

Final Evaluation Report

Your Details	
Full Name	Lutendo Mugwedi
Project Title	Resource base assessment of the endangered medicinal plant, Warbugia salutaris.
Application ID	33647-1
Date of this Report	31 August 2023

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
To undertake a resource base assessment for an endangered, highly sought-after medicinal plant, <i>Warburgia salutaris</i> in Limpopo and Mpumalanga provinces in South Africa.				All the known and reported <i>W. salutaris</i> populations were assessed. Unfortunately, in some areas where earlier records (pre-1990) showed <i>W. salutaris</i> presence were visited, no <i>W. salutaris</i> trees were found, probably due to overharvesting.
To raise awareness on the impact of harvesting in the wild populations				We managed to host five workshops that included local community members, learners and traditional healers in areas with still <i>Warburgia salutaris</i> population. The workshop participants were happy with the initiative and requested we give them <i>W. salutaris</i> seedlings to plant in their home gardens and schoolyards.
To make traditional healers aware that the leaves are also effective.				A traditional healer who only uses <i>W. salutaris</i> leaves, a technique he learned from his father, was part of the workshop. He advised traditional healers to prepare medication from leaves (leaf powder) and the patients' dosage.
To distribute <i>W. salutaris</i> seedlings.				Over 300 <i>W. salutaris</i> seedlings were distributed to traditional healers, schools and local community members to plant them. The seedlings were propagated under phase 1 of the project at the South African National Biodiversity Institute. The Endangered Wildlife Trust also donated seedlings to traditional healers in the area where the wild <i>W. salutaris</i> population has been severely harvested.

2. Describe the three most important outcomes of your project.

a). All the known *W. salutaris* populations in the Limpopo and Mpumalanga provinces were assessed, including one site that was not known, and these

populations had never been assessed were assessed in this study. Therefore, this project has the baseline data that will be used for future monitoring.

b). During one of the fieldworks, we managed to discuss with a local traditional healer who uses *W. salutaris* leaves instead of barks to treat patients. This person trained other traditional healers and community members about using leaves, including cultivation. Traditional healers are committed to using the leaves of the seedlings they planted, and they will only harvest what they need as there is no fear that if they don't harvest the bark and leaves, someone else will do.

c). We managed to get community members who volunteered to help monitor the wild populations in their area. This would reduce the cost that the project team could have incurred due to the ongoing monitoring. The South African National Biodiversity Institute and the Endangered Wildlife Trust will continue donating *W. salutaris* seedlings to people who need to plant them. We have also asked traditional healers to give us a list of scarce medicinal plants so that we can propagate them in the nursery and distribute the seedlings.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

According to the project time frame, the project was supposed to start in January 2020 and be completed in May 2022. However, due to the COVID-19 lockdown across the world and in South Africa, no work was done until September 2021. Therefore, instead of spending 27 months on the project, we only spent 13 months on the project, but managed to assess all the sites that we were referred to. It was also difficult to get people who have knowledge of the sites with *W. salutaris*. Some of the people who were part of the project changed jobs, and I had to find their replacements, which was not easy because the people I was coming across were not prepared to walk long distances in the bush and on steep slopes looking for and assessing *W. salutaris*. Some were not interested when they heard that the project had no stipends. Ultimately, I managed to convince a colleague who joined my university in June 2022 and a few postgraduate students to join the team. The local herbarium only had the quarter degree squares of the areas where *W. salutaris* specimens were collected more than 40 years ago. More than six sites were surveyed based on this information, but they yielded no results since no person knew the exact location. The other challenge was that it is also challenging to convince a person who knows where the *W. salutaris* population is to take us there because the sites are far away from the road, and one has to climb steep slopes. Those who agreed to take us to the site were paid £60 (per field trip) from the lead researcher's pocket since the funding does not cover stipends. However, the postgraduate students helped.

We are grateful to The Rufford Foundation for giving us an extension to complete some of the remaining activities. We encountered no challenges. Everything went according to plan. This project allowed us to work on other medicinal plants with the traditional healers. This will ensure that scarce medicinal plants do not become endangered as a result of overuse.

4. Describe the involvement of local communities and how they have benefited from the project.

Local communities involved in this project include traditional healers (primary beneficiaries), community members interested in conservation initiatives and learners from more than five schools. These stakeholders were involved in workshops that focused on raising awareness of the overharvesting of *W. salutaris* and its impacts on livelihoods and well-being, including biodiversity. Some community members also shared the sustainable traditional practices of harvesting medicinal plants. However, it was then agreed that the wild populations wouldn't tolerate continuous harvesting and that traditional healers should use the leaves of the plants that they are growing. Learners got to learn about the importance of medicinal plants in people's livelihoods and well-being, including their biodiversity value. Some *W. salutaris* seedlings were planted in schools so learners could tender them. Community members who were interested in conservation initiatives included community-based organisations that took it upon themselves to restore degraded ecosystems and monitor areas where there is unsustainable harvesting of natural resources, including firewood. This group of stakeholders was also given *W. salutaris* seedlings to plant in community centres and their home gardens. The Vhembe Biosphere Reserve staff members were quite engaged in the distribution of *W. salutaris* seedlings. They also leveraged this project's initiative to expand their footprint in the area and identify some of the socio-economic development initiatives they can work with local communities on.

5. Are there any plans to continue this work?

Yes, we are continuing with this work. We are now working on other scarce medicinal plant propagation, which are being distributed to the stakeholders we have been working with, including new stakeholders interested in this initiative.

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

The report that was submitted under phase 1 of the project has been shared with the South African National Biodiversity Institute and the government departments responsible for conservation. A peer-reviewed scientific publication is under preparation. It will be submitted to an international journal to communicate the research findings, including activities done in phase 2 of the project.

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

The most important step is to get more people involved in the conservation initiative. What is exciting is that we have the support of the South African National Biodiversity Institute and the Endangered Wildlife Trust, which are propagating other medicinal plants to be given to the stakeholders. The Vhembe Biosphere Reserve have incorporated our study findings into the environmental education activities aimed at educating primary and high school learner about the importance of biodiversity and its associated ecosystem services on the environment.

8. 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?

Yes, we made sure that in our workshop, we made the participants aware that this work would not have been possible without The Rufford Foundation's support. When some participants heard that The Rufford Foundation is from the UK, they were amazed because they realised that if an international organisation cares about their livelihoods and well-being, they should also be active agents in this project. One of the community-based organisations requested our assistance because they would like to apply for funding to restore the rangelands that the invasive alien plants colonise.

9. Provide a full list of all the members of your team and their role in the project.

Dr Lutendo Mugwedi - (Phase 1 and 2) Principal investigator

Dr Hloniphani Moyo – University of Venda (Phase 1 and 2): Technical and logistical support

Prof Eduard Stam – University of Venda (Phase 2): Technical and logistical support

Dr Jenny Botha – Endangered Wildlife Trust (Phase 1 and 2): Technical and logistical support

Mr Rofhiwa Netshituni – South African National Biodiversity Institute (Phase 1 and 2): Logistical support

Mr Mufhati Bulannga – South African National Biodiversity Institute (Phase 2): Logistical support

Ms Mukona Kone – Vhembe Biosphere Reserve (Phase 2): Logistical support

10. Any other comments?

We are very grateful to The Rufford Foundation for allowing us to spend the remaining budget on phase 2 of the project. I attached an appendix showing some of the workshop activities at the end of this report.

Appendix



Figure 1: (A) Dr L Mugwedi planting one of the scarce medicinal plants at Radikgobethe Secondary School following a successful workshop with learners, teachers, (B) government officials and some community members.



Figure 2: Distribution of *Warburgia salutaris* seedlings to the (A) traditional healers and (B) community members interested in conservation. The Vhembe Biosphere Reserve was involved in the distribution.



Figure 3: Awareness campaign workshop with a community-based organisation working on the restoration of degraded land within their community.



Figure 4: Warbugia salutaris seedlings donation to a community-based working on restoration of degraded land within their community.