CEPF SMALL GRANT FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Action for Community Organisation, Rehabilitation and Development (ACCORD)
Project Title:	Regeneration of traditionally used indigenous species to reduce pressure on the Mudumalai Tiger Reserve.
Date of Report:	20/12/2012
Report Author and Contact Information	Tarsh Thekaekara/ Mahesh Mathpati

CEPF Region: Western Ghats (Mysore-Nilgiri Corridor)

Strategic Direction:
CEPF Strategic Directions 1 - Enable action by diverse communities and partnerships to ensure conservation of key biodiversity areas and enhance connectivity in the corridors.

Grant Amount: $ 14,996,82

Project Dates: October 2009 to February 2012

Implementation Partners for this Project (please explain the level of involvement for each partner):

Though not initially envisaged, The Shola Trust (TST) helped in communication, attending meetings, and reporting. Some outreach activities (children's camps) were also held by TST.

The other key partner in terms of implementation on the ground was the Adivasi Munnetra Sangam (AMS), and 18000 member strong indigenous people's organization.

Conservation Impacts

Please explain/describe how your project has contributed to the implementation of the CEPF ecosystem profile.

The project aligned with the CEPF Strategic Direction and Investment Priority No. 1.3 of the Ecosystem Profile: "Enable action by diverse communities and partnerships to ensure conservation of key biodiversity areas and enhance connectivity in the corridors - Support civil society to establish partnerships with state agencies to implement science-based management and conservation of priority sites in the Mysore-Nilgiri corridor ."

To this extent the project was able to highlight the issue of the scarcity and or local extinctions of various plant species that were traditionally used by local communities. And this awareness of the problem was within the local community itself, triggering a further and much more long term discussion about widening the scope on nature conservation. Further, the Adivasi Munnetra Sangam, was able to leverage this project to work with the Tamilnadu Forest Department, getting them to recognise the knowledge base and stake indigenous communities have in nature conservation.

Please summarize the overall results/impact of your project against the expected results detailed in the approved proposal.

The expected results/impact of the project were:

- Brief report on the community's use of various tree and plant species in the region. The feasibility of this being published in the Journal of Threatened Taxa will be looked into.
- An operational nursery of approximately 2500 square feet to propagate these species
- Distributing and planting these species after ensuring they will be tended to over time.

All the three objectives were successfully realised. In addition to this, there were various less tangible outcomes:

- The project created a window of opportunity for the adivasi community to interact with the forest department as 'conservationists'.
- Overall considerable awareness has been created about the various useful plants and tree species used by local communities, and more importantly, the fact that they need to be conserved.
- There is now a considerable interest in propagating various other plants and trees, to conduct some 'restoration' activities in lands that communities have laid claim for as 'Community Forest Resource' under the Forest Rights Act, 2006.

Please provide the following information where relevant:

Hectares Protected: n/a.

Species Conserved: Full list attached.

Corridors Created: n/a

Describe the success or challenges of the project toward achieving its short-term and long-term impact objectives.

This was a completely new area of work for ACCORD, as no conservation related projects had been tried before. Hence we faced many challenges from the design stage right through to the implementation.

However, in spite of these challenges we are happy to say that this was an considerable success. We raised and distributed far more plants both in terms of species and numbers than we expected (7339 plants of 26 species). Many of these are endangered species for eg: *Garcinia cambogia* (Kodampully) *Embelia ribes* (Uppuvally) a medicinal plant for deworming and drinking water; *Saraca asoca* (Ashoka) used in Ayurveda for strengthening female reproductive systems. The Ashoka tree is known to grow in the wild in only three places in India and there is no wild population here. The landscape of the area is a critical factor for identifying the species in the nursery.

This was more of a pilot project to test the waters and gauge people's interest in the idea of propagating plant species that were endangered or likely to be endangered. So it was a more a short term project with defined short term objectives of raising a nursery of forest

species and distributing them for planting and ensuring that they are planted and tended to. The long term objective of reducing the dependence on the core zone by way of optimum human use of forest for regeneration is yet to be assessed.

Were there any unexpected impacts (positive or negative)?

The most unexpected positive impact was that our presumption that only tribals would be interested in growing these species was not correct. We were pleasantly surprised to learn that many non-tribals especially local planters were interested in planting these species. Many of these planters came all the way to the nursery to see these plants. While we could not respond to all the requests, we were able to partner with the Rotary club of Gudalur to plant trees in local schools involving school children. Various other options of more decentralized nurseries are being explored by The Shola Trust, particularly in the Nilgiri Upper plateau, in collaboration with some of the Toda villages.

A group of botanists from FRLHT also visited the nursery and looked at the species growing in the wild in the surrounding areas and were pleasantly surprised to find some rare species still growing in the wild here. One of the species found growing the in the wild, *Meteoromyrtus wynaadensis*, is critically endangered, and there is no earlier record of it growing in the wild in this landscape. Some botanists from FRHLT have recorded this in their herbarium database, and are looking into the possibility of a more systematic assessment of the species in this landscape. This has generated a growing interest among other stakeholders in the forest species of this area.

The interest also extended to the Forest department where the Field Director of the MTR visited the nursery with his officials and participated along with Revenue officials in a village tree planting programme at Kottaimedu village.

While asking the community to identify the species they would like to plant and grow we were struck by the fact that the people chose trees and plants that were not just for human use but also of use for birds and animals - eg: *Grewia tiliaefolia* (Chadachi – Fruits eaten by birds) and *Ficus spp.* (*a* keystone species whose fruits are eaten by several birds and animals).

Lessons Learned

Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building. Consider lessons that would inform projects designed or implemented by your organization or others, as well as lessons that might be considered by the global conservation community.

Project Design Process: (aspects of the project design that contributed to its success/shortcomings)

The first shortcoming in the design process was that it was designed as a short term project. We did not realise that the collection of planting material will be a much more arduous and slow process, given that these were not readily available and had to be collected from the wild. We had not factored in the seasonality of the different species. We approached more as one would a plantation project and made the mistake of lumping

all forest species together. This was a major shortcoming in the design process where a more detailed analysis and understanding of each individual species could have resulted in much better plan.

Secondly, we made the mistake of thinking this could be a short term project of one year – which we could not live up to and were forced to extend it. This resulted in not giving enough lead time to involve the community especially at the village level. While the entire project was planned with the community – if we had allowed more time to analyse and understand and arrive at consensus at the individual village and family level – we could have had more impact. This would have led to a better selection of species based on conservation concerns rather than just on what was more easily available.

Another shortcoming in the design was that we assumed that this would be of interest only to tribals. While this stems from ACCORD being an adivasi led organisation a broader consultation with the wider local population, led by adivasis, could have had more impact. However, as mentioned earlier we did seize the opportunity by working with the Rotary club and at least informing others of this project which has led to a more wide spread interest.

Another lesson we learned about the shortcoming of the design process was that we had not factored in the need for professional botanical advice. While we able to tap into our networks for informal advice (eg Keystone Foundation and FRLHT) and also use the locally available traditional knowledge about these species, the project would have benefited from having botanists as an integral part of this design who would have been able to work closely with tribals. This would have been particularly useful in reporting and sharing the information with a wider audience.

Notwithstanding all this, ACCORD's close involvement with the community enabled us to carry out this project successfully.

Project Implementation: (aspects of the project execution that contributed to its success/shortcomings)

The single most important aspect that contributed to the success of the project was the involvement of the community. Though we felt there was scope for improvement, given our deep committment and high standards of community ownership and involvement, community participation was key to the success. For example, much of the collection of seeds and planting material was done by the community. As this is not readily available anywhere their role in this was vital.

One the shortcoming in the execution was that the nursery was located on the ACCORD Madhuvana Plantation. While this helped in the execution in terms of the availability of skilled labour, water etc its poor road access made distribution of the plants very difficult since these plants had to be distributed during the monsoon.

Other lessons learned relevant to conservation community:

In spite of our best efforts we found it difficult to find sufficient information about propogation techniques of some the species. While it is possible to generate awareness and committment to growing endangered species, lack of readily available information on the propagation techniques makes it difficult to cash in on this commitment. There is a need for systematic and easily accessible information on the propagation techniques of these endangered species. Various publications on this will possibly be made available in local languages, while some of the indigenous knowledge of propagation techniques will also be documented and shared.

ADDITIONAL FUNDING

Provide details of any additional donors who supported this project and any funding secured for the project as a result of the CEPF grant or success of the project.

Donor	Type of Funding*	Amount	Notes
Nil			

Additional funding should be reported using the following categories:

A *Project co-financing (Other donors contribute to the direct costs of this CEPF project)*

B *Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF project.)*

C *Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)*

Sustainability/Replicability

Summarize the success or challenge in achieving planned sustainability or replicability of project components or results.

This is a significant challenge. The project has been a considerable success and the community clearly wants to continue with the nursery, but to ensure continued/indefinite funding remains a key constraint. Various opportunities/possibilities arose:

- Approach the forest department for funding, since they have this on their agenda, and their existing ‘gene pool’ project (with similar some overlapping objectives) is not functioning.
- Start smaller, localized nurseries at a village level that would be owned/controlled by the village or gramsabha formed under the forest rights act. This could then possibly attract independent funding from the local government/panchayats/forest department. This cannot be realized in the new future though, and will have to wait a few years for gramsabha capacity to evolve.
- Propagate and sell the some commercially viable plants to local estates/institutions etc. as a funding model to offset the costs. The constraint

would be the danger of the core idea/purpose of the nursery being sidetracked and it evolving into regular commercial nursery.

- The final and most promising possibility is to build up the potential of the estate as an eco tourism facility where by this project and the nursery could be funded.

All of these are currently being explored, and we are reasonably confident that the project will continue in the years to come using some of the above mentioned possibilities in various permutations/combinations.

Safeguard Policy Assessment

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

The project had been screened against CEPF's Environmental and Social Safeguard Policies, and found to (possibly) invoke two of them, viz., involuntary resettlement and indigenous people. All safeguards were duly complied.

a) Involuntary resettlement –there was no possibility of implementing restricting community access/use of the forests, merely fulfilling the objective of reducing pressure on the Mudumalai Tiger Reserve, therefore there was no scope for direct displacement of people either. Further, in all stakeholder meetings with members of the community, it was made clear that at no point was access going to the Mudumalai being restricted in any way.

b) Indigenous people – here again, since ACCORD worked primarily through the AMS, utmost care was taken to ensure that the interests and rights of indigenous people were kept central to the project.

Performance Tracking Report Addendum

CEPF Global Targets

(Enter Grant Term)

Provide a numerical amount and brief description of the results achieved by your grant.
Please respond to only those questions that are relevant to your project.

Project Results	Is this question relevant?	If yes, provide your numerical response for results achieved during the annual period.	Provide your numerical response for project from inception of CEPF support to date.	Describe the principal results achieved from October 2009 to February 2012. (Attach annexes if necessary)
1. Did your project strengthen management of a protected area guided by a sustainable management plan? Please indicate number of hectares improved.	No			Please also include name of the protected area(s). If more than one, please include the number of hectares strengthened for each one.
2. How many hectares of new and/or expanded protected areas did your project help establish	No			Please also include name of the protected area. If more than one, please include the number of hectares strengthened for each one.

through a legal declaration or community agreement?				
3. Did your project strengthen biodiversity conservation and/or natural resources management inside a key biodiversity area identified in the CEPF ecosystem profile? If so, please indicate how many hectares.	No	n/a	n/a	
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	Partly	n/a	140 ha	The 334 families were spread across about 70 villages, and collectively planted about 7500 plants/trees on common land outside a PA. Exact hectarage is not available, but a minimum area would be about 2 hectares for each village, or 140 ha in total.
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1below.	No	n/a	n/a	

If you answered yes to question 5, please complete the following table.

Table 1. Socioeconomic Benefits to Target Communities

Please complete this table if your project provided concrete socioeconomic benefits to local communities. List the name of each community in column one. In the subsequent columns under Community Characteristics and Nature of Socioeconomic Benefit, place an X in all relevant boxes. In the bottom row, provide the totals of the Xs for each column.

Name of Community	Community Characteristics								Nature of Socioeconomic Benefit									
	Small landowners	Subsistence economy	Indigenous/ethnic peoples	Pastoralists/nomadic peoples	Recent migrants	Urban communities	Communities falling below the poverty rate	Other	**Increased Income due to:**	Increased food security due to the adoption of sustainable fishing, hunting, or agricultural practices	More secure access to water resources	Improved tenure in land or other natural resource due to titling, reduction of colonization, etc.	Reduced risk of natural disasters (fires, landslides, flooding, etc)	More secure sources of energy	Increased access to public services, such as education, health, or credit	Improved use of traditional knowledge for environmental management	More participatory decision-making due to strengthened civil society and governance.	Other

Total																							
If you marked “Other”, please provide detail on the nature of the Community Characteristic and Socioeconomic Benefit:																							

Additional Comments/Recommendations

n/a

Information Sharing and CEPF Policy

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, www.cepf.net, and publicized in our newsletter and other communications.

Please include your full contact details below:

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List of appendices:

1) Report on the community's use of various tree and plant species in the region

***Citation**: Mathpati, Mahesh and Vaishnavi C, 2013. "Useful plants that are increasingly rare, as percieved by the Adivasi Community in the Gudalur Region". Action for Community Organisation, Rehabilitation and Development, Gudalur*

Useful plants those are increasingly rare

as perceived by the Adivasi community in the Gudalur Region

Complied by: Dr. Mahesh Mathpati and Vaishnavi C.

Uses and rationale behind the Chosen Plants:

The community held various meetings, discussing the various traditional medicinal uses of plants and came to a consensus deciding the different kind of plants that should be grown and distributed. The discussion itself provided to be a useful exercise where the "Vaithiyaars[1]"came together and discussed. It also gave an opportunity for the younger generation to listen to the elders explaining about the community's traditional practice.

When the discussion about choosing the right plants started not only the medicinal values of plants were given importance, but community took into consideration how those trees would benefit not only humans but also help the birds and animals. After rounds of discussions community decided on 25 plants which are now fast disappearing and these plants not only had medicinal values but also had other purposes which would help the community in longer run. Most of the plants chosen are used as one of the ingredients for particular disease but few of them though they are not used as a direct ingredient but considered as requirement in the diet when a person suffers from certain problem. The 25 plants which were finally chosen and some of their uses are listed below. In few cases, there are few clarifications about botanical names and so the details are kept blank in those cases.

Local/Common Name	**Botanical Name**
Naaval	*Syzygium cumini*
Naral	
MadhuraNellikka	*Syzygium mundagam*
Edala	*Olea dioica*

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[1] Local Medical Practitioners

Poovathi	
KodamPuli	*Garcinia gummi-gutta*
Cheeralam	
Athi	*Ficus racemosa*
KuranPazam	*Baccaurea courtallensis*
Thani	*Terminalia bellerica*
Vattakanni	*Macaranga pelteta*
ChoraPali	
Kaitha	*Polyalthia fragrans*
Ainie	*Artocarpus hirsutus*
Kulirmave	*Persea macrantha*
Manjzala	*Actinodaphne sp*
Eachili	
Mukkani	
VellaAkil	
Vainave	
Pepper	*Piper nigrum*
Nellikka	*Phyllanthus emblica*
Ashoka	*Saraka asoca*
Choriyan	
Arjuna	*Terminalia arjuna*
Cititora	*Cymbopogon citratus*

- About 500 *Naaval* have been planted and it has many medicinal purposes. Stem bark used for treating sore throat, bronchitis, asthma, thirst, diabetes, diarrhea, dysentery, ulcers and blood impurities. Bark has anti-inflammatory activity and is used for anemia.

Bark and seeds are used for diabetes which reduces the blood sugar level quickly. Fruit is used for dysentery and leaves juice for gingivitis (bleeding gums). High source of vitamin A and C. Its Husk is used as a cure for ulcer and helps in controlling diabetes. It also used in the ingredients used to control scabies. Its fruits are considered to be very tasty and it is consumed by human beings, birds, animals. kolambunoyu is used as Firewood and also in making furniture.

- About 25 *Naral* were planted and it is considered very tasty when used in a local dish called adai which is a healthy diet. The smell of the plant itself is believed to have medicinal value. Its skin and vegetables everything is used and its fruits attract birds.

- The fruits of *Madhura Nellikka* is almost used as a medicinal ingredient for everything. Its fruits are eaten by animals also. A total of 600 of these were planted. The flower provides nectar for butterfly and bees. The fruit is edible.

- The fruits of *Edala* are eaten by birds. Its presence in forest has drastically come down. One special feature about this plant is the fresh plant can be burnt even during rainy season. 250 of these planted and is very useful as a fuel wood.

- About 615 *Kodam Puli* were planted. Medicinal uses: Leaves, fruit seed oil used to treat ulcers, inflammations, bleeding piles, diarrhea, dysentery, flatulent colic, dyspepsia and hyperdipsia. It is a very rich food nutrient which cures diarrhea. It is used in cooking and used as a supplement for tamarind.

- About 125 *Athi* are planted. Bark, fruit, latex used to treat pain, wound, diarrhea with blood, dysentery, hemorrhages, diabetes and burning sensation. Its resin can be applied on Swollen legs it reduces the swelling immediately. Fruit is consumed by human beings, animals. It gives shade during summer not in winter. "Athi pal" the milk from the tree is used as a used for removing sprains. Its gum is also used while hunting.

- Around 80 *Thani* have been planted. Its seed is ground and used as an ingredient in the medicines which are used to stop vomiting. It is used as an ingredient in all digestion related problems. Both the skin and fruit of the plant are used. Its wood is also used for housing. Medicinal uses: One of the three ingredients of 'Thripala'. Fruits used in the treatment of cough, asthma, diarrhea, eye diseases and heart ailments. Indigenous information: The hornbill nests on this tree. Bees forage on flowers. Seeds are eaten by giant squrril. According to kurumba belief, bark has magical powers.

- *Vattakanni* grows very fast. Its leaves are used to cure ulcer. It grows in 2-3 years. Very good firewood. It also provides good fruits used for birds. 125 such plants have been grown. Indigenous information: Wood used for fuel. Bees forage on flowers. Monkeys eat fruit. Leaves are used as platter.

- Around 450 *Kaitha* have been distributed. One of the ingredients - Makamaranthu medicine used for children especially for cough, anemia. It is considered to be thicker than rosewood and as per the local information this is the only wood which sinks.

- *Ainie*- Its Resin is used for bird catching and it gives fruit like Jack fruit. Its seed is also consumed. It is collected and saved so that it can be consumed during winter. The ripe fruit of Ainie is eaten after removing the spiny outer skin. The structure of the fruit is similar to that of the much larger jackfruit. The seeds are also edible, usually fried as a snack.

- *15 of Kulirmave* were planted. It is used as an air refresher and considered to have good medicinal values. Its skin is used in whitewash. Indigenous information: Bark medicinal. Good firewood species. Fruits are eaten by birds. Squirrels eat bark. Bees forage on flowers.

- *Eachili'*s fruit is liked by kids and its bark used for firewood. Fruits attract birds, monkeys. It also provides a good shade and keeps the place cool.

- *Vellaakil* can, strong weightless wood can be used for furniture. If polished gives good look which helps for its use as furniture.

- *Vainav* skin is used for diarrhea. It has become an extremely endangered tree now.

- *Pepper* used in treating cold and cough. It is used as an ingredient in the medicines which are used for digestion related problems. 2000 such plants were distributed. Medicinal uses: Black pepper oil can be used to help in the treatment of pain relief, rheumatism, chills, flu, colds, increase circulation, exhaustion, muscular aches, physical and emotional coldness, nerve tonic and fevers. It furthermore increases the flow of saliva, stimulates appetite, encourages peristalsis, tones the colon muscles and is a general digestive tonic. Black pepper is a flowering vine in the family Piperaceae, cultivated for its fruit, which is usually dried and used as a spice and seasoning.

- *Nellikka* is used to cleanse water and the entire plant is used for numerous medicinal purposes. It is considered as very good diet especially for the kids. 250 of these have been planted. Medicinal uses: Fruits used to treat fever, loss of appetite, piles, worms, anemia, jaundice, cough, fainting, heart diseases, vomiting, thirst, burning sensation, gum trouble, digestive disorders, leucorrhoea, earache, dysentery and used as tonic, cooling, refrigerant, diuretic and laxative.

- Around 15 *Arjuna h*ave been planted. Its leaves and fruits are mashed and added in the diet .It good to control cholesterol and helps in preventing heart disease also. Medicinal uses: Bark used to treat heart diseases, consumption, diabetes, skin diseases, fracture, intrinsic haemorrhage, wound, piles and diarrhea.

- Ashoka - Medicinal uses: Bark and flower used to treat indigestion, fever, burning sensation, ulcers, menstrual disorders, dysentery, polyuria, scabies, bleeding piles and pimples. Leaves as blood purifier. Seeds used for bone fractures.

***Citation**: Mathpati, Mahesh and Vaishnavi C, 2013. "Useful plants that are increasingly rare, as percieved by the Adivasi Community in the Gudalur Region". Action for Community Organisation, Rehabilitation and Development, Gudalur*

List of plants propagated:

Sr. No	Local/Common Name	Botanical Name	No. of Plants
	Naaval	*Syzygium cumini*	*500*
	Naral		25
	Madhura Nellikka	*Syzygium mundagam*	*600*
	Edala	*Olea dioica*	*250*
	Poovathi		371
	KodamPuli	*Garcinia gummi-gutta*	*615*
	Cheeralam		500
	Athi	*Ficus racemosa*	*125*
	Kuran Pazam	*Baccaurea courtallensis*	*125*
	Thani	*Terminalia bellerica*	*80*
	Vattakanni	*Macaranga pelteta*	*250*
	ChoraPali		50
	Kaitha	*Polyalthia fragrans*	*450*
	Ainie	*Artocarpus hirsutus*	*10*
	Kulirmave	*Persea macrantha*	*15*
	Manjzala	*Actinodaphne sp*	*250*
	Eachili		25
	Mukkani		25
	VellaAkil		3
	Vainave		5
	Pepper	*Piper nigrum*	*2000*

	Nellikka	*Phyllanthus emblica*	*500*
	Ashoka	*Saraka asoca*	225
	Choriyan		10
	Arjuna	*Terminalia arjuna*	*30*
	Cititora	*Cymbopogon citratus*	30
	Total		7339