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	Balachandran Natesan
Project title	Effective utilisation and restoration of coastal sand dune ecosystems in the Puducherry region, India, with public participation.
RSG reference	48.04.08
Reporting period	October 2008 to September 2009
Amount of grant	£5,884
Your email address	nbala_plant@yahoo.co.in
Date of this report	9th November 2009

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective / Major activities	Not achieved	Partially achieved	Fully achieved	Comments
Village and land selection			+	
Community mobilisation			+	
Group formation			+	
Training		+		
Plant selection			+	
Nursery raising			+	
Awareness programme		+		
Planting of indigenous species			+	
Vegetable cultivation			+	
Exposure visit	+			
Documentation			+	
Reporting			+	

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

A cyclone hit the east coast of India during November 2008 and three species of vegetable plant seedlings that was sowed in all three test plots were dead and it was sowed again in January 2009.

A week after the cyclone 30 – 40 m of sandy beach was eroded in all the project sites by the strong wave action. In Anumandhai site, 2 – 3 rows of 2 year-old *Casuarina* about 200 m in length that had been planted as a buffer to reduce the salt spray were washed by the wave action. This loss was replaced by a fence and 1 m from the fence *Casuarina* seedlings were replanted and they are now coming up well.

During this project period, a portion of land with 2 year-old plantation along with vegetable test plot at Anumandhai, was occupied by the neighbouring land owner. The villagers were agreed and contacted us, stating that, as per the field survey map they were placing the wall.

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

a. There were ten different crop species tested in three plots from two villages: three vegetable species - cluster bean, lab lab and bottle gourd; a pulse - cow pea; a green plant - rosella; and a fruit - water melon, all performed well.

b. In the nursery 8028 seedlings were raised from 51 species. About16 species were treated as saline tolerant and planted towards the sea side and nearly 35 species were planted towards leeward side (i.e. facing the lagoon). At Nallavadu site 3610 indigenous seedlings and 622 *Casuarina* were planted.

c. Three posters were made to educate the fishing communities, school children, man and women self help groups and youth in collaboration with Auroville Coastal Developmental Centre (ACDC), Auroville, about the importance of plants and sand dunes, eco-restoration of indigenous species along the coast and having cultural, medicinal and economically valuable species in the plantation.

d. Two booklets were prepared in two languages (Tamil and English), *Parataxonomy* and *A Walk in A Tropical Dry Evergreen Forest – A Living Gene Bank* (partially supported by ACDC) to understand the plants in more detail from their surrounding environment.

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

Twelve people (6 men and 6 women) were regular beneficiaries through watching, watering and maintaining the plantation from these three villages. Four people (2 men and 2 women) in each group was selected from three communities: fisher folk were mainly involved in watching the plantation and generally helping while watering; dalit (agricultural labourers) are the lowest community in India; and poorest poor from vannier (farming group) were involved in planting, watering and maintaining the plantation. Besides that they showed much interest in testing the cultivation of vegetables, green and fruit in the plantation area. The harvest from 10 different crops species was shared among themselves.

Another group with 20 members of 10 men and 10 women from each site (60 in total) were from the same as well as the neighbouring villages was selected. We trained them how, where and which species to plant along the coastal sandy beach.

5. Are there any plans to continue this work?

It is a must to continue the work and the plans are given below:

1. The plantation has to be maintained (gap filling, watering, mulching and strengthening the buffer zone against the salt spray and the summer wind from the inland) at least for two more years at Nallavadu village.

2. Extending this eco-restoration programme to the neighbouring village(s) / district(s) as a model study site for the coastal school kids.

3. Involving the student energy in planting and protecting the plantation as part of the awareness programme by using the study materials that have already been prepared and printed.

4. As the funding was stopped for Anumandhai and Chetti nagar plantation by ACDC, maintenance of one more year will be needed before enjoying the harvest from the economically valuable plants: bio-diesel - e.g. Pongam, Neem and *Callophyllum*; medicinal value - e.g. Noni, Thandri, Aavarum; and fruits - e.g. Jamun and cashew.

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

The blog / detailed report of this project is being prepared. Once it is ready then it will be intimated as soon as possible to link with RSG website. I here with assure that the information will be shared at any time who ever they want to know.

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

Actual length of the project: August 2008 to September 2009

Nallavadu site: from August 2008 to September 2009, almost 75% of the RSG funds were used in nursery fencing, planting and maintenance.
Anumandhai and Chettinagar Site: From October 2006 to September 2009 this was funded by Auroville Coastal Developmental Centre (ACDC), Auroville. Nearly 25% of RSG funds were used for testing the vegetable crops and the preparation of posters, brochure and two booklets in two languages from October 2008 to September 2009 in collaboration with ACDC.

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 (INR)	Actual Amount (INR)	Difference (INR)	Comments
A. Nursery Raising				
One acre fencing with bamboo panels	13,000	15,750	- 2,750	
Plastic bags, hose pipes and equipment	12,000	9,970	2,030	
Bore well and 2.8 hp Honda engine	18,000	22,850	- 4,850	
Petrol, kerosene, oil and servicing	24,000	24,360	-360	
Vegetable and indigenous tree seeds	5,000	3,875	1,125	
Red earth, top soil and compost	8,000	7,250	750	

B. Planting				
Labour, compost and silt for 2 acre	30,000	18,000	12,000	
vegetable plots	90,000	83,670	6,330	
Planting of indigenous trees and shrubs				
C. Awareness and training				
SHG, CBOs and school children	9,000	6,955	2,045	
Preparation of education material	30,000	20,350	9,650	
Two days exposure visit	10,000	0	10,000	
D. Travel				
Staff travel to target village	12,000	12,000	0	
Seedlings to the planting site	3,000	3,000	0	
Fencing and nursery material	7,500	7,750	- 250	
Experts visit	6,000	6,000	0	
E. Project leader and Honorarium				Two more people
Project leader	90,000	90,000	0	involved in
Project assistant	42,000	42,000	0	watering
Watch and watering man / woman	25,200	61,200	- 36,000	
F. Overheads				
Audio and Video documentation	18,000	18,500	- 500	
Communication, stationary & reporting	6,000	4,860	1,140	
Contingencies	12,000	12,000	0	
TOTAL	**470,700**	**470,340**	**360**	

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

There are three important steps that need to be done:

1. Gap filling the plantation and strengthening the buffer zone by planting of *Casuarina* against the salt spray from sea and dry wind from the inland at Nallavadu site.

2. Five out of ten vegetable species and a fruit species were identified as commercially viable to crop. Sandy soil has to be encouraged to be cultivated as part of maintaining the plantation as well as to generating income for the group members.

3. The awareness materials should be effectively used among the students:

a. To encourage them to look after the plantation.
b. To under stand and share their knowledge with the younger generation.
c. To extend the eco-restoration programme from one place to another as per the wish of ACDC.

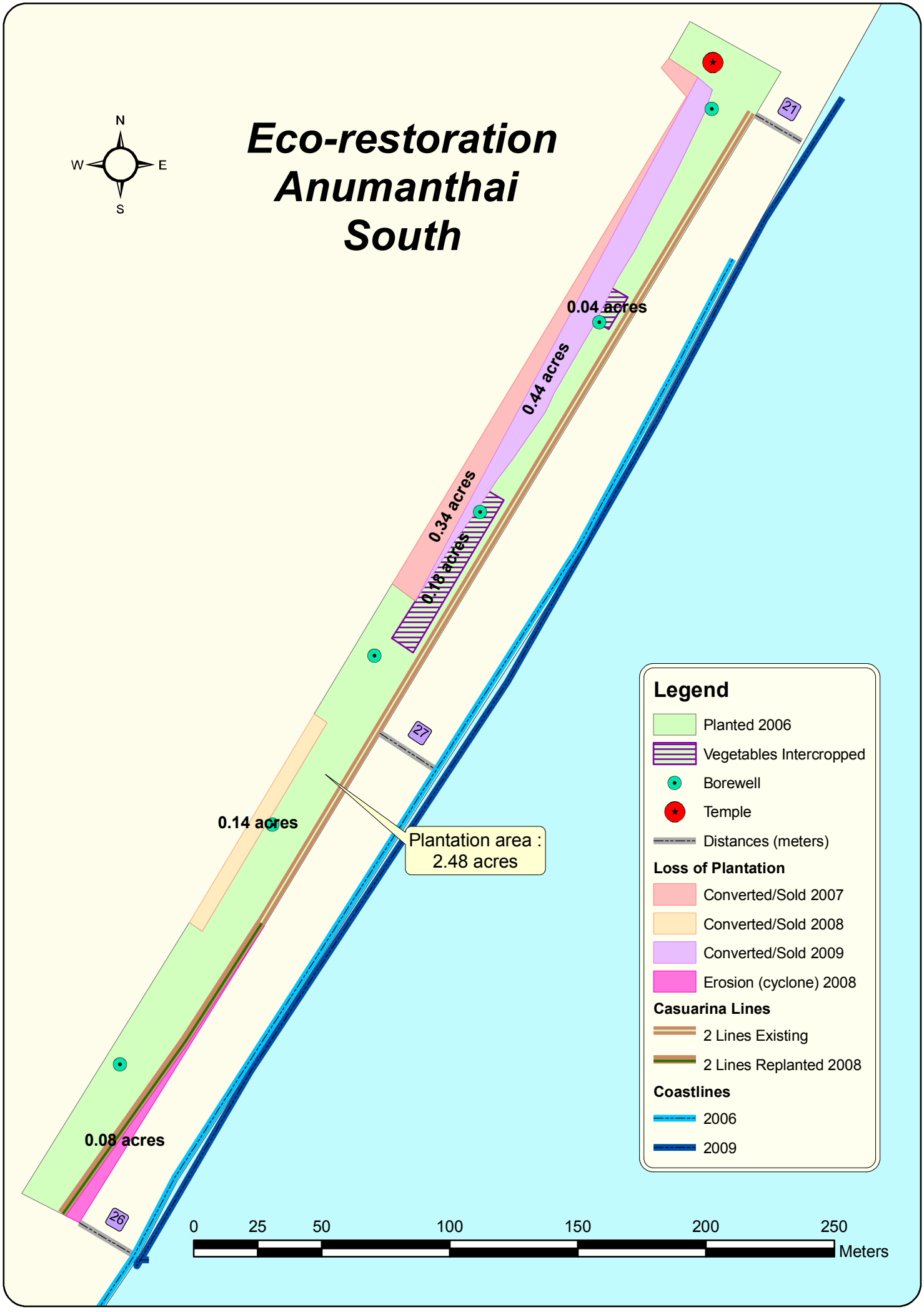
See: **http://www.youtube.com/watch?v=tn-RvLjtqjg&feature=channel_page** .The same link compressed into a tiny link in order to incorporate in emails or electronic correspondence is here: **http://tinyurl.com/7fx9tk**

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?

The RSG logo was used in one booklet that was prepared in both Tamil and English languages in collaboration with ACDC about how to identify and value 10 different indigenous plants. Pamphlets in Tamil language were printed about the nature of coastal habitats, conservation of sand dunes, ideal villages along the coast in their surrounding s to visit and plan for their future development, with acknowledgement to RSGF on first page, was distributed to the students. The painting on the wall of motor shed at Nallavadu plantation site had received additional publicity.

11. Any other comments?

Nallavadu – is one of the coastal villages found in Union Territory of Pondicherry, located at the northern end of long stretch of sandy land mass, about 100 to 400 m wide and 2 km long, bordering Bay of Bengal to the east and a back water lagoon to the west. This is one of the best sea turtle nesting grounds in Pondicherry. This area has to be protected more effectively with mangroves towards lagoon side, saline tolerant species along the sea side and the sand dune in between.


Eco-restoration
Anumanthai
South
N
W
E
S
0.04 acres
0.44 acres
0.34 acres
0.18 acres
0.14 acres
0.08 acres
Plantation area :
2.48 acres
21
27
26
Legend
Planted 2006
Vegetables Intercropped
Borewell
Temple
Distances (meters)
Loss of Plantation
Converted/Sold 2007
Converted/Sold 2008
Converted/Sold 2009
Erosion (cyclone) 2008
Casuarina Lines
2 Lines Existing
2 Lines Replanted 2008
Coastlines
2006
2009
0
25
50
100
150
200
250
Meters