

FINAL NARRATIVE REPORT

Guidelines on how to complete this report are included in italics.

Use the information included in your BIFA Full Proposal (reproduced in Annex 1 of your BIFA contract) as a baseline from which to complete this report.

Remember that this report will be made available on your project page on the GBIF website and therefore should not include any contact information, unless you have permission from all mentioned in the report that their contact information can be published.

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Project information

Main contact person and role:	Hicham El Zein
Institution/network/agency affiliation:	Wadi ez-Zouhour
BIFA Project ID:	BIFA4_053
Project title:	Mobilizing plant species occurrence and sampling-event data from the project "Distribution and Red List Assessment of the restricted range endemic <i>Jacobaea mouterdei</i> (Arènes) Greuter & B.Nord"
Start date and end date of the reporting period:	April to October 2019
Country in which the activities take place:	Lebanon

Executive summary

Please provide a brief summary of your project's objective(s), its implementation and achievements. You should also describe the context and the approach taken for the final evaluation of your project, and also the key best practices and lessons learnt identified. Remember to include any additional objectives that were defined during the implementation of the project and explain why they were added to the project's initial objectives. In the event of unexpected challenges which have prevented you to reach a planned project objective, please provide explanations and indicate if and how you plan to reach these objectives post project.

(Max. 350 words.)

The Biodiversity Information Fund for Asia (BIFA) allowed the mobilization on spreadsheet and the online publication of the botanical data collected during the project "Distribution and Red List Assessment of the restricted range endemic *Jacobaea mouterdei* (Arènes) Greuter & B.Nord." which was funded by the Mohamed bin Zayed Species Conservation Fund. This project was designed to survey and collect data about the occurrence of this very restricted plant species endemic to the regions of Akkar and Danniye in the North of Lebanon and to assess its vulnerability. The data collection targeted all plant species occurring in the sampled habitats of the Valleys of Hell (Wadi Jahannam).

The regions of Akkar and Danniye shelter among the most preserved natural habitats, but also the less studied in Lebanon. There is a significant gap in data availability that the BIFA component of the project helped us to address by mobilizing the collected data. The study improved the knowledge on the flora of these regions with recent qualitative and quantitative data on plant species occurrence in time and space and on their ecology. The dataset delivered more than 4800 observations of vascular plant species, which is twice than the amount of records estimated in the project proposal. The mobilized data is free of access and allows further ecological analyses such as population ecology. Recently, human activities have been seriously threatening natural habitats in the Valleys of Hell and there is an urge to act for the conservation of these areas. This dataset will also serve as scientific arguments to urgently advocate and implement conservation actions to preserve the unique natural patrimony of these regions.

Progress against expected milestones

Please indicate the status of the expected milestones as outlined in Annex 3 of the contract, at the time of final reporting. Please provide links in the sources of verification.

In the event of unexpected delay(s), please provide detailed explanatory notes.

Expected milestones	Completed? Yes/No	Explanatory notes	Sources of verification
Gain certification at BIFA Capacity Enhancement Workshop (Mid-term report milestone)	Yes		Successfully passed the exam. Digital badge awarded.
At least one dataset has been published to GBIF.org (Mid-term report milestone)	Yes		Vascular plants of the Valleys of Hell, Danniye-Akkar, Lebanon, 2019
All deliverables have been produced (Final report milestone)	Yes		Vascular plants of the Valleys of Hell, Danniye-Akkar, Lebanon, 2019
Sustainability and next steps have been documented (Final report milestone)	Yes		Final narrative report

Activities

Please indicate the status of the activities as outlined in the BIFA Full Proposal (section 4.4), at the time of final reporting.

The table below should be completed in the same way as in the BIFA Full Proposal, but should include information and updates on the status of each activity. Please indicate relevant source(s) of verification and **provide links, or a copy of the source of verification** mentioned if no links are available. Attachments should be provided in the Annex.

In the event of unexpected delay(s), please provide detailed explanatory notes and indicate new planned completion date(s).

Please include any additional activities completed during the implementation of the project that were not originally outlined in the BIFA Full Proposal.

Add rows as required.

Activity name	Expected deliverable	Contribution to goals listed in table 4.3 of the BIFA Full Proposal	Status of activity at final reporting: Completed? Yes / No (inc. % complete)	Explanatory notes, including new planned completion date if necessary	Source(s) of verification
Data entry, cleaning and preparation of the data collected on all the plant species surveyed during the fieldwork	Dataset (sampling-event data) on vascular plant species from the mountains of the regions of Akkar and Danniye (Lebanon)	The data has to be entered and prepared before the publication of the dataset.	100% of the data have been entered, cleaned and controlled..		Vascular plants of the Valleys of Hell, Danniye-Akkar, Lebanon, 2019
Publication of the dataset on the GBIF BIFA IPT and preparation of the data	Dataset (sampling-event data) on vascular plant species from the mountains of the regions	As proposed by the GBIF Secretariat, it is more logical to publish the dataset on	Yes	The dataset has been published and the data paper has been prepared and is ready to be published when scientific peer-	Vascular plants of the Valleys of Hell, Danniye-Akkar, Lebanon, 2019

Activity name	Expected deliverable	Contribution to goals listed in table 4.3 of the BIFA Full Proposal	Status of activity at final reporting: Completed? Yes / No (inc. % complete)	Explanatory notes, including new planned completion date if necessary	Source(s) of verification
paper	of Akkar and Danniye (Lebanon)	the IPT before publishing the data paper.		reviewed journals will accept it.	

Deliverables

This section should summarize the project deliverables as outlined in the BIFA Full Proposal (section 4,5), at the time of final reporting. Please highlight any changes from the original plans.

If no result has been achieved on a specific point, or in the event of unexpected delay(s), please provide detailed explanatory notes and indicate new planned completion date(s).

Please include any additional deliverables completed during the implementation of the project, that were not originally outlined in the BIFA Full Proposal.

Add rows as required.

a. Data

*Details of datasets published and/or pending publication as an outcome of the project. The table below should be completed in the same way as in the BIFA Full Proposal but should include information and updates on the status of each dataset. **Please provide links in sources of verification.***

If the dataset is not yet published, please indicate this as “not published” and provide a detailed explanation, % of digitization and expected date of publication.

Add rows as required.

Title of dataset	Data type (checklist/occurrences/sampling event) ¹	Estimated number of records (specimens)	Status of dataset: Published / not published and % of digitization and expected date of publication	Data holding institution agreed to publish its data via GBIF.org (Yes/No)	Explanatory notes	Source(s) of verification: DOI or URL
Vascular plants of the Valleys of Hell, Danniye-Akkar, Lebanon, 2019	Sampling-event	2000-3000 observations	100% have been published and twice the estimated number of records (4845 vs 2500).	The applicant agreed to publish the collected data via GBIF.org Yes		https://www.gbif.org/fr/dataset/5c08de-3e3b-4ce6-81fa-f45950801

b. Other deliverables

Describe other deliverables (e.g. publication of data papers, analysis, reports etc.) produced by the project. In the event of unexpected delay(s), please provide detailed explanatory notes and indicate if the deliverable(s) are to be produced post-project, and if so, indicate expected completion date(s).

Please provide links in the sources of verification. Attachments should be provided in the Annex.

Name and type of deliverable	Status of deliverable: Completed? Yes / No (inc. % complete)	Explanatory notes	Source(s) of verification
Preparation of the data	Yes		Data paper has been prepared and is ready to

¹ Dataset classes: <http://www.gbif.org/publishing-data/summary#datasetclasses>

Name and type of deliverable	Status of deliverable: Completed? Yes / No (inc. % complete)	Explanatory notes	Source(s) of verification
paper (sampling-event data) on vascular plant species from the mountains of the regions of Akkar and Danniye (Lebanon)			be published when scientific peer-reviewed journals will accept it.

Events organized as part of the project

Please indicate the status of the events as outlined in the BIFA Full Proposal (section 4.6), at the time of final reporting.

*The table below should be completed in the same way as in the BIFA Full Proposal, but should include information and updates on the status of each event. **Please provide links to any documents or web pages documenting the event(s) in the sources of verification. Attachments should be provided in the Annex.***

In the event of unexpected delay(s), please provide detailed explanatory notes and indicate new planned completion date(s).

Please include any additional events organized as part of the project that were not originally outlined in the BIFA Full Proposal.

Add rows as required.

Event title	Organizing institution	Date held / expected dates	Number of participants	Explanatory notes	Source(s) of verification

Calendar of activities

The calendar should be completed in the same way as in the BIFA Full Proposal (section 4.7) but should also clearly indicate and include any changes (e.g. use of colour-coding to indicate expected changes and/or delays). Please provide explanations for any changes in the "Notes" column. Please provide general comments on the calendar of your activities in the 'General comments on project implementation' section.

Activity	2019									2020						Notes
	M	J	J	A	S	O	N	D	J	F	M	A	M	J		
Mandatory attendance of a project team member to the BIFA Capacity Enhancement Workshop (expenses for attending the workshop are covered by the BIFA programme)			X													
Creation of an account on BIFA IPT and metadata of the dataset			X						X							This activity was added by the GBIF secretariat. The IPT account as created during the workshop. However it was amended in January 2020.

Activity	2019								2020						Notes
	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
Deadline for mid-term report – 31 October 2019 Mandatory milestones attached to the mid-term report: <ul style="list-style-type: none"> - Gain certification at BIFA Capacity Enhancement Workshop - At least one dataset has been published to GBIF.org 						X									
Data entry, cleaning and preparation of the data collected on all the plant species surveyed during the fieldwork								X	X				X		Activity planned to be implemented between December 2019 and January 2020, it was achieved in May 2020.
Publication of dataset on GBIF											X			X	Activity planned to be implemented before March 2020. It was achieved in June 2020.
Preparation of the data paper											X	X		X	Activity planned to be implemented between March and April 2020. It was achieved in June 2020.

Activity	2019								2020						Notes
	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
Deadline for final reporting – 30 April 2020 Mandatory milestones attached to the final report: - All deliverables have been produced - Sustainability and next steps have been documented												X		X	Activity planned to be implemented for the 30 th April 2020. It was achieved on the 15 th June 2020.

a. General comments on project implementation

(Max. 200 words)

We are grateful to GBIF Secretariat for giving us a delay of one and a half more month (15 June instead of 30 April 2020). Due to the general situation created by the pandemic globally and by the economical crisis locally in Lebanon, some deadlines were a bit delayed.

Project communications and visibility

Describe the way the results of your project have been and will continue to be communicated and shared with the project stakeholders and broader GBIF community.

Please also review the page describing your project available from <http://www.gbif.org/programme/bifa> and highlight any additional documents, events, news items or links that you would like to add to your page and provide links/attachments in the Annex.

(Max. 300 words)

The results of the project are mainly communicated through the websites of GBIF and of the Mohammad bin Zayed Species Conservation Fund (MBZ) :<https://www.speciesconservation.org/case-studies-projects/mouterdes-ragwort/19099>. A video was also realised about the fieldwork carried out in the Valleys of Hell in 2019 and published on *Youtube*. Photos were published on *FlickrR* website. On each page, a link leads to the pages describing the project on the websites of GBIF and MBZ.

Monitoring, evaluation and lessons learned

Please indicate the results of the monitoring and evaluation plans, as outlined in your BIFA Full Proposal (section 4.9), at the time of final reporting.

Ideally this section should also include the following:

- *An evaluation of the project activities and their outputs/deliverables*
- *An assessment of the overall outcomes, impacts of the project and how it contributes to the overall objective of the BIFA programme*
- *Comments on the project implementation and completion, and its efficiency and effectiveness, strength and weaknesses etc.*
- *Any feedback on the project's relevance from the partners and stakeholders*
- *Indications and reasons for any changes which have been made to the project's original plans, and actions to follow-up*
- *Areas of success to build on, after the project's implementation period and best practices that could be useful for the community*
- *Main lessons from the project experience that could be applied in other contexts*
- *Conclusions from your experience during the implementation of the project and recommendations for the GBIF Secretariat or the community to reinforce the success of the project*

(Max. 400 words)

- **An evaluation of the project activities and their outputs/deliverables**
 - The publication of a dataset about vascular plants in the understudied Akkar and Danniye districts successfully addressed part of the gap of knowledge about the local flora in these regions. The dataset revealed an important species richness (458 species) and a high endemism rate. Even the actual number of records collected (4845 observations) was twice than estimated (2000 to 3000 observations). It is the first dataset ever published and freely available about the vascular flora of North Lebanon (Akkar and Danniye).

-The publication of data constitutes an important success for the local organisation Wafi ez-Zouhour based in Qemmamin and which works in the fields of conservation of nature, development and education. The NGO is dedicated to the improvement of the lives of its villagers. This first dataset highlights the underrated richness of their natural patrimony and encourages the call to act for its preservation.

-Unique data about the very restricted species strictly endemic to the Valleys of Hell (*Jacobaea mousterdei*) has been published and was already used to assess its vulnerability. The mapping of these occurrences allowed the calculation of the Area of Occupancy and Extent of Occurrence according to the guidelines of the IUCN for Red List of threatened species. A temporary status of conservation was estimated for the species (Critically Endangered) as half of the site of study remains unexplored.

- **An assessment of the overall outcomes, impacts of the project and how it contributes to the overall objective of the BIFA programme**
 - We are honoured to be the first Lebanese organisation publishing data about the biodiversity of Lebanon. We are also honoured and thankful to be the first Lebanese organisation to receive a fund from BIFA to contribute to the database of GBIF. This mainly contributed to the objective of the BIFA programme, which is to strengthen and support organisations and researchers collecting and sharing data about biodiversity.
 - Moreover the workshop held in July 2019 contributed to reinforce our skills on how to clean and control datasets. The tutorials on software such as Openrefine were particularly useful to build up our capacity to produce datasets of good quality.
 - We are confident that this opportunity that was given to us could inspire other Lebanese researchers and institutions to freely share their data for the sake of biodiversity. It is common that research institutes having the same subject of study compete instead of collaborating. This mentality does not contribute to the improvement of research and conservation. This project has helped the popularisation of GBIF in Lebanon which is still poorly known among biologists.
- **Comments on the project implementation and completion, and its efficiency and effectiveness, strength and weaknesses etc.**
 - The implementation of the project was relatively easy due to the fact that the component involving the BIFA Fund was focused on data mobilisation.
 - The production of data was twice more fruitful than expected in the first time.
 - The deadline could not be respected for the final output (30th April) but was hopefully postponed to 15th June 2020.
- **Any feedback on the project's relevance from the partners and stakeholders**
 - Stakeholders from the village of Qemmamin are grateful for the publication of the dataset and are expecting that more projects will lead to the recognition of the richness of the biological diversity of their region.
- **Indications and reasons for any changes which have been made to the project's original plans, and actions to follow-up**
 - The main change in the activities was to prioritize the publication of the dataset before the publication of the data paper. This was a request from the GBIF Secretariat and was recognised as being indeed mandatory.
- **Conclusions from your experience during the implementation of the project and recommendations for the GBIF Secretariat or the community to reinforce the success of the project**
 - Our experience during this project was truly enriching and allowed us to build skills on data cleaning and sharing. We were already convinced by the importance of data sharing while writing the Full Proposal, however the workshop and the exchange with the trainers, mentors and other members of GBIF has significantly reinforced this conviction. The GBIF members met during the workshop, as well as most of the attendees, were all very positive, reachable and encouraging. This encounter and the energy present during this gathering had a positive effect on our commitment and our desire to join GBIF and be part of this outstanding action for the free access of biodiversity information.
 - Communication by mails during the second period of the project, particularly concerning the mid-term narrative and financial report were sometimes tinged with misunderstanding. We didn't always understand properly the requirements in the reports.

Sustainability plans

Please provide a description of how the partners involved will build on the results of this project in their future work. This could include future collaborative activities, such as plans to complete any unfinished project activities and how the future impact of the project could be monitored and/or measured.

(Max. 200 words).

The first part of the project funded by MBZ was to explore the entirety of the Valleys of Hell which covers an area of around 70 km². Due to an underestimation of the time needed to carry out this fieldwork, half of the area could be explored. An extension or a new fund to complete this project and to visit the whole area during the season of 2020 is currently being sought.

The collection of biological data is essential for the development of conservation action plan of any area. The first step is to know the species occurring in the targeted site of study, then to assess their rarity and level of endemism. The next step is to communicate to locals, stakeholders and decision-makers to importance of the site as a shelter for biodiversity but also as an invaluable component of our natural patrimony.

The support of the local communities to implement conservation actions in the Valleys of Hell is the driving force to carry on and fulfil this study. If any grant allows the completion of this project, we will try our best to amend the dataset published on GBIF with the new observations.

Annex – Additional sources of verification

Sources of verification are for example links to relevant digital documents, news/newsletters, brochures, workshop related documents, pictures, etc.

The report of the project funded by the Mohammad bin Zayed Species Fund is available through this link, as well as other documents such as the temporary draft of Red List Assessment of *Jacobaea mouterdei*, the video of the fieldwork and photos: <https://www.speciesconservation.org/case-studies-projects/mouterdes-ragwort/19099>

Photos of the workshop on the 8th July 2019 in Hanoi:



