

CEPF SMALL GRANT FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Paadhai
Project Title:	Integrated project for lantana management, restoration of scrub forest ecosystem and alternate livelihoods at Lokkere Reserve Forest, Bandipura
Date of Report:	2015
Report Author and Contact Information	Mr. Ramesh Venkataraman

CEPF Region: Western Ghats (Mysore-Nilgiri corridor)

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

Grant Amount: \$ 11,469.14

Project Dates: 1st August 2013 to 31st December 2014

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

- a. Lokkere-Guddukere village communities and Eco-Development Committee which were active participants in the implementation of the project.
- b. Junglescapes Charitable Trust which was the implementation partner / NGO for this project and was instrumental in planning and implementing the project on the ground in consultation with Paadhai and the Lokkere-Guddukere village communities.
- c. Centre for Environmental Monitoring of Degraded Eco-systems (CEMDE), University of Delhi which provided training and knowledge inputs for the management/removal of *Lantana camara* and the restoration of Lantana removed areas.
- d. Conservator of Forests and Director, Bandipur Tiger Reserve who helped in organizing two Lantana management workshops for the staff of the Bandipur Tiger Reserve and also supported the pilot project of Paadhai for alternate livelihoods based on Lantana Craft initiative for the Lokkere village community.
- e. Ashoka Trust for Research in Ecology and the Environment (ATREE) which provided resource support for training of community members in the Lantana Craft activity.
- f. Team of experts consisting of Dr Siddappa Setty, Dr Ayesha Prasad, Dr Geetha Ramaswami and Dr Rakesh Kumar who provided the initial guidance and direction on restoration of *Lantana camara* infested areas.
- g. Productive Solutions for designing the product logo, the publicity materials and website for the Lantana Craft activity.

Conservation Impacts

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

Investment Priority 1.1 -Test pilot models of community and private reserves to achieve conservation outcomes at priority sites, and

Strategic Direction No 1 – Enable action by diverse communities and partnerships to ensure conservation of key bio-diversity areas and enhance connectivity in the corridors

The following conservation impacts resulted from the project which are relevant to the implementation of the CEPF eco-system profile:

- a. The project helped test on the ground a pilot model of community participation / action in restoration of *Lantana camara* infested sites back to biodiverse wildlife habitats.
- b. The cut root stock method used for removal of *Lantana camara* proved to be very effective in removing lantana with almost no soil disturbance and therefore minimal re-appearance of *Lantana camara*. This method also ensured preservation of native species lying underneath the lantana clusters as well as of grass species surrounding the lantana clusters. As a result, there was quick occupation of the cleared areas by the grass species, helping natural restoration.
- c. The project helped create skill sets within the community to carry out such restoration work in general, and the cut root stock method in particular, thus creating a valuable resource pool for such conservation effort in future in any part of the protected area / buffer zones of Bandipur Tiger Reserve.
- d. The alternate livelihood created through this activity and the resultant revenues to the community members helped create a model of financial incentives for local communities to manage their natural ecosystems sustainably.
- e. The site lies within the eco-sensitive zone of the Bandipur Tiger Reserve, which is a CEPF priority site. The site lies in the Lokkere Reserve Forest which is part of an important corridor that connects Bandipur / Western Ghats with the Eastern Ghats and used by elephants to cross into the Eastern Ghats and the water sources of the Kaveri river system during summer months.
- f. The Lantana Craft activity has helped develop a sustainable alternate livelihood for the local community that is based on conservation, with appropriate market linkages and marketing support. This has helped create a 'green economy' model that can be easily replicated in other places in conjunction with restoration of *Lantana camara* affected areas.

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

1) Generate sustainable financial incentives to the community

The project has established viable models for generation of sustainable financial incentives to the community in the following ways:

- a. **Lantana camara removal activity**
 - The removal of Lantana camara is done through the Cut Rootstock method which is a 100% manual method. The average time needed for clearing one acre is 60 man days which amounts to earnings for the community members of Rs 12000.
 - The pilot area cleared under the project was 5.2 acres with accrued livelihoods of about Rs 64000, with around 14 community members involved.
 - The Lantana removal activity has been continued post-CEPF with funding from other sources as part of the ongoing habitat restoration initiatives of Paadhai and Junglescapes. As a result, the community members are able to earn on an average Rs 5000 a month based on 20 days' work per month. Assuming a 9 month work-window (non-monsoon months) this works out to Rs 45000 a year. This compares

favourably with their traditional earnings from seasonal farm labour of around Rs 30000 per annum. As a result the enthusiasm for the Lantana removal work has been high among local communities.

- We expect this activity to continue for at least a minimum of 5 years as there is significant amount of *Lantana camara* in the vicinity of the project area, both in the Lokkere Reserve Forest and in the Kundakere Range (PA) of Bandipur Tiger Reserve.
- This activity is easily replicable in other forest ranges of Bandipur Tiger Reserve as well as in other National Parks in the Western Ghats area.

b. Restoration of *Lantana camara* removed sites

- The restoration involves the following activities which are also carried out manually, generating financial rewards to the local community of approximately Rs 59000:
 - Making trenches for juvenile natural native plants found in the cleared sites to help water harvesting and faster vegetation build-up.
 - Making water bodies for harnessing rain water like small check dams, ponds, etc. in the Lantana cleared sites.
 - Planting of fresh saplings which involves digging of pre-planting pits, planting and post-planting care like mulching.
 - Broadcasting of grass seeds.
 - Removal of secondary invasive species like Parthenium.
 - Clearing dried Lantana from the site manually or using tractors, for use in Lantana craft making or as fuel in the villages.
 - Removal of re-appearing *Lantana camara* in years 2 and 3. The Corbett experience suggests this to be about 15% in year 2 and 5% in year 3.
- Since restoration is critical at all removal sites, this activity is concomitant with removal and contributes equally to sustainable livelihoods.

c. Lantana Craft making activity

- The Lantana craft activity has resulted in training of 12 persons from the Lokkere village community (10 women and 2 men) in making these craft items. These crafts persons are now able to make a variety of items like chairs, teapoys, baskets, key chain stands, etc.
- During the training period of July 2014 the group was given a stipend of Rs 150 per day which amounted to a total earning of Rs 61000.
- On an average 6-7 persons are working on this activity each day since completion of training in July 2014. During August-December 2014 the group has been able to earn revenues of around Rs 20,000 per month from this activity.
- There is good demand for these products and with market linkages being put in place the activity appears to be on a firm and sustainable footing. This is evidenced by the activity having sustained for 6 months and being able to retain the interest of the crafts persons.
- A number of market linkages have been implemented and some are under implementation. Also, awareness and visibility of these products among consumers is increasing due to active communication. These are expected to increase the demand and revenues for the community in future.

- While this activity is replicable in other EDCs of Bandipur Tiger Reserve as well as in other areas of the Western Ghats, this will need capability to market the output of more than one group of crafts persons which is untested as of now.

2) Create an integrated and self-sustaining methodology for management of lantana that is economically sustainable in areas where such invasion is endemic

The results against this objective are presented in two parts:

a. Creation of an intergrated methodology for management of lantana

- The project results demonstrate the feasibility of an integrated methodology for management of lantana. The integration is in two aspects:
 - The integration of the activities of lantana removal and restoration of the removed sites. The project results as described in the technical reports indicate that it is important to integrate these two activities
 - The seamless integration of the activities of lantana removal and lantana craft. The lantana removal is done by a team that is specialized in this activity and has as its objective scientific removal and restoration. The removal is done in contiguous plots inside the forest to create maximum restoration impact over a period of time. The removed lantana is moved to the craft making location through tractors. The craft activity is done by a separate team that is specialized in this activity and has as its objective the conversion of the removed lantana into craft products. This segregation of tasks with different objectives is important to maintain the integrity of these two activities.
 - Initial attempts where the lantana craft team removed *Lantana camara* for its captive use resulted in the use of wrong methods like slashing and burning, and also piece meal and sporadic removal of selective bushes. Hence the tasks of removal of lantana and craft making described above were allocated to two separate teams with significant success.

b. Creation of a self-sustaining methodology for management of lantana

- The project results show that creating a financially self-sustaining methodology for management of lantana may not be feasible because of the reasons outlined below. However, the opportunity to raise funds for Lantana management based on the craft activity is attractive.
- The sale price of the lantana craft items covers only the labour component of the crafts persons and the cost of added raw materials like nails, varnish, etc. It does not cover the cost of Lantana removal and transportation to the craft centre.
 - Raising selling prices of the craft items beyond current levels is likely to impact sales volumes adversely and hence not attempted. Hence generating surpluses from the craft activity to fund lantana removal and management has not been possible.
 - The lantana craft serves a very visible front end activity for attracting attention of sponsors and the general public to the larger lantana problem. Positioning the lantana removal and craft as a holistic effort in project communication has had good impact with target audiences. The potential for raising funding for the

lantana management activity by showing the craft activity as the front end is high and is planned to be pursued.

3) Quantify data on the benefits to the community from such an integrated activity

Quantified data is now available on the benefits to the community from the integrated activity. This has been provided in the technical reports attached to this report.

4) Establish effective market linkages for green economy products made by forest dwelling communities

The following initiatives have been taken to establish effective market linkages for the lantana craft (green economy) products made by the local communities:

a. Brand building

- A brand name “Chital” has been created for the “green economy” products made by forest dwelling communities. This name can be used for all products made by different communities and need not be limited to lantana craft.
- A logo has been created for the brand depicting the wildlife, local community participation in conservation and the craft activity.
- Communication materials like posters have been created.
- Product tags have been designed and accompany all lantana craft products sold.
- A website is under construction and is expected to be launched by end February 2015.

b. Market Linkages

Sales channel linkages have been explored giving priority to local sales opportunities which are easier and less expensive to service. In comparison servicing orders from places like Bangalore requires a higher degree of logistical effort and cost and it is better to look at these selectively. This model has been highly successful in MM Hills. The following initiatives have been taken in this context.

- A showroom has been established at Lokkere for display and sale of the products. Walk-in customers have started visiting from nearby resorts as well as from surrounding villages.
- Stalls at corporates on occasions like Environment Day have been initiated successfully. A stall was put up at GE, Bangalore in November 2015 with good success. Other corporates like HP have shown interest in promoting such stalls in their campuses. These offer the opportunity of high cash sales in a short time window with minimal logistics cost.
- Discussions are under way with two prominent resorts in Bandipur to start a program where they organize regular trips by their guests to the craft centre and showroom at Lokkere. The first batch of guests are expected to start by February 2015 and this would offer a regular stream of business.
- A tie-up has been made with a prominent wildlife store on the Ooty highway opposite Jungle Lodges Bandipur for selling these products. TRIFED Bangalore and two outlets in Mysore have been given samples for initiating similar tie-ups.
- Orders have been procured from the Bandipur Forest department for delivery of furniture items for their cottages and offices. Similar efforts to procure orders from Jungle Lodges and Resorts is under progress.

- Contacts have been made with corporates for bulk orders of items like waste paper baskets. While no orders have been received as yet, this is a significant opportunity that is being pursued.
 - The crafts persons have been encouraged to participate in trade fairs like Habbas. They participated in a Habba in Gundlupet in 2014.
- c. **Green certification**
 Fair Wild was approached regarding certification. The feedback received from them was that Fair Wild certification is more relevant to exploitation of valuable natural resources where the objective is to ensure there is no excess exploitation, and the same is not relevant while making products from an invasive weed. Fair Wild has preferred this matter to their Technical Committee and we are awaiting further feedback.
- d. **Continued Marketing support**
 Junglescapes will continue to support the crafts persons by undertaking marketing efforts to pursue different sales opportunities and create a sustained order flow. It is felt that such support is essential for a period of at least 18-24 months for linkages to stabilize, given the context of very limited marketing capability within the community. This has been the case with similar products made by the forest dwelling communities e.g. honey sold under the “Last Forest” brand which has significant marketing support from the implementing NGO.

5) Create community capabilities and frameworks that can be helpful in all other areas of conservation based livelihood that the community may pursue in future.

The following capabilities and frameworks have been created that will help the community in areas of conservation that they may pursue in future:

- a. A core group of 14 persons have been provided training on Lantana removal using the Cut Rootstock method and subsequent restoration. This group is now well versed with restoration skills involving lantana management, water harvesting methods, sapling planting, etc. and can work with the forest department on habitat restoration activity. In a way, this group is probably the first “community restoration task force” in Bandipur Tiger Reserve and has demonstrated excellent team working capability.
- b. A women’s Self Group has been formed for the Lantana craft activity named “Lokkere Mahila Lantana Karakosala Sangha”. The SHG has a separate bank account which the President and Secretary operate. Members have been making weekly savings and depositing this in the bank, thus creating thrift capability.
- c. The lantana craft activity has developed a number of capabilities that will help the community in alternate livelihood scenarios very well e.g.
 - Customer related capabilities like dealing directly with customers, understanding their expectations, determining appropriate pricing for products, managing orders, etc.
 - Technical skills related to cottage level manufacturing like planning for raw materials, adhering to specifications, quality control, estimating time needed to make different articles, etc.

- Team working capabilities.
- Basic understanding of profit and loss in a manufacturing activity, although this is yet to be well embedded.
- Significant benefits can be seen in ‘soft’ areas like
 - i. Self-esteem and self-confidence
 - ii. Communication
 - iii. Creativity (characterized by ability to envision and design new products with wildlife motifs)
- d. Both the above groups are now able to see the big picture where alternate livelihoods and conservation go hand in hand and are collaborative / complimentary. This is a significant capability that underpins the sustainability of such alternate livelihood models.

6) Document results on community managed conservation that can be useful for designing similar projects in future

The methodology and results of the community managed conservation project are documented in detail in the technical reports, covering both the restoration of Lantana infested habitats and Lantana craft activities. These can be used for designing similar projects in future.

Please provide the following information where relevant:

Hectares Protected: The pilot plot covers 5.2 acres, which is approximately 2 hectares.

Species Conserved: *NIL*

Corridors Created: *NIL*

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

- The project has been very successful in achieving its short-term impact objectives in its key components of Lantana management, restoration of scrub forest ecosystem and Lantana craft.
- The long term impact of the Lantana management impact objective will depend on the adoption of the results of this project by the forest department for management of larger tracts of forest within protected areas.
- The long term impact of the Lantana craft will depend on a sustained marketing framework to ensure continuous order flow.

Were there any unexpected impacts (positive or negative)?

Unexpected positive impacts

- Excellent regeneration of pilot plots where lantana has been removed using the cut rootstock method (significantly better than anticipated).
- The removed site is replete with examples of native species such as Tansi (botanical name), Bejulu (botanical name), Kaare (botanical name) Kakkorle (botanical name) and (Acacia Chundra, etc. that have remained intact during the

lantana removal process. In many cases the young native trees had remain bent over as they were growing under a dense canopy,

- Two workshops on Lantana Management conducted for the Bandipur Forest Department personnel in collaboration with CEMDE, Delhi. This was not part of the initial project plan but the idea came up during our discussions about the project with the Conservator of Forests, Bandipur Tiger Reserve and was implemented immediately.
- Formation of a stable core team for lantana removal and habitat restoration activity which had not been achieved in the past.
- Evolution of the lantana craft activity into a lantana craft centre-cum-showroom (helping create awareness of the lantana related issues to visitors from the public, Forest Department, other EDC groups, etc).
- Creation of two separate and specialized teams for lantana eradication vs lantana craft. By mixing the two objectives we realized that the teams would cherry-pick the bushes that were suitable for craft making. The course correction and segregation of the two tasks ensured that lantana eradication was complete in the selected plots.

Unexpected negative impacts

- Lantana craft making requires that the cut lantana stems be heated in boiling water for it to be pliable. To the extent possible the community used leftover lantana stems as the fuel. However, occasionally they resorted to using firewood from other species as fuel. Junglescapes is examining the use of solar water heaters to reduce any form for firewood use, lantana or others.

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.

- In order to succeed, alternate livelihood projects with forest dwelling communities like lantana craft require fairly intensive support to the community for 24-30 months. The support may involve both time and monetary resources. This has to be kept in mind while planning the transition from the CEPF project phase to the post CEPF project phase. Continued engagement of the implementation NGO or effective hand over to another NGO would be important.
- Availability of skilled resources to work with the community on soft skills was a constraint for the project. Building soft skills among the community members is important for such projects to succeed, and hence may be given specific attention in similar projects..
- Ecological restoration projects may need significantly longer than 12 months to generate comprehensive results. This may have to be kept in kind at the approval stage by CEPF-ATREE for future projects.

- Most forest dwelling communities in the Western Ghats are used to working for the forest department or in local farms on a daily wage basis. Migrating them to an economic model based on revenues, costs and profits is difficult and over-emphasis on this could jeopardize a project of this nature. Hybrid systems have to be attempted with a longer time span for migration to a fully self-reliant economic model.

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

- Keeping the project pilot at a manageable scale with the main objective of monitoring and recording results contributed to its success. This helped avoid diversion of energies to extensive project management.
- Typically, the community is new to these kinds of initiatives and their understanding and acceptance evolves over a period of time. Sufficient flexibility and adaptability was built into the project design in order to help align the project implementation suitably with the evolving response and expectations of the community.
- Planned restoration of Lantana removed areas immediately after removal is very critical and needs to be incorporated in the project design. Absence of planned restoration will lead to a high risk of such cleared areas being invaded by other invasive species.

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

- The implementation team looked actively for best practices (preferably from within India) for specific elements of the project and tried to adapt them to the needs of the project e.g. we adapted the best practices of CEMDE in Lantana management and that of ATREE in lantana craft. This ensured a higher chance of success and also reduced the learning curve and implementation time.
- Actively involving the community members on ground level decisions helped in project implementation success e.g. method of water harvesting to be done, plant species to be planted, costing and pricing of lantana craft items, etc.
- A bottom-up approach that gave adequate freedom to the lantana crafts persons from the community to decide products that they would like to be trained on and also to design new products contributed to the success of this part of the project.

Other lessons learned relevant to conservation community:

- The degree of responsiveness to such community participative conservation programs varies significantly between different villages. Selection of a responsive and enthusiastic village community is critical for testing the project hypotheses effectively and also to create good role models for other communities to follow.
- Collaboration with other agencies and not trying to do everything oneself is important to leverage on existing knowledge and methodologies. This needs to be done without losing the independence of the project, by validating the knowledge available before using it and also adapting it suitably to the project needs.

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
GE India Technology Centre, Bangalore	B	Rs 300,000 to Junglescapes	Towards further restoration of Lantana-infested sites

**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.

- The restoration of Lantana affected areas is replicable to other areas of Bandipur Tiger Reserve as well as to other forest habitats in India as the cut rootstock methodology is simple. The main challenge is availability of adequate numbers of manpower to carry out the activity. With increasing demand for labour for other economic activities like coffee plantations in the Western Ghats area, availability of labour for forestry related work is a significant constraint.
- Replication would also require willingness of the forest departments of various parks to change from historical Lantana management practices like mechanical grubbing that are counter-productive and adopt the cut rootstock method.
- The Lantana craft activity is also easily replicable to other community groups. The main challenge is the ability to market larger quantities of these products. However, with a large local market in most areas, this challenge is manageable.

Summarize any unplanned sustainability or replicability achieved.

- The ability of the Lantana craft activity to draw attention to the Lantana problem and thus help raise funds for the larger Lantana management activity is an unplanned sustainability achieved.

Safeguard Policy Assessment

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

The following actions have been taken for compliance with the referred policies:

- A public poster was prepared and displayed in both the local language (Kannada) and in English for the purpose of disseminating information about the project and also about the grievance redressal mechanisms.
- An explanatory document on the compliance of the project with relevant CEPF policies was submitted at the start of the project. The highlights of this document are as below:
 - The CEPF Pest Management Plan, 2012 does not apply since the removal of *Lantana camara* is done entirely manually.
 - The project is in compliance with the Environment Management Framework since it does not lead to degradation of any critical habitat, require land acquisition, adversely affect indigenous communities or involve any other sensitivity envisaged in the framework. It was explained that the project actually attempts to prevent degradation of critical habitats and build the capabilities of the indigenous peoples in line with their traditional skills.
 - In line with the CEPF Indigenous Peoples Planning Framework, prior consultations were done with the indigenous communities involved and their agreement and inputs taken for the project. This was followed by periodic consultations with the communities during the course of the project.
 - The CEPF Framework for Involuntary Restrictions does not apply to this project as it does not envisage any such restrictions. In fact the project provides incentives to change livelihood and natural resource (*Lantana camara*) use practices on a voluntary basis.

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 1st August 2013 to 31 st December 2014 (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 through a legal declaration or community agreement?	No			Please also include name of the protected area. If more than one, please include the number of hectares strengthened for each one.
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.	Yes	2 hectares	10 hectares	The project helped improve biodiversity conservation in the Lokkere Reserve Forest, which falls within the Eco-sensitive zone of Bandipur Tiger Reserve, which is a key biodiversity area identified by the CEPF ecosystem profile.
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	Yes	2 hectares	10 hectares	The project helped improve biodiversity conservation in the Lokkere Reserve Forest, which falls within the Eco-sensitive zone of Bandipur Tiger Reserve, and is contiguous with the Bandipur Tiger Reserve.
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1 below.	Yes	2 communities		Two local communities accrued tangible benefits – the village communities of Lokkere and Guddukere

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

Additional Comments/Recommendations

The CEPF projects have a high level of significance for the Western Ghats in the coming years. Many of the projects are not time bound and will sustain or extend into the future. Therefore the creation of a networking forum for the grantees would be very useful for sharing information and for harnessing their collective strengths. The forum may include a directory of organisations, a blog or posting space where the organisations can share updates, etc. Annual events may also be helpful and can be self-funded by participants.

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

Appendix 1: Field Manual for Cut Root-stock method of *Lantana camara* management

Appendix 2: Demonstration film on Cut Root-stock method of *Lantana camara* management (see U-tube link below)

(<https://www.youtube.com/watch?v=1d80KyKPkDo&feature=youtu.be>)