

Final Evaluation Report

Your Details	
Full Name	Juvenal Aragón Parada
Project Title	"Use and Conservation of native flora associated with agave crops in the Central Valleys of Oaxaca"
Application ID	37522-1
Date of this Report	19 October 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
Construction of community greenhouses				the activity is concluded
Germplasm collection				the activity is concluded
Establishment of seedbed and cuttings				the activity is concluded
Care and monitoring of seedbeds and cuttings				the activity is concluded
Reintroduction of species to habitat				30 trees were transplanted, with the start of rains in June 2024, massive reforestation will be carried out with high school students and primary school children.

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

a). Were planted in total 3,580 seeds of the proposed species: 1,000 *Lysiloma divaricatum*, 900 *Beaucarnea stricta*, 600 *Yucca periculosa*, 200 *Pithecellobium dulce*, 300 *Sapindus saponaria*, 500 *Amphipterygium adstringens*, 37 *Fouquieria formosa*, 33 *Senna pallida* were germinated in the seedbed, and 10 bulbils of *Furcraea macdougallii*.

b). The participation of municipal, community and school authorities were achieved in the integration of all the activities carried out in the Shigol Community Nursery of the community of Santa María Zoquitlán.

c). Fifteen people from the community were trained in the selection and sowing of seeds. 2,500 seedlings of different species of the tropical deciduous forest were transplanted into bags by young people in the eighth semester of the biology degree at the University of the Sierra Juárez of Oaxaca.

d). Workshops on planting, transplanting, fertilizer preparation and educational games related to the biodiversity of Santa María Zoquitlán were given to 190 children from the General Vicente Riva Palacios primary school in the community of Santa María Zoquitlán.

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

The main difficulties identified were the time to carry out all the proposed activities since it is difficult to organise various sectors of society. The unforeseen costs of certain materials since prices varied at the time of their acquisition.

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

The participation of the different local sectors was of great help as working together resulted in the establishment of the Shigol community nursery. The communal authorities participated and supported with heavy machinery (trascabo) to prepare the land where the nursery was established. The municipal authorities lent the land where the nursery was established, as well as heavy machinery (dumping) to haul material such as gravel and sand. Local people helped with material and consumables. Finally, the educational bodies came together and with those who worked on the activities already within the Shigol community nursery, 190 children from the six grades of the General Vicente Riva Palacio primary school participated in these activities, 18 young people from the eighth semester of the bachelor's degree in biology, from the University of Sierra Juárez, Oaxaca and 15 people from the community were trained.

5. Are there any plans to continue this work?

If there is a monitoring plan, during the second stage with the children, the propagated species will be transplanted from the seedbeds to bags. This activity will be accompanied by theoretical and practical activities. During the third stage, reforestation will be carried out where children and parents are integrated with family in the established properties. Also, a donation of 1,000 plants of the different species propagated will be made to the secondary school of the community of Santa María Zoquitlán. Likewise, a commitment was made to create a small school nursery on the campus of the Institute of Baccalaureate Studies No. 23 of Santa María Zoquitlán, where the young people of this educational institution will be trained with whom they will work on issues related to flora management, fauna and management and conservation of natural resources. It is proposed to carry out a massive reforestation of at least 2,500 plants with primary school children and parents, as well as with high school youth.

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

It is planned to publicize the project with more solid results at the XXIII Mexican Botany Congress in 2025. Likewise, publicise the project in forums and classes with

young people from different institutions that provide the opportunity. Likewise, work is being done on the publication of a scientific article on the propagation of native species of the tropical deciduous forest of the Upper Tehuantepec River Basin, Oaxaca.

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

The great first step was to integrate the different actors of the community of Santa María Zoquitlán, likewise, to visualise the activities carried out throughout society at a local and regional scale, to carry out theoretical and practical workshops with children and young people, and finally, to transplant in the field the first plants produced in this Shigol community nursery. Now our challenge is to carry out the activities outlined above, as well as visualise our work on a regional scale, as well as replicate this project and raise people's awareness about the care, management and conservation of the natural resources of the Upper Basin of the Tehuantepec River, Oaxaca.

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?

The Rufford Foundation logo was used in teaching material and the welcome sign to the Shigol community nursery. This material is attached in .pdf format in this report. The Rufford Foundation was always mentioned as the organisation donating the resource to carry out carry out all activities in the community.

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

The active members during this project and who will continue to promote this noble project that will undoubtedly be of benefit to future generations are:

Coordinator: **Juvenal Aragón Parada**

- Francisco Alejo Aragón Cruz,
- Martín Sosa Sosa,
- Carmela Sosa Sosa,
- Felipa Sosa Sosa,
- Edgardo Altamirano Martínez,
- Luis David Sosa Altamirano,
- Armando Altamirano Sánchez,
- Jaime Fernando Mijangos Barriga,
- Tania Nayelly Villavicencio Ornelas.

10. Any other comments?

The teaching materials and photographic archive of the activities carried out from June to October 2023 are attached.

The activities carried out have been promoted and disseminated through the Facebook page created for the Shigol community nursery, which is linked below:
<https://web.facebook.com/profile.php?id=100091979714654>

Compendium of photographic material of the activities carried out during the months of June to October 2023 referring to the project “Use and Conservation of native flora associated with agave crops in the Central Valleys of Oaxaca” with application number 37522-1.

Visit of the young people in the eighth semester of the bachelor's degree in biology at the University of Sierra Juárez, Oaxaca.





















Workshops held with the children of the General Vicente Riva Palacio primary school in the community of Santa María Zoquitlán, Oaxaca.

Activities with first grade students.











Activities with second grade students.









Activities with third grade students.







Activities with fourth grade students.



Activities with fifth grade students.







Activities with sixth grade students.



















Transplantation of native producias plants in the Shigol community nursery.





You can consult on the Facebook page of the Shigol community nursery:
<https://web.facebook.com/profile.php?id=100091979714654>