

# Mainstreaming Freshwater Invertebrates Biodiversity Data into Government Decision-Making

---

**Programme:** BID

**Project ID:** BID-AF2020-169-USE

**Project lead organization:** The Nelson Mandela African Institution of Science and Technology

**Project implementation period:** 1/4/2021 - 30/11/2022

**Report approved:** 8/6/2022

## Narrative Midterm report

---

### Executive Summary

---

The project has made great efforts to generate the intended outputs including data mobilization and publication into the TanBIF portal, notwithstanding some difficulties in getting data from data holders in some cases. The project has made good progress in building the international network. Significant steps have already been made in terms of data mobilization and collation of mobilized data. Nevertheless, there have been challenges. There were issues with getting these mobilized data in an easy way to format into required publication standards by GBIF, and this has delayed publications of the majority of mobilized data (so far we expect to publish about one-third of the data expected to be published) by the time of submission of this project. This phase has shown great progress both in data mobilization and in education and awareness creation of the importance of FIMC biodiversity to various stakeholders, by moving much of its networking and training activities from the team to face to face engagement with the data holders and users, by actively learning and engaging with them our project plans. One of the outputs from the entire mobilization process includes the publication of the first data set through GBIF. Among the lessons learned from all consultative meeting includes the intention of stakeholders (both data holders and users) to have a FIMC module in TanBIF for accessing FIMC information easily, an architecture in TanBIF linking the existing FIMC database with the portal, and a range of policy-specific communication tools

### Progress against milestones

---

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

**Dataset published:**

Dataset	DOI
Benthic Macroinvertebrates of Pangani River Basin, northeastern Tanzania	<a href="https://doi.org/10.15468/yfv6qs">https://doi.org/10.15468/yfv6qs</a>

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

**Rationale:** No, our project is a data use grant and we had a representative “Grite N Mwaijengo” who attended the data processing and data use workshop on 19th January 2022 and Assessing the Conservation Status of a Species on 17th Feb 2022.

## Report on Activities

---

### Activity progress summary

The management and Leadership of the Project have responded well to the activities planned for this phase and particularly to data mobilization and collation by substantially reconfiguring mobilization approaches that were done in parallel between data holder meetings and outsourcing the existing datasets using a bunch of trainees who have been supportive in compiling the mobilized datasets in ways that facilitated the project team to format some of these data into Darwin Core publishing standards within timelines. Some of these datasets have not been formatted in the required standards and work activities across this and other tasks are expected to continue in the coming months to ensure appropriate progress against this and other objectives. The delay to publishing some of the remaining mobilized data has also afforded the opportunity for new data holders (individuals and institutions) coming on board and are committed to sharing more data that will facilitate more data publication and be embedded into TanBIF portal.

Database composed as indicated in the project proposal was specifically re-designed to compile and host the FIMC datasets from all data holders of this for Northern Tanzania. Co-mobilization, co-production and co-learning in the process of implementation activities during this phase has been so beneficial and in terms of deriving lessons and feedback which has been useful as a dissemination of our project and anticipated output in a way. The feedback from the data holders, users and TanBIF Node Coordination team during the mobilization meetings proposed establishing the module within TanBIF portal and expanding data architecture within the portal to accommodate future link between TanBIF portal and repository system with all FIMC databases of different institutions in ways that can centralize this while at the same time making easy update and access by different data holders and users. The project team has been working on this in collaboration with IT specialists from TanBIF to ensure that this is achieved within the project timeframe.

Progress made was able to be achieved to this level despite the context of readiness of some data holders to grant access on the data because the team was flexible, responsive and quick to see opportunities – both in terms of emerging individual data holders and the approach that the project has been taking to respond to this and other activities. In terms of individual data holders who emerged especially during the data mobilization meetings, emerging opportunities in data mobilization approach at the 2022 data mobilization meetings (held physically) resulted in the convening of individuals interested in being visited to provide FIMC data needed by the project team immediately after the main meeting (and this was open to all interested individuals who had relevant data). In terms of approach, the ability to travel to where some data holders are stationed provided more opportunities for collation of more data and convincing data holders to share their data with the project after the project team had managed to give them convincing reasons on the benefits of sharing and publishing the FIMC data, which has led to more data being collected.

Stronger voices and participation have been encouraged from the data holders and users, as evidenced in the other project milestones by increased contribution of inputs by the meeting participants on how the FIMC data can be made accessible and available in the format that is easy to users. Such contributions from the meeting participants and the additional inputs from the technical team from TanBIF head office has helped to streamline the approach that is being used to develop the FIMC portal and database infrastructure within TanBIF portal in the way that can finally simply data holders to link their databases directly to TanBIF portal and also allow data users to access and process FIMC data from the portal specifically according to user categories (e.g. FIMC data of health, food and conservation concerns) and requirements. Collaboration with TanBIF technical team on understanding project-level database infrastructure implementation and identifying similarities and differences at a TanBIF portal has been initiated and the project is now implementing these actions now and in the coming months. The project interaction with data holders and users has provided more opportunity to work together in developing awareness on the importance of collating and communicating FIMC data to different users and also on emphasizing the need to build strategically on existing and new partnerships to engage more standard protocol for collecting FIMC data and monitoring activities at the local level without needing to start from scratch.

Looking into the future, the project team is moving on with putting the mobilized data into the required publication format and now aware of how to re-engage with remaining data holders (particularly individuals who directly have the data and reports with relevant data from across the region) and users, also taking into account that the mapping and infrastructure development into TanBIF portal and other remaining outputs are generated and delivered on time.

### Completed activities

#### **Activity: Data mobilization meeting**

---

**Description:** FIMC data mining, mobilization, identification and mapping of key FIMC biodiversity areas and prioritization

**Start Date - End Date:** 14/12/2021 - 20/12/2021

**Verification Sources:** 1. Midterm Annex 1 (Meetings report)

2. Links (published data):[http://41.93.33.31:8080/ipt/resource?r=pangani\\_tanzania\\_2022&v=1.2](http://41.93.33.31:8080/ipt/resource?r=pangani_tanzania_2022&v=1.2)

3. Submitted financial report

## Activity: Data mobilization meeting

---

**Description:** FIMC data processing/validation/ review and preparation of first FIMC data sets for publication

**Start Date - End Date:** 18/3/2022 - 25/3/2022

**Verification Sources:** 1. Midterm Annex 1 (Meetings report)

2. Links (published data):[http://41.93.33.31:8080/ipt/resource?r=pangani\\_tanzania\\_2022&v=1.2](http://41.93.33.31:8080/ipt/resource?r=pangani_tanzania_2022&v=1.2)

3. Submitted financial report

## Report on Deliverables

---

### Deliverables progress summary

The project has made significant progress toward achieving its mobilization and evaluation phase deliverables. This includes (i) the first batch of FIMC occurrence data set has been published through GBIF, (ii) the architecture/infrastructure within the TanBIF portal that will allow direct linking of existing FIMC databases from different institutions' data holder databases is in formulation (iii) the FIMC data module within TanBIF portal is in formulation following user needs, and (iii) the project is currently processing Geo-coded data/GIS data for FIMC map development following the identified user needs.

### Progress towards deliverables

### Deliverables - Project planning phase

---

### Deliverables - Project data mobilization phase

---

#### Project Data mobilization phase

**Dataset type:** Occurrences

**Dataset scope:** FIMC species occurrence of northeastern Tanzania

**Number of records:** 20,000

**Data holder:** TanBIF, PBWO, TAFIRI, TAWIRI, LVB, UDMS, NM-AIST,. Also in most of these organizations we have a list of key individuals with FIMC data whom we have been in touch and still working with them to finalize mobilization process

**Data host institution:** The Nelson Mandela African Institution of Science and Technology

**% complete:** 50%

**Status update:** We have managed to mobilize more than ten thousand FIMC records and the data are in the final stages of processing for publication. We have also managed to publish the first data set in GBIF

**DOI:** <https://doi.org/10.15468/yfv6qs>

**Expected date of publication:** 2022-09-30

### Deliverables - Project evaluation phase

---

#### FIMC species occurrence and distribution maps

**Description:** FIMC species occurrence and distribution maps of northeastern Tanzania

**% complete:** 25%

**Status update:** Gathering of files needed to produce maps for project area of interest and processing GIS data for FIMC map development are underway and draft maps expected to be generated in the coming months. following the identified user-needs.

**Sources of verification:** Generated FIMC species distribution maps that help in guiding (evidence-based) decision-making process

#### FIMC Module and linking FIMC databases with TanBIF portal

**Description:** Linking existing FIMC databases from different institutions with TanBIF portal and formulation of FIMC module

**% complete:** 35%

**Status update:** Compiling, gathering resources and formulation of FIMC module an infrastructure within TanBIF that will allow direct linking of existing FIMC databases with TanBIF portal is in progress

**Sources of verification:** FIMC module in TanBIF

## Events

---

## Project inception meeting/workshop (Brainstorming)

---

**Dates:** 2021-07-05 - 2021-07-11

**Organizing institution:** The Nelson Mandela African Institution of Science and Technology

**Country:** Tanzania

**Number of participants:** 9

**Comments:** Through this meeting all team members familiarized one-another and got a common understanding of the project goals and expected outputs. Awareness of the importance of mainstreaming Freshwater Insects Mollusks and Crustaceans (FIMC) data and enable effective decision-making from this was enhanced among team members. Through consultation of data users; user-needs had been defined. By the end of the meeting, the team was able to produce a FIMC data mobilization plan (Annex 2), develop project workflow (Annex 3), identify key data providers and users, identify FIMC data gaps, and allocate tasks to all stakeholders. For project progress monitoring purpose, a timeline (Annex 4) for delivering the planned project activities and outputs was reviewed and accentuated to all project members.

**Website or sources of verification:** Annex 1. Meetings report Annex 2. Data mobilization plan Annex 3: Project workflow

### Events

---

## Capacity Building

---

**Dates:** 2021-09-12 - 2021-09-18

**Organizing institution:** The Nelson Mandela African Institution of Science and Technology

**Country:** Tanzania

**Number of participants:** 21

**Comments:** The workshop has enhanced the capacity for effective mobilization of biodiversity data and highlighted the importance of biodiversity data publishing. Through this workshop, a network of FIMC data holders and users has been established, a FIMC data mobilization team established, and awareness of the use of GBIF-mediated data to produce policy-relevant information products has increased. The workshop has also given capacity to graduate volunteers who will participate in data mobilization

**Website or sources of verification:** Annex 1. Meeting reports

### Events

---

## Data mobilization meeting

---

**Dates:** 2021-12-14 - 2021-12-20

**Organizing institution:** The Nelson Mandela African Institution of Science and Technology

**Country:** Tanzania

**Number of participants:** 15

**Comments:** Through these meeting we have managed to mobilize more than ten thousand FIMC records and we have managed to publish the first data set through GBIF

**Website or sources of verification:** Midterm Annex 1: Meeting report ; <https://doi.org/10.15468/yfv6qs>

### Events

---

## Data mobilization meeting

---

**Dates:** 2022-03-18 - 2022-03-25

**Organizing institution:** The Nelson Mandela African Institution of Science and Technology

**Country:** Tanzania

**Number of participants:** 15

**Comments:** Through these meeting we have managed to mobilize more than ten thousand FIMC records and we have managed to publish the first data set through GBIF

**Website or sources of verification:** Midterm Annex 1: Meeting report ; <https://doi.org/10.15468/yfv6qs>

## Communications and visibility

---

In the course of project implementation, different stakeholders who are data holders and users have been educated, informed and awareness creation on the importance and the value of FIMC biodiversity data. Communications made during various meetings and platforms have been contextualized to reflect the specific needs of user categories amongst these stakeholders. Emphasis has been put more on stakeholders responsible for conserving both the FIMC biodiversity and their

habitat, the fisheries communities who need to conserve the food chain to ensure sustainable fisheries production, and water basin authorities who need to monitor water quality indicators using some of the FIMC biodiversity data being mobilized. To communicate the results of our project the links to the published data have been shared through the NM-AIST website and also shared with the key stakeholders and biodiversity informatics group in Tanzania. The link to the project's page on the GBIF website has also been shared with the stakeholders and data users to increase the visibility of the project. As outlined in the proposal, Maps, brochures, FIMC monitoring protocol, and a link to the FIMC module in the TanBIF portal will be shared with stakeholders (including local government, river basin, VPO-Environmental office). To share it with the broader GBIF community all the aforementioned products will be shared through the project's page on the GBIF website

## Monitoring and evaluation

---

### Monitoring and evaluation findings

The management and Leadership of the Project have responded well to the activities planned for this phase and particularly to data mobilization and collation by substantially reconfiguring mobilization approaches that were done in parallel between data holder meetings and outsourcing the existing datasets using a bunch of trainees who have been supportive in compiling the mobilized datasets in ways that facilitated the project team to format some of these data into Darwin Core publishing standards within timelines. Stronger voices and participation have been encouraged from the data holders and users, as evidenced in the other project milestones by increased contribution of inputs by the meeting participants on how the FIMC data can be made accessible and available in a format that is easy to users. Collaboration with TanBIF technical team on understanding project-level database infrastructure implementation and identifying similarities and differences at a TanBIF portal has been initiated and the project is now implementing these actions now and in the coming months. Looking into the future, the project team is moving on with putting the mobilized data into the required publication format and now aware of how to re-engage with remaining data holders (particularly individuals who directly have the data and reports with relevant data from across the region) and users, also taking into account that the mapping and infrastructure development into TanBIF portal and other remaining outputs are generated and delivered on time.

## Impact of COVID-19 pandemic on project implementation

---

Mobilization and other project activities progressed across our BID project in spite of Covid 19 situation- mainly because many of the necessary precautions and the fact that our country has not had a big hit after the disastrous Covid wave that had badly hit Tanzania before May 2021. The project looks forward to continued and smooth implementation its activities both for the remainder of 2022 and the year 2023 as the country has put in place and is closely observing World Health Organization (WHO) safety measures and precautions for Covid-19.

---

**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.**

