

## Final Evaluation Report

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Your Details	
<b>Full Name</b>	Semu Arayaselassie Abebe
<b>Project Title</b>	Vegetation ecology and ecosystem services of relict Monastery Forest patches in Northern Wollo, Ethiopia: Implications for Restoration and Plant Biodiversity Conservation
<b>Application ID</b>	30819-1
<b>Grant Amount</b>	6000
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<b>Date of this Report</b>	11/02/2022

**1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.**

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Identification of vegetation composition, diversity across altitude and their regeneration states				
climate modelling of endemic and native species condition in the presence of climate change				
Ecosystem service valuation of the forest patches				The ecosystem service mapping has been done for the cultural service

**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled.**

During the second season of data collecting for the study, there was some unrest in the area. To deal with the issue of safety, local armed individuals were employed. Data collection for vegetation, particularly during the rainy season, has been difficult. Due to a conflict between the federal administration and Tigray forces, only Afar Road was used to travel to Zobel and then to different research sites in Raya Kobo. The researchers had to travel for 5 to 6 days on a normal condition which takes a day to complete, and the level of insecurity was challenging. To tackle these issues, the researchers split into two groups and gathered all of the essential data with the agreement of the local authorities and community. After 3 months of collection because to transportation problem to the centre, the wet season vegetation data was transported to Addis Ababa University for further identification. In order to eliminate insecurity, a questionnaire survey was conducted four times. Three of the data collecting were done on paper, but one was done using KOBO software.

Finally, the findings of the study were presented to members of the local community, the elderly, stakeholders, and religious leaders. Furthermore, due to security concerns, gathering of more than 100 people is not permitted. Regarding the community meeting, higher officials had notified us on our conversation and agreed on a time frame for the discussion and we have done the meeting with small numbers of participants repeated times.

We were forced to transfer some of the costs to other operations due to an increase in the cost of expenditures, unanticipated costs, higher inflation in the country, and conflict between the two parties. To address these issues, personal costs were lowered and shifted to other expenses.

**3. Briefly describe the three most important outcomes of your project.**

- Vegetation composition of the patches were identified, and the regeneration states of the selected species were determined.
- Endangered species were identified from the vegetation study and their distribution was modelled using MaxEnt software.
- Cultural ecosystem service of the relict monastery forest patches was identified and the followers and local communities' willingness to pay and their perception were estimated.

**4. What do you consider to be the most significant achievement of this work?**

**5. Briefly describe the involvement of local communities and how they have benefitted from the project.**

FGDs and community meetings are used to engage the local community in the research. The local community has been a source of local knowledge, contributing historical information on the vegetation cover and collaborating in the plan for degraded area conservation and restoration.

**6. Are there any plans to continue this work?**

Yes, the rehabilitation of degraded land mass in and around the monasteries with involvement and ownership of the local communities. In addition, establishment of nurseries from the soil seed bank is the next activity to be done. The dispute in the area caused attitudinal shift towards the cultural services of the monasteries, the monasteries are enclosed with dense forest if the society income generating sources affected both the environment and the local community will be harmed so the next project will include the local community perception on the forest conservation after the dispute.

**7. How do you plan to share the results of your work with others?**

The outcomes of the project will be published in reputable journals for larger audience. In addition, the outcome of the research will be communicated to the officials of Raya kobo and communities around the church. In the agreement settled after the discussion with officials on the community and stakeholders meeting will be conducted after things become better and peaceful. In the meeting posters, fliers and reports will be provided to the participants.

In addition, two papers were prepared and are on due process to be sent to potential publishers. In the coming months the articles will be available for the readers and the whole scientific community.

**8. Timescale: Over what period was the grant used? How does this compare to the anticipated or actual length of the project?**

Activity	Time scale	Remark
Community and stakeholders meeting	Three times (February, April and January 2022) ***	February 2021 1 <sup>st</sup> phase (introducing about the project) April (on ecosystem service and local knowledge and administration of forests) 3 <sup>rd</sup> phase (was conducted January 2022)
Floristic data collection	March-May *** 2021 (dry season) End of September –first week of November 2021	All churches and monasteries indicated in the project were covered
Focus group discussion	February 2021 ***	
Structured interview	5 areas ***	Each areas annual ceremony has been used
Questionnaire survey	5 areas ***	Each areas annual ceremony has been used
Modelling of species	June 2021**	
Awareness creation discussion for conservation and restoration		Both initiation and finalizing meetings were done. Initiation of the project in February 2021 and finalizing project was January 2022.

**9. Budget: Provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.**

Item	Budgeted Amount	Actual Amount	Difference	Comments
materials purchase	900	1200	+300	Price of items has increases from 50% to 150%
accommodation for the	1250	1000	-250	Budget has been

researchers				transferred to other activities
voucher specimen identification fee	200	250	+50	
discussion preparation and materials purchase	1000	750	-250	Only the last meeting was interrupted all other has been carried out as planned
participants fee	500	600	+100	
stationary materials purchase	200	350	+150	
daily labours fee	800	1250	+450	Additionally local armed individuals were hired which is too much costly.
local flight and car rent	950	800	-150	
Contingency	200		-200	
<b>TOTAL</b>	<b>6000</b>	<b>6200</b>	<b>+200</b>	

**Note:** - The planned amount of money has been used in the research in addition the 100 £ from government fund has been added. Some costs have been covered by the researchers personally which accounts 100 £.

### 10. Looking ahead, what do you feel are the important next steps?

The next steps have to be:

- Changing the output to practical scenario on the ground.
- Conservation and restoration of the important plant species is mandatory.
- Rehabilitation of degraded landscapes and creating of better ownership states of the forest patches to the local community.
- Based on the projected model rehabilitate the endangered species.
- The society perception was recorded in this stage of the research project unfortunately dispute in the area has occurred and created a huge mess. If the society checked weather its perception to the forest has changed or not. This will help develop a clear understanding of the societies perception and develop a plan of action towards awareness creation and development issues.

### 11. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

We have been using the logo on the questionnaires, notebooks, banners and fliers prepared for the community meetings.

**12. Please provide a full list of all the members of your team and briefly what was their role in the project.**

**Arayaselassie Abebe**, coordinator of the project. Coordinate each activity and do all the necessary preparation for the crew. In addition, creating workable environment for the whole team and acting as a finance and human resource

**Ermias Lulekal Molla**, Plant taxonomist and ecologist. vegetation data collection, identification of species and recording local knowledge during the FGD and community meetings

**Tamrat Bekele**, part of the vegetation data collection team

**Arega Shumete**, taking part in the questionnaire survey and semi structured interview of ecosystem services and mapping. He was collecting data from followers and local community using the tools and transferred to STATA and analyse the data for wider understanding of the data.

**Gezahege Belete GIS specialist**. He was recording GIS data from the monasteries and used to map the cultural ecosystem services and map the study sites.

Generally new members were assigned to the project after discussion with members.

**13. Any other comments?**

The grant has helped us do wonderful activities and exposes us to a better experience in ecology and conservation activity. This project was planned to be finalised within 9 -12 months but due to the conflict and the internet disconnection in the area it has been a bit difficult to do it. Some months were without works as war is going on in the area people were displaced and we also moved to the centre Addis Ababa. Additional costs were incurred on us to timely finalise this research and submit the report to you. Now things are back to the normal and we are planning to submit the next stage of the project to you soon. We are hoping we will get the chance and continue our conservation and restoration soon.