

CEPF FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Foundation for Ecological Research, Advocacy and Learning (FERAL)
Project Title:	Bridging the Shencottah Gap: How payments for ecosystem services can restore biodiversity outside protected areas in India
Date of Report:	30 th July 2015
Report Author and Contact Information	Srinivas Vaidyanathan srinivasv@feralindia.org

CEPF Region:

Western Ghats & Sri Lanka

Strategic Direction:

Strategic Direction 1.2: “Promote partnership to identify, evaluate and advocate for suitable mechanisms that incorporate critical links (biological corridors) into the protected area network in the Periyar-Agasthyamalai, Mysore-Nilgiri, and Malnad-Kodagu corridors”

Grant Amount: US \$ 499,443.00

Project Dates:

Start Date: 2009/10/1 End Date: 2015/6/30

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

Indian Statistical Institute-Delhi: Professor E. Somanathan’s experience in evaluating conservation methods in India helped in designing the framework to make payments to individual landowner to enhance biodiversity on private land.

Centre for Market Design, at the Economics Department, University of Melbourne: Professor Peter Bardsley’s expertise in designing contracts to successfully implement payments for ecosystem services in Victoria. He helped the FERAL team in designing the contracts, developing a framework to make payments to individual landowners within the Periyar Agasthyamalai corridor. He was instrumental in developing an auction toolkit for practitioners and also in training the FERAL team on the approach of reverse auctions and how to conduct and implement it with a community.

Department of Sustainability and Environment, Government of Victoria, Australia: Dr. Gary Stoneham’s involvement at the early stages of the project contributed to the training of the FERAL team in the economics and approaches to cost-effective PES.

Conservation Stewards Program (CSP) at Conservation International: Experience sharing with CSP in “conservation agreements” contributed to better understanding of contracts, negotiations with the community and more importantly in understanding opportunity cost communities and individuals incur to participate in ongoing conservation efforts.

Conservation Impacts

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

Please summarize the overall results/impact of your project.

1. Identified two potential corridors to facilitate large mammal movement across the Shencottah Gap.
2. Results from this study have contributed to developing the buffer and corridor management plan which has been included into the Tiger Conservation Plans (TCP) for the Kalakad Mundanthurai Tiger Reserve.
3. It also contributed towards framing the corridor management plan for the Periyar Tiger Reserve’s TCP.
4. The project contributed to developing a systematic monitoring program for the Shendurney Wildlife Sanctuary, during the management plan discussions that were held by the Forest Department of Kerala.
5. Baseline data collected from this project has contributed to several campaigns to enhance protected area network in the study site. Two initiatives to which we

contributed were successful, one was the up gradation of the Tirunelveli Forest Division to Nellai Wildlife Sanctuary and the other was the inclusion of Courtallam Range into KMTR.

6. We developed a payment mechanism to engage with a forest dependent community and involved them in regular monitoring. This pilot exercise successfully operated for a year and the community covered about 72 km²
7. We developed and tested individual agreements with private landowners to enhance biodiversity. This pilot was a significant success and we were able to sign agreements which covered 49 hectares.

Planned Long-term Impacts - 3+ years (as stated in the approved proposal):

This project seeks to enhance conservation and biodiversity by linking up isolated populations between Periyar-Agasthyamalai landscapes. Additionally, the project seeks to demonstrate techniques for involving local residents in ongoing conservation initiatives at multiple scales. Finally the project will enhance conservation by influencing management policies for corridors and ecologically sensitive area outside protected areas

Actual Progress Toward Long-term Impacts at Completion:

The project identified two multispecies corridors that are vital to ensure connectivity within the Periyar Agasthyamalai landscape. These corridors pass through Reserved Forests, large company owned commercial plantations, forest plantations operated by the forest departments and small private landholding. The different land management systems and land tenures make it a challenge to restore connectivity across the Shencottah Gap. To restore connectivity across the Shencottah gap collaborations with a wide spectrum of stakeholders including forest departments, regional community based organization, local elected bodies (Panchayat), large businesses and individual landowners were built during the course of the project.

Prior to this project, no systematic assessment and identification of corridors was carried out based on current species distribution in and around the Shencottah Gap. As a result, corridors and connectivity have not been a high priority for managing these forests. Results and information from the project were used to engage with different stakeholders to seek their participation in enhancing connectivity and biodiversity in the Periyar Agasthyamalai corridor. The scientific knowledge base built by this project and regular interactions with the Forest Departments of Kerala and Tamil Nadu has not only led to increased awareness about issues of connectivity it has also led to including recommendations made by this study into their management plans.

This project also developed protocols to make payments to communities and individuals who volunteer to undertake conservation actions. Payments were linked to performance/outputs and it was aimed to make participation profitable. The protocols were developed to make these payments in a fair, transparent manner which can be easily

adapted to other parts of the Western Ghats to conserve biodiversity. CEPF also funded another FERAL project which looked at sustainable landuse practices in large company owned rubber plantations to enhance biodiversity conservation, and wildlife movement in this landscape. Constantly engaging with all stakeholders within the landscape, this project and other CEPF funded projects have increased awareness of biodiversity and the need to restore connectivity in the Shenottah Gap, thereby significantly contributing to ongoing conservation efforts in this landscape.

Planned Short-term Impacts – 1 to 3 years (as stated in the approved proposal):

1. Identification of wildlife corridor and ecologically sensitive land outside protected areas.
2. Introduction of conservation issues to village forest committees, SHGs (self-help groups), panchayats and other CBOs (Community-based organizations)
3. Creation of a workable conservation model involving payments

Actual Progress Toward Short-term Impacts at Completion:

1. Two corridors that could potentially provide connectivity for multiple large mammals were identified using data from intensive field surveys. These corridors are located on the eastern (Kotavasal corridor on the interstate border) and western edge (MSL corridor near Tenmala town) of the project area. Results from our camera trapping studies indicate the lack of connectivity for elephants and tigers, two species which have received national attention and better support to address issues of connectivity.

[www.feralindia.org/files/cepf/upload/CEPF_Corridors_2015.pdf]

[www.feralindia.org/files/cepf/upload/CEPF_Large_Mammal_Movement_2015.pdf]

We also looked at past prioritization processes carried out an exercise to identify areas of high conservation values. We identified new areas using data collected during the project. These new areas that we identified could potentially be included into existing PAs and could also facilitate the creation of new PAs. Results from this exercise have contributed to the creation of the Nellai Wildlife Sanctuary and towards including Courtallam Range into KMTR.

[www.feralindia.org/files/cepf/upload/CEPF_PA_Boundary_2015.pdf]

2. We adopted a flexible strategy to engage with different stakeholders within the project sites. During the project period workshops were held at the Panchayat level to sensitize people about biodiversity conservation and how they could benefit by participating in FERAL's efforts. These introductory workshops were

attended by local leaders, office bearers of community based organization, village forest committees, Forest Department officials, and influential people within the community. These introductory workshops were followed up with workshops and presentations at each settlement/village forest committee, highlighting the importance of forests in protecting wildlife and also in providing vital ecosystem services. This was required as we found that large meetings with elected representatives, government officials, members of political parties was not attended by a large number of households and those who were interested did not share their experiences of participating in conservation efforts. After these workshops we carried out a door to door camping handing out awareness material in the local language and also information on how they could partner with FERAL to conserve biodiversity. Additionally posters and handouts were also prepared. We also supported the government schools in it environmental initiatives and engaged with the students and head master to assist with such events.

During the course of the project we constantly engaged with these different groups to share our experiences and also to explore potential funding options within their budgets which can be effectively spent on biodiversity conservation.

3. We pilot tested two payment mechanisms during the course of the project. One was to make payments to communities to assist in monitoring. Other than receiving a small amount for their efforts, incentive was based on the number of animals photographed within the area that they monitored. The rationale behind this payment structure was once they realize that payments are linked to animal presence or densities, they will initiate actions that will be beneficial to wildlife populations. We worked with one forest dependent tribal community who successfully monitored an area of $\sim 72 \text{ km}^2$ for a year.

We developed and tested a model to make direct payments to individual landowners to undertake activities that will enhance biodiversity on their land. Payments were conditional on performance and the model was built to make sure participation is profitable to the farmer. We tested this approach across two different sites and together we were able to sign one year agreements covering an area of 121 acres.

[www.feralindia.org/files/cepf/upload/CEPF_Biodiversity_Payments_2015.pdf]

Please provide the following information where relevant:

Hectares Protected:

Species Conserved:

Corridors Created:

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

This project has shown that scientifically carried out research and effectively communicating findings in workshops, meetings and other fora can generate interest and influence policy to acknowledge the importance of connectivity in conserving biodiversity. FERAL was successful in achieving this objective in the Shencottah gap due to the good support and response that we got from the Forest Departments of Kerala and Tamil Nadu.

FERAL was also able to demonstrate the payment mechanisms that were developed along with its partnering institutions. We were able overcome some of the initial reluctance to participate, largely because of the support we received from the individuals from the local communities and due to the encouragement from CEPF.

The idea of payments to individuals and communities is a new concept in conservation efforts in India. Local residents are unaware of these approaches being followed in other parts of the Western Ghats and rest of the world. They were skeptical about our activities and winning their trust was a huge challenge and it required sustained efforts. This was also a new concept for large number of researchers who worked on this project, they were only exposed to the current exclusionary approach taken by the government in biodiversity conservation. To educate them considerable amount of time was invested in training and exposure visits to other agencies to understand how conservation objectives can be achieved through well designed incentive programmes that work with people participation. This was possible due to the support we got from the Conservation Stewards Programme, Indian Statistical Institute, University of Melbourne and the Department of Sustainability, Victoria.

The tribal community that we worked with is one of the most backward communities in the landscape. Literacy levels are low, and very few individuals are able to read and write. This required us to work with them to understand how they see the landscape, and

then come up with a simplified reporting format without too much dependence on the use of pen and paper. We also had to train them on the need for maintaining records of participation and payments that they got from us. This was quite time consuming and challenging, finally after several rounds of community meetings they nominated a person who would maintain these records. This experience has been beneficial for the community as well, although they were members of a VFC, they were not involved in any activities of the VFC. Their involvement in our programme has now led them to actively participate in some of the activities of the VFCs and they are now managing sale and processing of some of the NTFP products through the Government outlet.

This project provided important learning experiences for FERAL through interactions with Forest Department officials, community based organization, political organizations, village forest committees, managers of large plantations, individuals from diverse socio-economic-religious backgrounds, advocacy groups, legal advisors, conservationists and finally scientists working in diverse fields of research. This has been a very interesting learning process to understand various aspects and dimensions of working with individuals and communities towards a common conservation goal. These interactions have contributed tremendously towards understanding different perspectives towards participatory conservation efforts and allowed us to adopt our strategies which contributed towards the achievements of this project.

Were there any unexpected impacts (positive or negative)?

None

Project Components

Project Components: *Please report on results by project component. Reporting should reference specific products/deliverables from the approved project design and other relevant information.*

Component 1 Planned (as stated in the approved proposal):

Identification of lands of high conservation value

Component 1 Actual at Completion:

Using data collected during the course of the project, areas that are currently outside the PA network and which need to be included were identified. Additionally two multi-species corridors for large mammals were also identified.

[www.feralindia.org/files/cepf/upload/CEPF_Corridors_2015.pdf]

[www.feralindia.org/files/cepf/upload/CEPF_PA_Boundary_2015.pdf]

[www.feralindia.org/files/cepf/upload/CEPF_Mammal_Status_2015.pdf]

Component 2 Planned (as stated in the approved proposal):

Establishing a regular monitoring system which will be linked to actual payments and measure success of PES system

Component 2 Actual at Completion:

The project developed protocols and established a system to monitor improvement in habitat quality, use by large mammals and to monitor changes in total carbon stocks. Especially to measure the success of restoring connectivity for large mammals, we also demonstrate how information from camera trap surveys can be used to monitor successful dispersal events.

[www.feralindia.org/files/cepf/upload/CEPF_Habitat_Use_2015.pdf]

[www.feralindia.org/files/cepf/upload/CEPF_Carbon_Stocks_2015.pdf]

[www.feralindia.org/files/cepf/upload/CEPF_Large_Mammal_Movement_2015.pdf]

[Annexure X in
www.feralindia.org/files/cepf/upload/CEPF_Biodiversity_Payments_2015.pdf]

Component 3 Planned (as stated in the approved proposal):

Base line estimates for assessing and making payments

Component 3 Actual at Completion:

A mechanism to link land parcels with heterogeneous biodiversity/conservation values and different decisions that individuals will take to participate in restoring or conserving biodiversity was developed. This facilitated in arriving at our “willingness to pay” which was the key component of the overall payment mechanism that was developed by this project. The success of the payment was measured using actual turnover in biological variables and easily measureable ecosystem services.

[Annexure I and Annexure IV in
www.feralindia.org/files/cepf/upload/CEPF_Biodiversity_Payments_2015.pdf]

[www.feralindia.org/files/cepf/upload/CEPF_Habitat_Use_2015.pdf]

[www.feralindia.org/files/cepf/upload/CEPF_Carbon_Stocks_2015.pdf]

Component 4 Planned (as stated in the approved proposal):

Develop protocols for PES system relevant to the Indian context

Component 4 Actual at Completion:

Protocols to work with individuals and communities to enhance and conserve biodiversity were developed. These protocols were also tested and lessons learnt from the process were documented.

[www.feralindia.org/files/cepf/upload/CEPF_Biodiversity_Payments_2015.pdf]

Component 5 Planned (as stated in the approved proposal):

Build capacities of all stake holders and institutions to implement a payment system

Component 5 Actual at Completion:

Explaining the use of auctions was more difficult when compared to community contracts. The biggest challenge we faced in both these was to train the participating members and building their capacities. To explain the process of auctions we used a series of games which was played with all members of the community, including forest department staff, local government staff, landowner and landless people. This also served as a great community mobilization tool.

[www.feralindia.org/files/cepf/upload/CEPF_Auction_Toolkit_2015.zip]

To train the participating members in the community agreements, we hired them on a daily basis for a period of one month, this helped us understand different names they have for places and it also helped them understand the activities they need to carry out.

Component 6 Planned (as stated in the approved proposal):

Institute a mechanism to facilitate government/corporate/individual/institutional donors to fund the PES

Component 6 Actual at Completion:

The mechanism that was built into sustaining the payments was to access funds that would get directly channelized to individual accounts of participating farmers, and FERAL would only play the role of monitoring. However raising grants to sustain these contracts has been a challenge. In 2009, the Ministry of Environment and Forest and Climate Change announced a sum of nearly \$500,000 would be set aside towards payments on this project. However due to various reasons the release of funds was cancelled. Subsequently we have tried various funding agencies to look for short term funds before finding a long term partner. Currently we are in dialogue with a few corporate firms to consider setting aside some funds to sustain the payments as part of their CSR activities. The details of the framework adopted by FERAL to sustain the funding is provided in the following document.

[www.feralindia.org/files/cepf/upload/CEPF_Funding_2015.pdf]

Were any components unrealized? If so, how has this affected the overall impact of the project?

The project was able to realize all components that it set out to do.

Please describe and submit (electronically if possible) any tools, products, or methodologies that resulted from this project or contributed to the results.

The project developed a simple but effective game to introduce the auctions for conservation contracts to local communities. The toolkit contains instructions to the organization/individual who is interested in using auctions to secure agreements. It also contains a spreadsheet which aids the game and a set of cards that are required to play the game.

[www.feralindia.org/files/cepf/upload/CEPF_Auction_Toolkit_2015.zip]

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)

A lot of care and attention was paid during the design of the auctions, as there was some concern of collusion among participants and the possibility of the entire exercise being a futile effort. This concern was erased as the participating landowner was more concerned about ensuring his or her own participation and was not willing to share his costing with others.

Initially it was difficult for an interested land owner to understand our motivation to arrive at agreement using an auction. They were more familiar with the process of negotiations and were keen that we follow it rather than the new approach of auctions. However after several rounds of games and interaction with individual participants, they did realize and agree that an open auction was more transparent, fair and equitable as it eliminates any scope of favoritism. This further strengthened their conviction to participate in our efforts.

When the project was designed it was assumed that local participation will be forthcoming with payments and incentives provided for participation. However experiences with previous conservation efforts and the dynamic socio-political situation were overlooked. This proved costly when it came to mobilizing people for the pilot payments and we had to adopt a few changes to address concerns of the landowners. In general we find that the lack of interest in conservation, or better land management are deep rooted in practices that have been followed for decades and there is hesitancy to adopt better management practices. Only long term sustained efforts with demonstrable results can address this issue.

During the design phase of the individual agreements, the activities we had identified were largely aimed at restoring native forest vegetation on private lands. However landowners are not keen to undertake such activities as they feared the loss of land due to provisions with state acts (such as EFL) and also due to the timber transit rules. To address their concerns we had to modify some of the activities.

When we designed the payments for communities, it was assumed that they will have skills to deploy and monitor camera on their own. However, we soon realized that they do not possess the required capacities to carry out the exercise, even after providing adequate training. This led us to simplify the process and to jointly deploy the cameras. Similarly, it was assumed that they would understand a payment structure based only on the number of animals photographed. However this was not true and to continue to engage with them we had to split the payment into participation fees and incentives.

Intensive field surveys undertaken in a systematic and robust framework provided the baseline to identify corridors and provided a strong background for dialogues with concerned policy makers. In addition, the experience was key in helping us develop monitoring protocols.

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

To ensure successful implementation the project sought guidance from scientist working in different fields, to design the payment mechanism we had to rely on economists who had this expertise and experience. We also had a team of ecologists who were involved in developing the monitoring protocols. Social scientists were involved in working with the communities, especially personnel with a rich experience in mobilizing people. Legal advice on contracts helped simplify parts of the agreements. Interactions with these experts helped the FERAL field team to understand the complexity of the project, and they gained additional skill that will help them in the future careers.

Frequent interactions with forest department officials and presenting findings from the project in different fora helped garner support to address connectivity issues in the project site. This was also possible as a few interested officials provided us the required opportunities to present our results.

While commitment to participate was limited to a few individuals, our sustained efforts to continue working with these individuals has kindled interest among landowners who were skeptical about receiving payments, especially after learning from the experiences from the participating land owner.

We had to keep the design flexible to incorporate the feedback we received from interested landowners; this led to significant improvements and greater acceptance of our proposed activities. This was possible as we constantly interacted with farmers and wanted them to give us inputs to fine tune the process.

Other lessons learned relevant to conservation community:

Currently the government does not want to disburse CAMPA money to civil society or individuals to undertake conservation initiatives. Although policy indicates the need to work with local residents in conserving corridors and biodiversity outside protected area, there is a very large gap between the policy statement and actual implementation. This requires attitudinal change, and will require sustained efforts and interaction with both the state and central government to ensure funds are allocated to civil societies to restore corridors. Although government funds available to implement a PES approach to conserve biodiversity is not a limiting factor, the current governance structure and policies are not conducive towards large scale applications of PES models. Until these changes are instituted only small scale implementation will be possible. Such small scale implementation is required to influence the policy change in the Governments approach to biodiversity conservation.

Often it is considered that landowners around forested landscapes will participate in conservation efforts if sufficiently rewarding and economic models are designed to seek participation. However how a landowner relates to his land is overlooked and can seriously hamper even the most well meaning conservation efforts, a good understanding of this relationship during the design phase should help in overcoming this hurdle.

Additional Funding

Provide details of any additional funding that supported this project and any funding secured for the project, organization, or the region, as a result of the CEPF investment in this project.

Donor	Type of Funding*	Amount	Notes
Conservation Stewards Program, Conservation International	A	\$10,000	Towards travel and field visits to India and China.
US Fish and Wildlife Services	B	\$49,810	Project to understand functional connectivity for large mammals in the Shencottah Gap
Wildlife Conservation Society	B	\$16,000	Project to understand functional connectivity for large mammals in the Shencottah Gap
Foundation for Ecological Research Advocacy and Learning	A	\$78,000	Part of Salaries, Vehicles, Infrastructure, and facilities costs
Partner Organizations	A	\$59,000	Part of Salaries for people from partnering institutions and student stipend for researchers who worked on field

***Additional funding should be reported using the following categories:**

- A** *Project co-financing (Other donors or your organization contribute to the direct costs of this 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 funded 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 methods for corridor identification adopted in this project provide a frame work to identify corridors based on ecological process rather than assessing structural connectivity. This frame work can be adapted to other landscapes as well.

The major challenge FERAL has faced is in securing funds to scale up its agreement. Various sources were approached, however no favorable response was received within the term of the project and these efforts continue to sustain the initiative.

Summarize any unplanned sustainability or replicability achieved.

Recently the World Bank and Government of India have initiated the Biodiversity Conservation and Rural Livelihood Improvement Project which aims at conserving biodiversity in selected landscapes, including wildlife protected areas/critical conservation areas while improving rural livelihoods through participatory approaches. Two of the sites chosen for this project include the Periyar Tiger Reserve and the Kalakad – Mundanthurai Tiger Reserve. Lessons from the pilot payments can contribute towards this project. However the purview of adopting such an approach rests with the respective State Forest Departments, MoEF&CC and the World Bank.

Safeguard Policy Assessment

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

None

Additional Comments/Recommendations

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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*****If your grant has an end date other than JUNE 30, please complete the tables on the following pages*****

NOT APPLICABLE

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 July 1, 2013 to May 30, 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.	Yes		17100 Ha	Regular monitoring of wildlife has been initiated in the Shendurney wildlife Sanctuary. Camera trapping by forest department to has been initiated.
2. How many hectares of new and/or expanded protected areas did your project help establish through a legal declaration or community agreement?	Yes		35673 Ha	Information on large mammal occupancy in areas was shared with the various stakeholders which supported the declaration of the Nellai Wildlife Sanctuary during the project period.
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.				
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	Yes		7250 Ha	Community based monitoring of large mammals was carried out covering 7200 Ha (5257.2 in Punalur Forest Division and 1944.3 in Tenmala Forest Division) of reserve forests. Through individual agreements we covered 3.8 hectares within the Ariankavu Panchayat, Pathanapuram Taluk, Kollam District. and 46.46 hectares along the buffer zone of Srivilliputhur Wildlife Sanctuary in Peraiyur Taluk of Madurai District.
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		1	Local communities were involved in our monitoring programme and received community payments for the same.

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	
									Adoption of sustainable natural resources management practices	Ecotourism revenues	Park management activities	Payment for environmental services										
Mambazhathara			X				X					X										X
Total			1				1					1										1

If you marked "Other", please provide detail on the nature of the Community Characteristic and Socioeconomic Benefit: Increased household income due to cash payments and monthly household provisions as in kind payments

