





datasets, deliberation of NMK stakeholder project sensitization workshop and any future workshop proceedings.

8.2. Visibility of the EU contribution

Short summary

EU contribution to this project was mentioned or recognized in all project activities supported by the project funds from EU. For instance, during the stakeholder workshop at the National Museums of Kenya, EU contribution was recognized and even during the meeting for drafting the State of Environment Report. Going forward, any activities involving use of results associated with this project, EU contribution will be acknowledged i.e. in publications and even conference presentations.

Sources of verification

PowerPoint presentation for the stakeholder workshop at the National Museums of Kenya on the acknowledgement part. Further publication and presentation related to the project acknowledging EU can be availed.

.....

Signature _____

Name of the contact person for the BID Project: _____

Date report sent by email in Word format to bid@gbif.org for pre-approval:
31.8.2017 _____

Date report sent by post to GBIF Secretariat: _____

