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	Radosoa A. Andrianaivoarivelo
Project title	Flying fox habitat restauration and natural forest sustainable management in Eastern Madagascar
RSG reference	16591-2
Reporting period	October 2016 to September 2017
Amount of grant	£4968
Your email address	rraaddoo2001@yahoo.fr
Date of this report	21st October 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
Plantation of indigenous plants from seeds collected from Madagascar fruit bats				The seeds taken from the two fruit bat species (*Rousettus madagascariensis* and *Pteropus rufus*) are two *Ficus species*. *Ficus polita* and *Ficus* sp. (species to be determined). But three other species with fruits known to be eaten by these fruit bats were also planted (*Abrahamia ditimena; Syzygium malaccense; Solanum auriculatum*). 1320 Ficus plants from fruit bat faeces with intact fruits and 2350 plants from the seeds of the three other bat food species were planted in degraded and cleared lands. With regard to the local farmer demand, a total of 3930 plants from other 10 plant varieties for human consumption were planted in farmlands and abandoned rice fields far from the natural forests. However, more plant in pots at our tree nursery need to be planted.
Growing efficiency of seeds from fruit bats and intact fruits				Up to now, we registered 63% and 41% growing success of seeds taken from fruit bat faeces and intact fruits respectively. Large seeds from three species of fruits eaten by bats have greater growing success ranging from 70 to 91%.
Community Forest Management: CFM				The executive members of the CFM called « MIARAMIRINDRA» association were voted by the community in Ampasimaneva on 9th July 2017 and their term will last for 2 years. A social contract (Dina in Malagasy) was created in September 2017 and is used as a tool for controlling the forest use in our project site. The social contract was approved (signed) by the local and regional authorities and the forest and environment ministry regional representative in Moramanga.
Materialization of forests along the Soamandaranana river				A total of 152 ha of forest on both sides of the Soamandaranana river was materialized with 82 signposts (balises) made from reinforced concrete, which were painted in red and white. Sensitisation sessions were conducted in the villages to prevent the local villagers from

				clearing the vegetation or collecting timber within the areas marked with the signposts.
Training of a local technician on the maintenance of the hydroelectric and drinking water systems				M Paul Ranaivoson was the person who had the qualification required in the village for ensuring the electricity and drinking water systems maintenance. He was brought to Antananarivo and assisted with 1 month of training on electricity and drinking water maintenance organised by the Akamasoa technicians (humanitarian Association). He is back in Ampasimaneva and has trained two other persons to assist him on the maintenance of the systems.
Local association managing the electricity and drinking water				The executive members of the "Taratra" association who manage the working capital of the electricity and drinking water in Ampasimaneva were renewed. New system has been implemented for better management of the project, such as the use of tickets, people should buy for every bucket of drinking water they collect in the standpipe; we will set up a vault in the community centre for ensuring the security of fund generated by the use of water and electricity and they are encouraged to create a bank account in Anosibe An'Ala for the Taratra association.

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

The difficulty we encountered was on the tree nursery for the small seeds taken from the bat faeces and intact fruits (from the *Ficus polita and Ficus* spp). At first we had a difficulty on having them germinated in October 2016. The reason was the soil where they were sown need to be totally wet throughout the germination and the first development stage periods. To overcome this issue, we put a plastic sheeting with few holes under the soil (mixed with fertiliser) we used to sown the seeds. The plastic sheeting limited the water discharge.

Organising a meeting with the local communities was not an easy task. They are not punctual; a meeting supposed to happen in the morning was likely be delayed to the end of the day and sometimes the day after if we wish to have a meeting with the majority of the villagers and the decision makers.

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

- Reforestation of 22, 94 ha (3670 plants from five species) 24, 51 ha (3930 plants from 10 species) using plants food source for fruit bats and providing edible/cash fruits for people respectively.
- Physical materialisation of 152 ha forest surface with the social contract created and approved by the forest and environment regional representative.
- Management system for the sustainable use of the electricity and drinking water identified and implemented.

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

The local communities have great knowledge on the forest boundaries separating the administrative territories; they accompanied us during the investigation of the forest areas to be managed by the communities. During our three missions to the forest four members of the communities accompanied us and inform us about the name of the sites or limit of the forests within the Ampasimaneva territory.

The communities contributed during the elections of the bureau members for the community forest management (Miaramirindra association) and for the association managing the drinking water and electricity projects (Taratra association).

Two members (Mme Voahirana M. G. Ravaonasolo and M Régis Rakotoarivony) of the CFM are employed as tree nursery attendants and have ensured the preparation and production of the plants in the tree nursery before the reforestation. And during the reforestation sessions, the inhabitants of Ampasimaneva collected the pot plants and planted them in the reforestation areas.

5. Are there any plans to continue this work?

We have other 3970 pot plants left in our tree nursery that will be planted in the early rainy period in November - December 2017, such activity will be funded by A Better Life for Children.

Our plan also is to continue following up the regeneration rate and growing success of the planted trees either those yielding fruit food for bats or those providing edible/cash fruits for people.

The systems for long term management of the forest above the hydroelectric turbine, the drinking water and the electricity have been transferred to the local community but, non-formal visits of technicians or qualified persons from Antananarivo should be needed to monitor the implementation of the policy on the forest product harvest or clearing as defined on the social contract. The monitoring concerns also the control of the income generated from the use of drinking water and electricity, such income will be considered as the working capital of the project, especially, when there is no external support for ensuring the maintenance of the

systems. For information, the foreign association ABLFC (A Better Life for Children) supported the 70% and 50% of the maintenance of the electricity and drinking water systems for this year and the following year respectively.

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

We will write reports accompanied with photos in French and Malagasy and disseminate them locally to the District and High School of Anosibe An'Ala, the closest town of our project sites. A message will also be launched through the national newspaper (Midi Madagascar) about the reforestation efforts using indigenous plants.

For scientific purpose, the same as we did for our previous results gained from the RF first funding we plan to write a scientific publication for peer review scientific journal.

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

We conducted seven missions to the project sites from November 2016 to September 2017. Most of the activities presented on the RF proposal have been achieved a part from the tree plantation.

However more times are needed to assess the growing efficiency of the planted trees,

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. Total Budget = £ 4968; Total Expenses (Actual) = £ 4951.81; Left = £ 16.19; Exchange rate: £ 1 = MGA 3910

Item	Budgeted Amount	Actual Amount	Difference	Comments
Travel to and from Anosibe An'Ala (Ampasimaneva): Akamasoa members	53.93	0.00	53.93	This cost was so far coved by ABLFC
Training of local technicians (Maintenance & Management of electric and clean water systems)	606.74	548.59	58.15	One technician (training fees : £211.00; transport : £28.13; Lively cost : £71.61) from Ampasimaneva was trained but this amount was also used to purchase necessary electric tools and materials (£237.85)

Creations of social contract & local association (meeting and paperwork's)	485.39	379.80	105.60	the amount was mostly used to cover the accommodation and lively costs of the community going to Anosibe An'ala and Moramanga
Materialization of forest boundaries (65 ha)	679.21	922.76	-243.55	We made 82 X £11.25 concrete signposts instead of 62
Tree nursery (12000 plants)	741.57	584.14	157.43	Cost associated with payment of 2 tree nursery attendants X £15.34 X 10 months, plastic bags for making plant pots (120 packs X £1.23)
Car rental: return 5 trips Tana-Anosibe An'Ala	314.61	429.67	-115.06	We made 7 return trips X £61.38 to and from Ampasimaneva during the project period instead of 5 trips
Fuel: Four wheel drive rent (return 5 trips Tana-Anosibe An'Ala)	176.18	225.58	-49.40	7 trips to and from Ampasimaneva X 42l of Gasoil X £0.77
Rechargeable battery for head torches & GPS, Battery recharger	47.19	80.82	-33.63	Purchase of 1 AA/AAA battery recharger (£14.32) and 4 packs of AA rechargeable batteries X £16.62
Torches, Insect repellent, Posters (sensitization) A3 format	200.72	119.69	81.03	Printing 20 A3 size posters X £1.89, 6 insect repellents X £6.39 and pharmacy box 17.90
Communication : Telephone Credit, Internet, Books or literature purchase	249.89	236.32	13.57	Internet subscriptions ($92.07), telephone credit 7 X £ 3,07 and office materials with notebooks and sharpies used in the field (£122.76)
Per diem external stakeholders (Chef Cantonnement, Mayors)	471.91	515.60	-43.69	Per diem for 4 community representatives(X 2 missions X 9 days X £7.16) accompanying us to the forest
Per diem : Research assistant & Principal Investigateur, including foods	404.49	624.04	-219.55	Per diem for 1 missionary from Antananarivo X 4 missions X 15 days X £7.67 and stipend (£163) for one person making maps and organising data
Per diem : Local assistant & porters, including foods	537.08	257.80	279.28	Cost associated with 3 porters X 7 trips (travel by foot over 23km) from Anosibe An'Ala to Ampasimaneva and back (3 X 7 X 2 X £6.13)
Bank charge and transaction fees	0	28	-28.00	Unforeseen

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

Actually the emerging trees permanent roost of the Madagascar flying fox in Ampasimaneva is threatened by logging, and the bats had suffered from the roosting habitat loss, we feel that restoring the roosting habitat of these large fruit bats is one of the most important action to undertake but we will firstly seek funding for this activity.

Follow up the plant growing success.

Assist the local community on the CFM especially with difficulty they may encounter in implementing the social contract.

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

As there is no report produced on these projects funded by RF there we have not yet used the Rufford Foundation logo but will do so when we distribute the results of the activities to our partners and acknowledge Rufford in our newspaper and publication.

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

The following persons contributed during the implementation of project funded by the Rufford Foundation and received per diem during their field mission in our project site:

Andriniaina Z. Falimanantsoa (Faculté de Droit, d'Economie, de Gestion et de Sociologie University of Antananarivo): He worked with the local guides from the communities, they assess and collected the seeds from the fruit bat faeces and fruiting trees, which were shown in the tree nursery.

Tatamo E. A. Raharimihaja (Biologie de la Conservation Animale, University of Antananarivo): She was the responsible of the data base collected from the field such as GPS coordinates of the forest limits, reforested areas and the list of plants. She made the maps of the activities in the field: physical materialization of the forest to be conserved, reforestation sites, etc. …

Laza H. Andrianandrianina (Biologie de la Conservation Animale, University of Antananarivo): his role is to visit the forests above the hydroelectric turbine installation, which were advocated for the community management. He conducted with Radosoa A. Andrianaivoarivelo multiple meetings with stakeholders during the creation of social contract for the CFM. He also led the physical materialization of the forests in both sides of the Soamandaranana River. He led the community representative installing the signposts in the forests.

Victor Rakotomboavonjy (NGO Madagasikara Voakajy): he organized the plantation of plants from the tree nursery in the Ampasimaneva village and assessed the number of plants available at the tree nursery which were large enough to be planted in the degraded or farmlands.

Radosoa A. Andrianaivoarivelo (myself): first responsible of the project, scheduling the missions and the associated budgets. I organize the necessary data (minutes of the meeting; photos; budget reports) and wrote the reports.

12. Any other comments?

Other forest sites in the opposite side of our project (ca 25 to 35 ha) site in Ampasimaneva are now cleared by local villagers through the slash and burn practice. This is on the way to our project site and it is very upsetting when I imagine that in only three years these wonderful forests with some native bird species will become unwanted grasslands. And the soils will be subjected to erosion and desertification.