

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 | RAJASRI RAY |
| Project title | Developing strategies for conservation of threatened endemic biodiversity of the sacred groves of Central Western Ghats |
| RSG reference | 65.02.10 |
| Reporting period | August 2010 – August 2011 |
| Amount of grant | £ 5,439/- (1£ = Rs. 74/- at the time of fund release) Rs. 4,02,556/- (amount received by the institute) |
| Your email address | rajasri@ces.iisc.ernet.in |
| Date of this report | 05/08/2011 |

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 |
|--|--------------|--------------------|----------------|--|
| Mapping the spatial distribution of sacred groves in study area and collection of relevant socio-economic information | | | √ | |
| Obtaining vegetation profile and endemism status | | | √ | |
| Ecology of endemic plants with reference to their current population, regeneration, pollination and seed dispersal and threats to their survival | | √ | | The observations related to pollination and seed dispersal have not been achieved due to lack of time for long time observations and supportive documentations. |
| Data analysis and interpretation | | | √ | |
| Developing strategy for endemic plant conservation in sacred groves | | √ | | We have prescribed few protection measures for the endemic plants and sacred groves. However, species specific strategy has not been suggested due to lack of data on their reproductive and juvenile phase. |
| Awareness generation on sacred grove's role in biodiversity conservation and ecosystem functioning among the local communities. | | | √ | |
| Report preparation and submission | | | √ | |

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

The project aim was to assess the potential of sacred groves in conservation of endemic tree species in the locality. It also included population study of endemic tree species in that region. Lack of information on reproductive and establishment phase of the endemic plants, necessitates experimental set up with long term observation planning which has not been possible within the stipulated time of the project. We, therefore, restricted ourselves to the opportunities for making the observation within the study period.

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

- *Importance of small fragments in species conservation*
The studied sacred groves are in agriculture-plantation dominated landscape. The groves were very small in size and under different degrees of maintenance. We have recorded a total of ~ 138 tree species from these sacred groves almost ~ 80-85% of which are not available in surrounding landscape. In terms of endemic species too, sacred groves are the only habitats for most of them emphasising that, these small patches act as refugia of the local as well as endemic species which certainly enhance their candidature for local conservation planning and management.
- *Prioritisation of sacred groves for conservation*
We have categorised sacred groves of studied landscape according to their disturbance factors. There are few groves in high and less disturbed categories, whereas most of them are in moderately disturbed categories indicates simple protection measures are adequate for their conservation. Local level initiatives and development of landscape level conservation strategy are prerequisite in this regard.
- *Local level involvement in grove management and maintenance*
Village level survey in the study area has found that, a fraction of the communities is still maintaining the age-old norms related to sacred grove management thus protecting the grove from further degradation. Although changing attitude towards religious practices as well as resource management have been observed, people are still very much interested to conserve these groves with newer approaches like livelihood development strategy.

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

Local villagers were involved in grove selection, data collection, socio-economic survey as well as participation in awareness workshop all were conducted with active involvement from their site.

The project has pointed that, for the first time in the region, even very small groves have important role in endemic species conservation at local level thus, recognising communities' effort to maintain floral diversity in the region. The findings of the study have been submitted to local and regional authorities with recommendations for preserving the sacred groves in the region. These recommendations include options like carbon credit, species restoration, nursery activity which could be beneficial for local peoples' involvement in sacred grove management.

Similarly, ongoing experimental studies on carbon sequestration potential, water conservation and soil seed bank capacity of the groves will certainly show more opportunities for local people in coming days.

5. Are there any plans to continue this work?

We are interested to continue the work with valuation of services and goods focussing on water conservation and soil seed bank potentials. Water conservation both at macro and mini levels, has paramount importance for species as well as ecosystem functioning in the studied area especially at lean season. Similarly, study on soil seed bank potential will be helpful to understand groves role species restoration program in the region.

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

We are going to publish our research findings in peer reviewed journals to share it with scientific communities and decision makers. The research findings as well as general documentation will also publish in a series of posters, booklets and online information retrieval system so to make it available to interested persons. A part of our research findings has already been published as a technical report (ENVIS Technical Report # 38) under Environmental Information System (ENVIS), a decentralised environmental information dissemination program initiated by Govt. of India in 1982 (<http://www.envis.nic.in/>).

Link to technical report

http://wgbis.ces.iisc.ernet.in/energy/water/paper/ETR38/TR38_sacred_grove.pdf

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 for one-year study and report preparation as proposed in the original proposal.

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.

(The rate was 1£ = Rs. 74/- at the time of project proposal, however it is 1£ = Rs. 72/- during the preparation of final audit)

| Item | Budgeted Amount | Actual Amount | Difference | Comments |
|--|-----------------|---------------|------------|--|
| Professional services | 3312 | 3128 | -184 | Last month's salary |
| Field expenses | 800 | 801 | +1 | Change in conversion rate |
| Capital equipment and maintenance | 930 | 931 | +1 | Change in conversion rate |
| Workshops, trainings, meetings and information dissemination | 400 | 416 | +16 | Change in the price of infrastructure set up |
| Report preparation and publication | 70 | 34 | -36 | Work done |
| Office Supplies/ Miscellaneous | 70 | 89 | +19 | Change in market price |

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

It is necessary to take initiatives to establish groves' role in ecological functions through proper scientific approach and disseminate the information at all levels (i.e. from local people to administrative machinery) so to establish their importance at local and regional conservation planning.

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?

We have used Rufford Foundation's name in publishing educational posters, information booklets as well as organising the interactive sessions and workshops on sacred groves.

Details of the workshop, posters and technical report

Workshop web:

http://wgbis.ces.iisc.ernet.in/energy/stc/workshop_on_sacred_grove/index.htm

Technical report

http://wgbis.ces.iisc.ernet.in/energy/water/paper/ETR38/TR38_sacred_grove.pdf

11. Any other comments?

Detail study report with all necessary documents will be sent as early as possible.