

The Rufford Foundation Final Report

Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Juana García Flores
Project title	Mayan community knowledge for the conservation and restoration of forest systems in Tabasco, Mexico.
RSG reference	19541-1
Reporting period	Twelve months
Amount of grant	£5000
Your email address	Jugaf8@gmail.com
Date of this report	May , 2017

1. Please 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
Capacity building and empowerment of communities regarding conservation management and restoration of their lands				Capacity-building and empowerment for the collective "Almandros for a better world", represented by five Mayan communities from the Sierra de Tabasco, took place. Technical training on methods of seed collection, seed germination and practices of reproduction and reintroduction of species took place.
The local community takes responsibility and manages the nursery on their own.				A community nursery (mesh-shade house) was established in the community of <i>Tomas Garrido Canabal</i> for the reproduction, care and monitoring of priority species, which members of the collective community oversee.
Reproduce at least 21 species of interest and ecological and social importance by the communities in the region.				The reproduction of 21 species were considered, however according to results of the ethnobotanical work, it was decided to reproduce 10 species that are considered by the people in the communities as a priority for its medicinal use and social-environmental value.
Reintroduction and restoration of native tree species in forest systems for the conservation and restoration of habitats.				According to the phenology of the species reproduced, reintroduction of eight plant species has begun in two sites of secondary succession belonging to the community of <i>La Cumbre</i> and <i>Tomas Garrido Canabal</i> .
Establish a link between the communities and academic institutions, as well as with non-governmental organizations dealing with regional development, and forest conservation and restoration.				A community link has been established with the collective and the Intercultural University of the State of Tabasco, campus <i>Oxolotan</i> , through youth social service providers. Two young men from sustainable rural development careers and one of tourist development. In additions, the link with the academic institution of <i>Ecosur</i> has

				been retained through the exchange of socio-environmental experiences.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

The research project was determined based on the ethnobotanical work of the reproduction of 12 species for its medicinal use and for the conservation and restoration of degraded environments. However, seedlings of eight species of interest were obtained, whose percentages were above 50%. The species are: *Tabebuia rosea* (Bertol.) D.C., *Ceiba pentandra* (L.) Gaertn, *Cedrela odorata* L, *Pimenta dioica* (L.) Merrill, *Castilla elastica* Cerv., *Brosimum alicastrum* Sw., *Manilkara zapota* (L.) Royen, and *Pouteria sapota* (Jacq.) H.E. Moore & Stearn. The species *Annona reticulata* L., *Guazuma ulmifolia* Lam., *Genipa Americana* L. and *Cassia grandis* L. F., suffered from a plague and very low percentages of germination.

It was agreed upon with the collective, which seedlings of species not used in the experimental design of the research project will be reintroduced in other community areas with degraded lands to be restored. This will involve various activities to address to maintain good coordination.

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

The work has been done for the ethno-botanical identification of priority species to be used in ecological restoration and conservation. Was carried out to men and women with knowledge of their medicinal tree flora. This work led to the identification of 12 priority species to play for their medicinal utility and importance in the revaluation of community knowledge and for use in activities of restoration

The collection of germplasm and exemplars for herbarium from May to September 2016 took place. 12 species through the germination of seeds in the community nursery were reproduced. There were various pregerminatives practices. The species reproduced are: *Tabebuia rosea* (Bertol.) D.C., *Ceiba pentandra* (L.) Gaertn, *Cedrela odorata* L, *Pimenta dioica* (L.) Merrill, *Castilla elastica* Cerv., *Brosimum alicastrum* Sw., *Manilkara zapota* (L.) Royen., *Pouteria zapota* (Jacq.) H.E. Moore & Stearn., *Annona reticulata* L., *Guazuma ulmifolia* Lam., *Genipa Americana* L. and *Cassia grandis* L. F. The reintroduction of eight species in two community plots of the Tomas Garrido Canabal communities and La Cumbre have begun. The experimental design is based on a distribution of latin squares.

Social bonding with the collective "Almandros for a better world" has taken place for their appropriation and development of the project. A community nursery (house-mesh shade) was established in the community of Tomas Garrido Canabal, where the group oversees its care. The aim is the continuous reproduction of useful species for the conservation and restoration of tropical forests.

4. Briefly describe the involvement of local communities and how they have benefited from the project (if relevant).

The project has worked with the accompaniment of the collective, " Almandros for a better world" who is represented by members of five communities: Oxolotan, Tomas Garrido Canabal, Cerro Blanco 5ta. Section, La Cumbre and La Pila. With these communities, we have worked to strengthening their capacities through technical training on methods of seed collection, seed germination, practices of reproduction and reintroduction of seedlings, in addition, a community nursery in Tomas Garrido Canabal has been established, and whose management and care oversees the collective. The collective has accompanied and has been directly involved in all processes and stages of the project.

5. Are there any plans to continue this work?

This project is part of postgraduate studies at a doctoral level, which has a duration of 4 years. The conclusion will be in 2019. After this, it is expected to continue with postdoctoral studies, to give continuity to this project of restoration and conservation of tropical forest systems. In addition, the appropriation of the project by the local population will give continuity to a research process in the long term.

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

The publication of the results through research journals at the national and international levels, will be a means to expose the results of this research. A writing a manual is also being written for the local population of the communities and a presentation of the results will be generated for the members of the collective. The thesis in process will be another means of dissemination, in addition to the participation at different conferences.

7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?

The Rufford grant was used for the implementation of the second phase of the project that integrates: the collection of germplasm; the propagation of species; the establishment of a community nursery; the selection of community areas for the reintroduction of the species of social and environmental importance; the technical training of these processes to the local population to carry out the development of the project as a whole.

The first phase of the project was the ethnobotanical work for species identification of social and environmental interest to be used in ecological restoration and rainforest conservation.

The actual length of the field work of the project, will take until the first semester of the year 2018 to ensure continuity in the monitoring of the growth and survival of the species reintroduced.

8. Budget: Please 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.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Technique workshop on seed reproduction and management as well as tree nursery management.	704	690	+14	The difference was used to cover costs for establishing the tree nursery.
Establishing tree nursery	552	580	-28	The difference was used to cover costs for establishing the tree nursery.
Reproduction of species and collection of germplasm and herbarium samples	735	740	-5	
Monitoring the management of the tree nursery. Evaluation of reproduction of species. Selection of community areas for the reintroduction of species.	1198	1198	0	
Tree nursery: House for shade + Supplies	1810	1820	-10	The difference was used to cover costs of nursery materials.
1st.Reintroduction phase of species- Other sources (£ 750)				This amount was financed by other sources of my Ph.D. thesis director and assessors Ecosur-Unam.
Total	4,999	5,028	29	Exchange rate from mexican pesos to pounds: 25.86 mexican pesos / £ 1. (May, 2016) date of suvencion receipt.

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

Give continuity to the reintroduction of species in areas of community interest.

Monitor and evaluate the growth and survival of the species reintroduced.

Dissemination of the results of the investigation.

Connect with institutions for the generation of local markets for medicinal tree flora.

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

The materials for dissemination, are currently being generated. Therefore, as soon as they are ready they will have represented the logo of the Rufford Foundation.

The promotion of RSGF, has been generated from person to person with the local population participants of the project and with institutional colleagues, as well as the promotion of the web page.

11. Any other comments?

We are very great full for the Rufford Foundation grant. The grant has been able to support the work for the restoration and conservation of ecosystems in Mexico to continue.