



# **Final Assessment of CEPF Investment in the Western Ghats Region of the Western Ghats and Sri Lanka Biodiversity Hotspot**

A Special Report  
October 2016

## OVERVIEW

The Critical Ecosystem Partnership Fund (CEPF) is a joint initiative of l'Agence Française de Développement (AFD), Conservation International (CI), the European Union, the Global Environment Facility (GEF), the Government of Japan, the John D. and Catherine T. MacArthur Foundation and the World Bank. CEPF provides strategic assistance to nongovernmental organizations (NGOs), community groups and other civil society partners to help safeguard Earth's biodiversity hotspots: the biologically richest yet most threatened ecosystems. A fundamental goal of CEPF is to ensure that civil society is engaged in biodiversity conservation.

CEPF commenced its investment in the Western Ghats and Sri Lanka Biodiversity Hotspot on May 1, 2008, following the approval of an ecosystem profile<sup>1</sup>: an investment strategy and situational analysis developed with stakeholder input. The CEPF Donor Council approved a spending authority of \$4.5 million to be awarded over five years. Following good performance of the portfolio, the spending authority was increased to \$6.1 million in 2012, and the investment period was extended to seven years. A total of 103 grants were awarded over this period, comprising 43 large grants (with budgets over \$20,000), 59 small grants (with budgets of \$20,000 or less) and a grant for the Regional Implementation Team (RIT) to provide local coordination and support to the program. With two exceptions, all grants ended by December 2015.

The report aims to assess attainment of the goals set in the ecosystem profile, summarize lessons learned arising from the grant portfolio that can inform the work of conservation organizations, and improve the delivery of future investments in the Western Ghats Region by CEPF or other conservation donors. It draws on experience, lessons learned and project reports<sup>2</sup> generated by civil society groups implementing CEPF grants. It also incorporates the findings of the final assessment workshop, which was held in Bangalore, Karnataka, on June 9-11, 2015. This workshop was attended by more than 120 participants, representing 45 of the 61 CEPF grantees in the Western Ghats.

## THE WESTERN GHATS REGION

CEPF investment is focused on the Western Ghats Region of the Western Ghats and Sri Lanka Hotspot, comprising parts of Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu states (Figure 1). The Western Ghats Region, which covers an area of 180,000 km<sup>2</sup>, is centered on a range of mountains that runs along the west coast of India. Although the region accounts for less than 6 percent of the national land area, it contains over 30 percent of all plant, fish, herpetofauna, bird and mammal species found in India, including a high proportion of endemic species. The region also hosts a spectacular assemblage of large mammals and is home to some of the most important protected areas in the country. Superimposed on this biological diversity is a rich human diversity, in the form of cultures, ethnic groups and traditional knowledge systems.

As a result of high variation in latitude, altitude and monsoon-dominated climate, the Western Ghats support a wide variety of habitats and, thus, high overall biodiversity. Long periods of isolation from similar habitats elsewhere in the Indian sub-continent have led to the development of high levels of endemism, particularly within the region's moist deciduous and evergreen forests. Among vertebrate groups, amphibians exhibit the highest level of endemism (78 percent of species found in the region are endemic), followed by reptiles (62 percent), fish (53 percent),

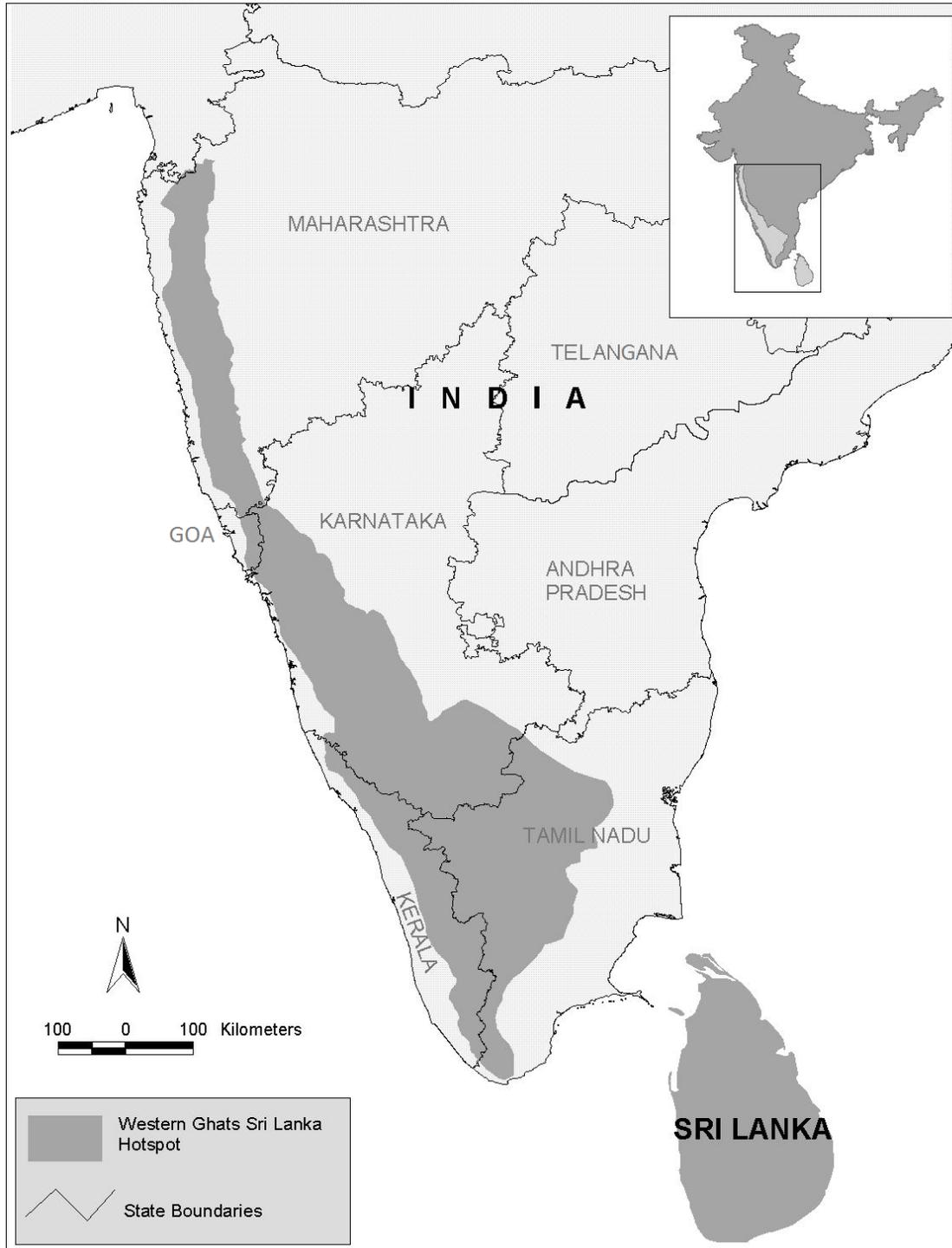
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<sup>1</sup> The ecosystem profile for the Western Ghats Region is available on the Web at [http://www.cepf.net/Documents/final.westernghatssrilanka\\_westernghats.ep.pdf](http://www.cepf.net/Documents/final.westernghatssrilanka_westernghats.ep.pdf) (PDF - 1.9 MB)

<sup>2</sup> All available final project reports can be downloaded from the CEPF Web site, [www.cepf.net](http://www.cepf.net)

mammals (12 percent) and birds (4 percent). Of the 4,000 species of flowering plant found in the Western Ghats, 1,500 (38 percent) are endemic. The Western Ghats also contain numerous medicinal plants and important genetic resources, including the wild relatives of various cereals (rice, barley, etc.), fruits (mango, mangosteen, banana, jackfruit, etc.), and spices (black pepper, cinnamon, cardamom and nutmeg).

**Figure 1. The Western Ghats and Sri Lanka Hotspot**



In addition to rich biodiversity, the Western Ghats are home to diverse social, religious and linguistic groups. The high cultural diversity of rituals, customs and lifestyles has led to the establishment of several religious institutions that strongly influence public opinion and the political decision-making process. The presence of hundreds of sacred groves and sacred landscapes in the region bears testimony to society's commitment to conservation.

The Western Ghats have a monsoonal climate, with between 2,000 and 8,000 mm of annual rainfall concentrated within a short span of three to four months, and perform critical hydrological functions. Over 365 million people live in the seven Indian states<sup>3</sup> that receive most of their water supply from rivers originating in the Western Ghats. Thus, the natural ecosystems of the region underpin the wellbeing of one person in every 20 on the planet. With the possible exception of Indo-Burma, no other hotspot impacts the lives of so many people. The forests and the soils of the Western Ghats also store one of India's largest carbon stocks.

The irreplaceable biodiversity and ecosystem service values of the Western Ghats are threatened by a variety of human pressures. Only one-third of the region is under natural vegetation, and much of this is degraded. One study estimated that, between 1920 and 1990, 40 percent of the original natural vegetation of the Western Ghats was lost or converted to open/cultivated lands, coffee and tea plantations and hydroelectric reservoirs. Driven by economic development, population growth, and rising demand for power, agricultural commodities and minerals, pressures on the region's natural ecosystems are intensifying. If these trends continue unchecked, the remaining forests will become ever more highly fragmented and face the prospect of increasing degradation.

In the face of this gloomy outlook, a ray of hope is cast by the diverse, committed and energetic civil society in the region, ranging from community groups to national NGOs. These organizations have played a critical role in conserving biodiversity and keeping it high on the agenda of national and state governments, despite pressure for rapid economic growth. Their success is largely due to society's respect for nature, strong democratic traditions, and appropriate institutions and policies. The challenge now is to strengthen conservation efforts in the face of expanding population, increasing demand for natural resources and strong economic growth.

## **CEPF NICHE**

Between 2008 and 2015, CEPF engaged and supported civil society organizations working on biodiversity conservation in the Western Ghats. CEPF's grant-making focused on geographic, taxonomic and thematic priorities set out in the ecosystem profile for the region, which was developed in 2003. Preparation of the profile was coordinated by the Ashoka Trust for Research in Ecology and Environment (ATREE), in collaboration with the Wildlife Conservation Society (WCS) India Programme and the University of Agricultural Sciences (UAS), Bangalore. Representatives of many of the NGOs, academic institutions and other civil society organizations active in the Western Ghats participated in the preparation process, to ensure broad input from the conservation community.

The ecosystem profile articulated a niche for CEPF investment in the region, which recognized that, throughout the region, unique habitats rich in biodiversity intersect with a human-dominated landscape. In order to sustain critical ecosystem functions and support viable wildlife populations, it is essential to maintain and restore the integrity of ecosystems at the landscape scale. For this to occur, conservation activities within protected areas need to be strengthened and effective

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<sup>3</sup> Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra, Tamil Nadu and Telangana.

strategies for conserving the substantial biodiversity in the adjoining unprotected areas must be developed. Because these areas face a complex array of threats, conservation can only be effective with the active involvement of civil society in protecting and restoring biodiversity on public as well as private lands. In this way, the CEPF niche sought to capitalize on the tremendous social and human resources of the region, by providing resources to civil society actors seeking to catalyze change and demonstrate innovative and effective approaches to conservation.

Specifically, the CEPF niche for investment in the Western Ghats was “to provide incremental support to existing protected area efforts and generate momentum for biodiversity conservation around protected areas to enhance habitat connectivity and enable greater civil society participation in conservation efforts”.

In line with this niche, the ecosystem profile defined three strategic directions for CEPF investment in the Western Ghats:

1. Enable action by diverse communities and partnerships to ensure conservation of key biodiversity areas and enhance connectivity in the corridors.
2. Improve the conservation of globally threatened species through systematic conservation planning and action.
3. Provide strategic leadership and effective coordination of CEPF investment through a regional implementation team.

To maximize impact and enable synergies among individual projects, 80 of the 126 Key Biodiversity Areas (KBAs) in the region were selected as priority sites for CEPF investment. In addition, 53 ‘critical links’ were defined that buffer or provide crucial connectivity between priority sites, based on the distribution of intact forest habitat and presence of unique and threatened ecosystems. The 80 priority sites and 53 critical links were concentrated within five landscape-scale conservation corridors: Periyar-Agasthyamalai; Anamalai; Mysore-Nilgiri; Malnad-Kodagu; and Sahyadri-Konkan. Finally, all 332 globally threatened species found in the Western Ghats were identified as priorities for species-focused conservation actions. The ecosystem profile for the Western Ghats Region was approved by the CEPF Donor Council on April 26, 2007.

## **COORDINATING CEPF INVESTMENT ON THE GROUND**

After approving the ecosystem profile, the Donor Council subsequently approved the appointment of ATREE as the RIT for the region on November 20, 2007. The RIT began work on May 1, 2008, and its contract ended on June 30, 2016. Over this period, ATREE worked closely with the CEPF Secretariat to coordinate and manage CEPF grant making in the Western Ghats Region. ATREE assembled a core team of full-time staff, supported by the knowledge and experience of senior fellows at the institution, and established peer review systems to ensure transparency and quality control for the grant making process. ATREE also managed a small grants mechanism, provided hands-on support to applicants and grantees, and ensured that all grants complied with the social and environmental safeguards of the World Bank.

ATREE added significant value to CEPF’s program in the Western Ghats, by: (i) reaching out to a wide spectrum of civil society groups and enabling them to access international donor funds, sometimes for the first time; (ii) enhancing the technical quality and relevance to CEPF investment priorities of individual projects, by providing feedback based on firsthand knowledge of the issues addressed and the capacities of the applicant institution; (iii) guiding the

development of a balanced grant portfolio, including by encouraging applicants to work synergistically and eliminate overlaps between projects; (iv) facilitating exchange of information, experience and lessons learned among grantees; (v) assisting applicants to negotiate the requirements of the Foreign Contribution Regulation Act (FCRA); and (v) helping early career conservationists identify work opportunities on CEPF projects.

## **IMPACT SUMMARY**

The impacts of the CEPF investment program in the Western Ghats are described in detail in Annex 2 and can be summarized as follows:

- Coherent and balanced grants portfolio developed, comprising 103 grants with a total value of \$6 million.
- Global threat assessments undertaken for 1,394 species, as a basis for more effective and better targeted conservation planning and action.
- Species recovery and management plans implemented for 14 priority species, comprising three mammals, four birds, five fishes and two plants.
- Web-based portal on the biodiversity and ecosystem service values of the Western Ghats launched and populated by a growing community of data-holders, featuring a citizen-science interface that accumulated over 1 million observations.
- Four new conservation reserves notified, covering more than 41,000 hectares and piloting a model for conservation of sites where human wellbeing and natural ecosystems are inextricably linked.
- Community Forests Rights (CFR) of tribal communities officially recognized across a cumulative area of 80,700 hectares, helping to rectify an historical injustice and establish a basis for communal management of natural resources.
- Conservation agreements piloted as a conservation tool at three priority sites in the Sahyadri-Konkan Corridor and a critical link in the Periyar-Agasthyamalai Corridor.
- Sustainable agricultural practices adopted by 34 tea and coffee estates, covering more than 19,000 hectares, and commitments obtained from major international brands to source supplies from Rainforest Alliance Certified™ farms in the Western Ghats.
- Biodiversity conservation strengthened in over 220,000 hectares within protected areas and over 110,000 hectares in production landscapes outside of protected areas.
- Critical habitat linkages protected between the Sahyadri-Konkan and Malnad-Kodagu Corridors and within the Mysore-Nilgiri, Anamalai and Periyar-Agasthyamalai Corridors, reinforcing ecological connectivity at the landscape scale.
- The Nilgiri Natural History Society launched, as a vehicle to promote interest and involvement in the conservation of the Nilgiri Biosphere Reserve.
- Forty-three civil society organizations directly engaged as CEPF grantees, in addition to 19 individual grantees.
- Traditionally polarized groups working on conservation from wildlife conservation and tribal rights perspectives brought together for the first time around a common agenda.
- Socially just conservation promoted as a vehicle for long-term sustainable use and conservation in protection as well as production landscapes.
- Innovative approaches and partnerships catalyzed involving NGOs, corporate sector, academia and government.
- \$11 million per year in conservation investment for the Western Ghats of Tamil Nadu catalyzed from the state government.
- Over 100 individuals trained in various aspects of conservation science and practice.

Taken together, the achievements of the CEPF grant portfolio in the Western Ghats contribute to 12 of the 20 Aichi Biodiversity Targets of the Convention on Biological Diversity's Strategic Plan for Biodiversity 2011-2020 (Annex 5).

## **IMPLEMENTING THE STRATEGY**

The final assessment workshop took place towards the end of the seven-year CEPF investment program, when most of the grants awarded had either ended or reached a point where the key results were known. This allowed for a dynamic exchange of lessons learned among grantees, while they were still fresh in people's minds. The final assessment report was drafted a year later, when all grants apart from one<sup>4</sup> had ended, and the full results from the grant portfolio were known. This allowed the results of the program to be evaluated against the goals set out in the ecosystem profile.

### ***Calls for Proposals***

CEPF grant making in the Western Ghats began in May 2008, with the award of the RIT grant, and continued until October 2013, with the award of the final grant. Small grants were contracted by ATREE, following a single-stage process, whereas large grants were contracted directly by CEPF, following a two-stage process comprising a Letter of Inquiry (LoI) followed by a full proposal from shortlisted applicants. The remainder of the investment program allowed time for awarded grants to be implemented, impacts monitored, and results disseminated to key audiences.

The RIT grant was awarded through a competitive process. The request for proposals was issued on July 11, 2007, with a final decision being made by the CEPF Donor Council on November 20 of that year. There then followed four calls for proposals. The first was issued on December 1, 2008, as an open call, covering all geographic and thematic priorities of the CEPF investment strategy (other than the RIT function). The second call was staggered, with the call for large grant applications being issued on November 17, 2009, followed by the call for small grant applications on February 1, 2010. The purpose of this call was to fill geographic and thematic gaps in investment after the first round. The third call was made on April 30, 2011, with the objective of addressing investment gaps and opportunities identified during the mid-term assessment. Finally, the fourth call was made on November 15, 2012, to award the additional funds allocated to the Western Ghats portfolio by the Donor Council. As there were relatively few gaps in the investment portfolio at that point, the fourth call emphasized consolidating and amplifying the results of earlier CEPF projects. In particular, it encouraged applications that leveraged financial support from government programs or integrated results into district, state and national policy.

Proposals received were subjected to external review by experts familiar with the project context and/or field, as well as internal review by ATREE fellows and (in the case of large grants) the CEPF Grant Director. On the basis of these reviews, applications were shortlisted and presented to a review panel comprising representatives of the RIT, NGOs, academic institutions and the CEPF Secretariat. For the third and fourth funding rounds, shortlisted applicants were invited to present their project ideas to the review panel in person, which was found to be a very effective means of clarifying aspects of project design that were unclear from the submitted proposals.

Under the first call for proposals, 36 small grant applications were received, of which 22 (61 percent) were awarded. In addition, 59 large grant applications were received, of which 18 (31 percent) were awarded. The success rates for applications under the second funding round

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<sup>4</sup> One grant was extended into 2017, to allow new species descriptions to be published in scientific journals prior to publication of the final technical output from the project.

were considerably lower, with only 10 out of 73 small grant applications (14 percent) and two out of 30 large grant applications (7 percent) being awarded. The reasons for the lower success rates under the second round are not totally clear, as the intention was to award a greater number of grants under this round. One possible explanation is that many civil society organizations with well developed ideas for conservation projects, in line with the CEPF investment strategy, had already submitted them under the first call and were not ready to consider follow-on activities or new project ideas.

Under the third call, nine out of 40 small grant applications (23 percent) and nine out of 16 large grant applications (56 percent) were awarded. Under the fourth call, grant awards were made to 13 out of 45 small grant applications (29 percent) and 19 out of 50 large grant applications<sup>5</sup> (38 percent). The quality of proposals received under the third and fourth calls for proposals was notably higher than under the first two rounds, which can be attributed to the more focused scope of the calls, greater familiarity of applicants with CEPF's investment strategy, and the RIT's efforts in managing expectations of potential applicants about the type of applications that were likely to succeed. Under both rounds, a greater proportion of applications would have been awarded, had sufficient funding been available to do so.

Overall, 28 percent of small grant applications and 31 percent of large grant applications were successful, which approximates to a success rate of one in three (Annex 1, Chart 3). This is a high success rate compared with many other grant programs available to conservation-focused civil society groups in India, and reflects a considerable investment of time and energy by the RIT in providing guidance to applicants on ensuring high technical quality of their proposals and a close fit to the CEPF investment strategy.

### ***Grantee Performance***

At the end of each grant, the performance of the grantee was evaluated, with regard to delivery of the expected results set out in the proposal, as well as with regard to compliance, management and reporting. Of the 44 large grants in the portfolio, 33 (75 percent) were evaluated as having met or exceeded expectations with regard to delivery of expected results, as were 44 out of the 59 small grants (also 75 percent). Given the deliberate emphasis on engaging a diversity of civil society actors in the program (some of which had capacity limitations) and the focus on innovative approaches (which are inherently challenging), the overall level of grantee performance was considered satisfactory. Even among the 25 percent of grants that did not meet expectations, the vast majority were evaluated as having met expectations in some regards. Only a single small grant was evaluated as having completely failed to meet expectations.

Many of the reasons for grants not meeting expectations were particular to the grant in question. One general lesson, however, was that, in a few cases, CEPF and ATREE may have over-estimated the capacity of applicant institutions and/or the principal investigator to implement a large grant and/or manage a large team, especially if it was a small institution that depended upon one or two key individuals. In future, if faced with a similar situation, CEPF and the RIT should perhaps pay more attention to assessing applicants' capacity prior to grant approval.

### ***Collaboration with CEPF Donors***

Throughout the investment program, ATREE and the CEPF Secretariat made efforts to inform and engage regional and headquarters staff of CEPF's donors. A member of staff from the AFD country office participated in the mid-term assessment, and provided helpful feedback on CEPF

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<sup>5</sup> Due to limited funds, five of the successful large grant applicants were awarded small grants only.

implementation. This was followed by a visit by CEPF staff to the AFD country office in New Delhi, to share preliminary results of the program.

In advance of the Convention on Biological Diversity COP-11 meeting in Hyderabad, CEPF Working Group members from AFD, the European Union and the GEF visited CEPF grants in the Periyar-Agasthyamalai Corridor, and gave useful guidance at project and portfolio levels. This was followed by a CEPF side event at COP-11, attended by representatives of five of CEPF's donors and numerous CEPF grantees.

CEPF Task Managers from the World Bank participated in two RIT supervision missions and site visits to grants in the Anamalai and Malnad-Kodagu Corridors, and provided valuable feedback and advice, especially on the implementation of the Bank's social safeguard policies. ATREE and CEPF Secretariat staff visited the World Bank country office in New Delhi on several occasions, and Dr Anupam Joshi from the World Bank visited CEPF grantees in the field, as well as participating in the final assessment workshop. Through these interactions, approaches demonstrated by CEPF grantees are being taken up into several World Bank projects in the forest sector.

CEPF Secretariat staff made several visits to the Ministry of Environment and Forests, which houses the GEF Operational Focal Point for India, to brief officials on implementation of the investment program and explore opportunities for synergy with government programs. One specific request that was responded to was to prioritize some CEPF funds for civil-society-led actions that address priorities in the National Tiger Recovery Programme for India.

Other opportunities for collaboration with CEPF donors arose during the implementation of individual grants. For example, a large grant to the International Union for Conservation of Nature (IUCN) for freshwater Red List assessments complemented a similar project in the Eastern Himalayas funded by the MacArthur Foundation. The two grants allowed a consistent approach to be implemented in the two areas. Furthermore, two large grantees, Applied Environmental Research Foundation (AERF) and Foundation for Ecological Research, Advocacy and Learning (FERAL), received complementary support from CI's Conservation Stewards Program, which enabled them to draw on experience from other countries with conservation agreements: negotiated agreements with local communities that provide concrete, periodic benefits in exchange for specific, measurable conservation commitments.

### ***Portfolio Status***

Over the course of the investment program, 103 grants were awarded, totaling \$6.1 million. The de-obligation of unspent funds from closed grants (mainly small grantees, who returned, on average, \$1,200 per grant) brought the adjusted figure<sup>6</sup> down to \$6,013,021 (Table 1). Of this total, \$4.9 million (82 percent) was committed to local groups and individuals, with the remainder going to international groups. This reflects the strong, dynamic and widespread local civil society presence in the region. Grants to international groups were only awarded when they could demonstrate clear value added, and in each case the grants went to groups with established programs in India: the French Institute of Pondicherry; IUCN; Rainforest Alliance; the Royal Society for the Protection of Birds (RSPB); and WCS.

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<sup>6</sup> All figures for grant awards given in this report refer to the actual amount disbursed, adjusting for de-obligations of unspent funds.

**Table 1: Status of CEPF grant portfolio in the Western Ghats, as of September 30, 2016**

<b>Strategic Direction</b>	<b>Allocation</b>	<b>Grant awards</b>	<b>Balance</b>
SD1	\$3,227,000	\$3,187,465	\$39,535
SD2	\$2,200,000	\$2,184,686	\$15,314
SD3	\$650,000	\$640,870	\$9,130
<b>Total</b>	<b>\$6,077,000</b>	<b>\$6,013,021</b>	<b>\$63,979</b>

The grants awarded leveraged \$3.2 million in co-financing, including counterpart funding and in-kind contributions. This figure does not include INR 75 crores (equivalent to \$11.25 million) per year that was committed by Tamil Nadu State Government towards the Special Area Development Programme. This program, which is designed to conserve biodiversity in districts that fall within the Western Ghats, was developed with technical assistance provided through a CEPF grant, and incorporates many of the models demonstrated by CEPF grantees in the state.

The awarded grants comprised 56 under Strategic Direction 1, totaling \$3.2 million; 46 under Strategic Direction 2, totaling \$2.2 million; and a \$640,870 grant under Strategic Direction 3 for the RIT (Annex 1, Chart 1). Excluding the RIT grant, large grants ranged in size from \$24,900 to \$499,443, with a mean of \$105,366. Only two grants larger than \$250,000 were awarded: a grant to FERAL to pilot innovative payment for ecosystem services mechanisms; and a grant to WCS to improve protected area effectiveness through rigorous monitoring of wildlife populations and threats. Small grants ranged from \$602 to \$20,000, with a mean of \$14,261. Annex 3 provides a full listing of all grants awarded.

There was a reasonably even geographic spread of projects across the five priority corridors, complemented by numerous cross-cutting projects (Annex 1, Chart 2). The Mysore-Nilgiri Corridor received the greatest concentration of grants, reflecting the fact that this was one of the largest corridors, with the greatest concentration of civil society organizations working on conservation-related issues. There was also a good thematic spread of projects across the different investment priorities in the ecosystem profile, with the main gap being Investment Priority 2.3 (Evaluate the existing protected area network for adequate globally threatened species representation and assess effectiveness of protected area types in biodiversity conservation), which few civil society organizations appeared willing to take on.

CEPF grant making in the Western Ghats was guided by an ecosystem profile prepared in 2003. Due to delays in getting the necessary funding in place, the CEPF Donor Council approved the ecosystem profile only in May 2007, and grant making began the following year, with the final grants being awarded in 2013. Consequently, the investment strategy was between five and 10 years old at the time of grant making, and the relevance of the investment priorities set out in the document to current conservation challenges diminished over time. This required considerable work on the part of CEPF and the RIT, both to ensure consistency between the objectives of proposed projects and the CEPF investment priorities, and to update the investment strategy to better respond to contemporary conservation needs and opportunities, as identified by local stakeholders. One way that this was done was by narrowing the niche of calls for proposals, to encourage applicants to address specific, identified issues. Any future investment in the Western Ghats should be preceded by a major overhaul and updating of the ecosystem profile, to reflect the major changes to the context for biodiversity conservation that have taken place since it was originally prepared.

### ***Portfolio Overview: Strategic Direction 1***

CEPF investment under this strategic direction aimed to enable action by diverse communities and partnerships to ensure conservation of key biodiversity areas and enhance connectivity in the corridors. This strategic direction was intended to address and reverse fragmentation and degradation of natural habitats, and thereby enhance ecological connectivity at the landscape scale, which is essential to maintaining critical ecosystem functions and viable wildlife populations. The strategy adopted by CEPF was to make a limited number of targeted investments in the conservation of protected areas, which form the core sites in landscape-scale conservation corridors, by supporting civil society to establish partnerships with state agencies to implement science-based management (Investment Priority 1.3). While emphasized in the investment strategy, this did not prove to be a major niche for civil society in the Western Ghats, as very few groups combined the specialist knowledge and credibility in the eyes of the Forest Department necessary to engage constructively in strengthening protected area management.

A greater focus for CEPF was, therefore, investments in the wider matrix, to enhance connectivity within and between corridors. This was achieved in two ways. First, partnerships were supported to identify, evaluate, and advocate for suitable mechanisms that incorporate critical links (biological corridors) into the protected area network (Investment Priority 1.2). Second, piloting models of community and private reserves were piloted to achieve conservation outcomes at priority sites and critical links in unprotected areas (Investment Priority 1.1).

Investment Priority 1.1 received a relatively modest amount of funding, with 18 grants totaling \$758,621 (equivalent to 13 percent of awarded funds). These grants were targeted strategically, to diverse local organizations and individuals, who piloted a variety of approaches to site conservation that provided alternative models to conventional protected areas. There was seen as being a need for such models in the Western Ghats, as socially just conservation solutions that recognize local communities and private landowners as positive stakeholders, and seek to give them a role in management and an equitable share of benefits arising from conservation.

One approach piloted under Investment Priority 1.1 was the establishment of conservation reserves: a category of protected area that allows for co-management between the Forest Department and local communities. Despite being provided for in the 2002 Wild Life Protection (Amendment) Act, only a single conservation reserve had been declared in the Western Ghats prior to the CEPF investment program there: Tiruvudaimarudur Conservation Reserve in Tamil Nadu, declared in 2005. Several CEPF grantees identified potential sites for designation as conservation reserves, such as the Centre for Environment and Development (CED), which identified four such sites in the Periyar-Agasthyamalai Corridor and submitted proposals to declare them as conservation reserves to Kerala Forest Department. Across the border in Tamil Nadu, the Wildlife Information Liaison Development Society (WILD) prepared conservation reserve proposals for three contiguous sites in the Anamalai Corridor, encompassing a total area of approximately 22,000 hectares in Theni district, which are under consideration by the Forest Department.

The gazettal process for conservation reserves tended to be slow, as there was limited precedent for seeking formal approval and high turnover in Forest Department officials require proponents to restart the process repeatedly. Nevertheless, some conservation reserve proposals developed by CEPF grantees, in consultation with local communities, were formally approved by the Forest Department during the CEPF investment program. For instance, Aghanashini Lion-tailed Macaque Conservation Reserve, a 29,952 hectare area in the Malnad-Kodagu Corridor, was declared by Karnataka State Government in June 2011, based on work by small grantees B. L. Hegde and H. N. Kumara. A detailed management plan for the conservation reserve was

subsequently developed by Snehakunja Trust, under a follow-on grant, alongside mechanisms to enable local communities to play an active role in management of the reserve and share benefits from the sustainable management of non-timber forest products (NTFPs).

Other approaches tested by grantees under Investment Priority 1.1 included assisting tribal communities to manage land and natural resources they have customary rights to in ways consistent with biodiversity conservation. Several grantees made use of provisions of the 2006 Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (a.k.a. the Forest Rights Act) to secure communal rights to forest resources. For example, CED, in partnership with the Western Ghats Hornbill Foundation, supported tribal communities in the Kerala portion of the Anamalai Corridor to secure official recognition of their CFR over a cumulative area of 80,700 hectares. A similar approach was adopted in Gudalur Forest Division in the Mysore-Nilgiri Corridor, where Action for Community Organization, Rehabilitation and Development (ACCORD) empowered 23 tribal gram sabhas to develop CFR claims and submit them to the Sub Divisional Level Committee. In addition to helping communities secure recognition of their community forest rights, CEPF grantees also assisted them to manage these resources sustainably. For instance, MES Asmabi College, in collaboration with the Western Ghats Hornbill Foundation, engaged members of the Kadar tribal group in monitoring and protecting populations of hornbills and their nesting trees in Vazhachal Forest Division and Parambikulam Tiger Reserve.

A third approach, which was tested by Keystone Foundation and ACCORD in the Mysore-Nilgiri Corridor and also by AERF in southern Maharashtra, was to revitalize traditional knowledge and customs as a route to conserving forest fragments within anthropogenic landscapes. These grantees helped tribal communities map and restore sacred groves and promote their recognition by private landowners and the State Tribal Welfare Department, in order to prevent further encroachment.

Investment Priority 1.2 received more funding than any other, with 18 grants totaling \$1,536,408 (26 percent of awarded funds). These grants piloted a range of approaches aimed at securing critical links (biological corridors) between priority sites, and thereby consolidating ecological connectivity. Such connectivity is essential for maintaining ecological processes, supporting viable populations of species with large area requirements, such as tiger (*Panthera tigris*) and hornbills, and ensuring that natural ecosystems and the services they provide are resilient to the effects of climate change. Civil society organizations showed themselves to be well placed to demonstrate innovative approaches to securing critical links within production landscapes, thereby complementing and linking conventional protected area approaches led by government.

One approach to securing critical habitat linkages adopted by grantees was to identify and map them, understand the social context within which they are found, and use these data to promote their protection by the relevant authorities. For instance, Asian Nature Conservation Foundation (ANCF) developed a GIS database of critical habitat linkages for mammal species in the Periyar-Agasthyamalai Corridor, and promoted it among state agencies as a tool for landscape-scale conservation planning. Similarly, the Wildlife Trust of India (WTI) developed plans to secure seven critical habitat corridors for Asian elephant (*Elephas maximus*) in the Mysore-Nilgiri Corridor, with input from local stakeholders.

A similar approach was to identify critical links threatened by linear intrusions, such as highways, railroads and power lines, evaluate the impacts of these intrusions on ecological connectivity, and develop mitigation measures in collaboration with concerned stakeholders. FERAL did this in the Shencottah Gap, where the northern and southern parts of the Periyar-Agasthyamalai Corridor are

fragmented by a highway and railroad. The project identified two species whose movement across the Shencottah Gap is currently prevented by linear intrusions (tiger and Asian elephant), identified two potential crossing points to facilitate large mammal movement, designed potential mitigation structures that could be built by relevant government agencies, and integrated the results into the Tiger Conservation Plans for Kalakkad-Mundanthurai and Periyar Tiger Reserves. A similar approach was adopted by WTI, which analyzed the ecological impacts of linear intrusions in the Mysore-Nilgiri Corridor, formulated practical mitigation measures, and promoted their adoption by state and national agencies.

Another threat to ecological connectivity in the Western Ghats is major development projects in natural resource sectors, especially energy and mining. CEPF grantees responded to this threat by empowering local communities and grassroots groups to take advantage of available legal tools to ensure that due account is given to the ecological impacts of development projects during the environmental and forest clearance processes. Through two grants to Environics Trust, for instance, local cells of the Environmental Impact Assessment (EIA) Resource and Response Centre were established in Goa and Tamil Nadu, through which support and advice were provided to local groups with more than 50 cases of actual or potential ecological damage.

An alternative approach piloted by grantees was to work with private sector companies to introduce more environmentally and socially sustainable management practices to their landholdings and, thereby, improve their contribution to ecological connectivity at the landscape scale. For instance, Nature Conservation Foundation (NCF) and Rainforest Alliance promoted sustainable practices on 34 tea and coffee estates in the Mysore-Nilgiri and Anamalai Corridors, through development of markets for certified products and provision of technical advice to estate managers. A similar approach was attempted by FERAL, in collaboration with Rainforest Alliance, in rubber estates in the Periyar-Agasthyamalai Corridor, although progress was limited by factors outside these organizations' control. Further north, Cheryl Nath promoted the conservation of native trees in coffee agro-forestry landscapes in the Malnad-Kodagu Corridor.

As well as engaging with the owners of large estates, grantees also worked with small landowners to incentivize them to maintain or introduce management practices consistent with biodiversity conservation on their landholdings. For instance, Jayant Kulkarni explored possible policy measures for the conservation of private forests in southern Maharashtra, with a focus on the corridor between Koyna and Chandoli Wildlife Sanctuaries. A key finding from this work was that strict protection may not be acceptable to private landowners but that sustainable harvesting, based on principles of scientific forestry, may generate sufficient returns to make retaining forest cover an attractive alternative to converting it to other land uses. In the same landscape, AERF piloted various financial incentives for conservation of forest on private land, including conservation agreements (described earlier) and certification of sustainably harvested medicinal and aromatic herbs under the FairWild accreditation program.

Other financial incentives were piloted in the Periyar-Agasthyamalai Corridor by FERAL, to incentivize small landholders to implement management measures that maintain and restore habitat connectivity within two critical links. At one of these sites, outside of Srivilliputhur Grizzled Giant Squirrel Sanctuary, an innovative auction system was piloted, to establish a fair price for participating landholders when compensating them for the opportunity costs of conservation. CEPF grantees explored various avenues to finance these incentives in the long-term, including private sponsorship and contributions from government funding mechanisms. Unfortunately, securing sufficient resources to scale up pilot initiatives has proved elusive to date, although several former grantees were still pursuing opportunities at the time of writing.

Investment Priority 1.3 received \$892,435 (15 percent of awarded funds) across 19 grants. Partnering effectively with the Forest Department or other government agencies to promote science-based management of priority sites is not something that every civil society organization is willing or able to do. Nevertheless, a significant number of CEPF grantees did so successfully. A case in point was WCS, which implemented a large grant to improve the effectiveness of protected area management in Karnataka, through enhanced civil society support and rigorous monitoring of wildlife populations and threats. By maintaining close partnerships with the Forest Department at all levels, this project built capacity among field staff, and provided actionable information to inform protected areas planning and management. The ultimate outcomes included improved, science-based management of protected areas across the state, and expansion of protected areas to incorporate previously under-protected habitats.

In the Nilgiri Biosphere Reserve, Keystone Foundation promoted the adoption of financing mechanisms to incentivize conservation of priority sites outside the protected area network. To this end, the grantee explored the feasibility of developing payment for ecosystem services (PES) mechanisms for three services: hydrological regulation; provisioning of NTFPs; and pollination. For the former two cases, it seems that there are fundamental barriers to developing PES mechanisms involving financial flows from “buyers” of the service to “sellers”. Rather, the way forwards seems to involve using information on the values and dynamics of these services to improve understanding between different actors of their respective roles, and facilitate the introduction of policies that conserve and restore natural ecosystems. In the case of pollination, however, there seems to be potential to establish something closer of a conventional PES mechanism, involving investment by private agricultural estate owners in conservation of natural ecosystems and/or pesticide-free farming. The project was able to test different models, although more time will be required to refine models to the point that they are suitable for wider replication.

In a departure from the expert-driven approaches favored by most CEPF grantees, Arulagam and Care Earth Trust piloted a bottom-up approach in Sathyamangalam Tiger Reserve and adjacent areas, whereby local communities were empowered to conduct ecological research along the Moyar River, and develop conservation micro-plans. This approach proved successful, and some of the panchayats (local governments) involved allocated funding for micro-plan implementation from within their budgets.

### ***Portfolio Overview: Strategic Direction 2***

CEPF investment under this strategic direction aimed to improve the conservation of globally threatened species through systematic conservation planning and action. This was intended to benefit species threatened with extinction globally, whose conservation would not necessarily be guaranteed by continued efforts to maintain and enhance habitat connectivity within the five conservation corridors. Certain species were assessed as requiring targeted conservation action, either because they face specific conservation issues (such as poisoning or human-wildlife conflict) or because they occur in ecosystems not well represented within the protected area network (in particular, wetlands). Other species were simply too poorly known to assume, with any confidence, that their conservation was being addressed by current strategies; these were assessed as priorities for research and assessment, to establish conservation priorities and evaluate their representation within existing conservation areas.

To this end, CEPF supported work to conserve species requiring targeted action, through the creation and implementation of recovery and management plans for selected Critically Endangered and Endangered species (Investment Priority 2.2). In parallel, species for which there was an overriding need for information to inform conservation action were addressed by

conservation status assessments and monitoring, with a particular emphasis on lesser-known taxa, such as reptiles and fish (Investment Priority 2.1). The results of these exercises were then used to evaluate the existing protected area network for adequate globally threatened species representation (Investment Priority 2.3), and made available to wider audiences through interdisciplinary efforts to analyze and disseminate biodiversity data (Investment Priority 2.4).

Investment Priority 2.1 was heavily oversubscribed, due to the large number of researchers interested in accessing CEPF funding to support baseline surveys or ecological research on lesser-known (and sometimes not-so-lesser-known) taxa. Consequently, CEPF and ATREE needed to be very selective and strategic in their investments, and focus on those projects that promised results with clear application to conservation planning and management. A total of \$790,850 (13 percent of awarded funds) was awarded under this investment priority, across 16 grants. The taxonomic groups that received the most attention under this investment priority were ones for which available data were either very patchy or had never been collated and used to systematically assess global conservation status, namely reptiles, freshwater fishes and other aquatic taxa. The lack of comprehensive status assessments of these groups was previously a major obstacle to addressing their conservation, particularly because they contain higher levels of localized endemism than better studied groups, such as mammals and birds, and tend to be less well represented within protected area networks.

Some grantees undertook comprehensive global Red List assessments of taxonomic groups, including WILD for reptiles, and IUCN for freshwater fishes, plants, odonates and mollusks. Other grantees addressed information gaps on the spatial distribution of lesser known taxa (the so-called ‘Wallacean Shortfall’) through primary field surveys, including the Indian Institute of Science for frogs, snakes and lizards, the Bombay Natural History Society (BNHS) and Rajeev Raghavan for freshwater fishes, Devcharan Jathanna for small carnivores, and Manju Siliwal for tarantulas. These studies resulted in the description of multiple new taxa for science, as well as new species records for India. It is notable that the key baseline studies and Red List assessments supported by CEPF led to applied conservation action, such as work by Zoo Outreach Organisation (ZOO) to integrate the results of the freshwater and reptile assessments into national policy.

Moving from research to action, 12 grants were awarded under Investment Priority 2.2, totaling \$465,587 (8 percent of awarded funds). These grants supported efforts to conserve 22 globally threatened species (6 CR, 8 EN, 8 VU), through the development and implementation of action plans and other species-focused interventions. These species include four vultures threatened by poisoning with veterinary drugs, which were targeted by grants to Arulagam, RSPB, the Rural Agency for Social and Technological Advancement (RASTA) and Sahyadri Nisarga Mitra. This work contributed significantly to reduction in threats to vultures in the Moyar Valley of Tamil Nadu, the Wayanad region of Kerala and the Konkan region of Maharashtra. Elsewhere, Snehakunja Trust promoted the conservation of six globally threatened plant species (plus many other threatened species that have yet to be assessed on the IUCN Red List) threatened by the loss of their freshwater swamp habitat, through establishment of decentralized, community-owned tree nurseries and restoration of degraded swamps. The protocols developed under this project proved so successful that they were supported by the Karnataka State Western Ghats Task Force for wider restoration of *Myristica* swamps, 98 of which were identified in Uttara Kannada district under the project.

Although such projects made important contributions to the conservation of the targeted species, only a small proportion of the 203 Critically Endangered and Endangered species identified in the ecosystem profile benefited from species-focused conservation actions, due to limited resources

and, in many cases, a lack of conservationists working on the species in question. One way in which grantees responded to these limitations was by adapting the ‘Alliance for Zero Extinction’ (AZE) site concept to the Indian concept, as a means of inspiring more people to become involved in the conservation of highly threatened species, and attracting financial support. The AZE site concept was applied on a pilot basis by Navadarsan Public Charitable Trust at Periyar Lake, which supports three Endangered fish species known from nowhere else. This pilot was successful in engaging stakeholders who had not previously participated in conservation actions, ranging from local villagers to hobby fishermen. The AZE site concept was also applied to mammal conservation by BNHS, to promote the conservation of Kondana soft-furred rat (*Millardia kondana*).

Compared with the other investment priorities, Investment Priority 2.3 received the smallest amount of investment, with only two grants, totaling \$43,947 (2 percent of awarded funds). One grant, to ZOO, applied the results of the reptile and freshwater Red List assessments to evaluate the effectiveness of the Western Ghats protected area network with respect to these groups. The other grant, to FERAL, conducted a gap analysis of the Periyar-Agasthyamalai Corridor for arboreal mammal conservation.

Investment Priority 2.3 was explicitly prioritized under all four calls for proposals but very few applications were received. All applications that were received focused on protected area gap analysis, and none addressed the second aspect of the investment priority related to assessing the effectiveness of different types of protected area at conserving biodiversity. Feedback from civil society groups suggested that it was very challenging for them to engage with the Forest Department on this issue. With hindsight, it may have been unrealistic to include this in the CEPF investment strategy.

Investment Priority 2.4 received \$884,303 (15 percent of awarded funds), spread across 16 grants. The bulk of this investment comprised two pairs of grants to the French Institute of Pondicherry and Strand Life Sciences Ltd to develop an open-access, on-line portal to enable sharing of information on the biodiversity of the Western Ghats and catalyze collaboration among different sections of civil society. This initiative involved other institutions and emerged as an exciting collaboration in the field of bioinformatics in India: the Western Ghats Portal/India Biodiversity Portal. After a long period of platform development and promotion of the portal among potential users, a critical mass was achieved. By September 2016, the number of species observations had crossed 1 million and was growing exponentially, while the number of user registrations had reached 9,000 and was also growing rapidly. In order to maximize the utility of the portal as a tool for local civil society, CEPF awarded three small grants to FERAL to compile additional spatial data and build capacity in GIS analysis to support conservation planning in the region.

Other investments under Investment Priority 2.4 sought to leverage data generated by CEPF grantees, including those stored on the Western Ghats Portal, to disseminate the results of their work to key audiences. Several grantees targeted the general public, through production of local language materials. For instance, Green India Trust produced a series of community primers in Kannada, disseminating the results of work by other grantees, and used them to raise awareness of key conservation issues among school pupils, community members and frontline Forest Department staff in Uttara Kannada and Chikmagalore districts. Further south, CED, working in partnership with the Western Ghats Hornbill Foundation and drawing on data provided by many CEPF grantees, produced a wide range of educational materials in Malayalam, Tamil and local tribal languages, raising awareness of biodiversity and conservation materials in the Anamalai Corridor. Other groups targeted academic audiences, such as WILD, which mentored CEPF

grantees and other researchers working in the Western Ghats to write scientific papers suitable for publication in the peer-reviewed, on-line *Journal of Threatened Taxa*.

An alternative approach was taken by Care Earth Trust, which targeted district and state government in Tamil Nadu, as part of an ambitious project to mainstream conservation goals into different sectors and levels of public administration. This project achieved unprecedented success in mainstreaming the work of civil society actors into a major government conservation program. Specifically, the project developed guidelines for a Special Area Development Programme for the Western Ghats of Tamil Nadu, in such a way that recommendations from CEPF grantees and other civil society groups were heeded and embraced by the relevant government departments.

### ***Portfolio Overview: Strategic Direction 3***

CEPF investment under this strategic direction was limited to supporting the operations of the RIT. To this end, a single grant of \$400,000 was made to ATREE, which was increased to \$640,870 (11 percent of awarded funds) when a two-year extension to the investment program was approved.

## **BIODIVERSITY RESULTS TO DATE**

### ***Globally Threatened Species***

#### **Conservation Status Assessments**

CEPF investments under Strategic Direction 2 aimed to improve the conservation of globally threatened species through systematic conservation planning and action. As discussed earlier, Investment Priority 2.1 (monitor and assess the conservation status of globally threatened species with an emphasis on lesser-known organisms such as reptiles and fish) was heavily over-subscribed. This level of competition allowed CEPF to maintain a high quality bar for grant making, and the performance of individual grants was correspondingly good. The main focus of CEPF investments under this investment priority was on the two taxonomic groups identified in the ecosystem profile as being particularly in need of updated status assessments, namely reptiles and fishes.

A grant to IUCN, implemented in collaboration with ZOO and other local partners, enabled conservation status assessments to be undertaken of all freshwater fishes, mollusks and odonates and selected aquatic plants in the Western Ghats, through an extensive process of expert review. The results were made publicly available on the IUCN Red List website ([www.iucnredlist.org](http://www.iucnredlist.org)) as a dataset on the conservation status, distribution and ecological characteristics of each species. The project filled a major information gap that was hampering conservation efforts for threatened and endemic freshwater taxa, and preventing their conservation needs being consistently addressed in environmental clearance and other safeguards related to development projects. Prior to the project, only a single freshwater fish species in the Western Ghats was assessed as globally threatened; under the project, 290 species were evaluated, of which 97 were found to be globally threatened (12 CR, 54 EN and 31 VU). For the other groups, none was included on the Red List previously. Thanks to the project, however, 77 species of mollusks, 171 odonates and 608 plants were evaluated, with seven (4 EN, 3 VU), four (4 VU) and 54 (12 CR, 21 EN, 21 VU) being assessed as globally threatened, respectively. The dataset created by the project provided a solid basis for follow-on work, including identification of freshwater KBAs (which was undertaken for Kerala and Tamil Nadu under a follow-on grant to IUCN), gap analyses of existing protected area networks and conservation legislation for the conservation of freshwater biodiversity (both of which were attempted under a grant to ZOO), and identification of AZE sites, where conservation

action for the most narrowly distributed and severely threatened species can be taken (which was piloted by Navadarsan Public Charitable Trust).

CEPF also supported a conservation status assessment of all reptiles in the Western Ghats, through a grant to WILD. In a similar way to freshwater taxa, reptiles were a major information gap prior to the project, with only four globally threatened reptile species being listed in the ecosystem profile. Under the project, Red List assessments were completed for 227 reptile species from southern India, including 107 species endemic to the Western Ghats. Of these, 18 species (8 EN, 10 VU) were assessed as globally threatened and 38 were assessed as globally threatened. The results were posted on the IUCN Red List website and the Western Ghats Portal, where they are freely available as a tool for conservationists and managers.

The conservation status assessments described here, although based on analyses of secondary data, were only possible due to the availability of data on the distribution, ecology and conservation of the species concerned. For many taxa, there still remain fundamental gaps in knowledge, which act as a barrier to status assessments and thus to targeted, evidence-led conservation action. Although the resources available to CEPF could only begin to address a small proportion of the gaps in fundamental information on the species of the Western Ghats, a few targeted investments were made, focusing on research with clear conservation applications. For example, Rajeev Raghavan investigated the status and distribution of little-known fish species across 10 river systems in Kerala, generating baseline data on 83 species and identifying 11 irreplaceable sites for fish conservation. Another important exercise was the work of the Indian Institute of Science, to fill gaps in distributional data on reptiles and amphibians through systematic sampling across the Western Ghats. More than 5,000 point locality records were generated: dramatically increasing the availability of data on the distribution of these species, and informing planning and action for their conservation. New populations were discovered of endemic species previously known only from single locations. In addition, many new lineages were discovered, and taxonomic work to describe them is underway. As well as feeding into Red List assessments and identifying centers of endemism, the results of the project were also used to develop distributional atlases of frogs, lizards and snakes of the Western Ghats.

Additional data on lesser-known vertebrates were generated under a grant to the University of Delhi on the conservation of threatened amphibians. This project included a component dedicated to rediscovering amphibian species that have not been reliably recorded for many years. A total of 42 field expeditions were conducted, generating important information on a number of little-known species (<http://www.lostspeciesindia.org/LAI2/>). Important results included the rediscovery of *Chalazodes bubble-nest frog (Raorchestes chalazodes)*, a Critically Endangered species last seen in 1874!

As well as rediscoveries of 'lost' species, CEPF grants have also facilitated the discovery of new species. For instance, small grantee Manju Siliwal discovered a new genus (*Neoheterophriectus*) and five new species (*N. crurolfulvus*, *N. sahyadri*, *N. uttarakannada*, *Tigidia sahydari* and *Idiops joida*) of spider from Uttara Kannada district, Karnataka. The new species were either named after the Sahyadris (a synonym for the Western Ghats), the district Uttara Kannada or the type locality Joida. Manju's research also resulted in a major range extension for the tarantula species *Poecilotheria striata*, which led to the IUCN threat status for the species being downgraded from Vulnerable to Near Threatened.

### **Creation and Implementation of Species Recovery and Management Plans**

In comparison with Investment Priority 2.1, Investment Priority 2.2 (support efforts to conserve Critically Endangered and Endangered species through the creation and implementation of

species recovery and management plans) was relatively under-subscribed. Applications under Strategic Direction 2 were dominated by proposals for research, surveys and assessments, with only a small number of applicants proposing direct conservation interventions for threatened species. Feedback from grantees and applicants suggests that this may reflect the strategic focus of many organizations on research, and a perception that there are limited opportunities for civil society to engage directly in conservation management. Nevertheless, while only 14 of the 203 Critically Endangered and Endangered species identified in the ecosystem profile benefited from species-focused conservation actions (Table 2), those initiatives that were supported had demonstrable impacts.

RSPB, in partnership with BNHS, implemented a grant to conserve four vulture species threatened by poisoning by the veterinary drug diclofenac. This project reinforced a national vulture recovery plan, and extended efforts to the Western Ghats. The project resulted in a significant increase in awareness among the conservation and veterinary communities about the threat to vultures from diclofenac, trialed local-level advocacy concerning the threat within designated ‘vulture safe zones’, and made progress with engaging pharmaceutical companies in closing loopholes regarding the use of diclofenac to treat cattle. For the first time, the project established baselines for vulture populations and threats to vultures in the Western Ghats, identifying the Moyar Valley as the main center of population, where future conservation and reintroduction efforts should be focused. To insure against the possible extinction of vulture populations in the wild, the project also supported *ex situ* conservation efforts for white-rumped (*Gyps bengalensis*) and Indian vultures (*G. indicus*) at the Pinjore captive breeding center. By the end of the project, the captive breeding stock was growing faster than at the beginning, and Indian vulture had been successfully bred in captivity for the first time ever.

**Table 2: Critically Endangered and Endangered species targeted by species-focused conservation actions**

Species	Taxonomic group	Red List status
Asian elephant ( <i>Elephas maximus</i> )	Mammals	EN
Kondana soft-furred rat ( <i>Millardia kondana</i> )	Mammals	CR
Lion-tailed macaque ( <i>Macaca silenus</i> )	Mammals	EN
Egyptian vulture ( <i>Neophron percnopterus</i> )	Birds	EN
Indian vulture ( <i>Gyps indicus</i> )	Birds	CR
Red-headed vulture ( <i>Sarcogyps calvus</i> )	Birds	CR
White-rumped vulture ( <i>Gyps bengalensis</i> )	Birds	CR
Periyar latia ( <i>Crossocheilus periyarensis</i> )	Fishes	EN
Santhampara loach ( <i>Homaloptera santhamparaiensis</i> )	Fishes	EN
Santhampara algae eater ( <i>Horalabiosa arunachalami</i> )	Fishes	CR
Periyar barb ( <i>Hypselobarbus periyarensis</i> )	Fishes	EN
Periyar trout ( <i>Lepidopygopsis typus</i> )	Fishes	EN
<i>Myristica magnifica</i>	Plants	EN
<i>Syzygium travancoricum</i>	Plants	CR

The work on vulture conservation in the Western Ghats begun by RSPB and BNHS was taken forward by three local civil society organizations: Arulagam in Tamil Nadu; RASTA in Kerala; and Sahyadri Nisarga Mitra in Maharashtra. For instance, Arulagam worked in the Moyar Valley to implement an integrated program of activities to address threats to vultures and build support for their conservation among diverse stakeholders, including Forest Department staff, local business persons, pharmacists, milk inspectors, journalists and tribal forest watchers. The project was highly successful in catalyzing local action to address a national problem. Most notably, the

project was successful in integrating vulture conservation efforts into local plans, including the management plans for Mudumalai Tiger Reserve and Nilgiris North Forest Division, and the resolutions of gram sabhas throughout Nilgiris, Erode and Coimbatore districts. In this way, the project effectively turned the attention and resources of public bodies at multiple levels towards vulture conservation, thereby increasing the sustainability and impact greatly beyond that which donor-funded projects could achieve.

Another successful initiative was a project by Snehakunja Trust, which developed and implemented protocols for restoring populations of six globally threatened plant species native to freshwater swamps, comprising one Critically Endangered species (*Syzygium travancoricum*), one Endangered species (*Myristica magnifica*) and four Vulnerable species (*Arenga wightii*, *Gymnacranthera canarica*, *Myristica malabarica* and *Ochreinauclea missionis*). The project also targeted *Semecarpus kathalekanensis*: a highly localized species, endemic to freshwater swamps, which had not been evaluated under the IUCN Red List. The project enhanced gene-flow among sub-populations, and hence the long-term viability of these species' populations, by restoring ecological connectivity along chains of swamps in Karnataka's Uttara Kannada district. By forging strong partnerships among local communities, the Forest Department and Sirsi Forestry College, the project was successful in mapping more than 100 freshwater swamps, developing protocols for restoration of swamps, establishing community-managed nurseries, raising more than 10,000 seedlings belonging to 45 species, and restoring six degraded swamps through large-scale planting. One of the most significant impacts of the project was raised awareness of the values of freshwater swamps among stakeholders at all levels. The protocols and models demonstrated by the project were taken up by Karnataka Forest Department and integrated into other programs and initiatives, whereby they are being amplified. In this way, the project quite literally put freshwater swamps on the conservation map.

Building on the results of the freshwater Red List assessments led by IUCN and ZOO, Navadarsan Public Charitable Trust designed *in situ* conservation actions for two of the most important sites for the conservation of threatened freshwater fishes in Kerala: Periyar Lake; and Santhampara Hills. The project successfully promoted the designation of the former site as India's first AZE site, and developed a conservation action plan for the endemic and threatened fishes there. This was integrated into the management plan of Periyar Tiger Reserve, thereby ensuring a degree of financial and institutional sustainability. At the same time, key management actions were undertaken, such as a campaign to remove African catfish (*Clarias gariepinus*): an invasive alien predator. Progress at Santhampara Hills was interrupted by socio-political developments outside the control of the project. Nevertheless, conservation action plans for the endemic fishes at the site were developed, which could be implemented in the future with funding from local panchayats and the State Biodiversity Board.

Other conservation actions for Critically Endangered and Endangered species implemented during the CEPF investment program in the Western Ghats included an initiative by H. N. Kumara to conserve a newly discovered population of the endemic lion-tailed macaque (*Macaca silenus*) in the Sirsi and Honnavara Forest Divisions of Karnataka's Uttara Kannada district. This project conducted a detailed study of the feeding ecology of the species, and compared it with patterns of NTFP collection by local communities, in order to develop a management regime that enabled the macaque population to recover without threatening local livelihoods. The results of the project were incorporated into the management plan of the new Aghanashini Lion-tailed Macaque Conservation Reserve, which was prepared under a grant to Snehakunja Trust.

### **Protected Area Gap Analyses**

As discussed previously, Investment Priority 2.3 (evaluate the existing protected area network for adequate globally threatened species representation and assess effectiveness of protected area types in biodiversity conservation) received the lowest amount of funding of any investment priority in the Western Ghats. Nevertheless, some significant results emerged. First, FERAL implemented a gap analysis of endemic and threatened arboreal mammals in the Periyar-Agasthyamalai Corridor. Based upon the results, priority sites for a potential new wildlife sanctuary (to the south of Periyar Tiger Reserve) and conservation reserve (in the Shencottah Gap) were delineated and submitted to the Forest Department, as well as the World Bank-supported Biodiversity Conservation and Rural Livelihood Improvement Project.

A second gap analysis was undertaken by ZOO, making use of the results of the freshwater Red List assessments undertaken by IUCN and ZOO. This analysis has revealed that 28 of the 97 globally threatened freshwater fish species in the Western Ghats are not found in any protected area, which is significant, because all of these species are threatened by habitat loss. The analysis also showed that, even for species within protected areas, management objectives are rarely oriented towards conservation of freshwater species, which face a number of threats, including invasive species. At the site level, ZOO selected one protected area (Periyar Tiger Reserve) and one unprotected site (Nelliampathy Hills) as case studies to improve the integration of conservation measures for freshwater species into existing management plans and working plans. Proposed amendments to these plans were submitted to the Forest Department for consideration.

A third gap analysis was undertaken as part of the University of Delhi project on threatened amphibians. Through a combination of desk studies and field surveys, candidate sites for establishment of dedicated amphibian sanctuaries to protect globally threatened species under-represented within the current protected area network were identified, and the designation of one of these sanctuaries was promoted with the government of Kerala.

### **Analysis and Dissemination of Biodiversity Data**

There were three main results in relation to Investment Priority 2.4 (support interdisciplinary efforts to analyze and disseminate biodiversity data), the first two involving online media and the third involving local-language materials. The first result was the launch of the Western Ghats Portal ([www.thewesternghats.in](http://www.thewesternghats.in)), a web-based portal on the biodiversity and ecosystem service values of the Western Ghats Region, populated and maintained by an active community of data-holding institutions and individuals. The portal addressed a major gap in conservation efforts for the region, namely the need to bring together the vast quantities of data that are held by different stakeholders (often not in the public domain), curate them in standard formats, and make them freely and widely available.

The Western Ghats Portal was developed under two pairs of CEPF grants to the French Institute of Pondicherry and Strand Life Sciences Ltd. The project leveraged the latest internet technologies and built state-of-the-art biodiversity informatics and Web-GIS functionality to facilitate a change from the former situation of dispersed, inaccessible and incompatible data sources to a future where core biodiversity and ecosystem service information are widely and freely available. It is hoped that this transformation in data availability will facilitate mainstreaming of biodiversity into development sectors (for instance, by improving the quality of EIAs), empower citizen engagement in development of public policy, and foster citizen science initiatives by amateur naturalists.

The core team driving development of the portal had to overcome many obstacles, both technical and attitudinal. Yet, preconceptions about data quality were successfully challenged, and attitudes

towards data sharing shifted. The team positioned the portal as one of the leading bio-informatics platforms in India, and built a reputation for inclusiveness, cutting edge technology and scientific credibility. To date, the portal has accumulated more than 200 map layers, 22,000 species pages and 1 million observations, and built an active community of over 9,000 users. In addition, more than 50 groups have been created on the portal, to facilitate collaboration among civil society on topics ranging from invasive alien species to the ants of India. Long-term governance arrangements for the portal have also been worked out, and the future development of the portal will be advanced collectively by a consortium of data-holding institutions.

The development of the Western Ghats Portal was complemented by the establishment of a special section within the *Journal of Threatened Taxa* ([www.threatenedtaxa.org](http://www.threatenedtaxa.org)) to publish scientific papers emerging from CEPF projects in the Western Ghats, under a grant to WILD. The journal is a monthly, online, open-access publication, which provides a medium for making technical results on taxonomy, ecology, natural history and conservation from CEPF projects widely, freely and permanently available. Over the course of the project, 69 articles pertaining to the Western Ghats were published in the journal, totaling 821 pages. These articles spanned many different taxonomic groups and topics, including type descriptions, faunal inventories, ecological notes and description of conservation actions. In addition to publishing results from research and conservation projects in the Western Ghats, WILD provided a mentoring service to the authors of 12 articles by CEPF grantees, to build their capacity and help them establish a publication record in a peer-reviewed journal.

With regard to local-language materials, Green India Trust produced illustrated community primers and posters in Kannada on five themes relevant to Uttara Kannada district: cinnamon plant resources; lion-tailed macaque feeding ecology; biological corridors; tarantula diversity; and restoration of *Myristica* swamps. Using focal learning groups, the project was able to generate interest and local pride among the target audiences about biodiversity values that they were hitherto largely unaware of. The project raised awareness of these values and this, in turn, translated into behavioral changes, including a reported reduction in destructive forms of NTFP harvesting, increased involvement of village forest committees in planting rare and endangered tree species, and conservation action for a lion-tailed macaque population. These examples, albeit anecdotal in nature, demonstrate the value of disseminating biodiversity information in local languages, and of combining literature with activities that ensure close reading and understanding of the material.

A similar approach was adopted in the Anamalai Corridor, where CED and the Western Ghats Hornbill Foundation collaborated with other grantees to prepare a range of communication materials in Malayalam, Tamil and local tribal languages. A total of 27 local-language publications were completed, either in softcopy or hardcopy, including: educational books for tribal children that introduce local wildlife and forest resources; a handbook on the Forest Rights Act, explaining the application process for CFR to tribal communities; a community-based ecological monitoring protocol for rainforest species and habitats; and field guides to the mammals, forest trees and freshwater fishes of the Anamalais. Several of these publications were taken up as pedagogical tools by Kerala Department of Tribal Affairs, which ensured their wide dissemination.

### ***Key Biodiversity Areas***

#### **New/Expanded Protected Areas**

During the preparation of the ecosystem profile for the Western Ghats in 2003, the region already had an extensive network of protected areas, as a result of a long-standing government

commitment to biodiversity conservation at state and national levels. Conflicting land uses and opposition to protectionist approaches from local communities, businesses and civil society groups meant that opportunities for expansion of conventional protected areas (i.e. wildlife sanctuaries, national parks and tiger reserves) were limited. For these reasons, the ecosystem profile did not strongly emphasize expansion of conventional protected areas but recognized that the fate of biodiversity and habitat connectivity in the Western Ghats ultimately depends upon finding solutions to overharvesting of forest resources that ensure genuine participation of local communities and address livelihood needs and social and gender equity. To this end, Investment Priority 1.1 (test pilot models of community and private reserves to achieve conservation outcomes at priority sites and critical links in unprotected areas of the Anamalai and Malnad-Kodagu Corridors as well as the Brahmagiri-Nagarhole critical link in the Mysore-Nilgiri Corridor) was formulated.

Several CEPF grantees piloted such models, taking advantage of provisions under the Wild Life Protection (Amendment) Act and the Forest Rights Act. For example, B. L. Hegde formulated proposals to designate selected reserve forests in Uttara Kannada district as ‘conservation reserves’: a category of protected area that provides local communities with a defined role in management and recognizes their rights to access forest resources sustainably. This designation, although a legal category of protected area, had rarely been applied in practice. Consequently, it was a significant step when the Karnataka Government notified three conservation reserves in June 2011: Aghanashini Lion-tailed Macaque Conservation Reserve (29,952 hectares); Bedthi Conservation Reserve (5,731 hectares); and Dandeli Hornbill Conservation Reserve (5,250 hectares). The successful application of the conservation reserve model in Uttara Kannada district was spearheaded by the Western Ghats Task Force, Karnataka, under the chairmanship of Ananth Hegde Ashisar, who undertook these activities as a main agenda item and provided co-financing via Karnataka Forest Department. Subsequently, a fourth site, Shalmala Riparian Ecosystem Conservation Reserve (489 hectares), was declared in the district. Other conservation reserve proposals were formulated in Kerala by CED and in Tamil Nadu by WILD and WWF India but none have yet been approved by the relevant authorities.

As well as promoting the establishment of model conservation reserves, CEPF grantees also supported tribal communities submit CFR applications. While individual forest rights had been granted to tribal people in various parts of the Western Ghats prior to the CEPF program, granting of community rights had proceeded slowly. Hence, the CEPF-supported initiatives were very much test cases, intended to establish important precedent for wider replication. In Kerala, CED and the Western Ghats Hornbill Foundation supported tribal communities to secure official recognition of CFR over a cumulative area of 80,700 hectares. In Tamil Nadu, a similar approach was adopted by ACCORD, which empowered 23 tribal gram sabhas to develop CFR claims and submit them to the Sub Divisional Level Committee.

Another community-based approach to site conservation tested by CEPF grantees was promoting the recognition of sacred groves, which are of special cultural significance to tribal communities but not necessarily recognized by other stakeholders, resulting in them being encroached and degraded. Keystone Foundation worked with the Kurumba communities of the Nilgiri Biosphere Reserve to demarcate sacred groves, erect signboards explaining their significance, restore them by planting native tree species, and promote their recognition by the Forest Department, tea estates and non-tribal communities. Eight sacred groves were declared in total: Banagudi shola (21 hectares); Baviyur (42 hectares); Chedikal (22 hectares); Kotada (11 hectares); Kavalcombai (4 hectares); Sengalcombai (4 hectares); Johicombai (1 hectares); and Dhodatti (1 hectares). Under a separate project in the same district, ACCORD helped indigenous communities map their sacred groves in an attempt to have them officially recognized by the Tribal Welfare Department.

Although creation and expansion of conventional protected areas was not a major focus of the CEPF investment program, a number of extensions to existing protected areas arose incidentally from WCS's work on engaging civil society in monitoring tiger prey species and threats across three landscapes in Karnataka. Monitoring data were used to justify extensions of Cauvery (by 50,059 hectares), Dandeli (by 24,806 hectares), Mookambika (by 12,337 hectares) and Someshwara (by 22,586 hectares) Wildlife Sanctuaries, to incorporate important but previously under-protected wildlife habitats. In addition, Nellai Wildlife Sanctuary (35,673 hectares) in Tamil Nadu was established thanks to analysis undertaken a FERAL project to maintain and restore habitat connectivity across in the Shencottah Gap.

### **Strengthened Management of Production Landscapes**

The CEPF investment strategy recognized that civil society is often well placed to engage with conservation of natural habitats outside of protected areas. Accordingly, CEPF grants explored partnerships with private landholders, ranging from smallholders to large agro-industrial estates, to test innovative approaches to strengthening biodiversity management within production landscapes. Many of these grants were awarded under Investment Priority 1.2, which targeted critical links in conservation corridors. Biodiversity management was strengthened in production landscapes covering 116,223 hectares.

In the Sahyadri-Konkan Corridor, AERF tested an innovative approach to incentivizing forest conservation on private land through negotiated 'conservation agreements', whereby local communities received negotiated benefits in return for not allowing logging or conversion of their forests. AERF negotiated agreements covering 1,149 hectares of forest on private land, including in the buffer zones of three CEPF priority sites. As well as being biodiversity-rich in their own right, these demonstration sites established proof of concept for the conservation agreement approach, which has considerable potential for replication.

In the Malnad-Kodagu and Anamalai Corridors, CEPF grantees strengthened biodiversity management within a number of reserve forests, by various means. Small grantee Prachi Mehta, for instance, promoted the introduction of measures to conserve Asian elephant and reduce human-elephant conflict across 1,500 hectares of Haliyal Reserve Forest. Another small grantee, MES Asmabi College, helped to initiate community-based forest resource monitoring across 4,400 hectares of reserve forest adjoining Parambikulam Tiger Reserve.

In the Nilgiri-Mysore and Anamalai Corridors, conservation measures were introduced into agricultural landscapes through certification of tea and coffee estates. This work was spearheaded by Rainforest Alliance and NCF, with the former focusing on development of markets for sustainable commodities from India, and the latter concentrating on adapting the global Sustainable Agriculture Network (SAN) Standard to the local context, and providing technical support to estates wishing to apply for certification. Market development was particularly successful with regard to tea. Two major tea brands (Tetley and Unilever) began sourcing and marketing teas from Rainforest Alliance Certified™ farms in the Western Ghats as a result of the project.

The growing market for certified commodities from the Western Ghats created conditions under which NCF was able to engage with tea and coffee estates to conduct diagnostic audits and provide training in sustainable agricultural practices that place environmental and conservation considerations firmly within the core business practices of estates. This had demonstrable impacts on biodiversity conservation, by, among other things, protection of native vegetation, establishment of wildlife corridors across plantations, reduced pollution of aquatic habitats, and restoration of riparian habitat. The incentive of gaining access to markets for certified

commodities also encouraged estate owners to ensure fair treatment and good conditions for workers, invest in good occupational health, and maintain good relations with local communities. By the end of the project, a total of 12,598 hectares of coffee estates, operating under 26 group or single farm certificates, and 6,732 hectares of tea estates, operating under eight group or single farm certificates, had been audited as having adopted sustainable agricultural practices meeting the SAN Standard.

Other CEPF grantees worked on a smaller scale, to strengthen biodiversity conservation within agricultural landscapes adjacent to or enclaved within protected areas. For example, Arulagam conducted a community-based planning exercise for conservation of natural resources along the Moyar River, resulting in the formulation of panchayat-level micro-plans that identified conservation actions for key species and habitats, and integrated them into panchayat-level planning and budgets. For instance, an agreement was reached with local farmers to refrain from summertime cultivation of 28 hectares of floodplain habitat within Sathyamangalam Tiger Reserve that had been leased to them, which was identified as a prime driver of human-elephant conflict.

### **Strengthened Management of Protected Areas**

Although the majority of CEPF investments in site-based conservation were located outside of conventional protected areas, several of the grants awarded under Investment Priority 1.3 supported civil society actors to establish partnerships with state agencies to implement science-based management of protected areas. The areas benefiting from strengthened management totaled 228,972 hectares.

One of the key projects was implemented by WCS, in collaboration with the Centre for Wildlife Studies, Karnataka Forest Department and several local NGOs, to improve management effectiveness of protected areas through enhanced civil society support and rigorous monitoring. Systematic monitoring of wildlife populations and conservation threats was conducted in eight protected areas and neighboring reserve forests, generating actionable information to inform protected area planning and management. Specific improvements to management were recorded across 49,500 hectares of Bhadra Tiger Reserve, 24,700 hectares of Mookambika Wildlife Sanctuary, 8,800 hectares of Someshwara Wildlife Sanctuary and 27,000 hectares of Sharavathi Wildlife Sanctuary.

Other grantees adopted similar approaches to strengthening management effectiveness of protected areas, albeit on a smaller scale, by building networks of local stakeholders to support ecological monitoring over the long term. For example, MES Asmabi College helped develop community-based resource monitoring across 6,000 hectares of Parambikulam Tiger Reserve, through the recruitment and training of members of local Kadar communities as hornbill watchers and nest guards. The monitoring protocols were developed in collaboration with WWF India, and focused on the traditional resource use areas of each tribal village.

### ***Conservation Corridors***

#### **Protection of Critical Links**

Some of the most significant results of the CEPF investment program in the Western Ghats were in relation to the protection of critical links among KBAs, in order to reinforce ecological connectivity at the landscape scale. Reviewing the geographical distribution of results from north to south, ecological connectivity was reinforced: (i) between the Sahyadri-Konkan and Malnad-Kodagu Corridors; (ii) within the Mysore-Nilgiri Corridor; (iii) between the Anamalai and

Periyar-Agasthyamalai Corridors; and (iv) within the Periyar-Agasthyamalai Corridor. These results are reviewed in turn.

The Sahyadri-Konkan and Malnad-Kodagu Corridors meet in Uttara Kannada district in north-western Karnataka. The district has the highest forest cover and lowest human population density in southern India. At the beginning of the CEPF investment period, however, the protected area network was restricted to the north and south of the district, with a large gap of unprotected forest in between. The establishment of four conservation reserves, described earlier, went a long way towards bridging this gap, while conferring greater protection against railroads, hydropower dams and other incompatible developments that threatened to fragment ecological connectivity across the district.

Within the Mysore-Nilgiri Corridor, WTI prepared conservation plans to secure seven elephant corridors. Surveys and ground-truthing were undertaken to map each corridor, investigate patterns of elephant movement and human-elephant conflict, and understand local perceptions towards wildlife conservation. Bottlenecks were identified, and plans were developed to re-establish or consolidate habitat connectivity, with participation of local landholders, forest department staff and other key stakeholders. Twenty-eight signboards were fixed along roads passing through the corridors, in order to warn drivers about the movement of elephants and reduce collisions.

Under a subsequent project, WTI increased understanding of the ecological impacts of linear infrastructure in the Mysore-Nilgiri corridor, by undertaking detailed mapping of four railway lines, 1,384 km of road, seven pipelines, two canals and 31 power lines that intersect forest areas. This project also contributed to a shared understanding of key conservation issues related to linear infrastructure among key actors, including through detailed studies of the ecological impacts of selected linear intrusions on forest and wildlife. Furthermore, the project formulated practical measures to mitigate the ecological impacts of selected linear intrusions and promoted their adoption by state and national agencies. WTI continues to promote uptake of the recommendations that emerged from the project in relevant policy forums, most notably the National Guidelines on Linear Intrusions in Forested Habitat being developed by the Wildlife Institute of India.

The Anamalai and Periyar-Agasthyamalai Corridors are linked by a thin strip of forest in the north and west of Theni Forest Division. Research by WILD revealed that this critical link is used as a corridor by terrestrial mammals (although not by arboreal mammals, due to canopy fragmentation), despite being fragmented by road and power infrastructure. In parallel, another WILD team developed conservation reserve proposals covering the northern end of the critical link, which were submitted to Tamil Nadu Forest Department for consideration. The project also promoted the sustainable development of ecotourism in Kottagudi valley, including initiating the sale of entrance tickets to tourists, which will hopefully provide a sustainable revenue stream to support management of Theni Conservation Reserve, when it is eventually established.

Within the Periyar-Agasthyamalai Corridor, FERAL conduct a range of field studies and demonstration activities to inform restoration of ecological connectivity across the Shencottah Gap, and thereby re-establish a habitat corridor between Periyar and Kalakkad-Mundunthurai Tiger Reserves capable of facilitating movement by tiger, Asian elephant and other large mammals. FERAL established a strong evidence base for the design of two habitat corridors and their current ability to provide connectivity for different species. This information was then used to justify and inform design of wildlife passages across linear developments in the gap. FERAL also established three workable conservation models involving payments: one based on

negotiated community payments; one based on negotiated individual payments; and one based on individual payments set by auction. Through these models, community-based monitoring was extended to 7,201 hectares of reserve forest in Punalur and Tenmala Forest Divisions, and 4 hectares in the Shencottah Gap and an additional 46 hectares outside of Srivilliputhur Grizzled Giant Squirrel Sanctuary was been covered by agreements with farmers for conservation actions. FERAL was also able to engage with the managers of rubber estates in the Shencottah Gap to encourage adoption of some improved practices with regard to soil and water management, including establishment of a wind-break, containing a proportion of native tree species, which may help to facilitate wildlife passage through the landscape.

## **SOCIOECONOMIC RESULTS TO DATE**

Delivering socioeconomic benefits to local communities was integral to many CEPF projects. Across the Western Ghats as a whole, 150 communities received direct socio-economic benefits, in terms of increased income, food security or other measures of human wellbeing. A greater but unquantified number received indirect benefits through the conservation and restoration of natural ecosystems that deliver essential provisioning and regulating services.

Several CEPF grantees assisted communities to introduce more sustainable natural resource management practices. For instance, Snehakunja Trust helped villagers install fuel-efficient ovens and NTFP driers, in order to reduce pressures on forest from fuelwood collection and add value to collection of uppage fruit (*Garcinia gummigutta*). It is estimated that each drier installed will save from 15 to 20 metric tons of fuelwood per year. Under the same project, the grantee established two Village Forest Committees, to facilitate community participation in efforts to manage and restore freshwater swamps. Among other activities, these committees identified and cultivated 12 tree species highly valued by local people, and distributed thousands of seedlings among target villages. Elsewhere, Arulagam helped 12 villages develop plans for the sustainable harvest of fodder, NTFPs and fuel wood from forests along the Moyar River, and integrate them into panchayat plans and budgets. This was the first time that community-based planning for sustainable natural resource management took place in these villages, and also the first time that stakeholders such as the Electricity Board and the Special Task Force participated in such a process in Tamil Nadu.

As described earlier, several grantees helped tribal communities to take advantage of provisions under the Forest Rights Act to secure stronger legal recognition of their traditional rights to land and forest resources. In Nilgiris district, Keystone Foundation is a member of an NGO forum established to raise issues related to the Forest Rights Act with the district authorities, and help tribal communities advocate for recognition of their ancestral domains. At the village level, the Keystone supported mapping of ancestral domains and traditional NTFP collection areas for community rights claims in five villages, and facilitated mapping of ancestral domains and submission of individual claims in a sixth. Elsewhere in the district, ACCORD assisted 23 tribal gram sabhas to prepare and submit CFR claims. A similar approach was followed in the Kerala portion of the Anamalai Corridor, where WWF India, CED and the Western Ghats Hornbill Foundation assisted tribal people living in 43 hamlets to prepare and submit CFR claims.

As discussed earlier, CEPF grantees also provided communities with direct financial incentives in exchange for conservation actions on their part, under the framework of various innovative agreements and mechanisms. For example, in Kollam district of Kerala, FERAL engaged a single Malapandaram tribal settlement in community-based monitoring of wildlife in a critical link outside protected areas, where monitoring by the Forest Department would be logistically challenging and expensive. Similarly, in Ratnagiri and Sindhudurg districts of Maharashtra,

inhabitants of 13 villages in AERF's project area received direct payments under conservation agreements. Under a separate project, AERF promoted certification of wild harvested *Terminalia* fruit under the FairWild standard for sustainable wild harvesting of medicinal and aromatic plants. This resulted in significantly increased income for people from two villages, while incentivizing them to protect the nesting sites of hornbills in mature trees within sacred groves.

CEPF grantees also empowered local communities to respond to development trends and pressures affecting their wellbeing. For instance, Environics Trust assisted communities impacted by development projects to respond to issues of non-compliance, ecological damage and claims for compensation. Support was provided to local communities in over 50 cases of actual or potential ecological damage, and notable successes were recorded. For example, the environmental clearance for an iron ore mine in Goa was withdrawn by the Ministry of Environment and Forests, after the proponent was found to have concealed information about environmental impacts. In a second case, also in Goa, an iron ore and manganese ore mine was halted on procedural grounds. In a third case, in Tamil Nadu, a proposal to construct an 8-km-long road through Srivilliputhur Grizzled Giant Squirrel Sanctuary was rejected by the Central Empowered Committee of the Supreme Court. As well as helping mitigate negative impacts on local livelihoods and biodiversity, these judgements established important legal precedents, and sent out a signal to developers about the need to ensure higher standards in the EIA process.

One lesson learned by CEPF grantees was that projects working with local communities, especially those involving scheduled tribes, require significant up-front investment in trust building, consent seeking and capacity strengthening. In addition, projects introducing alternative livelihoods or other forms of economic incentives usually require some time to show results, and may require considerable modification to the local context. Both of these lessons introduce a note of caution into plans to amplify innovative approaches piloted under CEPF grants more widely. There is a need for careful evaluation and refinement of new approaches, before promoting wider replication.

## **ENABLING CONDITION RESULTS TO DATE**

### ***Policy Improvement and Implementation***

Very few CEPF grants awarded under the first two funding rounds had an explicit focus on policy advocacy or capacity building of government institutions for policy implementation. As the investment program progressed, however, an increasing number of grants made this a focus, drawing on the growing body of policy-relevant experience generated by other projects. Indeed, dissemination of results to government, including in local-language formats, was explicitly emphasized under the third and fourth calls for proposals.

In spite of the growing number of grants with an emphasis on policy and management improvement and implementation, it remained challenging for civil society organizations to achieve tangible policy and management impacts. There are a number of reasons why this was the case, often specific to particular projects. For instance, efforts by Equitable Tourism Options to influence local government policy and regulations governing tourism development in the Masinagudi and Bokkapuram areas of the Nilgiri Biosphere Reserve were stymied by the polarizing effect of the elephant corridor case before the Madras High Court and, subsequently, the Supreme Court. However, a number of common factors emerged, not least that policy advocacy work often takes a long time to reach fruition, that policy measures must ensure a balance between the rights and needs of local communities and the needs of conservation, and that policy changes, when they happen, are typically the result of multiple influences, and can rarely be attributed to the actions of a given project or organization.

One grantee to have success in influencing policy was Arulagam. Using in-person meetings, public events and media coverage, underpinned by sound scientific facts, Arulagam was successful in bring the vulture crisis to the attention of policy makers in Tamil Nadu, resulting in tangible policy changes. These included issuance of instructions on the misuse of human diclofenac by veterinarians by the Animal Husbandry Department, and the establishment of a financial compensation scheme for livestock losses due to carnivore predation.

Another grantee to have had traction at the state level was NCF, which identified critical animal crossing points along roads within Anamalai Tiger Reserve and surrounding areas, and formulated recommendations for mitigation measures to reduce road kill. Several of these recommendations were adopted by Tamil Nadu Highways Department, resulting in engineering solutions being introduced, such as replacement of safety barriers with ones more permeable to wildlife movement.

The most significant policy-level impact from the grant portfolio came under a grant to Care Earth Trust, which initiated mainstreaming of the knowledge and experience of CEPF grants in Tamil Nadu into state and district plans and policies. Specifically, this project promoted uptake of experience and recommendations from the conservation community into a dedicated Special Area Development Programme for the Western Ghats of Tamil Nadu, with received a dedicated budget allocation from the state government of INR 75 crores (\$11.25 million) annually. This enabled the amplification of approaches piloted by CEPF grantees and their incorporation into the state budget. These achievements were made possible by a cross-departmental approach, not limited to a single line department, and the willingness of multiple actors to work in partnership and let the common good take priority over other concerns.

### ***Public Awareness Raising***

Public awareness raising was not initially a major focus of CEPF grant making in the Western Ghats. However, the third and fourth calls explicitly requested proposals for dissemination of information generated by CEPF projects via local-language materials and the popular media, after this was identified as a major gap during the mid-term assessment. Accordingly, several grants featured public awareness raising, as a means of disseminating information and building constituencies of support for conservation objectives.

Under a grant to Keystone Foundation, an integrated program of outreach activities was implemented to increase awareness about good practices for conservation of biodiversity and sustainable use of natural resources. Over the course of the project, 19 programs on conservation themes were held at the Bee Museum in Ooty, reaching hundreds of participants from diverse backgrounds. Three nature interpretation centers were established (one at Mudumalai Tiger Reserve, one at Hassanur near Sathyamangalam Tiger Reserve, and one at Longwood Shola in Kotagiri) as sites for nature camps and experiential learning for local schools. Four village conservation centers were established within the Nilgiri Biosphere Reserve, to hold regular trainings and conservation awareness programs for tribal communities in neighboring villages. In addition, village elders were encouraged to act as community naturalists, passing on their knowledge about medicinal plants, wildlife and NTFPs to the young generation, who typically leave their villages to study. Finally, a documentary film and educational handbook were produced, telling the story of the interdependencies between the Nilgiri Biosphere Reserve and the lives of local tribal communities. Due to its indigenous nature, the outreach program was able to incorporate local issues and knowledge, making conservation messages relevant to the community. Indeed, the village conservation centers became hubs of grassroots self-organization. For example, in Appankapu village, NTFP harvesters formed a self-help group to promote sustainable harvesting practices and nursery raising.

Under a separate project, Keystone Foundation implemented a program of conservation education focused on hill wetlands, which are an under-recognized and under-valued ecosystem type. Around 500 students from three schools participated in the program over a period of six months. The program focused on creating awareness about wetlands and their multifaceted role in ecological flows, livelihood support and cultural values, and made use of outdoor sessions to allow for hands-on experiential learning.

In order to popularize the results of the freshwater Red List assessment, WILD developed a variety of educational materials aimed at a wide range of target groups. A manual, entitled *The Sahyadri Freshwater Biodiversity Conservation Teaching Guide*, was produced in English, in a format suitable for translation into local languages, together with various supplementary materials, posters and pocket guides. Sixteen educators from across the five Western Ghats states were trained in using these materials and assisted to plan and implement training and awareness programs in their own local areas. It is a measure of the success of this training that 17 such programs were held, with support from more than 30 partner organizations.

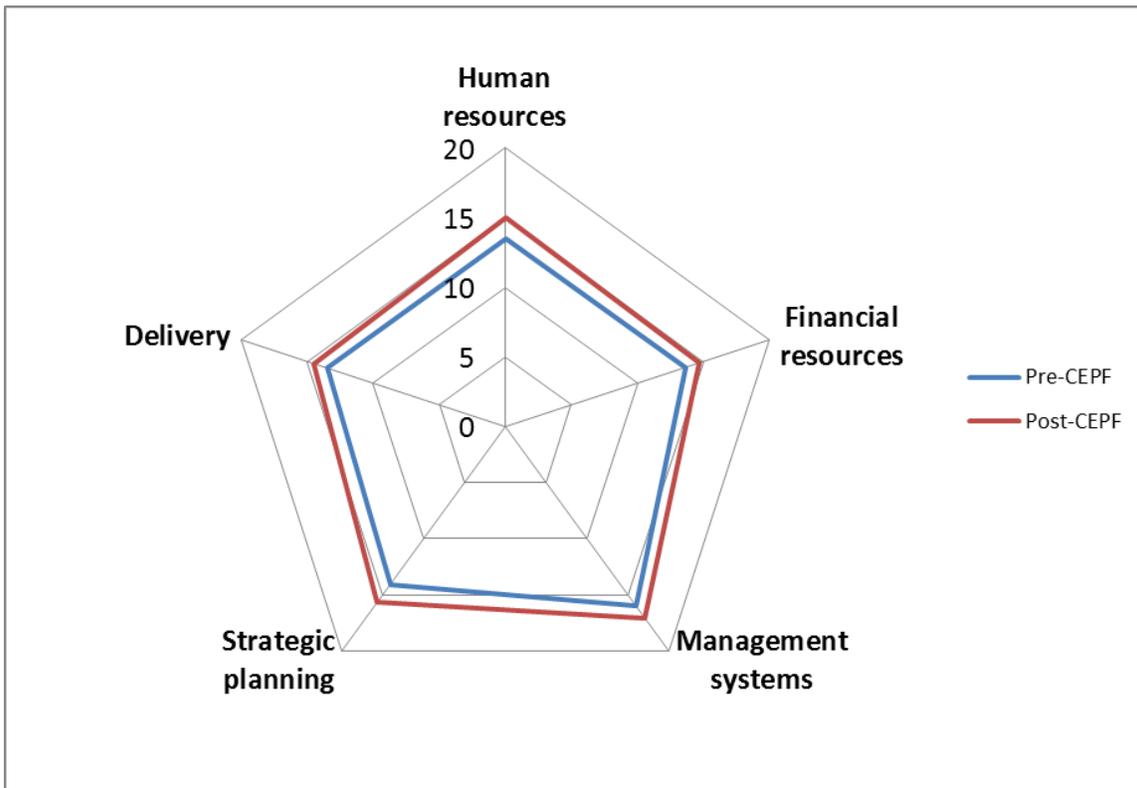
In this way, the original training was passed on to 460 educators, 109 students and adults, and 47 journalists from various institutions across the Western Ghats. The participants in this second level of training went on to reach more than 10,000 people at the ground level, using the educational materials prepared by WILD, and beginning a process of building a broad-based constituency of support for conservation of taxa that had been largely neglected by mainstream conservation efforts. Although evaluating the impacts of education and awareness projects is inherently challenging, WILD conducted random sampling of participants in the awareness workshops, which showed that 20 percent kept pledges they had made to implement simple conservation actions within three months.

#### ***Civil Society Capacity Building and Involvement***

CEPF places a strong emphasis on engaging and strengthening the capacity of civil society to conserve biodiversity. While only a portion of grants had a direct focus on capacity building, all of them provided opportunities for strengthening the capacity of civil society at the scale of the individual, organization and/or network. Including the RIT, 43 civil society organizations (38 local and five international) and 19 individuals (all local) were directly involved in implementing conservation projects as CEPF grantees. CEPF tracks the impacts of its investments on local organizations by using the Civil Society Organizational Capacity Tracking Tool, which is completed by each grantee as a self-assessment, at the beginning and end of the period of CEPF support.

In the Western Ghats, the tool was completed by 33 local civil society organizations (individuals, international organizations and organizations receiving CEPF support for periods less than 12 months were not required to complete it). Over the period of CEPF support, 24 of the 33 organizations reported an increase in organizational capacity, four reported a decrease and five reported no overall change. The dimensions of civil society capacity where grantees reported the greatest net increase were human resources and management capacity. At the end of the CEPF investment program, the dimensions where grantees reported the greatest residual capacity gaps were financial resources and delivery (Figure 2).

**Figure 2. Comparison of Baseline and Final Civil Society Organizational Tracking Tool Scores for CEPF Grantees in the Western Ghats and Sri Lanka Hotspot**



In addition to capacity building of individual organizations, some projects built civil capacity at the network scale. For example, AERF established a network of local civil society organizations active in the Sahyadri-Konkan Corridor, and provided training in private forest conservation, ecosystem services, tree identification, seed collection and nursery establishment. Also in the northern Western Ghats, Biome Conservation Foundation created an issues-based network focused on the conservation of rocky plateaus. This network, which has more than 100 individual members, documented the biodiversity, ecological and cultural values of the rocky plateaus, prepared site profiles with detailed information on key localities, and advocated measures to mitigate the impacts of tourism and other incompatible activities.

Other grantees invested in the capacity of individuals. For example, WCS trained more than 100 frontline Forest Department staff and 500 civil society volunteers in systematic wildlife surveys through field workshops. The trainees undertook the first ever rigorous population assessment of tiger prey species across 265,000 hectares of wildlife habitat within and around protected areas. Some of the volunteers showed a keen interest in becoming involved in the monitoring of large mammal populations on a long-term basis, and will continue to be involved in the monitoring program, which has permission to continue until at least the end of 2017. Similarly, IUCN formed a professional network of 20 specialists on the freshwater biodiversity of the Western Ghats. The network members received training in Red List assessment methodology, and now have the skills needed to keep the Red List assessments of freshwater species up to date.

Keystone Foundation catalyzed the establishment of a new civil society organization, to provide an umbrella for groups and individuals interested in the biodiversity of the Nilgiri Biosphere Reserve. This organization, the Nilgiri Natural History Society, was launched in February 2010,

by the Union Minister of Environment and Forests, Mr Jairam Ramesh. Since then, the membership of the society has steadily built up to over 100 lifetime members.

Finally, AERF organized a successful series of events to celebrate the 25th anniversary of the Save the Western Ghats March, culminating in a practitioners' conclave in Mahabaleshwar, which was attended by more than 345 delegates from a broad cross-section of stakeholders involved in conservation of the Western Ghats, including 45 members of eight different tribal groups and 34 of the original marchers. The conclave created space for conservationists to exchange views, forge new partnerships and update their knowledge on topical issues, ranging from indigenous food to public interest litigation.

## **PROGRESS TOWARDS LONG-TERM CONSERVATION GOALS**

Because biodiversity hotspots are, by definition, the biologically richest and most threatened terrestrial ecoregions on the planet, the scale of the conservation challenge in these places is, on average, greater than elsewhere. Also, in most hotspots, conservation efforts are constrained by limited capacity among conservation organizations, unsupportive operating environments, and unreliable funding. Therefore, conservation in the biodiversity hotspots is a long-term endeavor, requiring the combined efforts of many actors over long periods, to achieve the systematic changes necessary to reverse entrenched processes of biodiversity loss.

To better evaluate its contributions to collaborative conservation efforts, CEPF has developed long-term goals for the regions where it invests. These goals are an expression of five key conditions that must be met in order for conservation efforts to meet with enduring success:

1. Global conservation priorities (i.e., globally threatened species, KBAs and conservation corridors) and best practices for their management are identified, documented, disseminated and used by public sector, civil society and donor agencies to guide their support for conservation in the region.
2. Local and national civil society groups dedicated to conserving global conservation priorities collectively possess sufficient organizational and technical capacity to be effective advocates for, and agents of, conservation and sustainable development for at least the next 10 years.
3. Adequate and continual financial resources are available to address conservation of global priorities for at least the next 10 years.
4. Public policies, the capacity to implement these, and the systems of governance in each individual country are supportive of the conservation of global biodiversity.
5. Mechanisms exist to identify and respond to emerging conservation issues.

The attainment of all five goals would not necessarily mean that biodiversity was no longer threatened but only that government, civil society and donors, collectively, were able to respond effectively to all present threats and any potential future threats that could reasonably be expected to arise. Periodic assessment of progress towards these goals can help identify areas most in need of additional investment from CEPF.

The participants at the final assessment workshop were asked to assess progress towards the five goals, either using the criteria and indicators provided, or adjusting them to fit with the specific conditions of the Western Ghats. Participants were asked to apply the criteria and indicators based on the prevailing situation in June 2015. These were then compared with the results of similar exercises conducted during the five-year and mid-term assessment workshops, which compared the situation in mid-2008 with that in mid-2011 and mid-2013, respectively. This

allowed an assessment of change over time to be made with respect to each criterion. The synthesized results are presented in Annex 4

Although seven years is quite a short period over which to observe significant change with regard to long-term goals, when comparing CEPF grantees' perception of the situation prevailing in 2015 with that in 2008, it was notable that significant changes were observed with regard to 10 of the 25 criteria (40 percent), and that the direction of change was positive in each case, albeit with caveats. Specifically, under Goal 1 (conservation priorities), significant progress was reported with regard to: (i) global Red List assessments, with comprehensive assessments having been completed for reptiles, fishes, mollusks, odonates and aquatic plants; (ii) identification of KBAs, with freshwater KBAs having been identified for Kerala and Tamil Nadu, building on a preliminary assessment for the entire Western Ghats; and (iii) conservation plans, with information on global conservation priorities having been fed into the Western Ghats Ecology Expert Panel report and the subsequent report of the High Level Working Group on the Western Ghats. In the first two cases, the improvements are directly attributable to CEPF grants.

Under Goal 2 (civil society capacity), significant progress was reported with regard to: (i) human resources, with civil society organizations having collectively attained a higher level of technical competence over the duration of the CEPF program; (ii) management systems and strategic planning, with operational capacity and management structures having gradually improved for NGOs (although less so for community groups); and (iii) transboundary conservation, with collaboration having increased among civil society groups from different states. These improvements are partly attributable to the additional grant funding made available by CEPF and other donors, and to CEPF's role in bringing together civil society actors from different places with different perspectives.

Under Goal 3 (sustainable financing), significant progress was reported with regard to: (i) availability of civil society funding; and (ii) funding for livelihood alternatives. In the former case, there was a significant increase in government funding for research, while CEPF and other international donors significantly increased availability of grant funding for conservation action by civil society. In the latter case, the increased availability of funding was largely attributed to new government funding mechanisms, such as the National Rural Employment Guarantee Scheme. These improvements in funding availability were offset to some extent by increased restrictions on civil society groups accessing foreign funding, due to tightened implementation of the FCRA.

No significant changes were reported with regard to Goal 4 (enabling environment). It was noted, however, that some developments since 2008 had created new opportunities for civil society to engage effectively in conservation, such as the establishment of the National Green Tribunal in 2011. At the same time, participants noted that there had been some tightening of the operating space available to civil society organizations, especially activist groups opposing Kudankulam Nuclear Power Plant and other high-profile developments.

Finally, under Goal 5 (responsiveness to emerging issues), significant improvements were reported with regard to: (i) threat monitoring, with new online portals having been developed to facilitate sharing of information on development projects with potential environmental impacts; and (ii) discussion of conservation issues in the public sphere, with debate of conservation issues in mass media having increased, albeit not to the point where it was seen as having any greater influence on public policy than before. The former improvement was directly attributable to CEPF investments but the latter was a wider societal change.

In spite of improvements in these areas, there remains a long way to go before the long-term conservation goals for the Western Ghats are met. Participants at the final assessment workshop considered that, of the 25 criteria assessed, only three had been fully met by 2015: legal environment for civil society (laws exist that allow for civil society to engage in the public policy-making and implementation process); education and training (domestic programs exist that produce trained environmental managers at secondary, undergraduate, and advanced academic levels); and public sphere (conservation issues are regularly discussed in the public sphere, and these discussions influence public policy). Of the remaining criteria, 17 were assessed as partially met and five were assessed as not met. The unmet goals were evenly distributed among the five criteria, with one apiece.

## **CONCLUSION**

The CEPF investment program in the Western Ghats took place in a region with a long history of biodiversity conservation, led by government and supported by a mature conservation movement. The region benefits from a reasonably extensive and representative protected area network, albeit characterized by top-down models that provide local communities with various benefit-sharing opportunities but seldom a role in governance. The CEPF investment in the region, amounting to less than \$1 million per year, was dwarfed by government investment in conservation and major donor-funded programs in the forestry sector. Nevertheless, because few other conservation donors were supporting civil society groups in India are limited, CEPF became one of the most important sources of grant funding available to groups working on biodiversity conservation in the Western Ghats.

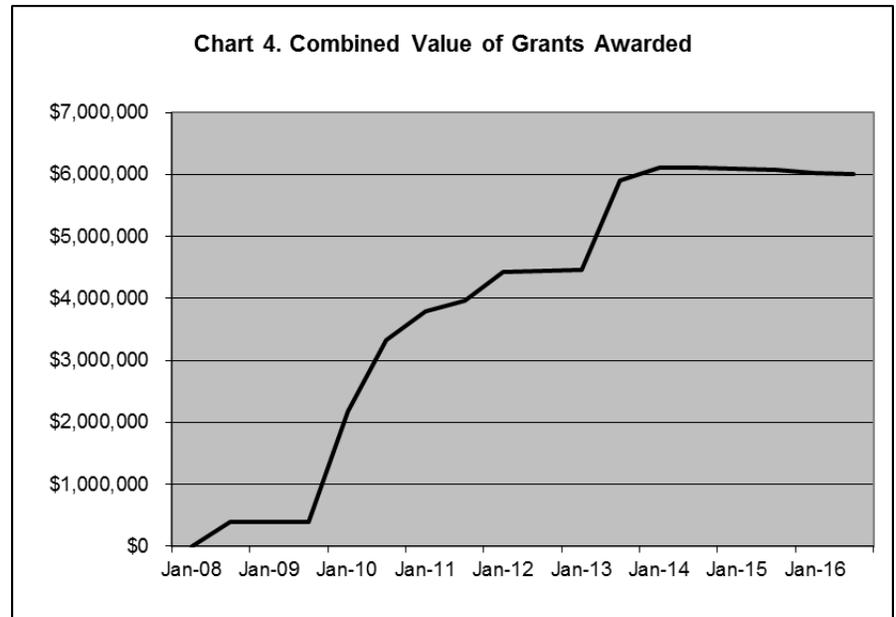
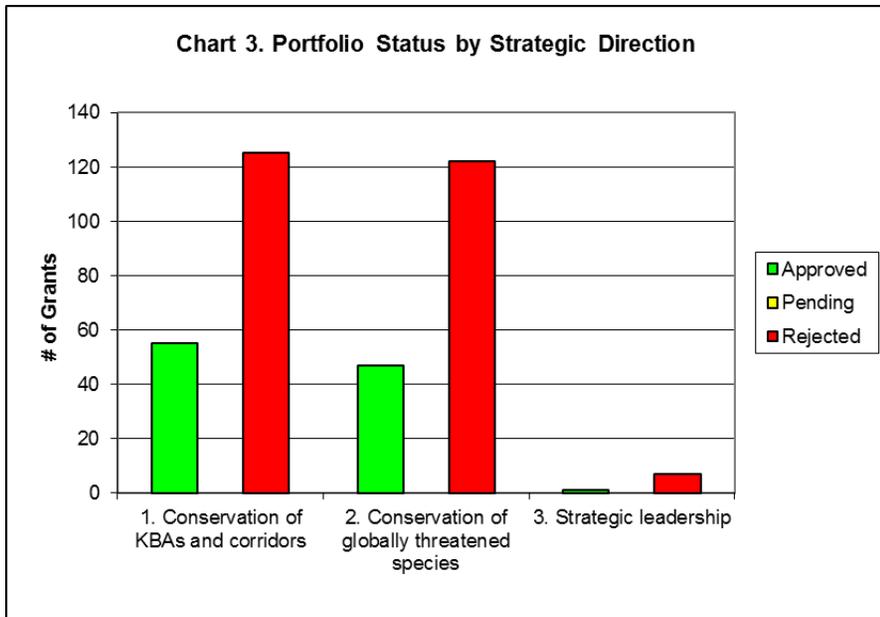
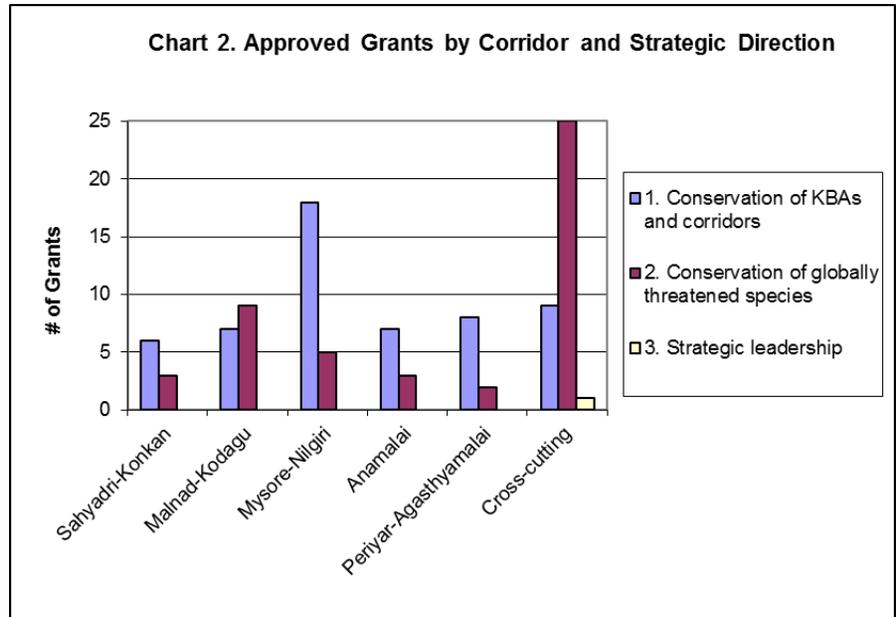
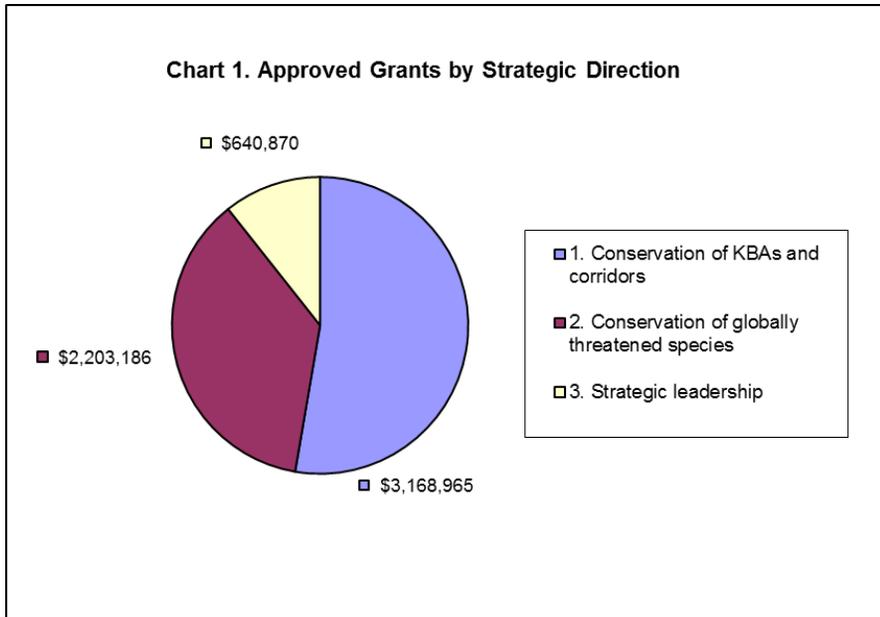
In this context, CEPF investments complemented on-going investments in conventional protected areas by: demonstrating alternative conservation models with a greater role for local communities in governance; mainstreaming conservation into production landscapes; and addressing the needs of highly threatened species requiring focused conservation action. CEPF grants contributed to a growing body of knowledge and good practice models that can inform the development of state and national policies that optimize biodiversity conservation within an overall program of inclusive, green growth.

In general, CEPF grantees found it difficult to engage effectively in the public policy process. Nevertheless, some significant results were achieved, particularly with regard to incorporating experience and recommendations from CEPF grantees into the Special Area Development Programme of Tamil Nadu State Government. Likewise, CEPF grantees demonstrated a diversity of innovative conservation approaches for conservation outside of conventional protected areas but often found it difficult to secure the necessary financial support to sustain these approaches or take them to scale. The grantees that were most successful in achieving financial sustainability for their activities tended to be ones who promoted uptake into the plans and budgets of government agencies and local authorities. This points either to a lack of conservation funding from private sources or to a lack of know-how among civil society organizations in tapping into sources that do exist. These are areas where a future program of support to civil society in the Western Ghats could place greater emphasis on capacity building.

The aforementioned shortcomings notwithstanding, the CEPF program in the Western Ghats had a significant aggregate impact. One area in which the program was transformative was in supporting the emergence of an effective conservation movement in the Western Ghats. A significant number of high capacity conservation-focused civil society organizations were well established long before the arrival of CEPF. While CEPF investment enabled a number of smaller and more nascent organizations to grow in capacity and credibility, its most significant impact

was arguably bringing together groups with complementary capacities and different (sometimes conflicting) perspectives around a common agenda. This was achieved through face-to-face meetings, a shared web-based platform, and numerous small group interactions facilitated by the RIT. In this way, the program promoted socially just conservation as a vehicle for long-term sustainable use and conservation of biodiversity in both protection and production landscapes.

**Annex 1 – CEPF Investment in the Western Ghats Region as of September 30, 2016**



## Annex 2 – Update of the Logical Framework for CEPF Investment in the Western Ghats Region

Objective	Targets	Progress
<p>Conserve and manage globally important biodiversity by strengthening the involvement and effectiveness of NGOs and other sectors of civil society in biodiversity conservation in the Western Ghats and Sri Lanka Biodiversity Hotspot: Western Ghats Region.</p>	<p>NGOs and civil society actors, including the private sector, actively participate in conservation programs guided by the CEPF ecosystem profile for the Western Ghats Region.</p> <p>Alliances and networks among civil society groups formed to avoid duplication of effort and maximize impact in support of the CEPF ecosystem profile for the Western Ghats Region.</p> <p>Development plans or policies influenced to accommodate biodiversity.</p>	<p>62 civil society actors received CEPF grants, including ATREE as the RIT. Of these, 5 were international organizations, 38 were local organizations and 19 (all small grantees) were individuals.</p> <p>8 alliances and networks were forged:</p> <ul style="list-style-type: none"> <li>(i) Applied Environmental Research Foundation (AERF) formed a network of civil society groups engaged in conservation in the northern Western Ghats;</li> <li>(ii) Environics Trust created a website called Western Ghats EIA Watch to network stakeholders to monitor and engage in the environmental approval process for development projects;</li> <li>(iii) Keystone Foundation founded the Nilgiri Natural History Society to network and exchange information among organizations and individuals with interests in Nilgiri Biosphere Reserve;</li> <li>(iv) Rainforest Alliance and Nature Conservation Foundation forged an alliance for setting standards for sustainably produced coffee and tea;</li> <li>(v) IUCN's Freshwater Biodiversity Unit, through its local partner Zoo Outreach Organization, created a network of freshwater biodiversity experts to update the IUCN Red List of Threatened Species;</li> <li>(vi) The French Institute of Pondicherry, Strand Life Sciences Ltd and several other data-holding institutions forged an alliance to develop the Western Ghats Portal as an open-access, on-line data repository on Western Ghats ecology;</li> <li>(vii) Biome Conservation Foundation formed a civil society network for conservation of rocky plateaus in the Sahyadri-Konkan corridor;</li> <li>(viii) Wildlife Information Liaison Development Society established a network of educators and journalists who can raise awareness of threatened freshwater biodiversity and reptiles.</li> </ul> <p>4 policies were influenced to accommodate biodiversity:</p> <ul style="list-style-type: none"> <li>(i) Tamil Nadu Highways Department introduced measures to minimize road kill of wildlife in the Anamalai Corridor;</li> </ul>

	80 key biodiversity areas have new or strengthened protection and management guided by a sustainable management plan.	<p>(ii) Tamil Nadu Animal Husbandry Department established a new financial compensation scheme to insure cattle owners against livestock losses due to predation;</p> <p>(ii) Tamil Nadu Animal Husbandry Department banned the veterinary use of ketoprofen, a drug harmful to vultures, in three districts of the Western Ghats;</p> <p>(iv) Experience and recommendations from CEPF grantees were incorporated into the Special Area Development Programme for the Western Ghats adopted by Tamil Nadu State Government.</p> <p>Management was strengthened at 29 KBAs: Agumbe Reserve Forest (RF); Amboli RF; Bhadra Wildlife Sanctuary (WLS); Cauvery WLS; Chandoli National Park (NP); Chimmony WLS; Dandeli WLS; Haliyal RF; Indira Gandhi WLS; Kollegal Forest Division (FD); Kotagiri-Longwood Shola; Koyna WLS; Kudremukh NP; Malayathur FD; Mookambika WLS; Mudumalai WLS; Nemmara FD; Nilgiri North FD; Palni Hills; Parambikulam WLS; Peechi-Vazhani WLS; Periyar Tiger Reserve (TR); Sharavathi WLS; Shendurney WLS; Someshwara WLS; Talaimalai RF; Theni FD; Tirunelveli FD; Vazhachal FD.</p>
Intermediate Outcomes	Intermediate Indicators	Progress
<p><b>Outcome 1:</b> Action by diverse communities and partnerships enabled to ensure conservation of key biodiversity areas and to enhance connectivity in the target corridors</p> <p>Original allocation: \$2,300,000 Revised allocation: \$3,300,000</p>	<p>Percent of targeted protected areas with strengthened protection and management.</p> <p>Percent of projects outside protected areas that introduce and/or strengthen biodiversity in management practices</p> <p>Percent of projects that enable stewardship of biodiversity and ecosystem services by Indigenous and local communities in focus areas.</p>	<p>Management was strengthened at 16 protected areas, equivalent to 70 percent of those targeted: Aghanashini Lion-tailed Macaque Conservation Reserve (CR); Anamalai TR; Bedthi CR; Bhadra TR; Chimmony WLS; Dandeli Hornbill CR; Mookambika WLS; Mudumalai WLS; Parambikulam WLS; Peechi-Vazhani WLS; Periyar TR; Shalmala Riparian Ecosystem CR; Sathyamangalam TR; Sharavathi WLS; Shendurney WLS; Someshwara WLS.</p> <p>11 projects, equivalent to 31 percent of the 36 grants awarded under Strategic Direction 1 that are located outside protected areas, integrated biodiversity conservation into management practices of production landscapes, such as reserve forests and coffee estates.</p> <p>29 projects, equivalent to 53 percent of the 55 grants awarded under Strategic Direction 1, enabled stewardship of biodiversity and ecosystem services by local communities.</p>

	<p>Number of hectares of key biodiversity areas with strengthened protection and management.</p>	<p>455,584 hectares of KBAs received strengthened protection and management:</p> <p>(i) Training was provided to Forest Department staff responsible for managing 50,000 hectares within Kollegal KBA, 49,500 hectares within Bhadra KBA, 43,900 hectares within Sharavathi KBA, 25,000 hectares within Agumbe KBA, 24,700 hectares within Mookambika KBA and 8,840 hectares within Someshwara KBA;</p> <p>(ii) 50,059 hectares within Cauvery KBA, 24,806 hectares within Dandeli KBA, 22,586 hectares within Someshwara KBA and 12,337 hectares within Mookambika KBA were covered by extensions to existing protected areas;</p> <p>(ii) CFR claims were approved for 24,000 hectares within Malayattur, Nemmara and Vazhachal KBA, 20,700 hectares within Parambikulam KBA, 12,500 hectares within Peechi-Vazhani KBA and 8,500 hectares within Chimmony KBA;</p> <p>(iv) 35,673 hectares of Tirunelveli FD was designated as Nellai Wildlife Sanctuary;</p> <p>(v) Regular monitoring of wildlife populations was initiated across 17,100 hectares of Shendurney KBA;</p> <p>(vi) 16,000 hectares within Mudumalai, Nilgiri North Forest Division and Talaimalai KBAs was covered by community conservation actions;</p> <p>(vii) 3,788 hectares of Theni FD KBA benefited from strengthened management of the environmental impacts of tourism;</p> <p>(viii) 2,300 hectares within Periyar KBA benefited from manual removal of an alien invasive species (African catfish);</p> <p>(ix) 1,500 hectares in Haliyal KBA benefited from improvement management of human-elephant conflict;</p> <p>(x) 790 hectares of Palni Hills KBA benefited from with improved conservation management for grizzled giant squirrel;</p> <p>(xi) 250 hectares of forest adjacent to Kotagiri-Longwood Shola KBA and 200 hectares adjacent to Indira Gandhi KBA benefitted from strengthened conservation management within certified tea and coffee estates;</p> <p>(xii) 90 hectares of forest on private land within Chandoli KBA, 40 hectares within Amboli KBA and 20 hectares within Koyna KBA were covered by conservation agreements with private landowners;</p>
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	<p>Number of hectares in newly established or expanded protected areas.</p>	<p>(xiii) 100 hectares of agricultural land near Talaimalai RF KBA benefited from strengthened conservation of solitary bees;  (xiv) 90 hectares of village and forest land within Nilgiris North FD was covered by community-based ecological monitoring;  (xv) 90 hectares of freshwater swamps within Sharavathi KBA was placed under restoration and long-term management;  (xvi) 88 hectares within a vital wildlife corridor connecting Kudremukh KBA with adjoining shola forest benefited from enhanced protection;  (xvii) Biodiversity-friendly management practices were introduced across 37 hectares of agricultural land in two unprotected enclaves within Dandeli KBA.</p> <p>Protected area coverage in the Western Ghats increased by 186,989 hectares through the creation and expansion of protected areas:</p> <p>(i) Cauvery WLS was expanded by 50,059 hectares (from 52,695 to 102,754 hectares);  (ii) Nellai WLS was declared, covering 35,673 hectares;  (iii) Aghanashini Lion-tailed Macaque CR was declared, covering 29,952 hectares  (iv) Dandeli WLS was expanded by 24,806 hectares (from 63,835 to 88,641 hectares);  (v) Someshwara WLS was expanded by 22,586 hectares (from 8,840 to 31,426 hectares);  (vi) Mookambika WLS was expanded by 12,337 hectares (from 24,700 to 37,037 hectares);  (vii) Bedthi CR was declared, covering 5,731 hectares;  (viii) Dandeli Hornbill CR was declared, covering 5,250 hectares;  (ix) Shalmala Riparian Ecosystem CR was declared, covering 489 hectares;  (x) 8 sacred groves totaling 106 hectares were restored and placed under community management: Bhaviyur (42 hectares); Chedikal (22 hectares); Banagudi shola (21 hectares); Kotada (11 hectares); Kavalcombankai (4 hectares); Sengalcombankai (4 hectares); Johicombai (1 hectares); and Dhodatti (1 hectares).</p>
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	<p>Partnerships (including with state agencies) established to implement progressive science-based management, conservation and monitoring of priority sites.</p>	<p>7 partnerships were established to implement progressive science-based management, conservation and monitoring of priority sites:</p> <ul style="list-style-type: none"> <li>(i) AERF forged community-civil society partnerships to enhance conservation of forests on private lands in the Sahyadri-Konkan Corridor;</li> <li>(ii) Amitha Bachan established a protocol for biodiversity monitoring, engaging Kadar tribal people, sponsored and supported by Kerala Forest Department in Vazhachal Forest Division;</li> <li>(iii) Arulagam facilitated partnerships among communities, local government and civil society for conservation of biodiversity along the Moyar River;</li> <li>(iv) Foundation for Ecological Research, Advocacy and Learning forged partnerships with local tribal communities for monitoring wildlife usage of a proposed ecological corridor;</li> <li>(v) Keystone Foundation forged partnerships among communities, local government and civil society for the conservation of hill wetlands within Nilgiri Biosphere Reserve;</li> <li>(vi) Snehakunja Trust established a protocol for restoration of freshwater swamps, with participation and support from the Forest Department, Sirsi Forestry College and local communities;</li> <li>(vii) Wildlife Conservation Society established a protocol for systematic monitoring of tiger prey species and threats, engaging volunteers, supported by Karnataka Forest Department at several tiger reserves and adjoining unprotected areas.</li> </ul>
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<p><b>Outcome 2:</b> Conserve globally threatened species and habitats through systematic conservation planning and action</p> <p>Original allocation: \$1,800,000 Revised allocation: \$2,050,000</p>	<p>Percent of targeted areas with strengthened protection and management.</p> <p>Number of hectares of key biodiversity areas with strengthened protection and management.</p> <p>Number of hectares in newly established or expanded protected areas.</p> <p>The status and distribution of globally threatened plant species investigated and results applied to planning, management, awareness raising and/or outreach.</p>	<p>Management was strengthened at 16 protected areas, equivalent to 70 percent of those targeted (see above for details).</p> <p>455,584 hectares of KBAs received strengthened protection and management (see above for details).</p> <p>Protected area coverage in the Western Ghats increased by 186,989 hectares through the creation and expansion of protected areas (see above for details).</p> <p>The status and distribution of 608 species of aquatic plant was assessed, and the results disseminated via the Red List of Threatened Species, where they can be used to inform conservation action.</p>
<p><b>Outcome 3:</b> A regional implementation team effectively coordinates the CEPF investment in the Western Ghats Region.</p> <p>Original allocation: \$400,000 Revised allocation: \$650,000</p>	<p>Number of groups receiving grants that achieve a satisfactory score on final performance scorecard</p> <p>RIT performance in fulfilling the approved terms of reference.</p>	<p>33 out of 44 large grants (75 percent) and 44 out of 59 small grants (75 percent) were evaluated as having met or exceeded expectations with regard to delivery of expected results in the final performance scorecard.</p> <p>ATREE met 23 of the 23 deliverables in the logical framework for the RIT grant.</p>
<b>Strategic Funding Summary</b>	<b>Amount</b>	<b>Investment Period</b>
<b>Original Spending Authority</b>	\$4,500,000	May 1, 2008 to April 30, 2013
<b>Revised Spending Authority</b>	\$6,077,000	May 1, 2008 to June 30, 2015

### **Annex 3 – List of CEPF Approved Grants in the Western Ghats**

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

#### **Promotion of Community Forest Management for Livelihood Support of the Paliyar Tribe**

With the assistance of government departments and experts, sensitize, build capacity and involve the Paliyar indigenous community in sustainable NTFP collection, while conserving the habitats and wildlife of the Palni Hills, Tamil Nadu. Collect baseline data on NTFP resource availability, expose community members to sustainable harvesting practices and promote community forest management. Explore ecotourism as a possible alternate livelihood.

Amount: \$16,958

Grant Term: 07/13 - 12/14

Grantee: Action for Community Transformation India Foundation

#### **Revitalizing the Indigenous Farming System to Enhance the Ecological and Livelihood Security in Anamalai Corridor of Western Ghats, Southern India**

Revitalize the capacity of tribal farmers for traditional farming, maintaining on-farm crop diversity and practicing sustainable harvesting of non-timber forest products harvest, and thereby improve the quality of critical habitats for biodiversity within the Palni Hills in the Anamalai Corridor.

Amount: \$16,338

Grant Term: 09/09 - 07/12

Grantee: Action for Community Transformation India Foundation

#### **Regeneration of Traditionally Used Indigenous Species to Reduce Pressure on the Mudumalai Tiger Reserve**

Create a nursery of traditionally used species such as various medicinal plants and tubers and provide saplings to the numerous tribal families and settlements along the edge of the critical tiger habitat of Gudalur Division near Mudumalai. Help tribal communities retain their traditional resource base while reducing pressure on tiger habitat.

Amount: \$14,997

Grant Term: 10/09 - 02/12

Grantee: Action for Community Organisation, Rehabilitation and Development

#### **Strengthening Conservation through Adivasis' Traditional Practices and the Forest Rights Act**

Enhance ecological connectivity across the Gudalur Plateau, an important link in the Mysore-Nilgiri Corridor. Understand, document and promote recognition of the role of sacred groves in biodiversity conservation. Support Adivasis indigenous communities to claim community forest rights under the Forest Rights Act of 2006, and strengthen capacity of these indigenous communities to conserve forest resources. Apply learning to inform wider implementation of the act.

Amount: \$59,147

Grant Term: 06/13 - 11/15

Grantee: Action for Community Organization, Rehabilitation and Development

**Investigating Congruence between Biodiversity and Ecosystem Services across Production Landscapes in the Mysore-Nilgiri Landscape Corridor in the Western Ghats**

Assess patterns of and congruence between biodiversity (birds) and ecosystem services (carbon storage) outside protected areas in Kodagu. Document impacts on ecosystem services by land-use intensification for increased economic returns, and provide a quantitative understanding of biodiversity and economic aspects for planning private reserve models on private lands, as well as state-supported models on public lands.

Amount: \$12,859

Grant Term: 10/09 - 12/10

Grantee: M. O. Anand

**Celebrating 25 Years of Save the Western Ghats March: Rejuvenating the Spirit of Civil Society Movement**

Provide a platform for collective action among civil society organizations for sustainable development in the Western Ghats by organizing a meeting to celebrate the 25th anniversary of the Save the Western Ghats March. Strengthen the Save the Western Ghats Movement, by engaging a greater diversity of stakeholders, facilitating dialogue among them and catalyzing collective action on specific conservation issues.

Amount: \$29,851

Grant Term: 12/11 - 05/13

Grantee: Applied Environmental Research Foundation

**Critical Links – Forging Community-Civil Society Partnerships to Enhance Connectivity in the Sahyadri-Konkan Corridor**

Enhance ecological connectivity in the Sahyadri-Konkan Corridor by establishing a network of nongovernmental organizations to jointly develop and implement a plan of action for restoring connectivity, and use the "conservation agreements" approach to develop and implement innovative models for community-based conservation that create a steady stream of benefits for local people at Koyna and Chandoli wildlife sanctuaries and Amboli Reserve Forest.

Amount: \$151,195

Grant Term: 11/09 - 06/13

Grantee: Applied Environmental Research Foundation

**In Harmony with Nature: Advancing Sustainability of the Satoyama Landscapes in the Sahyadri-Konkan Corridor**

Test innovative models for biodiversity conservation on private lands in the Satoyama landscape of southern Maharashtra. Scale up the successful incentive-based conservation agreements model piloted in the landscape, promote sustainable collection of selected medicinal plants under certification schemes such as FairWild, and create opportunities for private sector sponsorship of biodiversity conservation.

Amount: \$93,067

Grant Term: 06/13 - 10/15

Grantee: Applied Environmental Research Foundation

**Building a Grassroots Constituency to Conserve the River Moyar in the Mysore-Nilgiri Corridor**

Build a constituency for conservation of riverine habitats along the River Moyar among local communities and create a basis for incorporating biodiversity values into local development planning by identifying and training local partners at the grassroots level, training and providing them with firsthand experience of biodiversity and socio-economic studies, and assisting them to develop "micro-plans" for conservation action.

Amount: \$40,428

Grant Term: 11/09 - 11/11

Grantee: Arulagam

**Conservation of the Periyar-Agasthyamalai Corridor in the Southern Western Ghats: Knowledge Generation, Dissemination of Information and Capacity Building for Key Stakeholders**

Facilitate the long-term conservation of biodiversity in the Periyar-Agasthyamalai Corridor, by completing a GIS-based database on critical habitat links in the corridor, placing it into the public domain in a variety of accessible formats, and using this information base to implement programs of capacity building for state forest department staff and awareness raising among other key stakeholders.

Amount: \$74,825

Grant Term: 01/10 - 09/12

Grantee: Asian Nature Conservation Foundation

**Community-Based Conservation and Monitoring of Great Hornbills and Malabar Pied Hornbills and their Habitats of the Anamalai Part of Southern Western Ghats, India through Empowering the Endemic "Kadar" Tribe**

Develop a long-term conservation strategy for hornbills and their habitat with the support of the Kadar tribe by assessing availability of hornbill nesting trees, nest characteristics, habitat details and threat factors. Activities include strengthening of ongoing participatory conservation activity in the Vazhachal forest division with the support of the Forest Department, the Kadar tribe and its community groups.

Amount: \$9,959

Grant Term: 09/09 - 10/10

Grantee: Amitha Bachan

**Capacity Building of Forest Dependent Communities through Organic Farming in Dandeli Wildlife Sanctuary of North Kannada District, Karnataka, India**

Identify major native species threatened by intensive chemical agriculture on selected farms in and around Dandeli Wildlife Sanctuary and assess the positive effect of organic farming on endemic biodiversity. Project also aims to document indigenous agricultural knowledge in reducing the effect of chemicals on flora and fauna, while promoting organic farming with active participation of stakeholders and minimizing the use of inorganic inputs to crops.

Amount: \$7,740

Grant Term: 12/09 - 01/11

Grantee: Ganapati Bhat

**Networking and Information Support for Conservation of Rocky Plateaus in the Sahyadri-Konkan Corridor**

Network groups working on rocky plateaus and build their capacity for conservation and management of 15 sites in the northern Western Ghats. Engage scientists in building capacity in monitoring and assessing threatened biodiversity, and prepare and widely disseminate information resources on rocky plateaus. Formalize management guidelines for selected sites with concerned government departments.

Amount: \$13,869

Grant Term: 02/12 - 03/13

Grantee: Biome Conservation Foundation

**Facilitating Partnerships for Community Forest Resource Areas (CFRs) in the Southern Western Ghats**

Strengthen capacity of grassroots institutions for natural resource management and conservation of Community Forest Resource Use Areas (CFRs) in the Anamalai and Periyar-Agasthyamalai Corridors, ensuring long-term involvement of local communities. Support the gram sabhas of tribal villages to claiming community and CFR rights, undertake resource mapping and form CFR management committees and plans, through facilitating partnerships with relevant government departments.

Amount: \$20,000

Grant Term: 09/13 - 01/15

Grantee: Centre for Environment and Development

**Identifying Potential Areas as ‘Conservation Reserves’ in Agasthyamalai Biosphere Reserve**

Develop criteria for the establishment of conservation reserves in the reserve forests of Agasthyamalai Biosphere Reserve and delineate and map potential conservation reserves. Promote and strengthen partnerships and mechanisms for the management of biological corridors within and outside protected area networks in the biosphere reserve.

Amount: \$16,531

Grant Term: 09/09 - 12/10

Grantee: Centre for Environment and Development

**Empowering Local Communities and Civil Society Organizations in the Nilgiris to Use the Environmental Impact Assessment as a Conservation Tool**

Empower civil society to systematically engage with the EIA process by undertaking capacity building, monitoring EIA reports and approvals, conducting alternative “citizens” EIAs, and assisting communities impacted by faulty EIAs respond to issues of urgent concern. Establish a local unit of the EIA Response Centre in Nilgiris district to keep effective watch on EIA-related issues in the southern Western Ghats.

Amount: \$35,999

Grant Term: 12/11 - 07/13

Grantee: Environics Trust

**Empowering Local Communities and Civil Society Organizations in Using Environmental Impact Assessment Process as a Conservation Tool in the Western Ghats**

Empower local communities and civil society groups in the Western Ghats to address the negative environmental impacts of development projects by strengthening their capacity to engage in the EIA process; monitoring and challenging EIA reports; conducting alternative 'Citizens' EIAs'; responding to issues of urgent concern for communities and groups impacted by faulty EIAs; and establishing a network of interested groups.

Amount: \$85,527

Grant Term: 10/09 - 05/13

Grantee: Environics Trust

**Community-Based Partnerships for Impact Assessment and Regulation of Tourism in Western Ghats**

Address the threats that unregulated tourism development poses to natural ecosystems within the Mysore-Nilgiri Corridor by researching environmental impacts and promoting appropriate regulatory and management measures to mitigate negative effects. Build capacity to assess tourism impacts at the grassroots level, including by establishing community-based Tourism Impact Assessment Cells at two pilot sites and disseminating results to a wide range of stakeholders.

Amount: \$44,756

Grant Term: 01/10 - 06/13

Grantee: Equitable Tourism Options

**Bridging the Shencottah Gap: How Payments for Ecosystem Services Can Restore Biodiversity outside Protected Areas in India**

Catalyze payments for ecosystem services mechanisms to strengthen ecological connectivity across the Shencottah Gap within the Periyar-Agasthyamalai Corridor. Identify critical linkages for wildlife movement across the gap, and then target payments to private landholders and community groups to restore, enhance and secure wildlife habitats within them. Monitor the effectiveness of these mechanisms, leverage funding to ensure sustainability and promote replication elsewhere.

Amount: \$499,443

Grant Term: 10/09 - 06/15

Grantee: Foundation for Ecological Research, Advocacy and Learning

**Exploring Sustainable Land-Use Practices in Rubber Plantations in a Critical Wildlife Corridor**

Promote the adoption of sustainable land-use practices in rubber plantations within the Periyar-Agasthyamalai corridor by developing local indicators for certifying rubber products that comply with the appropriate global standard and respect local tradition and laws, providing guidance to rubber plantation managers about the priority actions needed to achieve certification, and developing market linkages for certified rubber products.

Amount: \$39,833

Grant Term: 01/12 - 06/15

Grantee: Foundation for Ecological Research, Advocacy and Learning

**Thematic Training on GIS and Remote Sensing for Conservation Research and Planning**

Leverage data on the Western Ghats Portal to reach out to a larger community of conservation scientists and practitioners. Provide training on application of GIS and spatial analysis to three or four thematic areas of conservation and ecology, via a minimum of five residential workshops that involve CEPF grantees as thematic experts and mentors. Make course materials publicly available on-line.

Amount: \$19,916

Grant Term: 04/13 - 01/15

Grantee: Foundation for Ecological Research, Advocacy and Learning

**Overcoming Barriers: Restoring Ecological Connectivity across Linear Intrusions in the Shencottah Gap**

Enhance ecological connectivity between the Periyar and Agasthyamalai landscapes by mitigating the impacts of linear infrastructure. Assess barrier effects on large mammal movement, identify priority areas for mitigation measures for optimum restoration of connectivity, and formulate practical mitigation measures that can be integrated into road and railway engineering design. Promote uptake of recommendations by relevant stakeholders through consultative workshops.

Amount: \$145,958

Grant Term: 06/13 - 12/15

Grantee: Foundation for Ecological Research, Advocacy and Learning

**Identifying Critical Areas for a Landscape-Level Wildlife Corridor in Uttara Kannada District (Northern Part of Malnad-Kodagu Corridor to Sahyadri-Konkan Corridor) of Central Western Ghats**

Assess and advance conservation strategies for priority areas in the northern part of Malnad-Kodagu Corridor. Compile and analyze research results from the landscape over the years, including baseline ecological and diversity status data for Aghanashini and Bedthi river valleys. Take advantage of available legal options to propose appropriate management designations, such as conservation reserve.

Amount: \$7,177

Grant Term: 09/09 - 01/11

Grantee: B. L. Hegde

**Barefoot Ecologist for Ecological Monitoring in the Nilgiri Biosphere Reserve**

Develop a community-based ecological monitoring program for the Nilgiri Biosphere Reserve. Meet with villagers to select sites and explain methods, hold an expert meeting to discuss the monitoring protocol, organize staff trainings to familiarize them with the methodology, and identify and train community members interested in becoming 'barefoot ecologists'.

Amount: \$19,000

Grant Term: 06/13 - 06/14

Grantee: Keystone Foundation

### **Conserving the Sacred: an Eco-cultural Approach to Community Conservation in the Nilgiris District**

Engage with local communities who have age-old associations with sacred groves. Document the ecological as well as the cultural dimensions of the groves. Facilitate secure tenure over these groves for local communities, evolve a local monitoring mechanism to regulate use, and develop partnerships with other stakeholders, such as estates, the forest department and settler communities.

Amount: \$18,500

Grant Term: 11/11 - 01/13

Grantee: Keystone Foundation

### **Hill Biodiversity and Indigenous People: The God of Small Ecosystems**

Channel local interest in the biodiversity of the Nilgiri Biosphere Reserve toward addressing conservation issues through establishing a Nilgiris Natural History Society, implementing activities through the society with direct conservation benefits to local communities (including conservation awards, protection of sacred groves, nature interpretation sites and conservation villages) and developing a hub for outreach, training and extension in biodiversity conservation.

Amount: \$199,845

Grant Term: 10/09 - 09/11

Grantee: Keystone Foundation

### **Hill Wetlands in the Nilgiri Biosphere Reserve – A People’s Conservation Initiative**

Preserve special hill wetland habitats in Nilgiri Biosphere Reserve, namely: Tarnadmund, Bison Swamp and Nedugula. Highlight their special status, and bring to the forefront lesser known wetland species and their importance in conservation programs. Implement sustainable management plans with stakeholder communities for the protection and monitoring of these wetlands, which today are fragmented and disregarded.

Amount: \$19,702

Grant Term: 04/11 - 08/12

Grantee: Keystone Foundation

### **Mainstreaming Conservation Action in District Public Policy**

Demonstrate linkages between upstream shola grassland and swamp habitats in Nilgiris district and downstream water resources of the Coonoor River, through quantification and valuation of hydrological services, and evaluation of the impacts of land use patterns and practices. Integrate hydrological services of natural ecosystems into district government planning and policy, as a model for wider replication in the Western Ghats.

Amount: \$41,825

Grant Term: 12/11 - 06/13

Grantee: Keystone Foundation

### **Sowing Seeds for a Green Economy: Exploring Payment for Ecosystem Services in Nilgiri Biosphere Reserve**

Test new mechanisms to incentivize conservation of natural ecosystems outside protected areas in Nilgiri Biosphere Reserve. Develop frameworks for payment for ecosystem services (PES) mechanisms for three services: hydrological regulation, pollination and provisioning of non-timber forest products. Identify potential buyers and develop PES metrics. Secure commitment by district authorities to establish at least one PES mechanism, as a demonstration to inform wider policy.

Amount: \$185,526

Grant Term: 06/13 - 12/15

Grantee: Keystone Foundation

### **Study of Distribution, Status and Dynamics of Private and Group Private Forests in Sahyadri-Konkan Corridor in Southern Maharashtra**

Form partnerships for protection of private and group private forests in the Sahyadri-Konkan to help maintain tree cover on group private forests, thereby enhancing biodiversity in priority sites and assisting in consolidation of corridors. Activities also include analyzing policy issues and making recommendations that will help to protect tree cover on private forests.

Amount: \$14,114

Grant Term: 09/09 - 01/12

Grantee: Jayant Kulkarni

### **Empowering Local Communities and Civil Society Organizations in the Western Ghats to Use Environmental Impact Assessments as a Conservation Tool**

Empower local communities and civil society groups in the Western Ghats to systematically engage with environmental impact, forest clearance and related environmental decision-making processes; and strengthen the capacity of grassroots civil society to effectively participate in these processes. Use the environmental impact assessment tool to monitor dam, railway and other development projects with potentially adverse biodiversity impacts. Provide public comments on proposals for forest diversion to relevant statutory bodies.

Amount: \$44,169

Grant Term: 07/13 - 06/15

Grantee: Legal Initiative for Forest and Environment

### **Restoration of *Lantana camara* Invaded Deciduous Forests in Mudumalai Tiger Reserve**

Determine, through field trials, the most effective way of removing *Lantana camara* from deciduous forest and restoring native vegetation, thereby improving the capacity of invaded forests to support greater biodiversity. Demonstrate good practice restoration techniques that benefit native plants and improve habitat for ungulates and their predators.

Amount: \$19,748

Grant Term: 12/11 - 02/13

Grantee: Madras Crocodile Bank Trust

### **Conserving Native Trees in the Coffee Agroforestry Landscape of Kodagu**

Identify strategies to enable farmers to conserve native trees within privately owned coffee estates in Kodagu that harbor a high diversity of tree species, despite economic and legal constraints. Produce scientific articles and develop linkages among stakeholders.

Amount: \$8,529

Grant Term: 10/09 - 08/10

Grantee: Cheryl Dwarka Nath

**Coexistence Bottom Up: Strengthening Asian Elephant Conservation in Human-dominated Landscapes**

Working in the Gudalur region of the Nilgiri Biosphere Reserve, develop a better understanding of human-elephant interaction in the region, focusing more on tolerance of Asian elephants rather than on conflict with them. Experiment with a range of site-specific interventions that could facilitate long-term human-elephant coexistence.

Amount: \$17,938

Grant Term: 08/13 - 01/15

Grantee: Nature Conservation Foundation

**Fostering Sustainable Agriculture Practices for Conservation of Tropical Biodiversity in Plantation Landscapes of Western Ghats**

Demonstrate a market-based approach to enhancing ecological connectivity while safeguarding agricultural production by introducing the Rainforest Alliance's "Sustainable Agriculture Standard" into tea and coffee estates in the Anamalai and Mysore-Nilgiri corridors, raising awareness and promoting adoption of sustainable agricultural practices, and developing a set of local indicators that adapts the Sustainable Agriculture Standard to the context of the Western Ghats.

Amount: \$197,334

Grant Term: 10/09 - 12/11

Grantee: Nature Conservation Foundation (\$115,235 grant), Rainforest Alliance (\$82,099 grant)

**Identification of Critical Crossing Points of Animals along the Road in and around Anamalai Tiger Reserve and to Suggest Relevant Mitigation Measures to Minimize Road Mortality**

Identify and implement mitigation measures to reduce the road mortality of endangered fauna in Anamalai Tiger Reserve, resulting from increasing tourism development, and contribute to the knowledge on the effects of traffic and road construction on forest animal movements.

Amount: \$17,532

Grant Term: 04/11 - 06/12

Grantee: Nature Conservation Foundation

**Threatened and Endemic Freshwater Fishes of the Southern Western Ghats: Improving Local Capacity to Link Conservation and Livelihoods**

Develop and implement community-based monitoring program to assess the status and trends of endemic and threatened freshwater fish in Kulathupuzha Reserve Forest and Parambikulam Tiger Reserve, with the participation of local fisher folk, gram sabhas (local self government) and Kerala State Forest Department, with the assistance of Participatory Rural Appraisal tools and monitoring methods.

Amount: \$7,999

Grant Term: 08/13 - 01/15

Grantee: Navadarshan Public Charitable Trust

**Opportunities for Establishing Informal Conservation Arrangements in the Periyar-Agasthyamalai Corridor of the Southern Western Ghats**

Identify potential mechanisms and sites for informal biodiversity conservation arrangements in Ranni Forest Division within Periyar-Agasthyamalai Corridor. Develop, using an integrated approach involving ecological, socio-cultural and policy-level filters, a set of mechanisms that identify sites of ecological importance and long-term, socio-ecological persistence. Conduct a review of policies governing land-use and develop a template for awareness generation in the area.

Amount: \$15,199

Grant Term: 08/09 - 05/11

Grantee: Meera Anna Oommen

**Building Stake to Conserve River-related Biodiversity using Otters as Flagship Species in the Cauvery River Basin in Karnataka**

Involve local stakeholders to raise awareness and develop a sense of responsibility towards sustainable utilization of river resources and conservation of biodiversity along the Cauvery River: an important freshwater ecosystem, and a stronghold of smooth-coated and Asian small-clawed otters. Using otters as flagship species, pilot various methods of community engagement, such as Village River Committees and community-based otter protection programs.

Amount: \$18,482

Grant Term: 08/13 - 10/14

Grantee: Paadhai Trust

**Integrated Project for Lantana Management, Restoration of Scrub Forest Ecosystem and Alternate Livelihoods at Lokkere Reserve Forest, Mysore-Nilgiri Corridor**

Combine removal of alien invasive *Lantana camara* with restoration of cleared areas using a Green Economy model involving the local communities in a reserve forest contiguous with Bandipur Tiger Reserve. Engage local community members in lantana removal and restoration activities, and develop market-linked alternate livelihood options based on the removed lantana, such as handicraft and charcoal production.

Amount: \$9,144

Grant Term: 08/13 - 07/14

Grantee: Paadhai Trust

**Grassland and Shola Research and Restoration of the Palni Hills**

Evaluate the status of and restore three high altitude patches of forest land in the Palni Hills presently occupied by invasive monocultures of eucalyptus and wattle to create habitat for native biodiversity, especially Nilgiri tahr, while demonstrating to hill communities that restoration can provide vital resources and income. Research and identify suitable pioneer native species that can replace invasive wattle.

Amount: \$18,721

Grant Term: 09/09 - 01/11

Grantee: Palni Hills Conservation Council

**Promotion of Organic Farming through Introduction of Analog Forestry Concept in Kollegal Forest District**

Explore the possibilities of initiating Analog Forestry, a system of forest management that combines the values of local forest biodiversity with organic crop cultivation, in Kollegal Forest District. Activities include providing an overview of the causes of the biodiversity loss and current situation in the project area, including human-wildlife conflict and threats from chemical farming.

Funding: \$3,080

Grant Term: 10/09 - 09/12

Grantee: G. Krishna Prasad

**Motivating the Local Communities through Documentary Movie Campaign to Evolve Long-Term Conservation Strategies in the Community and Private Reserves and Achieve Conservation Outcomes at Unprotected Sites in Malnad-Kodagu Corridor**

Identify and evaluate the community-induced threats to biodiversity sites in Malnad-Kodagu Corridor. Suggest locally adaptable threat mitigation mechanisms in a documentary film, and promote protection of biodiversity sites from major landscape level threats, like proposed mega- and mini-hydroelectric projects, through screenings among local communities and different stakeholders.

Funding: \$19,729

Grant Term: 05/11 - 10/12

Grantee: Samvada

**Assessing the Ecosystem Services of Newly Declared Conservation Reserves**

Work towards assessing ecosystem services of newly declared conservation reserves in Karnataka's Uttara Kannada district. Assess ecosystem service values of NTFP use, ecotourism, hydrological and carbon value of conservation reserves using questionnaire survey, resource mapping and appropriate scientific methods.

Amount: \$19,108

Grant Term: 10/13 - 12/14

Grantee: Snehakunja Trust

**Empowering Local Communities for Conservation in Newly Declared Conservation Reserves in the Western Ghats**

Develop management plans for three newly established conservation reserves in Karnataka's Uttara Kannada district enshrining community-based conservation strategies. Empower local people for effective participation in conservation reserve management by establishing and strengthening local community organizations, identifying suitable incentive mechanisms for engaging local people in conservation, promoting sustainable NTFP harvesting practices, and cultivating selected NTFPs to reduce pressure on forests.

Amount: \$38,000

Grant Term: 12/11 - 09/13

Grantee: Snehakunja Trust

**Improving Protected Area Effectiveness through Enhanced Civil Society Support and Rigorous Monitoring of Wildlife Populations and Conservation Threats**

Carry out rigorous scientific monitoring to assess the status of several species and levels of conservation threats in the Sahyadri-Konkan, Malnad-Kodagu and Mysore-Nilgiri corridors within Karnataka State. Involve and train civil society groups and the state forest department to enhance their technical capability to monitor and manage these areas in addition to providing critical management inputs.

Amount: \$350,000

Grant Term: 09/09 - 08/12

Grantee: Wildlife Conservation Society

**Assessing the Status and Distribution of Large Mammals in Highway and its Environs, Southern Western Ghats**

Identify eco-sensitive and potential corridors and contiguity within and with adjacent landscapes in Highway and its environs. Develop plausible science-based management mechanisms with support of data on large mammal movement patterns, species-habitat interactions and threats. Disseminate results and findings to local stakeholders and the Forest Department through a series of workshops.

Amount: \$18,977

Grant Term: 04/11 - 09/12

Grantee: Wildlife Information Liaison Development Society

**Establishing Community Conservation Reserves in the Anamalai Corridor**

Establish community and conservation reserves in Theni and Dindigul districts in the Anamalai Corridor, and thereby integrate rural livelihoods and biodiversity conservation. Assess management at existing reserves, prepare reserve management plans for nominated reserves through the participation of multiple key stakeholders, and promote establishment of suitable reserve management committees.

Amount: \$17,500

Grant Term: 01/12 - 01/13

Grantee: Wildlife Information Liaison Development Society

**Promoting Coordinated Civil Society Action for Biodiversity Conservation in the Malnad-Kodagu Corridor of the Western Ghats**

Connect motivated individuals and civil society organizations in the Western Ghats districts of Udipi and Shimoga to create a network for positive action in conservation of key biodiversity areas. Provide capacity building measures to people in villages outside protected areas through a series of training programs and meetings, and by introducing suitable technological solutions such as mobile phone applications.

Amount: \$5,203

Grant Term: 09/13 - 09/14

Grantee: Wildlife Information Liaison Development Society

**Roots of a Green Economy: Enhancing Biodiversity Conservation and Local Livelihoods in the Anamalai Corridor**

Expand the protected area network into the Theni Forest Division, linking the Anamalai and Periyar-Agasthyamalai corridors. Demonstrate the effectiveness of Theni Conservation Reserve as a co-management model, and facilitate formulation and implementation of a management plan for the reserve. Test forest-based livelihood options as potential benefit-sharing and sustainable funding mechanisms for the reserve, including ecotourism and sustainable harvesting of non-timber forest products.

Amount: \$50,000

Grant Term: 06/13 - 12/15

Grantee: Wildlife Information Liaison Development Society

**Examining Large Carnivore Connectivity and Creating Conservation Networks in the Sahyadri-Konkan Corridor**

Identify critical links in connectivity for large carnivores in the Sahyadri-Konkan Corridor and incorporate the importance of corridors, for their persistence, in regional policy and protected area management. Involve local stakeholders as part of conservation networks to maintain or enhance functional connectivity for large carnivores.

Amount: \$15,594

Grant Term: 07/13 - 12/14

Grantee: Wildlife Research and Conservation Society

**Mid-Term Assessment Workshop in Sahyadri-Konkan**

Bring together grantees in the Sahyadri-Konkan Corridor to exchange experience and lessons learned, and forge partnerships for future collaboration. Disseminate results of CEPF grants to the Forest Department.

Amount: \$616

Grant Term: 01/12 - 01/12

Grantee: Wildlife Research and Conservation Society

**Conservation Plan for Securing Selected Elephant Corridors in Southern Western Ghats**

Facilitate the conservation of critical elephant corridors within the Mysore-Nilgiri Corridor by evaluating the current status of each corridor, assessing local communities' dependence on them, monitoring usage by elephants and other animals, and preparing plans for securing them. Fix signage along each corridor to inform people about their importance, advise them how to minimize impacts on elephants, and warn drivers.

Amount: \$45,000

Grant Term: 12/09 - 05/11

Grantee: Wildlife Trust of India

**Staying Connected: Addressing the Impacts of Linear Intrusion on Wildlife in the Western Ghats**

Respond to the effects of linear infrastructure (roads, railways, power lines, etc.) on wildlife and habitats within the Western Ghats. Evaluate the main impacts of linear infrastructure, and undertake pilot studies in the Mysore-Nilgiri Corridor to inform on-going discussions toward the development of comprehensive national guidelines on linear intrusions in natural areas. Develop site-specific mitigation plans for selected sites.

Amount: \$75,000

Grant Term: 07/13 - 09/15

Grantee: Wildlife Trust of India

**Communities and Critical Corridors: Maintaining Landscape Connectivity in the Southern Western Ghats through Collaborative Approaches**

Take advantage of recent legislative changes to secure community rights to forest resources and establish new models of community-based conservation areas covering 30,000 ha. Facilitate the formal establishment of these areas, and strengthen the local institutions necessary to manage them. Develop participatory resource use, management and monitoring plans for the areas, as well as alternative livelihood options for local people.

Amount: \$199,977

Grant Term: 07/10 - 09/15

Grantee: World Wide Fund for Nature - India

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

**Mid-Term Assessment in Anamalai**

Bring together grantees in the Anamalai Corridor to exchange experience and lessons learned, and forge partnerships for future collaboration. Disseminate results of CEPF grants to the Forest Department.

Amount: \$1,733

Grant Term: 05/12 - 05/12

Grantee: Action for Community Transformation India Foundation

***In Situ Conservation of Threatened Vultures in the Moyar Valley of the Western Ghats***

Develop a model for *in situ* conservation of vulture populations in southern India and pilot in the Moyar Valley. Establish broad-based local support for vulture conservation, advocate for cessation of veterinary use of diclofenac, and pilot innovative conservation measures, such as a diclofenac-free sanctuary for domestic cattle, and a compensation scheme for households that lose animals to depredation by predators.

Amount: \$39,346

Grant Term: 12/11 - 05/13

Grantee: Arulagam

**Right to Soar High Again: Establishing a Vulture Safe Zone in Southern India**

Establish, through targeted awareness-raising and community engagement activities, a 'vulture safe zone' in the Mysore-Nilgiri-Sathyamangalam landscape, where no cattle carcasses have veterinary drugs harmful to vultures. Undertake participatory research to evolve a long-term strategy for vulture conservation. Engage vulture conservation brigades, frontline forest department staff, and local civil society groups in public outreach, monitoring and conservation activities.

Amount: \$59,961

Grant Term: 06/13 - 04/15

Grantee: Arulagam

**Distribution and Assessment of the Population Status of the Critically Endangered Kondana Soft-furred Rat, with Special Emphasis on Implementation of the Conservation Management Plan at Sinhgad**

Examine the taxonomic and distribution status, population density and habitat selection of a Critically Endangered rodent, Kondana soft-furred rat (*Millardia kondana*), in the northern Western Ghats. Apply the results to develop and implement a conservation management plan for the species with active participation of all stakeholders.

Amount: \$15,172

Grant Term: 09/13 - 01/15

Grantee: Bombay Natural History Society

**Status of Freshwater Fishes in the Sahyadri-Konkan Corridor: Diversity, Distribution and Conservation Assessments in Raigad**

Develop a database on the diversity and distribution of freshwater fish in the Konkan region, while building local capacity through the involvement of experts from various academic institutes, NGOs civil society, and local/tribal fishing communities. Identify and document traditional ecological knowledge that can help understand the ecology and threats to the region's fishes.

Amount: \$17,316

Grant Term: 07/13 - 01/15

Grantee: Bombay Natural History Society

**Linking Scales: Mainstreaming the Conservation Agenda in Tamil Nadu**

Mainstream conservation goals across different sectors and levels of public administration in Tamil Nadu so they evolve as part of the state's overall planning and agenda. Curate CEPF grant outputs and other data on the Western Ghats Portal into local-language formats appropriate to government audiences. Support development of a policy document that defines the state's vision for conservation in the Western Ghats.

Amount: \$70,000

Grant Term: 06/13 - 09/15

Grantee: Care Earth Trust

**Produce Local-language Materials on Biodiversity Conservation Using Results of Ongoing and Completed CEPF Projects and Other Research Outputs to Disseminate among Local Ethnic Communities, Forest Departments and Other Key Stakeholders in Anamalai**

Leverage existing knowledge on the biodiversity of the Anamalai Corridor and its relationships with bioclimate, forest and ethnic communities, including the results of ongoing and completed CEPF projects, for empowerment of local forest-dwelling communities and conservationists through dissemination of local-language materials, such as books, study aids for children, guidelines for teachers, field guides for community members, and natural history series.

Amount: \$18,500

Grant Term: 11/11 - 08/13

Grantee: Centre for Environment and Development

**Mid-Term Assessment in Bhadra**

Organize a site visit to the Wildlife Conservation Society project at Bhadra Tiger Reserve, and facilitate interactions with the volunteers and local civil society organizations involved in monitoring tiger prey species and threats at the site.

Amount: \$602

Grant Term: 05/12 - 05/12

Grantee: Centre for Wildlife Studies

**Evaluation of Aquatic Insect Diversity in Natural Water-Filled Tree Holes and their Artificial Analogues in a Tropical Forest of Western Ghats**

Perform a much-needed scientific evaluation on the dynamics of the canopy-aquatic insects and other fauna of natural tree holes (phytotelmata) and their artificial analogues. Project explores how insects in tree holes are active colonizers trapped in a risky, mostly ephemeral habitat, and, along with other fauna, play a significant role in the ecosystem functioning in the forest canopy.

Amount: \$9,540

Grant Term: 09/09 - 11/10

Grantee: K. S. Anoop Das

**Ecological and Anthropogenic Correlates of Large Carnivore Occupancy in the Sahyadri-Konkan Corridor**

Quantify the ecological and anthropogenic correlates of occupancy for tigers, leopards, dholes and sloth bears in the Sahyadri-Konkan Corridor to generate a scientifically rigorous estimate of species distribution. Activities include identifying habitat variables underlying occupancy and critical sites for interventions, disseminating the results of the research to various stakeholders, and supporting efforts to conserve threatened species through management plans.

Amount: \$19,721

Grant Term: 08/09 - 07/11

Grantee: Advait Edgaonkar

**Building Capacities for Conservation Planning Using Open Source Tools and Data**

Address the gap between availability of spatial data and its use by conservationists, by providing basic-level training in a user-friendly and open source Geographical Information System (GIS) package, covering vector and raster GIS applications. Select participants from across the Western Ghats who can subsequently use the training for conservation planning, research, and as a stepping stone to advanced spatial analysis.

Amount: \$13,109

Grant Term: 10/11 - 07/12

Grantee: Foundation for Ecological Research, Advocacy and Learning

**Gap Analysis of the Periyar-Agasthyamalai Landscape for Arboreal Mammal Conservation**

Identify forests outside the protected area network in the Periyar-Agasthyamalai Corridor that are crucial for conservation of threatened arboreal mammals. Assess the existing protected areas for adequate representation of these species, while also determining current distribution of arboreal mammals in this landscape. Use information generated to formulate site-specific conservation and management plans for these threatened species.

Amount: \$19,047

Grant Term: 08/11 - 01/13

Grantee: Foundation for Ecological Research, Advocacy and Learning

**Spatial Decision Support for Conservation Planning in the Western Ghats**

Build a spatial data set to support decisions made on the conservation of ecologically sensitive areas and ecosystem services by the Western Ghats Panel. Available information from CEPF partners and publicly available data sets will be compiled, analyzed and shared under an appropriate Creative Commons license. Research priorities of the collaborating institutions will guide the data collection efforts to facilitate publications in peer reviewed journals.

Amount: \$19,892

Grant Term: 09/10 - 05/11

Grantee: Foundation for Ecological Research, Advocacy and Learning

**Indian Biodiversity Congress-CEPF Special Session on the Biodiversity of Western Ghats**

Organize the Second Indian Biodiversity Congress in Bangalore to be held 9-11 December 2012, with the focal theme "Biodiversity Heritage of the Western Ghats-Challenges and Strategies for Conservation and Sustainable Management," to facilitate discussion on the pros and cons of conservation. Presentations by all the CEPF-ATREE Western Ghats grantees will occur as part of the focal theme session.

Amount: \$4,633

Grant Term: 11/12 - 12/12

Grantee: Foundation for Revitalisation of Local Health Traditions

**Western Ghats Biodiversity Open Collaborative Information System**

Create an open-access, web-based portal on the biodiversity and ecosystem service values of the Western Ghats, populated and maintained by an active community of data-holders. Leverage Web 2.0 technologies to facilitate a transformation in data availability that facilitates mainstreaming of biodiversity into development sectors, empowers citizen engagement in public policy development, and fosters citizen science initiatives by amateur naturalists.

Amount: \$448,486

Grant Term: 11/10 - 09/13

Grantee: French Institute of Pondicherry (\$240,669 grant), Strand Life Sciences Pvt. Ltd. (\$207,183 grant)

**Western Ghats Portal: Toward Consolidation and Sustainability**

Consolidate the Western Ghats Portal as an open-access information system on Western Ghats ecology and conservation by addressing data gaps; building a broad-based consortium of partners and a governance structure that can sustain and nourish the portal in the long-term; campaigning for participation that goes viral; and retaining the technology lead with new features.

Amount: \$179,682

Grant Term: 07/13 - 06/15

Grantee: French Institute of Pondicherry (\$84,736 grant), Strand Life Sciences Pvt. Ltd. (\$94,938 grant)

**Building a Pro-Conservation Understanding among Communities in Uttara Kannada, Through Designing the Need-Based Environmental Literature and Educational Materials in Kannada**

Distil results of four CEPF projects in Uttara Kannada district to develop local-language environmental literature in a user-friendly style, including community primers and an environmental education blueprint. Address lack of environmental information in Kannada, which is a barrier to promoting pro-environmental behaviour among local communities.

Amount: \$17,522

Grant Term: 11/11 - 03/13

Grantee: Green India Trust

**Sahyadri's Science Reaches the Communities' Study: Disseminating the Results of CEPF Projects in the Western Ghats**

Pilot three innovative strategies for disseminating results of CEPF grants in the Western Ghats: close reading-cum-discussion sessions for community members, short orientation training for frontline forestry staff, and nature immersion visits for pupils and teachers. Test their effectiveness in developing pro-environmental understanding among target audiences. Promote wider adoption of information dissemination strategies with objectively verified effectiveness emerging from the project.

Amount: \$29,830

Grant Term: 07/13 - 02/15

Grantee: Green India Trust

**Cinnamon Plant Resources of the Central Western Ghats: Impact Assessment, Livelihood Issues and Conservation through a Participatory Approach**

Assess the impact of harvesting *Cinnamomum malabattrum* and *C. riparium* and related livelihood issues, prospects for green-labeling and, promotion of the sustainable harvest and multiplication of species in agro-forestry systems through participatory approaches. Outcomes expected include knowledge of cinnamon regeneration status, level of disturbance and impact on regeneration, sustainable harvesting methods, and importance of resources to the family income.

Amount: \$11,144

Grant Term: 09/09 - 09/11

Grantee: Narasimha Hegde

**Addressing the "Wallacean Shortfall" for Small Vertebrates in the Western Ghats across Space and Time**

Address the "Wallacean shortfall" (i.e. the lack data on the geographic distribution of taxa) with respect to key reptile and amphibian species in the Western Ghats through systematic field assessments of poorly known taxa, predictive distribution modelling, producing field guides, and feeding the results into other conservation planning and priority-setting exercises.

Amount: \$149,716

Grant Term: 10/09 - 06/14

Grantee: Indian Institute of Science

**Freshwater Biodiversity Assessments in the Western Ghats: Fishes, Molluscs, Odonates and Plants**

Provide essential information for guiding decisions on the conservation and sustainable management of freshwater biodiversity in the Western Ghats by assimilating data on the distribution, conservation status and livelihood values of fishes, molluscs, odonates and aquatic plants, using them to define priority areas for conservation and best practices for management, and linking the results to conservation and sustainable development planning.

Amount: \$175,863

Grant Term: 11/09 - 09/11

Grantee: International Union for Conservation of Nature and Natural Resources

**Refining and Validating Freshwater Key Biodiversity Areas in Kerala and Tamil Nadu**

Identify, map and document freshwater key biodiversity areas (KBAs) in Kerala and Tamil Nadu. Ensure stakeholder engagement via KBA delineation workshops, and develop key management recommendations to improve conservation of freshwater biodiversity. Ensure availability of data online. Develop a network of local stakeholders able to access and apply information on freshwater KBAs to inform conservation and development planning.

Amount: \$69,811

Grant Term: 07/13 - 06/14

Grantee: International Union for Conservation of Nature and Natural Resources

**Ecology and Conservation of Small Carnivores in the Western Ghats**

Address a critical knowledge gap by investigating the biology and ecology of cryptic and elusive small carnivore species endemic to the region. Investigate aspects of the species' biology and ecology, construct a model to predict and understand current patterns of persistence, and identify areas for species-based conservation while substantially building and engaging local capacity and stakeholders toward site-based conservation.

Amount: \$17,259

Grant Term: 01/10 - 05/13

Grantee: Devcharan Jathanna

**Development of Conservation Strategy for a Newly Discovered Lion-tailed Macaque Population in Sirsi-Honnava, Western Ghats: Understanding of the Impact of Non-Timber Forest Product Collection on Lion-tailed Macaques**

Study the impact of non-timber forest product collection on the feeding ecology of a newly discovered population of the Endangered lion-tailed macaque, an endemic primate restricted in its distribution to certain forest pockets in the Western Ghats. Help formulate a conservation action plan for this newly discovered and, possibly, largest population, which is confined to unprotected forests under intense pressure.

Amount: \$13,550

Grant Term: 08/09 - 04/11

Grantee: H. N. Kumara

**An Ecological Assessment of Freshwater Fish and Amphibian Communities in a Landscape Mosaic of the Western Ghats, Karnataka**

Identify the anthropogenic and ecological covariates that determine freshwater fish and aquatic amphibian diversity in a heterogeneous landscape mosaic in the upper catchment of the Netravathi River. Understand local perceptions on ownership and access rights along the river. Enable local communities to form groups that will promote sustainable development of aquatic resources.

Amount: \$16,541

Grant Term: 07/13 - 08/14

Grantee: Legal Initiative for Forest and Environment

**Pilot Study for Mitigation of Human-Elephant Conflict in Affected Areas of Northern Karnataka and Southern Maharashtra, India**

Address the issue of conservation of the Endangered Asian elephant in the fragmented landscape of northern Karnataka and southern Maharashtra by involving local communities in conflict mitigation along with the Forest Department. Identify and implement activities that will motivate local communities, create social awareness, and strengthen the efforts of the Forest Department toward elephant conservation.

Amount: \$14,502

Grant Term: 10/09 - 10/11

Grantee: Prachi Mehta

**Involving Local Ethnic Communities in Monitoring Key Biodiversity Information and the Important Forest Resources They Depend on in the Dandeli and Anamalai Parts of Western Ghats, India**

Involve local ethnic communities in participatory conservation and monitoring of key biodiversity and important forest resources in the Anamalai and Dandeli areas, guided by experience from an earlier grant based in Vazhachal Forest Division, whose activities will be sustained and expanded. Empower community members to monitor resources, such as major NTFP trees, hornbill nesting trees, and endangered and endemic species.

Amount: \$8,000

Grant Term: 11/11 - 01/13

Grantee: MES Asmabi College

**An Investigation into the Taxonomy of Malabar Civet**

Examine the taxonomic status and validity of Malabar civet (*Viverra civettina*), a Critically Endangered species that is endemic to the Western Ghats. Determine whether Malabar Civet is a valid species, and use results to inform conservation and management decisions.

Amount: \$12,118

Grant Term: 02/10 - 07/11

Grantee: R. Nandini

**Assessing Biodiversity Value of Production Landscapes and Non-Protected Forests on Sky Islands by Establishing Occurrence of Cryptic, Threatened Birds**

Investigate how threatened and endemic bird species use remnant forest patches in shola habitats on sky islands that have been fragmented and disconnected by the formation of commercial plantations from a century ago. Provide species lists to private land-holders to increase awareness and value of their landscapes.

Amount: \$18,802

Grant Term: 02/11 - 06/13

Grantee: National Institute of Advanced Studies

**Bridging the Gap: Community Outreach for Wildlife Conservation**

Improve the reach and impact of conservation in the Mysore-Nilgiri Corridor and strengthen the support of local communities, opinion builders and policy makers through outreach campaigns to promote partnerships. Utilize the time and skills of urban-based wildlife enthusiasts to bring about on-the-ground changes, thus bridging the gap between two sectors of the society for the common cause of wildlife conservation.

Amount: \$19,000

Grant Term: 09/13 - 08/14

Grantee: Nature Conservation Foundation

### **Showcasing the Western Ghats at the Society for Conservation Biology (Asia) Conference and Beyond**

Create a compelling showcase of the incredible biodiversity of the Western Ghats, with special focus on lesser-known organisms and ecosystem services for the Asia Regional Conference of the Society for Conservation Biology to increase awareness and understanding of the landscape in the larger science and conservation community in Asia.

Amount: \$17,185

Grant Term: 03/12 - 08/12

Grantee: Nature Conservation Foundation

### **Conservation of Critical Freshwater Fish Habitats in the Southern Western Ghats**

Demonstrate the utility of the Alliance for Zero Extinction (AZE) approach for prioritizing site-based conservation actions through the design and implementation of conservation action plans for the two most critical AZE sites for freshwater biodiversity in Kerala State. Establish a foundation for collaborative management of endemic and threatened fishes by empowering key stakeholders and instilling a sense of environmental stewardship.

Amount: \$35,779

Grant Term: 01/12 - 07/13

Grantee: Navadarsan Public Charitable Trust

### **Status of Freshwater Fishes in the Kerala Region of the Western Ghats Hotspot: Determining Distribution, Abundance and Threats to Data Deficient Species from Ten Major River Systems**

Assess the status of data-deficient freshwater fish from 10 major rivers of Kerala as freshwater fish remain one of the most poorly studied and documented taxa in the Western Ghats. Project will generate baseline information to help in systematic conservation planning and action, as well as monitoring and assessing the conservation status of globally threatened species of fish in the Western Ghats.

Amount: \$16,521

Grant Term: 09/09 - 12/10

Grantee: Rajeev Raghavan

### **Averting the Extinction of Critically Endangered Vultures in the Western Ghats**

Avert the extinction of Critically Endangered vultures in the Western Ghats through a combination of in situ conservation measures and ex situ conservation breeding. Establish the size, status and threat situation of vulture populations in the Western Ghats, expand a captive breeding program aimed at providing birds for reintroduction and advocate for key policy responses at national and state levels.

Amount: \$99,957

Grant Term: 01/10 - 06/11

Grantee: Royal Society for the Protection of Birds

### **Conservation of Critically Endangered Vultures in Wayanad and Neighbouring Areas of Kerala as Part of Establishing a Vulture Safe Zone in Southern India**

Through targeted awareness activities and sampling within at least a 100 km radius, establish a 'vulture safe zone' in Wayanad district, where a breeding population of vultures survives. Engage a network of indigenous communities, cattle owners and veterinarians to support implementation and monitoring of the ban on veterinary use of diclofenac and other drugs toxic to vultures.

Amount: \$17,738

Grant Term: 09/13 - 08/14

Grantee: Rural Agency for Social and Technological Advancement

**The Konkan Vulture Project: Participatory Vulture Conservation in the Northern Western Ghats**

Implement *in situ* conservation actions for the important vulture colonies in Maharashtra's Konkan region. Undertake an integrated communication campaign to promote non-toxic alternatives to veterinary drugs harmful to vultures. Pilot an award program for 'diclofenac-free villages'. Systematize a compensation mechanism for coconut grove owners who volunteer to protect vulture nests, and link to private companies and individuals for long-term sponsorship.

Amount: \$35,000

Grant Term: 06/13 - 11/15

Grantee: Sahyadri Nisarga Mitra

**Bat Communities in the Western Ghats: Status, Ecology and Conservation**

Quantify and characterize spatial variation in bat communities, and develop echo-location call libraries for bats in priority conservation areas in the Western Ghats. Contribute to an enhanced recognition of the biological value of this unstudied taxonomic group, and evaluate the efficacy of the current protected area network for bat conservation in the region.

Amount: \$15,740

Grant Term: 12/09 - 01/11

Grantee: Mahesh Sankaran

**Tarantula Spider Diversity, Distribution and Habitat-Use: A Study on Protected Area Adequacy and Conservation Planning at a Landscape Level in the Western Ghats of Uttara Kannada District, Karnataka**

Document the diversity, distribution and habitat use of theraphosid species of tarantula spiders in various land-use categories in the Uttara Kannada district to help in population assessments of Indian theraphosid spiders of the region, creating awareness among local citizens about the importance of conserving tarantulas and improving conservation efforts for these poorly known but globally threatened taxa.

Amount: \$8,770

Grant Term: 09/09 - 10/10

Grantee: Manju Siliwal

**Linking Fragmented Fresh-Water Swamps through the Restoration of Micro-Corridors in Central Western Ghats**

Enhance ecological connectivity within the Malnad-Kodagu Corridor and increase the genetic viability of populations of five globally threatened plant species by demonstrating approaches for restoring fragmented networks freshwater swamps. To this end, develop techniques for planning and undertaking habitat restoration, pilot them within selected micro-corridors and build capacity among grassroots institutions to sustain habitat restoration efforts into the long term.

Amount: \$115,438

Grant Term: 01/10 - 06/15

Grantee: Snehakunja Trust

### **Western Ghats Network of Protected Areas for Threatened Amphibians**

Synthesize available information and use it to prepare reference materials and plans to guide amphibian conservation efforts. Produce a comprehensive guide to the taxonomy, ecology and conservation of Western Ghats amphibians, and a national plan for their management. Map sites in critical need of protection to avoid further amphibian extinctions and advocate for the establishment of a dedicated amphibian sanctuary.

Amount: \$120,000

Grant Term: 10/09 - 07/17

Grantee: University of Delhi

### **Identifying Historic and Present Connectedness in the Unique Montane “Sky-Island” Ecosystem in the Western Ghats**

Examine connectedness and the effects of anthropogenic isolation, as well as historical geographic isolation, on populations of the endemic white-bellied shortwing, using microsatellite and mtDNA markers from different sky-islands, including 22 CEPF priority sites. Sky-island refers to shola forests fragments on mountain tops isolated by anthropogenic forces.

Amount: \$17,819

Grant Term: 08/09 - 11/12

Grantee: Robin Vijayan

### **Enhancing Knowledge about the Conservation Status of Globally Threatened Species in the Western Ghats, with a Particular Emphasis on Reptiles**

Assess the global conservation status of all 265 reptile species found in the Western Ghats, compile detailed information on each species and make the results freely available through the IUCN Red List site and other online portals. Solicit and publish articles on Western Ghats biodiversity in an open-access, peer-reviewed journal, provide tutoring to authors and disseminate widely among key stakeholders.

Amount: \$111,925

Grant Term: 10/09 - 12/14

Grantee: Wildlife Information Liaison Development Society

### **Involving Community, Stakeholders and Journalists for the Conservation of Freshwater Biodiversity and Reptiles of the Western Ghats through Education, Training and Follow Up of the Assessment Projects**

Create momentum for the conservation of globally threatened reptile and freshwater species among local stakeholders at priority sites, as well as policy makers at state and central levels, by developing local-language educational materials for diverse target groups, creating strong networks of local educators and environmental journalists in the Western Ghats, and using mass media as a communication tool.

Amount: \$38,991

Grant Term: 01/12 - 03/14

Grantee: Wildlife Information Liaison Development Society

**Protected Area Analysis with Respect to Freshwater Biodiversity and Reptile Assessments, and Development of National Policy for Inclusion in Legislation**

Develop a policy framework and strategies for linking the IUCN Red List assessments to the Indian Wildlife (Protection) Act. Evaluate the current effectiveness of the protected area network in the Western Ghats for the conservation of globally threatened reptiles and freshwater taxa. Strengthen national legislation on conservation with regard to import of alien freshwater species and export of threatened fishes.

Amount: \$24,900

Grant Term: 01/12 - 09/14

Grantee: Zoo Outreach Organisation

***Strategic Direction 3: Provide strategic leadership and effective coordination of CEPF investment through a regional implementation team***

**CEPF Regional Implementation Team in the Western Ghats**

Provide strategic leadership and local knowledge to build a broad constituency of civil society groups working across institutional and geographic boundaries toward achieving the conservation goals described in the ecosystem profile for this region. Major functions include assisting civil society groups in designing, implementing, and replicating successful conservation activities; reviewing all grant applications; and awarding small grants.

Amount: \$640,870

Grant Term: 05/08 - 06/16

Grantee: Ashoka Trust for Research in Ecology and the Environment

#### Annex 4 – Progress towards Long-term Goals for CEPF Investment in the Western Ghats

##### Goal 1: Conservation priorities

Criterion	2008		2011		2015		Notes
i. <b>Globally threatened species.</b> Comprehensive global threat assessments conducted for all terrestrial vertebrates, vascular plants and at least selected freshwater taxa.	X	Not met		Not met		Not met	In 2008, only mammals, birds and amphibians had been comprehensively assessed. By 2011, assessments for reptiles and four major freshwater taxa (fish, mollusks, odonates and aquatic plants) had been completed under CEPF grants. The major remaining gaps are terrestrial plants and invertebrates: < 10% of the species in each group have been assessed.
		Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
ii. <b>Key Biodiversity Areas.</b> KBAs identified, covering, at minimum, terrestrial, freshwater and coastal ecosystems.	X	Not met		Not met		Not met	In 2008, terrestrial KBAs had been documented during the profiling process, although gaps remained: (1) Gujarat; and (2) Maharashtra part of Sahyadri-Konkan corridor. In 2014, freshwater KBAs were identified for Kerala and Tamil Nadu, building on a preliminary assessment for the whole region in 2011. There is still no broad understanding of KBAs among civil society and government, however.
		Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
iii. <b>Conservation corridors.</b> Conservation corridors identified in all parts of the region where contiguous natural habitats extend over scales greater than individual sites, and refined using recent land cover data.		Not met		Not met		Not met	In 2008, five conservation corridors had been defined under the profiling process but they were not specifically recognized by government. This remains the case today. There is a need for agreement among government and civil society on criteria for defining corridors, based on multiple values, and for these to be used to refine the five corridors.
	X	Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
iv. <b>Conservation plans.</b> Global conservation priorities incorporated into national or regional conservation plans or strategies developed with the participation of multiple stakeholders.	X	Not met	X	Not met		Not met	A National Biodiversity Strategy and Action Plan has been drafted but implemented. Information on global conservation priorities from multiple sources was fed into the Western Ghats Ecology Expert Panel report in 2011 and the subsequent report of the High Level Working Group on the Western Ghats in 2013. Multiple stakeholders were consulted but the findings were not accepted by all parties.
		Partially met		Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
v. <b>Management best practices.</b> Best practices for managing global conservation priorities (e.g., participatory approaches to park management, invasive species control, etc.) are introduced, institutionalized, and sustained at priority KBAs and corridors.	X	Not met	X	Not met	X	Not met	Good practices are in place at 10 to 20% of priority KBAs. A few protected areas have good-practice co-management arrangements, such as Eco-Development Committees, while good practice approaches for community reserves and conservation in production landscapes have been piloted at a few sites outside protected areas.
		Partially met		Partially met		Partially met	
		Fully met		Fully met		Fully met	

## Goal 2: Civil society capacity

Criterion	2008		2011		2015		Notes
i. <b>Human resources.</b> Local and national civil society groups collectively possess technical competencies of critical importance to conservation.	X	Not Met		Not met		Not met	Civil society, collectively, has attained a higher level of technical competence between 2008 and 2015. However, civil society groups involved in conservation are still few in number, many groups need more technical expertise, many staff are on short-term contracts due to funding constraints, and capacity building is diluted by staff turnover.
		Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
ii. <b>Management systems and strategic planning.</b> Local and national civil society groups collectively possess sufficient institutional and operational capacity and structures to raise funds for conservation and to ensure the efficient management of conservation projects and strategies.	X	Not Met		Not met		Not met	Operational capacity and management structures are gradually improving for NGOs but less so for community groups. Between 2008 and 2015, the number of proposals generated by NGOs increased, due to new funding sources, such as CEPF. However, there remains a lack of long-term funding, especially at local levels, and many smaller organizations exist on an insecure, grant-to-grant basis.
		Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
iii. <b>Partnerships.</b> Effective mechanisms exist for conservation-focused civil society groups to work in partnership with one another, and through networks with local communities, governments, the private sector, donors, and other important stakeholders, in pursuit of common objectives.		Not met		Not met		Not met	In 2008, some informal civil society networks (e.g. Save the Western Ghats Movement) existed among civil society groups. By 2015, new cooperation mechanisms had emerged (e.g. the Western Ghats Portal), and were being formalized. CEPF brought together groups that did not work (or even talk) together in the past but there is still a need for greater openness towards collaboration and data sharing.
	X	Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
iv. <b>Financial resources.</b> Local civil society organizations have access to long-term funding sources to maintain the conservation results achieved via CEPF grants and/or other initiatives, through access to new donor funds, conservation enterprises, memberships, endowments, and/or other funding mechanisms.	X	Not met	X	Not met	X	Not met	Availability of financial resources improved between 2008 and 2015 due to new grant-making programs by CEPF and other donors but long-term funding for civil society remains elusive. Small, local groups still face severe financial challenges, and need capacity building in fundraising. Donor priorities are shifting away from conservation, and NGOs have not yet learned how to tap into government programs and corporate social responsibility (CSR) funds.
		Partially met		Partially met		Partially met	
		Fully met		Fully met		Fully met	
v. <b>Transboundary cooperation.</b> In multi-country hotspots, mechanisms exist for collaboration across political boundaries at site, corridor and/or national scales.	X	Not met	X	Not met		Not met	Within India, planning is still at the state level but civil society is increasingly able to collaborate across boundaries, in part thanks to CEPF. The Save the Western Ghats Movement was helpful in bringing NGOs, activists and other actors from different states together for a time, although new models for collaboration may now be needed.
		Partially met		Partially met	X	Partially met	
		Fully met		Fully met		Fully met	

### Goal 3: Sustainable financing

Criterion	2008		2011		2015		Notes
i. <b>Public sector funding.</b> Public sector agencies responsible for conservation in the region have a continued public fund allocation or revenue-generating ability to operate effectively.		Not met		Not met		Not met	Since 2008, new sources of public sector funding for conservation became available, such as CAMPA and the National Mission for a Green India. However, funds were released slowly, often towards unstrategic priorities and few civil society groups learned how to access them. Public-sector funding for conservation remains focused on staff and infrastructure costs, with little for operational management.
	X	Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
ii. <b>Civil society funding.</b> Civil society organizations engaged in conservation in the region have access to sufficient funding to continue their work at current levels.	X	Not met	X	Not met		Not met	Since 2008, government funding for research increased, while CEPF and other international donors significantly increased availability of grant funding for conservation. The majority of donor funding available to civil society is secured by a relatively small number of larger, typically urban, NGOs and research institutions. Grassroots NGOs and community-based organizations tend to more have limited fundraising capacity, and, for many of them, FCRA regulations are a barrier to accessing international funds.
		Partially met		Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
iii. <b>Donor funding.</b> Donors other than CEPF have committed to providing sufficient funds to address global conservation priorities in the region.		Not met		Not met		Not met	Other than CEPF, no other major funding agency is supporting biodiversity conservation at the landscape scale in the Western Ghats. Few donor agencies make long-term commitments, causing discontinuity in conservation efforts. Compared with 2008, more CSR funds are available now but few conservation organizations know how to access them.
	X	Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
iv. <b>Livelihood alternatives.</b> Local stakeholders affecting the conservation of biodiversity in the region have economic alternatives to unsustainable exploitation of natural resources.	X	Not met	X	Not met		Not met	More funding opportunities for alternative livelihoods for emerged since 2008, most notably the National Rural Employment Guarantee Scheme. Investments in agricultural development have helped improve and diversify livelihoods. At the same time, development aspirations have increased, sometimes with negative implications for conservation.
		Partially met		Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
v. <b>Long-term mechanisms.</b> Financing mechanisms (e.g., trust funds, revenue from the sale of carbon credits, etc.) exist and are of sufficient size to yield continuous long-term returns for at least the next 10 years.	X	Not met	X	Not met	X	Not met	The potential of carbon financing to support forest conservation has not yet been realized. Most carbon offset funding is being targeted at clean energy not avoided deforestation. Revenue from tourism to protected areas is not being channeled towards conservation efforts. More needs to be done in this area to introduce innovative mechanisms.
		Partially met		Partially met		Partially met	
		Fully met		Fully met		Fully met	

#### Goal 4: Enabling environment

Criterion	2008		2011		2015		Notes
i. <b>Legal environment for conservation.</b> Laws exist that provide incentives for desirable conservation behavior and disincentives against undesirable behavior.		Not met		Not met		Not met	There was no overall change in the legal environment for conservation between 2008 and 2015. Multilateral Environmental Agreements are reflected in national laws but clear procedures for implementation are lacking. Strong conservation laws exist, although these mainly focus on disincentives for undesirable behavior. Attempts to create positive incentives have not always worked.
	X	Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
ii. <b>Legal environment for civil society.</b> Laws exist that allow for civil society to engage in the public policy-making and implementation process.		Not met		Not met		Not met	The 2005 Right To Information Act and other laws create a clear legal basis for civil society to influence policy making and implementation. Many civil society groups take advantage of these opportunities. New opportunities were created by the establishment of the National Green Tribunal in 2011. However, tightened implementation of the FCRA restricted civil society's access to international funding.
		Partially met		Partially met		Partially met	
	X	Fully met	X	Fully met	X	Fully met	
iii. <b>Education and training.</b> Domestic programs exist that produce trained environmental managers at secondary, undergraduate, and advanced academic levels.		Not met		Not met		Not met	There are numerous training programs in India on environmental management and ecology but few are of high quality. Course content is often outdated and critical thinking is not encouraged. Fees are a disincentive to students from poor backgrounds. Nonetheless, almost 100 percent of senior leadership positions in conservation agencies are staffed by Indian nationals.
		Partially met		Partially met		Partially met	
	X	Fully met	X	Fully met	X	Fully met	
iv. <b>Transparency.</b> Relevant public sector agencies use participatory, accountable, and publicly reviewable process to make decisions regarding use of land and natural resources.		Not met		Not met		Not met	Frameworks exist for public participation in development decision making. However, public consultation does not always take place as mandated and, where it does, decision making is typically opaque. Protected area managers are generally not open to civil society input regarding management decisions.
	X	Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
v. <b>Enforcement.</b> Designated authorities are clearly mandated to manage the protected area system(s) in the region and conserve biodiversity outside of them, and are empowered to implement the enforcement continuum of education, prevention, interdiction, arrest, and prosecution.	X	Not met	X	Not met	X	Not met	Designated authorities have a clear mandate to manage the protected area system but they are constrained by resource and capacity limitations and high turnover in leadership positions. Few protected areas have adequate mechanisms for resolving conflicts between conservation and sustainable use of resources by local people, although this is changing gradually with implementation of the Forest Rights Act.
		Partially met		Partially met		Partially met	
		Fully met		Fully met		Fully met	

### Goal 5: Responsiveness to emerging issues

Criterion	2008		2011		2015		Notes
i. <b>Biodiversity monitoring.</b> Nationwide or region-wide systems are in place to monitor status and trends of the components of biodiversity.		Not met		Not met		Not Met	Between 2008 and 2015, there was a qualitative increase in the resolution of baseline data but no increase in coverage. Population monitoring is in place for a small number of charismatic large mammals but, for other species and habitats (e.g. invertebrates, rocky plateaus, etc.), monitoring is patchy or non-existent. Permanent vegetation plots are in place but these are limited in scale and number. The Forest Research Institute is monitoring forest cover nationwide.
	X	Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
ii. <b>Threats monitoring.</b> Nationwide or region-wide systems are in place to monitor status and trends of threats to biodiversity.	X	Not met	X	Not met		Not met	Monitoring systems are in place for fire, wildlife trade and habitat loss but the scale at which these systems operate is an issue. No monitoring systems are in place for disease, invasive species or climate change. With CEPF support, the EIA Resource Centre began monitoring diversion of forest land for development projects and putting this information in the public domain.
		Partially met		Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
iii. <b>Ecosystem services monitoring.</b> Nationwide or region-wide systems are in place to monitor status and trends of ecosystem services.	X	Not met	X	Not met	X	Not met	This remains an emerging field in India and needs more attention. There have been isolated studies but there is no long-term monitoring at scale. There is a need to establish methodologies for valuing climate, water, pollination and provisioning services of forests and other natural habitats, and to develop a framework for natural capital accounting.
		Partially met		Partially met		Partially met	
		Fully met		Fully met		Fully met	
iv. <b>Adaptive management.</b> Conservation organizations and protected area management authorities demonstrate the ability to respond promptly to emerging issues.		Not met		Not met		Not met	Over the period 2008 to 2015, some organizations responded to emerging conservation issues, such as sand mining, linear intrusions and human-wildlife conflict. The CEPF program helped bring together conservation science and activist groups around a shared agenda to respond to some of these issues.
	X	Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
v. <b>Public sphere.</b> Conservation issues are regularly discussed in the public sphere, and these discussions influence public policy.		Not met		Not met		Not met	Between 2008 and 2015 there has been an increase in public debate of conservation issues in the media, which is highlighting these issues and sensitizing the general public to them. Politicians are also paying more attention to conservation issues. Public debate of conservation issues rarely influences public policy but there are examples of this happening, such as the moratorium on mining in Goa.
	X	Partially met		Partially met		Partially met	
		Fully met	X	Fully met	X	Fully met	

**Annex 5 – Contribution of CEPF Grant Portfolio in the Western Ghats towards the Aichi Biodiversity Targets**

Goal / Target	Contribution
<b>Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society</b>	
<b>Target 1.</b> By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably	Local language materials disseminating the results of CEPF grants produced in Kannada, Malayalam, Tamil and selected tribal languages; more than 10,000 people directly reached by public awareness raising
<b>Target 2.</b> By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems	Biodiversity values of the Western Ghats mainstreamed into state, district and panchayat development planning and policy in Tamil Nadu, including the Special Area Development Programme, which has an annual budget allocation of INR 75 crores (\$11.25 million)
<b>Target 3.</b> By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.	Financial incentives for the conservation and sustainable use of biodiversity on private lands piloted in three states, following different models, including negotiated individual agreements, community agreements, conservation auctions and sustainability certification
<b>Target 4.</b> By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits	Support and advice provided to local communities with more than 50 cases of actual or potential ecological damage arising from development projects in the mining, transport and energy sectors
<b>Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use</b>	
<b>Target 5.</b> By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced	Critical habitat linkages protected between the Sahyadri-Konkan and Malnad-Kodagu Corridors and within the Mysore-Nilgiri, Anamalai and Periyar-Agasthyamalai Corridors, significantly reducing ecological fragmentation at the landscape scale
<b>Target 7.</b> By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity	Sustainable agricultural practices adopted by 34 tea and coffee estates, covering more than 19,000 hectares, and similar measures being explored by rubber estates
<b>Target 9.</b> By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment	Best practice approaches for removal of <i>Lantana camara</i> , one of the most problematic invasive alien plants, developed and tested; approaches for controlling African catfish, an invasive alien fish, piloted

Goal / Target	Contribution
<b><i>Strategic Goal C: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</i></b>	
<b>Target 11.</b> By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes	186,989 hectares of terrestrial and freshwater habitats afforded protection through the creation and expansion of protected areas, including community co-managed conservation reserves as well as conventional, government-managed protected areas
<b>Target 12.</b> By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained	Species recovery and management plans implemented for 14 globally threatened species, with core populations of several species stabilized or increased
<b><i>Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services</i></b>	
<b>Target 14.</b> By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable	Ecological connectivity restored in three clusters of <i>Myristica</i> swamps, the most threatened ecosystem type in the Western Ghats and one that delivers ecosystem services essential to human wellbeing; feasibility of payment for ecosystem service models for hydrological, non-timber forest product (NTFP) provisioning and pollination services explored
<b><i>Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building</i></b>	
<b>Target 18.</b> By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels	Indigenous communities supported to take advantage of provisions under the Forest Rights Act to secure stronger legal recognition of their traditional rights to land and forest resources; community forest rights officially recognized across 80,700 hectares; indigenous communities engaged in monitoring and sustainable harvesting of forest resources; sacred groves restored and recognition of indigenous communities' rights of access and management promoted
<b>Target 19.</b> By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied	Web-based portal on the biodiversity and ecosystem service values of the Western Ghats launched and populated by a growing community of data-holders, with more than 1 million observations already generated through a citizen-science interface