GBIF | Global Biodiversity Information Facility

MID-TERM ACTIVITY REPORT

Contents

1. Project overview

Project title	Unlocking access to biodiversity data in southern Africa, through engagement and training of academia		
Project ID	CESP2018_025		
Project period	**Start date (dd/mm/yy):** 01/07/18	**End date (dd/mm/yy):** 31/05/19	
Project lead			
Name of the main contact person	Lizanne Roxburgh		
Name of institution	Endangered Wildlife Trust		
GBIF Participant represented	Endangered Wildlife Trust		
Role(s) in this project	Coordinator and Trainer		
Project partner(s)			
Name and institution of the representative		GBIF Participant	Role(s) in the project

	represented (if applicable)	
Prof Ara Monadjem, University of eSwatini (UNESWA)		Data champion at University of Swaziland, promotion of course among students and colleagues
Dr Tiwonge Gawa, Malawi University of Science and Technology	Malawi	Data champion at Malawi University of Science and Technology
Prof Tamuka Nhiwatiwa, University of Zimbabwe		Data champion at University of Zimbabwe, promotion of course among students and colleagues
Prof Aliza le Roux, University of the Free State, South Africa		Data champion, promotion of course among students and colleagues
Dr Nimmi Seoraj Pillai, Tshwane University of Technology, South Africa		Data champion, promotion of course among students and colleagues
Dr Morgan Hauptfleisch, Namibia University of Science and Technology		Data champion, promotion of course among students and colleagues

2. Executive summary

We have completed a survey of data publishing by academic institutions in the region. Despite being important collectors and holders of biodiversity data, only 10 out of more than 100 institutions have published any data.

We completed our first two-day training course at the University of eSwatini with eight graduate students from the Biological Sciences Department. Based on the experience and feedback from students, the course will be further adapted before being rolled out to at least three other universities and made available online.

We also gave a departmental seminar on data publishing and GBIF at the Biological Sciences Department to at least 40 staff members and students. This will be further improved

and also given at the other universities as well as developed into a webinar. A pre-seminar survey was conducted to determine willingness to share data, which was overwhelming positive, as well as people's awareness of GBIF, which was low.

In early 2019, further training of graduate students will be conducted at at least three universities (University of Malawi, Tshwane University of Technology and others) and departmental seminars will be given at the same time to inform lecturers and other staff about GBIF and data publishing. The online course will also be launched in 2019 in conjunction with a webinar, which is planned to be released first to the University of Zimbabwe and then to additional universities and data champions during the remainder of the project.

3. Introduction to the project and its objectives

The project's main objective is to improve skills and knowledge of biodiversity data management and publication of researchers in the SADC region, leading, in the long-term, to increased mobilisation of biodiversity data, to better inform and strengthen conservation practice and sustainable development.

The project deliverables were as follows:
1) Baseline information on current data publication and knowledge of GBIF across academic institutions in southern Africa.
2) Ten open data champions identified at biological sciences departments within academic institutions in countries within the SADC region, both within countries that already have BIFs and in countries without BIFs.
3) A webinar aimed at researchers (initially our data champions) about GBIF, data publication and data papers. This will be made available on the project webpage during the course of the project, so that the wider GBIF Africa community can make use of the resource.
4) A training module for biological sciences students developed in various formats, made available to at least 10 academic institutions in various countries within the SADC region, and promoted more widely within the GBIF Africa network.
5) At least 50 students trained, either through the EWT's online training platform, or in face-to-face training offered at universities (although we expect to reach a lot more students less formally through webinars, Facebook and LinkedIn and other disseminated training materials).
6) Guidance material for use by GBIF nodes to engage academia, including a description of the approaches we took, and information on university policies to data ownership and publication.

In terms of the monitoring and evaluation of the project, we had planned the following activities:

1)   Baseline information of data publication and knowledge of GBIF

1.1 Determining the baseline knowledge about GBIF among researchers in biological sciences departments within academic institutions across the region through a short online survey, sent to as many researchers as possible (bearing in mind, the typical survey response rate of 10–15%).

We have not sent out the online version of this survey yet. However, a short survey has been developed and conducted with lecturers and students at UNESWA. Some minor edits need to be made to the survey, as there was a few issues with non-mother tongue English speakers. The edited survey will be repeated at the various departmental seminars that we give, as well as developed into an electronic survey and distributed as part of advertising the webinar.

1.2 Amount of data being published to GBIF by academic institutions in the region (assessed from GBIF records).

This review was completed in September 2018. Through an internet search, we identified 159 tertiary education institutions in the 14 countries of the SADC region; however, not all of these will collect biodiversity data. In total, only 28 datasets have been published to GBIF from these institutions, from only 6 countries and 10 institutions.

2)   Open data champions

2.1 Details of ten open data champions from biological sciences departments within academic institutions provided in mid-term report to GBIF.

We have not yet made a concerted effort to identify additional data champions apart from those indicated in the proposal and that are included as project participants. It was important for us to first develop our course and seminar/ webinar content and ensuring that we were engaging with existing partners first, before contacting new data champions. We will complete this process by the end of the project. However, we have had contact with University staff in Mozambique as well as additional staff at the University of Zimbabwe and will pursue these contacts in 2019.

3)   Webinar

3.1 Pre-webinar and post-webinar surveys of data champion project participants to determine their extent of knowledge, change in attitude and behaviour regarding data publication.

The survey in activity 1.1 is the same as the pre-webinar survey, which we have explained in more detail in 1.1. From the responses of people that attended the UNESWA departmental seminar, attitudes to data sharing were overwhelmingly positive, with 33 of 34 respondents willing to share their data, while knowledge of GBIF was relatively poor (only 11 of 34 respondents had hear of GBIF before). The post-webinar survey is challenging as we could expect an immediate change in knowledge, but not in attitude or behaviour, and this requires additional thought.

4)   Training module.

4.1 Distribution of training module for biological sciences students to at least 10 academic institutions in various countries within the SADC region, as detailed in final report to GBIF.

This has begun with training at UNESWA, and additional training planned for TUT and Malawi in the first quarter of 2019. We still need confirmation from UFS that they can accommodate the training, but have had engagement with SANBI (the SABIF staff) about the potential of obtaining funding from them to conduct face-to-face training at the University of Namibia. Staff at the University of Zimbabwe have indicated that they have the technical capacity to host a departmental webinar for their biological sciences staff, which we will set up once we have worked out the timing and technicalities of this in early 2019. It is critical though that this happens once the online e-learning course has been loaded, as we can take this opportunity to promote the online course. The EWT's online e-learning platform has been installed on our own servers (learning.ewt.org.za), which will allow us to take full control over the course administration, and will allow us to load the online course in early 2019. Note that this platform is not publically available yet, as we need to finalize the security certificate for the site.

5)   Student training

5.1 Pre- and post-course surveys of students, to determine extent of knowledge about GBIF, data publishing, and attitudes to data sharing. These will be built into the online courses, and will be given at the face-to-face lectures at universities.

We conducted the pre-course survey of students but did not conduct a post-course attitude survey. This needs to be built into the post-course satisfaction survey.

5.2 Pre- and post-course skills assessment surveys of students to determine improvement in data management skills.

We neglected to do this in our training at UNESWA, but based on the experience of giving the course for the first time, we now have some ideas of how to do this. It will be built into the updated course content.

5.3 Course satisfaction surveys to be given in face-to-face lectures, to improve the course, in preparation for the launch of the online course, and also in the online course, to identify problems and improve the course content.

A course satisfaction survey was completed by students at UNESWA. The main two requests that came up repeatedly were to include more practical exercises and that the terminology was difficult to grasp in a relatively short period of time. We will therefore include more practical exercises, as well as reduce the new terminology to the essentials.

6)   Guidance material

6.1 Guidance material distributed to GBIF nodes.

This will be produced towards the end of the project.

4. Project deliverables - status update by mid-term

Deliverable	Related activity	Status: Completed / on track / delayed	Explanatory notes	Sources of verification
Baseline information on current data publication and knowledge of GBIF across academic institutions in southern Africa.		On track	Baseline information on current data publication for all academic institutions has been collected. We completed one survey at the University of eSwatini.	Summary table/ database of published datasets from academic institutions
Ten open data champions identified at biological sciences departments within academic institutions in countries within the SADC region, both within countries that already have BIFs and in countries without BIFs.		On track	6 data champions have been identified as part of the project. We need to identify additional data champions once we've made progress with the webinar and course presentations at the universities	Initial letters of support
A webinar aimed at researchers (initially our data champions) about GBIF, data publication and data papers. This will be made available on the project webpage during the course of the project, so that the wider GBIF Africa community can make use of the resource.		Delayed	A departmental seminar was given at the University of eSwatini. This is being adjusted based on the experience and questions from the audience, and will be recorded in January and placed on the project webpage.	Seminar description
A training module for biological sciences students developed in various formats, made available to at least 10 academic institutions in various countries within the SADC region, and promoted more widely within the GBIF Africa network.		On track	A training module was developed and given to students at UNESWA in a two-day course. The course content needs to be further adapted, based on various issues (lack of internet access and poor computing power that cannot run the necessary software)	Course outline

Deliverable	Related activity	Status: Completed / on track / delayed	Explanatory notes	Sources of verification
At least 50 students trained, either through the EWT's online training platform, or in face-to-face training offered at universities (although we expect to reach a lot more students less formally through webinars, Facebook and LinkedIn and other disseminated training materials).		Delayed	8 students have been trained so far. We had planned to conduct more unversity trainings by now, but the training did not fit into everyone's schedule before the end of 2018. However, we should have no problem meeting this target with the additional courses planned at various universities in early 2019.	Course photos, course attendance register
Guidance material for use by GBIF nodes to engage academia, including a description of the approaches we took, and information on university policies to data ownership and publication.		On track	This has not actually started, and is only planned for March and April 2019, although we are starting to gather the necessary information for this document.	

5. Project calendar - status update by mid-term

Note: changes are highlighted in yellow

Activity	2018							2019					Notes
	J	J	A	S	O	N	D	J	F	M	A	M	
Engagement with researchers and universities to identify open data champions, in consultation with GBIF Africa partners in the SADC region. Compile and interrogate information on university data policies.		X	X		X				X	X	X		Engagement has started, but this is an ongoing process beyond the first two months of the project. Information on university policies is best obtained when visiting the universities. We have initial information from UNESWA on their data policy.
Prepare webinar content, student training and advocacy materials, and			X	X	X			X	X				This is also an ongoing process. The course and webinar content needs to be adapted, based on the experience at UNESWA

Activity	2018							2019					Notes
	J	J	A	S	O	N	D	J	F	M	A	M	
course assessment.													
Obtain baseline information on data publication and knowledge of GBIF among academic institutions.		X			X				X	X			Baseline information has been collected. Knowledge of GBIF is still being collected.
Present webinar to data champions.			X		X			X	X	X			This has been changed, as we felt that a (live) departmental seminar would work better at many universities. However, a webinar will be recorded in January, made available online and shared with partners.
Present course at four universities in the region (taking into account university timetables, exam periods, holidays).					X			X	X	X	X		It was not initially clear when the training would occur based on university schedules. One training was completed in Swaziland, we're still planning the training for next year at the other universities
Adjust course content based on face-to-face learning experiences and assessments. Adapt materials for online course, load and test online course.								X	X	X			
Promote online course through data champions, and other regional contacts and GBIF Africa network. Enrol students for online course. Disseminate training materials in other formats to universities with poor internet access.									X	X	X		
Complete guidance material on academia engagement for African nodes.											X	X	

Activity	2018							2019					Notes
	J	J	A	S	O	N	D	J	F	M	A	M	
Deadline for mid-term reporting.							X						
Deadline for final reporting.												X	

6. Project communications

Up until now, there has not been a lot of communication about the project, apart from one-on-one communication with direct project partners, as well as sharing photos and a description of the UNESWA course on our GBIF project page. The communications around the project will increase in 2019, once we launch the online course, the webinar is released and more of the courses are conducted at the different universities.

7. Mid-term evaluation findings and recommendations for the remaining project implementation period

We have engaged with 6 data champions at the Universities listed in the original proposal, in order to prepare and present courses and a departmental seminar at their Universities. The timing of the courses was not ideally suited to the end of the southern academic year (Nov-Dec 2018), as this is the time that universities are preparing for and conducting exams, so most face-to-face courses have been planned for early 2019.

We prepared the course material for post-graduate students and completed the first training at the University of eSwatini. At the same time, I gave a departmental seminar for students and lecturers in the Biological Sciences Department, and conducted a pre-seminar survey to determine knowledge of GBIF and willingness to share data, which was overwhelming positive. Unfortunately, the perception still exists among the older staff that this is a "western" initiative to steal "African" data, so more examples of how the data can be used nationally will be included in the seminar/ webinar, as well as more information about the GBIF Africa Region nodes activities.

We conducted a course assessment with the course participants, and, based on that experience, are adapting the course content. Challenges that we encountered were that students did not have access to internet connection (it was intermittent at best), and their computers did not have enough capacity to run some of the software, such as OpenRefine. These are likely to be challenges encountered in some Universities but not all, so we need to

develop the course content to accommodate both scenarios of good internet connection and computer hardware and no internet connection with poor computer hardware. The course content also needs to have more practical exercises and less lecture content, as well as provide some practical use cases of published GBIF data.

In conclusion, we are confident that we will be able to complete the deliverables for this project although the schedule has shifted slightly into 2019. We have gained valuable experience from the initial training, seminar and course assessments at UNESWA that we will build into improved course content in 2019.

8. Annex 1 – Additional sources of verification

I have attached a zipped folder that contains

1) *Photos from the UNESWA workshop*
2) *The seminar and course outline that was sent to UNESWA*
3) *A scanned copy of the attendence register from UNESWA*