CEPF FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Strand Life Sciences Pvt. Ltd
Project Title:	Western Ghats Portal: towards consolidation and sustainability
Date of Report:	4 August 2015
Report Author and Contact Information	R Prabhakar Strand Life Sciences 5th Floor, Kirloskar Business Park, Hebbal, Bangalore 560024 Phone: +91-80 4078 7263 Fax: +91-80 4078 7299 Email: prabha@strandls.com

CEPF Region: Western Ghats and Sri Lanka Biodiversity Hotspot

Strategic Direction: Strategic Direction 2. Improve the conservation of globally threatened species through systematic conservation planning and action

Grant Amount: USD 94938.00

Project Dates: 2013/07/01 End Date: 2015/06/30

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

This was a collaborative project between Strand Life Sciences (SLS) and IFP. The responsibilities of IFP and Strand was distributed as follows: (a) Addressing data gaps on biodiversity, ecosystem services and development activities in the Western Ghats (Implemented by IFP) (b) Governance and Sustainability (Implemented jointly by IFP and Strand) (c) Campaign for participation (Implemented jointly by IFP and Strand) (d) Technology Platform: (Implemented by Strand). The coordination and partnership involved weekly status calls and regular meetings to evaluate and plan strategy.

The project has also forged scientific partnerships with various agencies, CEPF Grantees and individual researchers. The consortium has been strengthened with 19 institutional members. We have framed a constitution for the consortium that has been ratified by all the institutions. Each institution has identified a point person and is a member of at least one of the four working groups. These are (a) Species Pages Working Group; (b) Informatics Working Group; (c) Capacity Building and Outreach Working Group; (d) Research and Policy Working Group. Each of the 19 members are implementation partners of the project in varying degrees. The table below lists the consortium members and their participation in the working groups.

1. Asian Biodiversity Conservation Trust (ABCT)
2. Azim Premji University (APU)
3. Ashoka Trust for Research in Ecology and the Environment (ATREE)
4. Bombay Natural History Society (BNHS)
5. Care Earth (CE)
6. Foundation for Ecological Research Advocacy and Learning (FERAL)
7. Foundation for Ecological Security (FES)

8. Foundation for Revitalisation of Local Health Traditions (FRLHT)
9. French Institute of Pondicherry (IFP)
10. Hornbill Foundation (HF)
11. I Found Butterflies (IFB)
12. Keystone Foundation (KF)
13. Madras Crocodile Bank Trust (MCBT)
14. National Centre for Biological Sciences (NCBS)
15. Open Source Geospatial Foundation, India (OSGeo)
16. Salim Ali Centre for Ornithology and Natural History (SACON)
17. Strand Life Sciences (Strand)
18. WWF - India
19. Zoo Outreach Organisation (ZOO)

Working Group composition:

Species Pages Working Group	ABCT, ZOO, SACON, CE, MCBT, BNHS, NCBS, HF, KF, IFP, FRLHT, ATREE, WWF India
Informatics Working Group	Strand, IFP, OSGeo
Capacity Building and Outreach Working Group	ABCT, OSGeo, FERAL, SACON, MCBT, NCBS, KF
Research and Policy Working Group	ABCT, ZOO, FERAL, SACON, CE, MCBT, BNHS, NCBS, ATREE, IFP, FRLHT, KF, WWF India

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.

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

1. Provide a open, participatory information base for motivating informed action on biodiversity and conservation of the Western Ghats.

2. Encourage a spectrum of research on biodiversity, from citizen science initiatives, school and education projects, to academic and action research on the Western Ghats

3. Institutionalize and sustain the portal initiative by promoting an inclusive consortium with well-defined governance structure and participation of partners

Actual Progress Toward Long-term Impacts at Completion:

The open, participatory biodiversity information system has matured as a portal contributing to biodiversity information of the Western Ghats. Further, it has now become a vibrant and participatory information system for the whole country as the India Biodiversity Portal. Very clearly two trends are visible. The aggregation of biodiversity observations are on an exponential trend and is currently at over 100,000 records. User registrations have also started to grow exponentially and is currently at over 7000 users. We believe participation on portal has crossed

the threshold and will facilitate content to grow over the next few years to be a rich biodiversity information system for India.

As a consequence of aggregating valuable biodiversity we have seen an increase in the use of the information among various groups. Many research publications have been using the data from the portal for scientific studies. We have registered 35 known citations of the portal in scientific literature to date. Please see http://indiabiodiversity.org/page/122 and over 400 downloads of data from the portal. These are expected to grow over the next few years as more data aggregates on the portal.

We have enhanced the observation interface with groups and the ability to add custom fields in group contexts. This is an enabling feature where researchers can add custom field to crowd source data on specific queries of interest on biodiversity and its attributes across the country. This single feature will enable researchers and groups to target academic and action research in the Western Ghats. Over the last few years, we have seen the use of the portal to crowdsource amphibian species distributions and on invasive species across the country. This is in addition to the regular annual campaigns managed by the portal and many other programs are being planned..

For scalability and sustainability, we believe independent groups and researchers would use the group infrastructure and custom fields on their own for their research and action agenda. They will have the ability to independently exploit the platform for their purpose without the intervention of the portal administrators. We believe the enabling feature of the platform will see increasing decentralized use by researchers in crowd sourcing specific and targeted information on aspects of biodiversity for research and conservation action.

Building a consortium and institutionalizing the portal for long-term sustainability is the most challenging task. We are convinced that the task of assembling and maintaining biodiversity information cannot be the sole responsibility of one institution because of capacity limitations. In the ideal situation, there is consensus and shared ownership of the portal among a set of institutional partners. We have set up a constitution for an inclusive consortium and have enlisted members into working groups. We believe we have the basic framework in place, but we will need to evolve and cultivate the consortium with leadership, trust and ownership. Currently with 19 members in the consortium, we have a core group of ATREE, IFP and Strand who are committed to raising resources and ensuring long-term sustainability of the portal.

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

1. Scientific collection, curation, organization, and dissemination of biodiversity and ecosystem data of the Western Ghats via the Western Ghats Portal.
2. Building a virtual community of stakeholders on the biodiversity and conservation of the Western Ghats
3. Building a consortium of partners with governance structure

Actual Progress Toward Short-term Impacts at Completion:

The enhancement of species pages content was systematically started with a detailed data gap analysis of information available on the portal and the available estimates on the total number of species in the Western Ghats. Gaps in species pages are: Mammals: 6%; Reptiles: 8%; Fish: 10%; Plants: 11%; Amphibians: 12%; Molluscs: 50%; Birds: 69%; Fungi: 95% . Species groups such as mammals, reptiles, fish, plants and amphibians are well represented on the species pages module. Data on arthropods, birds, molluscs and fungi needed to be focused on. Based on the gap analysis we started looking for experts who could contribute content and enhance the Western Ghats information system. A total of 8 fellowships covering reptiles, odonates, diptera, spiders, plants and amphibians were awarded to various experts and data from the experts and

used to populate the species pages. Currently, the number of species pages on the portal stands at over 20,000 species pages and 28,000 species name stubs.

We have also added the ability for users and experts to request permission to add species page content along with their expertise and their bio-data. Based on their expertise and an evaluation by experts, they are allocated permissions to contribute to specific species groups, In these pages, experts can login and add and edit species pages content on-line via their browser. In this we have over 40 experts who have been given permission to add content. Many of them are very active in enriching media into species pages, adding synonyms and adding descriptive content to species pages. We expect that this form of crowd sourcing experts for adding content will grow to be an active and effective source of enriching species pages on the portal.

Over the year, the one major success we have had is the growth of a vibrant virtual community of users and experts interacting via the portal. The citizen science observation interface is the most active and vibrant component of the portal with over 100,000 observations and aggregating over a thousand observations every month. We have gone beyond the threshold and see an exponential growth of observations. With a user base of over 7000 registered users, currently over 20% of the users are contributors of content. This is considered very high in social media participation terms who claim a participation of less than 5%.

We have also seen other stakeholders being a part of the virtual community. Scientists seem to be using the data from the portal to examine and study patterns of biodiversity. We already have over 35 peer reviewed publications referring the portal for their scientific research. We also have registered over 400 downloads of data. We believe the community of researchers and conservationists will grow over the next few years.

We now have 19 consortium members who have agreed to a constitution. They are members of at least one of the working groups involved in providing strategy, direction, feedback and campaign for the information system. We have a core group consisting of French Institute of Pondicherry, Strand Life Sciences and ATREE who are involved in running and maintenance of the portal. They have weekly status meetings and are involved in raising resources for the portal. The basic foundation of a consortium that can evolve as it goes along has been established. We hope, over time the consortium governing structure will evolve and mature to provide long-term stability and sustenance to the portal.

In December 2014, we organized a community meet along with the 2nd Consortium meeting, where we extended an open invitation to the virtual community of users on the portal to come for the face-to-face community meeting. We had over 50 participants who attended the meeting. The community members had met each other virtually on the portal but a face-to-face to know each other their interests and meet the portal team was very rewarding for everybody. We intend continuing the community meet once an year in different locations across the country and in the Western Ghats.

Please provide the following information where relevant:

Hectares Protected: not relevant
Species Conserved: not relevant
Corridors Created: not relevant

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

The portal is now mature and has active participation. Participation is the single most successful achievement of the portal. We believe the principle of participation can be extended to other

areas of the portal, like documents, species pages and maps. The accumulation of data on the portal is also significant and is growing exponentially. It has matured as a platform for mediating biodiversity information on a large scale.

The major challenges over the long-term are (a) to build a sustainable consortium based governance structure for the portal and (b) to build an ecosystem around the portal. The initial work on building a consortium structure is in place. We need to build and evolve this as we go along. The task of building an ecosystem around has been initiated by discussions with various groups. We believe there are three main areas were synergies and collaborations will be valuable.

Education and awareness: The ability for students and citizens to interact with the portal, gather, and generate information can significantly help education and awareness programs. Engaging schools in understanding their environment, conducting biodiversity inventories of their surroundings, studying and analysing their data, doing comparative studies with their peers from other geographic regions in India, and interacting with experts will help inform, educate and build a constituency for advancing biodiversity conservation. The portal has been actively engaged in certain pilot projects involving schools and its benefits towards biodiversity education and helping build biodiversity information are beginning to show. Further effort needs to be made to scale up these programs across different geographies and in different aspects of biodiversity.

Conservation Science: We believe conservation science will go through a sea of change with the open availability of large scale biodiversity data. New species unknown to science are being discovered and new ranges of species are being defined. Over the last few months the portal has already seen such insights and we believe many more new species and range expansions will be discovered through the portal. The portal provides a unique platform where such reports can be followed up and acted upon, leading to authenticated scientific publications. Provisions that encourage and facilitate collaboration between amateur citizens and the scientific community need to be further strengthened such that the interaction is rewarding for both communities.

The portal has the ability to run citizen science programs that are gaining importance in many areas of science. In the area of conservation science, spatial and temporal distribution of biodiversity can be effectively gathered through citizen science projects and can lead to better understanding of natural systems and their dynamics. A few such projects are being attempted, and there is huge potential to run targeted citizen science projects in conservation through the portal.

Conservation and Development Planning: Given the development aspirations of the population, and the growth engine of the economy, there is a need for informed and data driven conservation and development planning. The rich data on the portal can be downloaded and used for analysis on environmental impact assessments. The portal can evolve into an information system that will identify known and potential areas of species richness, through aggregation of current data and other means such as ecological modeling. Such mechanisms will make it easy to identify and prioritise areas for conservation and development options. The availability of such information on an open access system will spur conservation research, planning and action.

Were there any unexpected impacts (positive or negative)?

The biodiversity information platform can have many unexpected positive impacts. Assembling a large open access database will impact conservation science and action. It will change the paradigm of conservation sciences in ways that can be unexpected.
Since the activity is mainly in the virtual, information space, we believe there can be not expected or unexpected negative effects from this project.

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):
Addressing data gaps on biodiversity, ecosystem services and development activities in the Western Ghats

Component 1 Actual at Completion:
At the beginning of the project the data gaps in the Western Ghats were analyzed. Based on these data gaps we identified resource persons and experts who could contribute content to the species pages of the portal. We provided 8 fellowships to individuals to curate and enrich data on the portal in different areas of biodiversity. They are: Vijay Barve (Aggregating species lists); Swara Yadav (200 Spiders); Nilesh Thaokar (100 Odonates); Meenakshi Malhotra (66 Diptera); Zeeshan Mirza (90 Scorpions, Tarantulas and Lizards); Madhumita Panigrahi (200 Birds); Vivek Prabhu (400 Fungi); Sameer Padhye (125 Heteroptera & Hemipterans). With this many of the data gaps identified for the portal were partially filled. We continue to track the data gaps on the portal and currently it stands at Mammals: 6%; Reptiles: 8%; Fish: 10%; Plants: 11%; Amphibians: 12%; Molluscs: 50% and Birds: 69%. We will solicit more contribution from these fellows and other identified experts in the future.

Component 2 Planned (as stated in the approved proposal):
Governance and Sustainability (Implemented jointly with Strand)

Component 2 Actual at Completion:
A constituting meeting of the consortium was held in August 2013 at IFP, Pondicherry followed by a second consortium meeting in December 2014 at KFRI, Kerala. A functional consortium with a constitution has been agreed upon by 19 consortium members. Each consortium organisation is a member of at least one working group with the responsibility of providing strategy, direction, feedback and campaign for the information system. We have a core group consisting of French Institute of Pondicherry, Strand Life Sciences and ATREE who are involved in running and maintenance of the portal. They have weekly status meetings and are involved in raising resources for the portal. The basic foundation of a consortium that can evolve as it goes along has been established. We hope, over time the consortium governing structure will evolve and mature to be provide long-term stability and sustenance to the portal.

Consistent efforts for securing sustainability of the portal initiative have been made in collaboration with the consortium members in the last six months. Three distinct funding possibilities were identified and two of them are being pursued with. Cooperation within the consortium members has increased. Overall the idea of the consortium has taken deep roots and has stimulated collaborative efforts. One has to channelise and groom these efforts so that the consortium as a whole can benefit being part of such collaborations in the long term.

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

Campaign for participation (Implemented jointly with Strand)

Component 3 Actual at Completion:
The portal has successfully been running campaigns to gather data on group themes. Some of the campaigns that were executed and are ongoing are listed below:

- Neighborhood Trees Campaign 2014: 22-28 April, 2014; enlisted over 600 participants to contribute 2283 observations of trees from across India, primarily from the Western Ghats. Resources on trees were compiled.
- National Moth Week 2014: 19-27 July 2014; Over 2800 observations were aggregated by 180 participants. Over 3300 species pages and 120 documents on moths were uploaded during the campaign. Directory of moth experts were created.
- Mapping the Malabar Tree Toad: Jun - Oct 2015; Aims to map the distribution of the endangered Malabar Tree toad (Pedostibes tuberculosus). Currently over 30 records have been aggregated.
- Neighborhood Trees Campaign 2015: April 22 - May 3, 2015; Over 2200 records aggregated covering 620 tree species of which over 80% have been identified.
- National Moth Week 2015: 18-26 July 2015; Ongoing.
- Spotting Alien Invasive Species: Scheduled for August 2015. Will aim to map the distribution of 20 alien invasive plants and animals of India.

We have also been engaging with different State Governments in the Western Ghats region on biodiversity conservation issues, research organisations and educational institutions. Research community is being actively mobilised for participation on species pages and the recently launched name curation interface. Several new groups have been formed such as TreesIndia, Frogwatch, Indian Moths, Ants of India, SpiderIndia, Beetles, Bugs, Avian demography, Agrobiodiversity of India, Lizards of Indian, Medicinal Plants, VNC India, Biodiversity of Andaman and Nicobar Islands, Wild Orchids of India, Spotting Alien Invasive Species, Coastal Karnataka Birders Network, Aquatic Macroinvertebrates of Meghalaya, BirdWatch, Tamiraparni wintering waterbird count, Roadkill Network and FungiIndia. We stay in touch with the membership body of the portal through regular mail updates on new features, new data and upcoming campaigns. Blogs are enabled on the portal providing information on usage of the portal like the citations of the portal in scientific peer-reviewed publications.

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

All were realised beyond committed deliverables.

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

WGP's code base is open and is available at http://www.github.com/strandls/biodiv which can be used by anyone interested to adopt and implement their own biodiversity information system.

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 portal is built as a generic biodiversity platform with a few basic organizing principles and data model. The data model is to reference all the biodiversity data into three axes, a taxonomic axis, a spatial axis and a temporal axis. When all information is disaggregated and referenced

into these three axes, the data has great flexibility and power and can be combined, searched and served in many ways depending upon the needs and requirements of the user. This design aspect has enabled great flexibility in building a generic bio-informatics platform.

At a functional level the modular nature of the platform with the map module, the species pages module, the observation module, and the discussion module allows great power for aggregating and serving biodiversity information. These modules are nicely integrated with each other through the data model of information. This provides the basis of enabling groups within the biodiversity platform to use the functions of these modules to aggregate and provide biodiversity information.

At the social level, the portal believed strongly in participation of stakeholders and is organized on the principle of open data and sharing content under clear Creative Commons license with attribution to the contributors. This contributes to transparency and wide use of the information for a variety of purposes. This principle also allows clear articulation and action, building openness and trust and an active principled community of users. This design aspect has contributed to encouraging large scale participation and collaborations among individuals and organizations.

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

Building a participatory social network portal takes effort and time. It involves building a virtual community with transparency and trust. The stability of the portal over a period of time with clear basic principle outlined above help in the growth of the portal. It has taken time to build and nurture this virtual community and over the last six months of the project period, we have seen the beginnings an exponential growth of observations and registered users on the portal, expanding the virtual community with a stake in biodiversity information system.

Other lessons learned relevant to conservation community:

All major learnings have been explained above. Last year we had travelled and presented the portal at international forums and at the Taxonomic Database Working Group meeting in Sweden. The portal was well received at the conference. We currently make three instances of the generic biodiversity information platform; the Bhutan Biodiversity Portal (BBP) and the WIKWIO portal for weeds of Indian Ocean Islands and Southern Africa.

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
EU ACP S&T II Program	C	Euros 38700	Partial funding of Wikwio project to IFP towards developers human resources costs
Strand Life Sciences (SLS)	A	USD 87798	Strand Life Sciences has provided partial development resources infrastructure support to the portal as well as managerial and software architecture support to the portal
Royal Norwegian Embassy - Ashoka Trust for Research in the Environment and Ecology (ATREE)	B	USD 10000	ATREE has secured finding from the Royal Norwegian Embassy for a whole variety of activities in biodiversity. Under this component, content creation and some development activity of the portal is supported.
French Institute of Pondicherry	A	USD 24500	Part of Salaries, Infrastructure costs and facilities

****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.

After the formalisation of the consortium, the core group has made several efforts in securing funds for continued expansion and enrichment of the portal. The consortium meetings in August 2013 and December 2014 discussed sustainability aspects of the portal. A road map was presented by the core group which was approved by the consortium members and each member's contribution were discussed. Joint partnership efforts will be made to obtain funding from different sources in 2015. We had applied for Google Impact awards, GEF small grants, JRS Biodiversity Foundation and European Commission's India specific Civil Society Organisations call. A grant from WIPRO Applying Thought in Schools for Biodiversity Inventory of Vembanad

has been secured. In partnership with ATREE a grant from Royal Norwegian Embassy has been obtained for biodiversity informatics content and development. We have interacted with the Omidyar Network for support for building a common lands database on the portal. They were interested but have already funded a global proposal on common lands. Another proposal to the Tata Trusts has been submitted and is under review. Dialogue has been initiated with the World Bank Environment Group representative who sounded very interested in the portal. We have submitted a proposal to IUCN on Project Tiger conservation in partnership with the Wildlife Institute of India. Results will be announced in August 2015. We are in dialog with the WIPRO Earthian project for using the India Biodiversity Portal for their schools project.

The project is eminently replicable and essential in other hotspot regions of the world. For the CEPF investments to be consolidated and exposed, an information system to systematize all the projects and knowledge of the hotspot will help long term conservation. In fact either the regional implementation agency or the central secretariat of the CEPF should consider an information system at a cost of 10% of the total investments in the region a desirable strategy.

The Western Ghats Portal has been developed as a generic open source biodiversity platform. The platform technology has been replicated as the Bhutan Biodiversity Portal (BBP) and the Weed Identification and Knowledge System for the Western Indian Ocean (WIKWIO) showing its capability as a generic biodiversity platform.

Summarize any unplanned sustainability or replicability achieved.

A tangible unplanned outcome is that the WGP/IBP code base has been replicated to build the Wikwio portal for the weeds of Western Indian Ocean and Southern African region.

Safeguard Policy Assessment

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

No

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:

Name: R Prabhakar
Organization name: Strand Life Sciences Pvt. Ltd.
Mailing address: 5th Floor, Kirloskar Business Park, Hebbal, Bangalore 560024

Tel: +91 80 4078 7263
Fax: +91 80 4078 7299
E-mail: prabha@strandls.com

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

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.	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.	No			
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	No			
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1below.	No			

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												
									Increased Income due to:												
	Small landowners	Subsistence economy	Indigenous/ ethnic peoples	Pastoralists/nomadic peoples	Recent migrants	Urban communities	Communities falling below the poverty rate	Other	Adoption of sustainable natural resources management practices	Ecotourism revenues	Park management activities	Payment for environmental services	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: