

The Rufford Small Grants Foundation

Final Report

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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details

Your name	Yaw Kwateng
Project title	Conserving Medicinal Biodiversity and the Sustainable Use for Local inhabitants of Lake Bosomtwi of Ghana
RSG reference	16.09.09
Reporting period	March, 2011
Amount of grant	£5,626
Your email address	Ykwat24@yahoo.co.uk
Date of this report	04/03/2011

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
Create awareness on the importance of medicinal biodiversity conservation and sustainable use			×	The heavy reliance on wild sourced medicinal species is not readily balanced by the cultivated type due to unavailable seed sources and supply, space for cultivation Dearth of local by-laws regulating the use and conservation of medicinal plants Knowing what is right in biodiversity conservation and doing what is right in terms of practicing conservation by the people is not commensurable. There is little sense of alacrity or commitment to the practice of conservation by local inhabitants.
Promote the cultivation of medicinal plant through the establishment of a herb garden			×	Readily access to Land for cultivation is a major challenge. Effective management and supervision of herb garden particularly from perennial bush fires and flooding; especially at the juvenile stage of plant growth caused largely by extreme weather conditions.

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

Basically, access to land plays a pivotal role in community-based biodiversity conservation. Customarily, in Lake Bosomtwi and its surrounding communities, land belongs to the local indigenous people but held in trust for the people by the traditional head. However, due to unsustainable land use practices and/or ineffective local by-laws regulating land use in an ever-burgeoning population, issues of land access for conservation activities is very difficult as most of the lands are used primarily for subsistence farming and household construction.

Furthermore, the quest by the local people for financial rewards for their participation in conservation activities within the locality particularly among the youth and community leadership initially was a very worrying development. Significantly, no matter how local communities embraced the project concept, indicating its relevance to enhancing nature conservation, bridging the gap between the demand and supply of medicinal plants to improve their traditional and primary health needs in the medium to long term, there was dearth or little sense of voluntary involvement.

The involvement of school children in conservation activities was initially opposed and highly criticised by some parents who deemed it as child labour which would take much of their ward's time off their academic work.

Lastly, there were setbacks in acquiring seeds requested by the local indigenous people for planting within the stipulated time thus impacting hugely on the growth patterns of some plants. A total of 20 species of medicinal plants were requested but 15 seed types were found. This is because Forestry Research Institute of Ghana (FORIG) is the only formal source for the supply of viable seeds and majority of these seeds are collected from the natural forest which is seasonal. Hence seven out of 20 seed types could be supplied by FORIG.

However, to combat and overcome these difficulties, the following were carried out.

There was the need to identify and appoint opinion leaders of higher reputation to the project advisory board, whose understanding and practical involvement in nature conservation programmes was remarkable. This was also to bring their experience, influence, expertise and knowledge (mainly indigenous) to bear on the project. The project advisory board with support from the project team was able to:

- Exert their influence in organising large gatherings for successful community forums, meetings and other outreach programmes.
- Create the platform to make it easier for chiefs and elders to better appreciate the socio-economic and environmental benefits of the project thus paving way for community land to be earmarked for such conservation activities.

To promote sustainable use of land and to further reduce pressure on the wild medicinal plant resources, the concept of integrating medicinal plants with food crops was introduced in addition to the herb garden establishment. This innovation, introduced at the latter stage of the project was to enable farmers, willingly, as part of carrying out their routine cultural practices on their farms such as weeding would contribute to nurturing the medicinal plants together with the food crops cultivated.

Additionally, farmers are able to decide and choose the type of plants that would be of benefit to their health needs. It was observed from the views gathered that with the increasing reception of awareness created, this practice could further contribute to reducing the high preference for wild medicinal species. This is because those cultivated would be indifferent from the wild type at maturity. However, with time, the concentration on the cultivated plants would help assuage the exploitation of the wild resources.

Primarily, the core of the project sought to engage school children, right from environmental outreach programme, and the establishment and management of the herb garden. In consultation with the School Management Committee, students' leadership and the traditional authority, a set of school jerseys and later a mobile phone were purchased for the school as requested to serve as motivation for the school children and also enhance communication in the project site. Again, to allay the fears of parents who were opposed to the engagement of schoolchildren, they were sensitised.

In relation to seed collection, several farmers along some forest reserves were outsourced for the seed supply with certain standards and specifications. To determine the viability of seeds collected, a simple seed germination test using paper absorbent technique was used.

In conclusion, it is observed that the successful management of the herb garden is very critical in reducing the growing demand from the wild, but it is largely dependent on curtailing prevailing perennial bush fires, often triggered by extreme weather conditions and the avoidance of over exploitation by traditional herbalists for commercial purposes. Likewise, the plain is a flood prone area and therefore heavy rains pose serious threats to the sustainability of the herb garden particularly at the juvenile stage.

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

The three most significant outcomes of the project are:

- Increased awareness on medicinal biodiversity conservation. This could be ascertained by the level of participation of the local inhabitants during focus group discussions and the display of in-depth understanding of biodiversity conservation in meeting their health and socio- economic needs; their roles and responsibilities of clamping down on over-exploitation of wild resources. In this regard, there has been the growing need by the majority of the local people to remedy the situation by getting involved in conservation activities.

One other significant outcome arising from the increased sensitisation was the erosion of a long-held perception by some local inhabitants that wild-sourced medicines contained higher therapeutic properties than the cultivated type. This could be confirmed from the community desire to be supplied with seedlings to grow in their farms, open spaces and along the banks of the lake.

The involvement of school children in project activities and the incorporation of medicinal plant conservation in the terminal examination of Abono Junior High School also boosted the level of awareness among school children. This was confirmed during a quiz competition organized for the school with both contestants and audience showing high levels of practical knowledge on biodiversity conservation in general.
- The establishment of a model and pilot herb garden in Abono community. Fifteen (15) medicinal plant species, either rare or over exploited were planted in a 4 -acre land. Species cultivated include *Pycanthus angolenesis* (Otie), *Zanthoxylon gillette* (Okuo), *Tetrapleura tetraptera* (Prekese), *Khaya ivorensis* (Mahogany), *Moringa oleifera*, *Rauvolfia vomitra* (Kakapenpen), *Neuboldia laevis* (Sesame), *Morinda lucida* (Konkroma), *Alstonei boonei* (Nyame dua), *Celtis mildbraedii* (Esa fufuo), *Cassia alata*, *Garcinia kola* (Tweapea), *Kigelia africana* (Nufutene), *Paullinia pinnata linne* (Twentini) and *Garcinia epunctata* (Nsokodua). About 5000 seedlings were raised in a confined area of about 0.2 ha.
- The integration of medicinal plants and food crops on a piece of land. The dearth of land use policies nationally, local by-laws or customary laws regulating land use in the community put so much pressure on land resources. This innovation is carefully chosen to allow farmers to willingly nurture medicinal plants of multipurpose characteristics of their choice on their farms together with their food crops. This seeks to maximise the use of land, increase crop yield as well as meeting the farmer's health needs and reducing pressure from the wild resources.

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

The local inhabitants of Abono community and other two nearby villages namely Abrodwum and Adwafo were greatly involved right from the project design, decision making and actual implementation processes. Representatives from the traditional authority, the local assembly member representing the local government in the area, representatives from Abono School Management Committee together with the project advisory board who are local residents were involved in the design and decision making process whilst the implementation process primarily engaged the staff and the students of Abono Junior High School. The staff and students played a major role in the establishment and still having an oversight responsibility of the management of the herb garden as part of the students' agricultural field practice with the community-based project advisory board providing supervisory role.

The local communities have benefited in diverse ways and could be classified into two; knowledge acquisition and material gains.

Materials gained included nursery equipment for keeps by the community school, supply of set of textbooks and other reading materials to deserving school children, supply of set of football jerseys for recreational purposes, supply of various species plant seedlings to local inhabitants for planting and supply of recharged mobile phone for Abono Community Junior High School in the course of the project for effective communication.

The local communities were sensitised and empowered through focus group discussions, forums and video documentary on best practices in some communities in other parts of the world. These were meant to contribute to harnessing medicinal and genetic resources to meet local inhabitants' primary health needs as well as enhancing biodiversity conservation and also ensuring effective ways of collaborating with the Bosomtwi district assembly in managing forest resources sustainably. With regards to students, they have gained practical experience in medicinal biodiversity conservation in many ways such as:

- ❖ The preparation and management of nursery.
- ❖ Raising, maintenance, transportation and planting of seedlings.
- ❖ Monitoring and management of established herb garden.
- ❖ Handling and usage of nursery equipment.
- ❖ Application of silvicultural treatments on cultivated plants.

5. Are there any plans to continue this work?

There are plans to replicate this work in other communities; - increased awareness creation, promote herb garden establishments and also encourage the integration of medicinal plant and food crops cultivation on farmlands.

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

Plans for sharing results of my work will include:

- Disseminate hard copies of final report to all stakeholders involved in the project.

- Disseminate results via e-mail to network of other professionals and partners.
- Publish results on my blog, creating platform for further discussions.

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

RSG was used over a period of 10 months. It was anticipated to run through a period of 12 months. The bulk of the project activities were accomplished on time, in consonance with plan of work except for few activities which could not be carried out due to insufficient funds.

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
Awareness creation: Forums and meetings	1,800 (4,500)	1,140 (2,850)	660 (1,650)	3 community forums were held instead of 5 Insufficient funds for this item Exceeded expected budget by 100% due to high cost of hiring vehicle with video and PA system
Workshop Documentaries /film show	1,200 (3000)	- 300 (750)	- 150 (375)	Cost of design and printing
Outreach programme with school children: Development of flyers	150 (375)	280 (700)	130 (325)	Increased. 2 copies of flyers costing £1 instead of 3 copies stated in the budget
Cost of quiz competition	155 (387.5)	700 (1,750)	545 (1,362.5)	Rental of PA system and the use of a private communication resource centre was not budgeted initially
Cost of nursery/ herb garden establishment	1001 (2,502.5)	1200 (3000)	199 (497.5)	High cost of nursery tools, seed supply and labour
Travelling expenses: Accommodation/Daily subsistence allowance	360 (900)	360 (900)	-	
Transport cost	700 (1,750)	960 (2,400)	260 (650)	Increases in petroleum and other related tax components impacted significantly on this item
M & E cost	400 (1000)	-	-	Could not be carried out because of insufficient funds
Other project costs:	210 (525)	650 (1,625)	440 (1,100)	Budget bloated by over 200% due to unforeseen cost like the purchase of football jersey, a recharged mobile phone, project site communication and bank charges.
Total	6,126 (15,315)	5,570 (13,925)	2,384 (5,960)	

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

Basically, looking ahead, some of the important next steps are:

- To increase sensitisation of medicinal biodiversity conservation across the length and breadth of the entire stretch of Lake Bosomtwi in order to make a collective and meaningful impact.
- Replicate the model herb garden in other communities whose primary source of health care is through traditional medicine.
- Promote and encourage the integration of medicinal plants of multipurpose uses and food crops cultivation.
- Empower local inhabitants to harness medicinal resources and also preserve genetic resources locally.
- Promote green fire breaks along forest peripherals.
- Strengthen the collaboration between the local government and local communities in community forest management and biodiversity conservation.
- Increase collaboration with school authorities and school children in the training and management of conservation activities.
- Institute community resource centre that stores data, preserves seeds collected from the wild, provides guidelines and gives readily information on community medicinal resources utilisation and management.

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?

RSGF logo was used on letterheads sent out to:

- Invite stakeholders in our consultation meetings and forums particularly the local government representative.
- Make request for video materials at the Balm's Library (University of Ghana), Viasat 1 TV station, DFID, IUCN, DANIDA, WWF, Forestry Commission, Botanical Department of University of Ghana etc.
- Seek for counterpart funding.

The RSGF logo was published on the flyers developed.

11. Any other comments?

The current exchange rate was used for the local currency as contained in the budget. The Ghanaian Cedis is bracketed to the British Pound Sterling. A counterpart funding of £500 due to be received from Optimal Development Consult failed. All other attempts to secure funding from other donor partners listed in the project document also failed.