

## The Rufford Small Grants Foundation

### Final Report

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Congratulations on the completion of your project that was supported by The Rufford Small Grants 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](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

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Grant Recipient Details	
<b>Your name</b>	Blandine Marie Ivette Nacoulma
<b>Project title</b>	Impact of elephants (endangered animal species) on baobab (endangered plant species) conservation in eastern protected areas of Burkina Faso
<b>RSG reference</b>	12764-1
<b>Reporting period</b>	February 2013 - February 2014
<b>Amount of grant</b>	£5879
<b>Your email address</b>	<a href="mailto:nblandine@gmail.com">nblandine@gmail.com</a>
<b>Date of this report</b>	06 <sup>th</sup> March 2014

**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
Assess the current pattern and population structure of baobab trees in the W-Arly-Pendjari complex PAs			X	The current pattern and population structure of baobab have been investigated in the WAP complex PAs of Burkina Faso on the base of dendrometrical measurements. A total of 300 trees have been sampled within the three PAs in Burkina Faso.
Determine the periods, types, rates and patterns of elephant damages on baobab trees			X	From the field observations, elephant damages on baobab were classified into 3 categories: bark removed (74, 18% of sampled trees), branches broken (34, 72%), and tree uprooted. We also determined the period of elephants damages on baobab in the PAs by combining field observations and interviews with the foresters and PAs managers.
Assess the importance of baobab in elephant diet		X		Baobab macroscopic and microscopic items have been identified in a sampled of 45 dungs, collected during the dry season within the complex.
Local population's perception of the problem, their proposed solutions and the conservation issues of baobab in the agroforestry systems			X	We did ethnobotanical interviews with local populations on the base of predefined questionnaire in three ethnic groups (Gourmanchté, Mossi and Djerma). The total number of villages sampled was 12, located within a radius of 25 km around the PAs. A total of 215 respondents have been interviewed.
Baobab trees planting			X	A total of 100 baobab plants in close collaboration with local communities. Then, we decided to monitor the monthly survival and growth rates each of the planted trees.

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

The elephant dung collections were more difficult than planned. The roads inside the PAs were in very bad condition during the rainy season, making sites inaccessible. Consequently, we did not sample elephant dung in this period as planned.

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

i. The actual existence of a scientific database on the ecological status and the use of *Adansonia digitata* by elephants in the WAP complex PAs of Burkina Faso. It is clear from our investigations, that baobab in this complex presented old population's structure. These populations are subjected to three categories of elephant damages: bark removed (74, 18% of sampled trees), branches broken (34, 72%) and trees uprooted. Furthermore, the species is more abundant in W and Arly national park and very scarce in the Pama reserve.

ii. The causes of elephant damage on baobab species were recorded. According to the local populations, the reasons of elephant attacks on baobab trees in the PAs are: the lack of fodder (70, 62%) and water (15, 62%) in the areas, and food supplement (15, 16%). Thus, according to them, the best solution should come from the government. They also proposed a reduction of the number of elephant and baobab trees afforestation.

iii. Participatory plantation: 100 baobab trees were planted.

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

Local communities are the central part of our work.

The aim of the project has been understood and accepted. The second part of this project is based on the information given by local communities. They also, actively participated to the trees plantation. In addition, this project has financial benefits, as assistant for field work, guide, and interpreter for ethnobotanical surveys were recruited and paid during the whole data collection. Assistant for field work was also initiated to basic technique and knowledge in forest inventory (tree diameter, height and crown diameter), especially by the use of clinometer, compass, rubon pi and GPS.

### **5. Are there any plans to continue this work?**

Yes, I planned to continue this work. The next phase will focus on: (i) chemical analysis of bark item contained from different level of damaged trees; (ii) monitoring of planted trees through dendrometrical characteristics measurement; and (iii) environmental education for primary school children living around the WAP complex on the importance and sustainable use of the complex and some highly valued trees species (included baobab).

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

I plan to share the results of this project by presenting posters, oral presentations at conferences/meetings. I also plan to publish the research outputs in scientific journals and edit pamphlets.

We intend to present a poster at the National Farmers' Day (called in French: "Journée National du Paysan"), which will be held at 3<sup>rd</sup> to 5<sup>th</sup> April 2014 in Fada N'Gourma (eastern Burkina Faso). In addition copies of poster will be sent to each of PAs managers.

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

The grant was used from February 2013 to February 2014.

**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
Laptop	600	600	0	
Literature and documentation	150	100	+50	The purchase expense was less expensive as we planned.
Purchase of a motorbike	675	660	+15	The motorbike chosen was a bit less expensive than planned
Car hire	750	750	0	
Fuel	450	465	-15	We used more fuel than planned due the monitoring of planted baobab
Assistant for field work, guide, interpreter for ethnobotanical surveys	1234	1234	0	
Accommodation in guest houses during field trip	300	350	-50	For tree planting more people was involved and has supported.
Material for laboratory (research of baobab items in elephant dung: petri, dishes, blades and bladelets, NaOH)	440	350	+90	The number of sampled dung was less than we planned. The reason is the inaccessibility of sites during the rainy season.
Internet and mail fees	100	100	0	
Publication and dissemination (workshop and pamphlet edition)	430	430	0	
Suunto, Compas, Clinometer, rubon pi	130	130	0	
Digital camera	310	300	+10	The digital camera chosen was a bit less expensive than planned.
GPS Garmin76	200	200	0	
Paper, pens, Ink for printer	110	110	0	
Baobab nursery, planting and monitoring	0	100	-100	This activity was not initially planned; but after project review, we decided to include this activity.
<b>Total</b>	<b>5879</b>	<b>5879</b>	<b>0</b>	

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

- i. Continue the monitoring the planted trees.
- ii. Environmental education for primary school children living around the WAP complex on the importance and sustainable use of the complex and some highly valued trees species (included baobab).

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

Not yet! But RSGF will be acknowledged for all scientific publications, conference/meeting to be produced from the project outputs. I also advertised RSG to my colleagues in my institution and motivated some of them who submitted proposal for funding to the foundation. In addition, the materials acquired in this project will be used by other students of my laboratory and thus, contributed to increase the visibility of Rufford Small Grants Foundations in Burkina Faso.

**11. Any other comments?**

I thank RSGF for having provided me with this financial assistance for my project. This project is useful for my scientific career and actually allowed extending my scientific network in the field of plants ecology and plants-animal interaction.