

## 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. 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. 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>	Ya Tang
<b>Project title</b>	Assessment of impacts of huge hydroelectricity projects in the lower reaches of the Jinsha Jiang on biodiversity conservation
<b>RSG reference</b>	34.11.07
<b>Reporting period</b>	January 2008 — December 2008
<b>Amount of grant</b>	£5000
<b>Your email address</b>	Tangya999@gmail.com
<b>Date of this report</b>	5 May 2009

**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
To provide a list of seed plants from the inundation areas of the four huge hydroelectric plants			✓	This is the most important objective of this project and is achieved by collection and identification of seed plant specimens from the target areas in the preliminary survey in February and the detailed survey in April –May.
To categorize plants according to their risk of endangerment and extinction			✓	This is achieved in comparison with the list of protected plant species of the country and on the basis of population in the project areas.
To collect and distribute seeds of endemic plants for ex situ conservation		✓		During the two surveys, only some plant bore mature fruit. Collection of seeds needs special plans and a number of visits to the region in autumn.
To publicize the results in various media to increase public awareness about the issue of hydroelectric plants		✓		Papers and reports have not been published. Results were presented in two workshops only. One to two papers are planned to publish in science journals.
To prioritize strategies to protect biodiversity and environment in the target area			✓	This has been achieved through various contacts and discussions with local governments and local communities. Since no measures have been taken, the only one is to collect seeds of as many species as possible from the target areas and distribute seeds to botanical gardens.

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

We did not encounter major difficulties, except one which was solved after the first preliminary survey in February 2008. The difficulty arose during the project was the insufficient funds planned for transport. Originally, I planned to collect largely from the inundation area of one reservoir but the first preliminary survey indicated that such a survey would not provide sufficient information to assess the impacts of huge hydroelectricity projects on inundation of habitats and plant species. I thought it was very necessary to cover the inundation areas by at least three hydroelectricity projects. But this would increase considerably the cost of transportation. I discussed this issue with Mr. Yang Xin, President of Green River, the local NGO with which I have collaboration for many years and the one I proposed to collaborate in the application. With the condition that we share with the Green River all the data and information collected from the project, Mr. Yang agreed to use the

Green River's vehicles and that this project paid all the expenses during the surveys, including fuels, parking, toll roads, etc. We did not need to hire a jeep from commercial company. Thanks to his support, we could cover the whole inundation areas of three huge hydroelectricity projects and sites of dams of the four huge hydroelectricity projects in the lower reaches of the Jinshajiang River.

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

#### **3.1. The flora of the inundation areas by three huge hydroelectricity projects in the lower reaches of the Jinshajiang River investigated**

Previous studies have covered only some part of the project areas in the Yunnan Province and no investigations have been carried out in most areas within Sichuan Province. The present project is the first one to cover most part of the inundation areas of the three huge hydroelectricity projects. We collected around 1200 specimens. While there are still some specimens not yet identified, the flora of the target area consists of around 540 species in 349 genera and 108 families. The flora is characterized by a high proportion of plant genera of tropical origin, indicating that this region is a climate enclave. A number of species are recorded from this region for the first time. Some species were very rare and only a few individuals were found during the surveys. As a basic component of the flora, a checklist of seed plants from the inundation area is prepared and this checklist will function as a basis for conservation planning.

#### **3.2 Better understanding issues related to hydroelectricity development**

Because nearly 70% of China's primary energy consumption relies on coal, pressure on reduction of greenhouse gases emission with alternative energy has increased considerably. Therefore, development of hydropower has been advocated and promoted greatly in China in the past two decades, but debates have been strong about the impacts of hydroelectricity projects. The major debates about hydroelectricity development include unclear or unforeseen environmental impacts and impacts on biodiversity conservation. Unfortunately, few detailed studies have been carried out in China on these topics. During the field surveys, we had opportunities to interact with local governments, local communities and development agencies. We found that there are substantial differences with regard to benefits of hydroelectricity development among different stakeholders. Basically, the local communities are the only disadvantaged group in hydroelectricity development. Due to time constraints and different focus, however, we did not take this topic in detail in the present project.

#### **3.3 Collection of large number of photographs and some video films on plants, landscape, and local culture in the project region**

Thanks to fast development of digital technologies, we were equipped with three digital cameras and two film cameras. Large numbers of photographs were taken during the three field surveys, including most plant species, their habitats, vegetation, landscape, local culture, etc. These photographs will form an important database for comparison research on impact of hydroelectricity on local environment in the future.

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

Local communities were not directly involved in the project, but a number of local people were hired as guides during field collections in different areas.

In addition, in collaboration with Green River, we have selected three sites (villages) that will be inundated to make photo and video records about the changes in the life of local communities and local environments. These might be their important record of the life before lost to the reservoirs.

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

Yes. There is a plan to apply for the second grant to support collection of seeds of plants for ex situ conservation.

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

The final report of the project will be online at the RSG webpage. I have planned to prepare one to two papers to publish in science journals. In addition, the data collected, including photographs are shared with Green River, a local environmental conservation NGO. Green River and I have planned to make a video film on impacts of the huge hydroelectricity projects on livelihood of local communities and we will distribute this to local televisions if this film can be made finally. Additional funds are being sought for this programme. Due to various reasons, we did not contact local media about our project.

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

The RSG was used during the planned period and mostly during the field work from April to May 2008. This is in accordance with the actual length of the project. The field survey covered 31 days.

#### 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
Use of a four-wheel jeep	£2500	£2380	+£120	One jeep in the first preliminary and two jeeps in the April-May survey were used.
Equipment and materials	£100	£105	- £5	We used both negative and positive film in addition to digital photos
Local guides and assistants	£400	£410	- £10	Paid to local guide and small gifts to local communities for interviews
Lodging and boarding	£1800	£1910	- £110	As compromise to the cost of transport, all the boarding cost of both the project team and Green River team was borne by the project
Pre-field and post-field cost	£200	£200	0	Though more expenditure was incurred but only the estimated budget was charged from this project.
<b>TOTAL</b>	<b>£5000</b>	<b>£5015</b>	<b>-£15</b>	

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

To collect seeds of plant species, especially those distributed largely in the inundation areas.

**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?**

No but I will acknowledge support from the RSG in the publication of the research papers.