

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. 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.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Gayatri Reksodihardjo-Lilley
Project title	Raising community awareness and development of conservation education for school children to support coral reef conservation in Tejakula, Buleleng District, North Bali
RSG reference	10305-1
Reporting period	Final report August 2012
Amount of grant	
Your email address	gayatri@lini.or.id
Date of this report	31 August 2012

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 increase understanding and appreciation of coastal communities about the importance and value of coral reefs			V	<p>Changing behaviour and increasing awareness of marine environmental issues is a long term goal requiring continuous support. Educating children is important, as children will bring the ideas home and share their thought with their parents. Engaging children and schools are particularly important in the villages we have been working with, as young people still see being fishermen like their parents and grandparents are ways of make a living.</p> <p>Questionnaires were developed to conduct perception surveys on the importance of conserving coral reefs. The main target for the questionnaires were adults (local communities representatives, including women groups)</p> <p>40 children of Les village celebrated Ocean Day, and participated in a drawing and colouring competition, with the theme of "Conserving the marine environment near our village".</p> <p>Coral reef monitoring workshops were held to share information on better techniques for making artificial reefs for reef restoration.</p>
To assist school teachers to teach marine conservation education and to develop education materials			V	<p>Training workshops for local teachers were held to develop marine conservation awareness and education materials.</p> <p>The materials were tested during awareness and education activities for school children. As a result, the teachers were able to improve the materials.</p> <p>The education and awareness materials were the produced and distributed to the local schools.</p>
To increase knowledge and skill of fishermen groups to			V	<p>Education and the provision of tangible examples of how coral reef conservation can benefit communities and demonstrated economic benefits</p>

implement 'best management' practices for sustainable reef fisheries				<p>was essential. This is because those who livelihoods depend on the marine environment and resources would reluctantly changing their habits and sacrifice their way of living, unless alternatives are available.</p> <p>The training was organised to increase skills and knowledge of the fishermen groups and local community about various aspects of fisheries management and marine managed areas.</p> <p>Further training was held regarding participatory rural appraisal for resource mapping, and strengthening the community group organisational skills. This produced a negotiated work plan for LINI's community partner in Les village.</p>
To assist in development of community-based ecotourism			v	<p>Fishermen in the community were Trained in nature interpretation, safe diving, and getting dive certificates. Hands-on training was given about the basics of running homestays was given to two fishermen's families, whose houses have regularly been used by foreign visitors who came to see the community - based conservation efforts.</p>
Provide the skills and tools for community-based conservation and resource use.			V	<p>Training and mentoring of the organisational skills and development of micro enterprise for community group were given to fishermen group in Les village.</p>

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

Learning by doing

The fishermen know that they experience decline in catches and species diversity but they have not been able to see how conservation can prevent over exploitation and habitat degradation. To effectively implement and apply the concept of conserving coral reefs and managing its resources required the fishermen to be presented with a tangible example of success so that they would be encouraged to support the conservation efforts. Fishermen have been fishing for generations without any control or means of management. To help fishermen to witness the improvement through conservation effort to prevent further reef degradation a pilot project to set up reef restoration using artificial substrates was conducted. To accelerate recruitment on the restoration sites, coral fragmentation were attached to artificial substrates. A small group of fishermen was part of the pilot project to design, survey location to identify sites, deploy and to monitor recruitment and fish population. The fishermen participated, learnt and observed the whole process so that they

experienced effort to implement conservation activities and fisheries management. They started to internalise the concept that managed resources and healthy reefs can sustain their longterm livelihoods. The project provided opportunity for learn by doing. This was the way to tackle the difficulties of understanding the concept of conservation.

Marine conservation education

Introducing marine conservation education to local teachers proved to be a challenging task. The initial challenge was to introduce the concept of developing marine education materials in collaboration with the teachers. This was particularly challenging as many teachers were not familiar with the marine environment issues. Leading and teaching the coastal children was not a guarantee that the teachers were aware of the local situation. Training teachers to understand the current and local marine issues was conducted through 'training of trainers' (ToT) workshops. During the ToT workshops, materials were developed and tested.

The second challenge was to find time for the teachers to include environmental modules in their usual programmes. As is common in small villages there are not enough teachers in the schools, with one teacher having to cover 2 to 3 classes in one day. After a series of discussion with school teachers it was decided to conduct the activities of marine education as part of the students' extra curricular activities. The education modules were thus conducted on Saturdays, mostly outdoors at the beach, and were well accepted by the children.

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

a) Community group established and Reef restoration implemented

The community at Les formed a fishermen reef restoration group, called *Kelompok Rumah Ikan Mina Lestari*, in January 2012. Members consist of 15 ornamental fishermen, who depend on healthy reefs for their livelihood. The reef restoration aims to provide more habitats for fisheries enhancement. The community group has started to harvest the ornamental shrimps from the areas where the artificial substrates were deployed. Members of the fishermen group is now actively become an ambassador of reef restoration in the Buleleng district. The group has been asked to help other community groups to develop reef restoration in their respective villages, including Sumber Kima, Temukus, and Tejakula.

b) Awareness raised

The community group at Penuktukan village received donation from their own people to build their dive centre which will serve as information centre as well. This was the outcome of increased understanding the potential value of the good reefs in their village. The community group is eager to promote their village as diving destination, while remain conserving the reefs.

c) Created an enjoyable learning and sense of proud

Schoolchildren learnt how to snorkle during the awareness and education activities. This has raised their sense of proudness about the wealth of coral reefs in their village. Even though their parents are fishermen and make their living from the sea, many of their children have experienced for the first time the wonder of underwater life through this project.

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

Local communities have been involved from the beginning of the project implementation. In some new initiatives, community stakeholder consultations were held to discuss concepts and potential risks if initiatives were materialised. Example of these were:

- a) The idea of reef restoration : Direct action to restore the reefs was a new idea for the community, and the potential outcomes were unknown. After a few fishermen became willing to try out the initiative, and saw the economic implication that could result from reef restoration, these small number of fishermen then became trainers for others.
- b) The concept of promoting sustainable ornamental fisheries: The fishermen of Les have ceased the practice of using cyanide for collecting fish. One improvement has been implemented. However, the idea of managing the number of catch and of not targeting species which have been declined significantly due to over harvesting in the past, has not yet been understood. The discussions about the concept of sustainable fisheries have been held regularly, and challenges to develop sustainable fisheries are still huge.

Local communities representatives were involved on the development of questionnaires and the survey of the perception on the importance of conserving coral reefs and resources at the beginning of the project. Monitoring of the perception could now being done by the communities to learn about the impact of the project. The involvement of the communities with these activities have made local communities empowered and sense of ownership was developed from the early part of the project period.

Increased income through their sell of ornamental shrimps collected from artificial reefs. Extra income through building artificial reefs and deployment as request of artificial reefs increased from other villages in Buleleng district.

Community group developed a save and credit scheme to help their member to be able to access small capital they need for instance for their children schooling. Medicines, and money during the season when the sea is too rough for fishing.

The project has benefited to 42 households from 2 villages in Tejakula subdistrict, these through fishing and development of community-based tourism.

5. Are there any plans to continue this work?

Yes, there is need for continuation of the project.

1. To develop a mobile unit of marine conservation awareness and education to visit schools in other villages within Tejakula sub-district;
2. To facilitate marine awareness and education activities supporting local teachers;
3. To expand reef restorations in other villages with damage reefs with deployment of more artificial substrates;
4. To develop guidelines and best practices to implement community-based reef restoration
5. To conduct monitoring on the reef restoration sites for fish diversity and population

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

We have written an article for OFI, the Ornamental Fish Journal about raising marine conservation awareness through the development of reef restoration. We hope this information will reach out to ornamental industries to source sustainable fish from the fishermen group we are currently working with.

The member of a community partner, *Kelompok Rumah Ikan Mina Lestari*, whom we trained, have now been asked to help other coastal communities in Buleleng district to develop reef restoration using artificial reefs.

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

The project ran from August 2011 to September 2012. We used 13 months, while the project was designed to take 12 months. The project took longer than the anticipated time.

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
Community Participatory mapping of resource use (7days)				
Local transportation	£ 150,00	£ 150,00	£ 0,00	
Logistic & Venue	£ 200,00	£ 200,00	£ 0,00	
Field supply (mapping materials)	£ 300,00	£ 300,00	£ 0,00	
Facilitators fee	£ 250,00	£ 250,00	£ 0,00	
Accommodation for facilitators	£ 100,00	£ 100,00	£ 0,00	
Training workshop for local teacher (5 days)				
Local Transportation (for LINI staff & to support the teacher to come to training venues)	£ 200,00	£ 200,00	£ 0,00	
Logistics and Venue	£ 205,00	£ 200,00	£ 5,00	The difference funding was obtained from in-kind from school venue
Training materials	£ 304,50	£ 300,00	£ 4,50	The difference funding was obtained from in-kind from school.
Assistant Trainers fees	£ 200,00	£ 200,00	£ 0,00	
Accommodation for trainers	£ 100,00	£ 100,00	£ 0,00	
Training on nature interpretation, safe diving, organizational skills & development of microenterprise				
Local Transportation	£ 250,00	£ 250,00	£ 0,00	
Logistics and Venue	£ 158,50	£150,00	£ 8,50	The difference funding was obtained from in-kind from village venue
Training Materials	£ 307,69	£ 300,00	£ 7,69	The difference funding was obtained from in-

				kind
Diving certificates (for 5 community members)	£ 305,77	£ 300,00	£ 5,77	The difference funding was obtained from in-kind ADS
Diving equipment rentals	£ 300,00	£ 300,00	£ 0,00	
Trainers Fee	£ 400,00	£ 400,00	£ 0,00	
Accommodation for trainers	£ 300,00	£ 300,00	£ 0,00	
Perception surveys on the importance of conserving reefs and resources				
Local transportation	£ 200,00	£200,00	£ 0,00	
Photocopying	£ 46,15	£ 50,00	£ 3,85	
Surveyors allowance	£ 150,00	£ 150,00	£ 0,00	
Accommodation for surveyors	£ 100,00	£ 100,00	£ 0,00	
Development of Education and awareness materials				
Multimedia design graphic fee	£ 250,00	£ 250,00	£ 0,00	
Printing	£ 750,00	£ 750,00	£ 0,00	
Operational Cost				
Communication	£ 500,00	£ 500,00	£ 0,00	
Total Expense	£6.027,62	£ 6.000,00	£ 27,62	

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

Communicating the effort of the communities to conserve and restore coral reefs in their village for the benefit of their sustainable livelihoods;

- Promoting community-driven initiatives to produce sustainable ornamental fish;
- Facilitating linkages between fishermen group with buyers to shorten the trade links to increase economic benefit for fishermen;
- Employ scientific approach to investigate the impact of artificial reefs in restored areas toward social, economic and environment aspects.
- Continue to maintain data recording for the monitoring and management purposes.

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?

Yes, we used the RSGF logo in awareness and education materials produced. We also used the logo in banner for events, such as celebrating environment and World Ocean Day.

11. Any other comments?

The fund has given us the opportunity to help the local communities and school children to learn about marine conservation issues. Also to help the communities to conduct marine conservation activities through a pilot project on reef restoration in their villages in Tejakula sub-district, North Bali. As a small organisation, the fund has helped us to continue our work in marine conservation.