



Five-year Assessment of CEPF Investment in the Western Ghats Region of the Western Ghats and Sri Lanka Biodiversity Hotspot

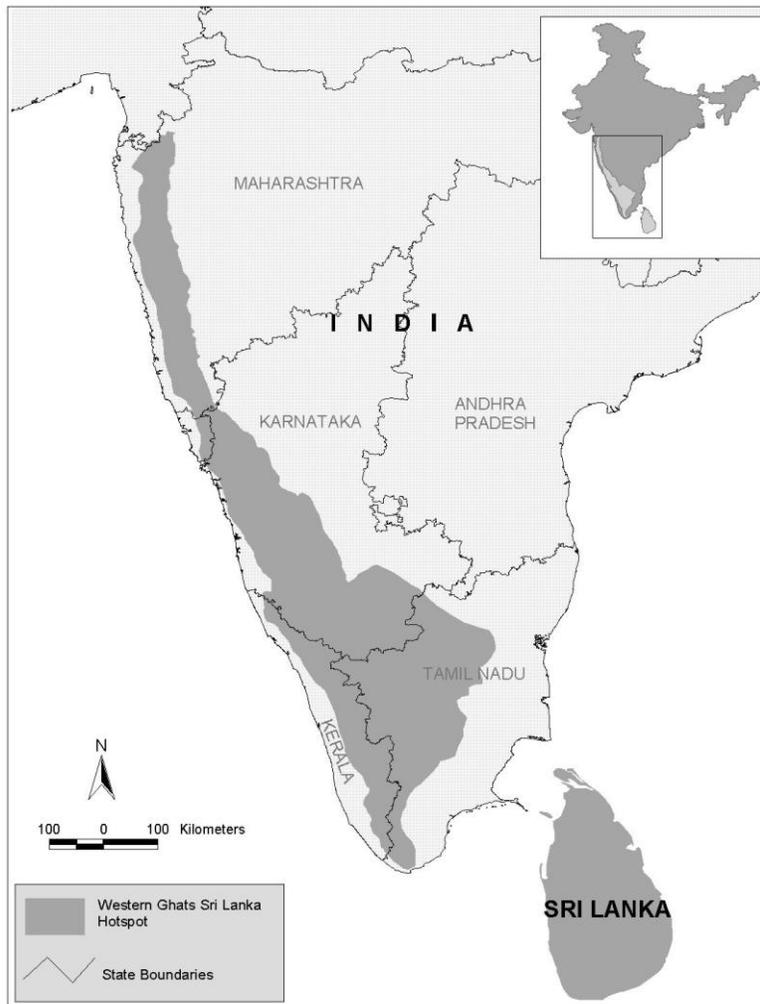
A Special Report
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OVERVIEW

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 profile¹ developed with stakeholders' input and 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 extended to seven years.

Figure 1. The Western Ghats and Sri Lanka Hotspot



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

CEPF investment is focused on the Western Ghats Region of the 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 km², 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.

This report aims to assess progress towards the goals set out in the ecosystem profile, and to capture initial lessons arising from the CEPF grant portfolio. It draws on experience, lessons learned and project reports² generated by civil society organizations implementing CEPF grants. In addition, it incorporates the findings of three five-year assessment workshops, held in Periyar, Kerala, on June 28-29, Kolhapur, Maharashtra, on July 1-2, and Kotagiri, Tamil Nadu, on July 4-5, 2013. These workshops were attended by over 120 participants, representing 43 of the 61 CEPF grantees in the Western Ghats.

THE WESTERN GHATS REGION

As a result of high variation in latitude, altitude and 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), 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, such as the wild relatives of various cereals (rice, barley, etc.), fruits (mango, mangosteen, banana, jackfruit, etc.), and spices (black pepper, cinnamon, cardamom and nutmeg).

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 six Indian states³ 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 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

² All available final project reports can be downloaded from the CEPF Web site, www.cepf.net

³ Andhra Pradesh, Goa, Karnataka, Kerala, Maharashtra and Tamil Nadu.

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

Since 2008, CEPF has been working to engage civil society in biodiversity conservation in the Western Ghats, focusing on the highest priority species, sites and corridors. CEPF investments follow an investment strategy, set out in the ecosystem profile for the region, which was developed in 2003, through analysis of primary and secondary data, consultations with experts, and stakeholder workshops. The 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 preparation of the ecosystem profile, to ensure broad input from the conservation community.

The ecosystem profile begins with a description of the biological importance of the Western Ghats, including an analysis of 'conservation outcomes': priorities for conservation at the species, site and landscape scales. It then moves on to provide an overview of the causes of biodiversity loss, describes current institutional frameworks and investments for conservation, and identifies the niche where CEPF investment can provide the greatest incremental value.

The CEPF niche for investment recognizes 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 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 seeks to capitalize on the tremendous social and human resources of the region, by providing resources to a range of civil society actors who seek to catalyze change and undertake innovative and effective approaches to conservation.

Specifically, the CEPF niche for investment in the Western Ghats is defined as follows: "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 defines 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 are 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 CEPF ecosystem profile for the Western Ghats Region was approved by the CEPF Donor Council on April 26, 2007, with a total budget allocation of \$4.5 million. The Donor Council subsequently approved the appointment of ATREE as the Regional Implementation Team (RIT) for the region on November 20, 2007. The RIT began work on May 1, 2008, and issued the first call for proposals on December 1, 2008. In September 2012, the Donor Council approved an increase in the spending authority for the Western Ghats, and a two-year extension to the investment period.

COORDINATING CEPF INVESTMENT ON THE GROUND

ATREE has performed the RIT role for over five years now, working closely with the CEPF Secretariat to coordinate and manage CEPF grant making in the Western Ghats Region. ATREE has assembled a dedicated team that draws on the knowledge and experience of senior fellows at the institution, and has established peer review systems that ensure transparency and quality control of the grant making process. ATREE has also introduced the necessary processes to ensure effective management of a small granting mechanism, financial and programmatic risk assessment of individual grants, and compliance with World Bank social and environmental safeguard policies.

The RIT is the steward of the CEPF grant portfolio for the Western Ghats, in close cooperation with the CEPF Secretariat. The RIT maintains close contact with CEPF grantees at each stage of project identification, design and implementation, providing guidance and assistance, where needed. The RIT performs the following key functions:

- Act as an extension service to assist civil society groups in designing, implementing, and replicating successful conservation activities.
- Review all grant applications and manage external reviews with technical experts and advisory committees.
- Award grants up to \$20,000 and decide jointly with the CEPF Secretariat on all other applications.

- Lead the monitoring and evaluation of individual projects using standard tools, site visits, and meetings with grantees, and assist the CEPF Secretariat in portfolio-level monitoring and evaluation.
- Widely communicate CEPF objectives, opportunities to apply for grants, lessons learned, and results.
- Involve the existing regional program of the RIT, CEPF donor and implementing agency representatives, government officials, and other sectors within the hotspot in implementation.
- Ensure effective coordination with the CEPF Secretariat on all aspects of implementation.

ATREE has overcome a number of challenges inherent in working in one of the first regions to adopt the RIT model, and has added significant value to CEPF investment 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, through providing feedback based on a 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

CEPF investment in the Western Ghats Region began in May 2008. Achievements during the first five years of CEPF investment are detailed in Annex 2 and can be summarized as follows:

- Coherent and balanced grants portfolio developed, comprising 101 grants with a total value of \$6.1 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 13 priority species, comprising two mammals, four birds and seven plants, including the first successful breeding of the Critically Endangered Indian vulture (*Gyps indicus*) in captivity.
- 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 observation interface that accumulates over 1,000 records a month.
- Five new conservation and community reserves notified, covering more than 80,000 hectares and piloting models for conservation of sites where human wellbeing and natural ecosystems are inextricably linked.
- 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 170,000 hectares within protected areas and over 60,000 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.

- Nilgiri Natural History Society launched, as a vehicle to promote interest and involvement in the conservation of the Nilgiri Biosphere Reserve.
- Forty-two 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.

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 assessment took place five years into the seven-year CEPF investment period in the Western Ghats Region. It was timed when most of the grants awarded under the first three funding rounds had either ended or reached a point where the key results and lessons learned were known. At the same time, the grants awarded under the fourth round either had started or were in the final stages of preparation. This allowed experience to be transferred between earlier cohorts of grantees and the current cohort, and for new opportunities for collaboration to emerge.

At the time of the assessment, 55 grants (16 large and 39 small) had already ended, and a further five had been under implementation for at least two years. This meant that, unlike for the mid-term assessment in 2011, where, for the most part, only preliminary results were captured, the final results of the CEPF investment program were beginning to take shape, and it was possible to evaluate progress towards attainment of the goals set out in the ecosystem profile.

Calls for Proposals

CEPF grant making in the Western Ghats began in 2008, with the award of the RIT grant, and continued until 2013, with the award of the final grants. Over this period, two types of grants were made: small grants of up to \$20,000 and large grants above that amount. Small grants were contracted by ATREE, following a single-stage process, whereas large grants were contracted directly by CEPF, following a two-stage process consisting of a Letter of Inquiry (LoI) followed by a full proposal from shortlisted applicants. The final two years of the investment program, from 2013 to 2015, will allow time for awarded grants to be implemented, and for results to be documented and 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 call 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 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 14 out of 45 small grant applications (31 percent) and 16 out of 50 large grant applications (32 percent). Due to limited funds, five of the large grant applicants were awarded small grants only. 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 29 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.

Collaboration with CEPF Donors

Throughout the first five years of the investment program in the Western Ghats, ATREE and the CEPF Secretariat have 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 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 have 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 have visited the World Bank country office in New Delhi and the GEF Operational Focal Point at the Ministry of Environment and Forests, to brief them on CEPF implementation and explore opportunities to align CEPF investments with their programs. One specific opportunity that was identified and realized was a request that some CEPF resources be prioritized for civil-society-led actions that address priorities in the National Tiger Recovery Programme for India.

Other opportunities for collaboration with CEPF donors have arisen through the development and 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 conservation status assessments of freshwater taxa 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.

Most recently, CEPF grantees working on the conservation of freshwater biodiversity shared results of their work with a mission from the MacArthur Foundation, which was exploring a potential new program in India.

Portfolio Status

As of October 31, 2013, a total of 101 grants have been contracted, with a total value of nearly \$6.1 million, equivalent to almost 100 percent of the total allocation for the Western Ghats (Table 1). Of this sum, \$5.0 million (82 percent) has been 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. The grants awarded to date have leveraged \$3.3 million in co-financing, including counterpart funding and in-kind contributions.

The grants contracted as of October 31, 2013 comprise 54 under Strategic Direction 1, totaling \$3.2 million; 46 under Strategic Direction 2, totaling \$2.2 million; and a \$650,000 grant under Strategic Direction 3 for the RIT (Annex 1, Chart 1). The remaining balance will be used to award two additional small grants that were approved under the fourth funding round but have not yet been contracted due to delays in obtaining the necessary FCRA clearance

Table 1: Status of CEPF grant portfolio in the Western Ghats, as of October 31, 2013

Strategic Direction	Allocation	Grant awards	Balance to award
SD1	\$3,227,000	\$3,209,799	\$17,201
SD2	\$2,200,000	\$2,206,350	-\$6,350
SD3	\$650,000	\$650,000	\$0
Total	\$6,077,000	\$6,066,149	\$10,851

Including the RIT grant, 44 large grants have been contracted to date, with a total value of \$4.6 million. These grants range in size from \$24,900 to \$650,000, with a mean of \$103,479. Only three grants larger than \$250,000 have been awarded, comprising the RIT grant, 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. The remaining 57 grants that have been contracted are small grants, and have a total value of \$863,056. These grants range in size from \$616 to \$20,000, with a mean of \$15,141. Annex 3 provides a full listing of all grants awarded to date.

The two pipeline small grants notwithstanding, the grant portfolio for the Western Ghats is now essentially complete. There is a fairly even geographic spread of projects across the five priority corridors, complemented by a good number of cross-cutting projects (Annex 1, Chart 2). The corridor with the greatest concentration of grants is the Mysore-Nilgiri, reflecting the fact that this is one of the largest corridors, with the greatest concentration of civil society organizations working on conservation-related issues. There is also a good thematic spread of projects across the different investment priorities in the ecosystem profile. The main gap that has persisted throughout the program is with respect to 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), because it appears that few or no civil society organizations have the necessary credibility and standing with the Forest Department to undertake assessments of protected area effectiveness.

Portfolio Overview: Strategic Direction 1

CEPF investment under this strategic direction aims to enable action by diverse communities and partnerships to ensure conservation of key biodiversity areas and enhance connectivity in the corridors. This strategic direction is 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 has been 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). These investments have been complemented by a larger number of investments in the wider matrix, to enhance connectivity within and between corridors. This has been achieved in two ways: first, by promoting partnerships to identify, evaluate, and advocate for suitable mechanisms that incorporate critical links (biological corridors) into the protected area network (Investment Priority 1.2); and, second, by piloting models of community and private reserves to achieve conservation outcomes at priority sites and critical links in unprotected areas (Investment Priority 1.1).

Investment Priority 1.1 has received a relatively modest amount of funding, with 15 grants totaling \$708,107 (equivalent to 12 percent of awarded funds). These grants have been targeted strategically, however, to diverse local organizations and individuals, and have piloted a variety of approaches to site conservation that provide alternative models to conventional protected areas.

Such models are much-needed 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 has been conservation reserves, which is 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 have 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, covering over 20,000 hectares; proposals to declare these sites as conservation reserves are under consideration by Kerala Forest Department. Across the border in Tamil Nadu, the Wildlife Information Liaison Development Society (WILD) has prepared conservation reserve proposals for three contiguous sites in the Anamalai Corridor, encompassing a total area of approximately 22,000 hectares.

In some cases, conservation reserve proposals developed by CEPF grantees, in consultation with local communities, have already been approved by the Forest Department. 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 is currently being 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 being tested by grantees under Investment Priority 1.1 involve assisting tribal communities to manage land and natural resources they have customary rights to in ways consistent with biodiversity conservation. Several grantees are making use of recent provisions in 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, WWF India has supported members of two tribal communities to establish a 'community forest resource use area' covering nearly 40,000 hectares of Vazhachal Forest Division in the Anamalai Corridor. A similar approach is being adopted in Gudalur Forest Division in the Mysore-Nilgiri Corridor, where Action for Community Organization, Rehabilitation and Development (ACCORD), working through 29 tribal gram sabhas, is supporting local indigenous communities to secure recognition of their community forest rights and develop forest conservation and management plans. In addition to helping communities secure rights to forest resources, CEPF grantees have also been assisting them to manage these resources sustainably. For instance, Amitha Bachan has 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 has been piloted by Keystone Foundation in the Mysore-Nilgiri Corridor and also by AERF in southern Maharashtra, is to revitalize traditional knowledge and customs as a route to conserving forest fragments within anthropogenic landscapes. These grantees have helped tribal communities restore sacred groves and promote their recognition by private landowners, in order to prevent further encroachment.

Investment Priority 1.2 has received more funding than any other, with 19 grants totaling \$1,579,114 (26 percent of awarded funds). These grants have 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 have shown 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 has been 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) has 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. In the Mysore-Nilgiri Corridor, the Wildlife Trust of India (WTI) has developed plans to secure seven critical habitat corridors for Asian elephant (*Elephas maximus*), with input from local stakeholders.

A similar approach has been to identify critical links threatened by linear intrusions, such as highways, railroads and power lines, to evaluate the impacts of these intrusions on ecological connectivity, and develop mitigation measures in collaboration with concerned stakeholders. FERAL is doing this in the Shencottah Gap, where the northern and southern parts of the Periyar-Agasthyamalai Corridor are fragmented by a highway and railroad. At the same time, WTI is analyzing the impacts of linear intrusions in the Mysore-Nilgiri Corridor, and linking the results to national policy debates.

Another threat to ecological connectivity in the Western Ghats is major development projects in natural resource sectors, especially energy and mining. CEPF grantees have responded to these threats 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 have been established in Goa and Nilgiris district, through which support and advice have been provided to local groups with more than 50 cases of actual or potential ecological damage.

An alternative approach piloted by grantees has been 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 have 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 is being attempted by FERAL and Rainforest Alliance with rubber estates in the Periyar-Agasthyamalai Corridor, drawing on experience from the earlier work. Further north, Cheryl Nath has promoted the conservation of native trees in coffee agro-forestry landscapes in the Malnad-Kodagu Corridor.

As well as large estates, grantees are also working with private landowners to incentivize them to maintain or introduce management practices consistent with biodiversity conservation on their small landholdings. Small grantee, Jayant Kulkarni, for instance, has been exploring 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 is

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 has been piloting 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.

A similar set of financial incentives are being 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 Srivilliputhur Grizzled Giant Squirrel Sanctuary, an innovative auction system is being developed to establish a fair price for participating landholders, which compensates them for the opportunity costs of conservation. CEPF grantees are exploring various avenues to finance these incentives in the long-term, including private sponsorship and contributions from government funding mechanisms.

Investment Priority 1.3 has received \$922,579 (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 groups have done so successfully with CEPF support. A case in point is WCS, which implemented a large grant to improve the effectiveness of protected areas 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 is promoting the adoption, by district authorities, of financing mechanisms to incentivize conservation of priority sites outside the protected area network. To this end, the grantee is developing frameworks for payment for ecosystem services (PES) mechanisms for three services: hydrological regulation; pollination; and provisioning of non-timber forest products. If suitable metrics can be developed and buyers identified, it is hoped that this initiative can serve as a demonstration to inform wider policy on PES in the Western Ghats.

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 biological 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 aims to improve the conservation of globally threatened species through systematic conservation planning and action. This strategic direction is 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 are known to require 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 are simply too poorly known to assume, with any confidence, that their conservation is being addressed by current strategies; these are priorities for research and assessment, to establish conservation priorities and evaluate their representation within existing conservation areas.

To this end, CEPF has 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 is an overriding need for information to inform conservation action have been addressed by investments in monitoring and conservation status assessments, with a particular emphasis on lesser-known taxa, such as reptiles and fish (Investment Priority 2.1). The results of these exercises are being 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 \$681,886 (11 percent of awarded funds) has been awarded under this investment priority, across 15 grants. The taxonomic groups that have received the most attention under this investment priority are 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 are typically less well represented within protected area networks.

Some grantees have undertaken comprehensive global Red List assessments of taxonomic groups, including WILD for reptiles, and IUCN for freshwater fishes, plants, odonates and mollusks. Other grantees have 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 have resulted in the description of several new taxa for science, as well as new species records for India. It is particularly encouraging that the key baseline studies and Red List assessments supported by CEPF have led on to more 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 have been awarded under Investment Priority 2.2, totaling \$472,298 (8 percent of awarded funds). These grants have 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 a grant to RSPB, followed by grants to Arulagam, the Rural Agency for Social and Technological Advancement (RASTA) and Sahyadri Nisarga Mitra. This work is contributing to a reduction in threats to vultures in the Moyar, Wayanad and Konkan regions. Elsewhere, Snehakunja Trust is promoting 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 have proven so successful that they have been supported by the Karnataka State Western Ghats Task Force for wider restoration of *Myristica* swamps, 72 of which have been identified in Uttara Kannada district under the project.

Although such projects are making 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 are benefiting 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 have been responding to these limitations has been 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 greater financial support. The AZE site concept has been applied on a pilot basis by Navadarsan Public Charitable Trust at Periyar Lake, which supports three Endangered fish species known from nowhere else. This has been a successful pilot on a number of levels, not least the wide range of stakeholders who have been engaged in practical conservation actions, ranging from local villagers to Forest Department officials to fishing hobbyists. The approach is now being replicated by BNHS for Kondana soft-furred rat (*Millardia kondana*).

Compared with the other investment priorities, Investment Priority 2.3 has received the smallest amount of investment, with only three grants, totaling \$163,947 (3 percent of awarded funds). One grant, to the University of Delhi, is assessing the coverage of the protected area network with regard to amphibians, and identifying new protected areas to fill gaps in coverage. Another grant, to ZOO, is applying 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. A third grant, to FERAL, is conducting 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 the aspect of the investment priority related to protected area gap analysis, and none addressed the second aspect: assessing the effectiveness of different types of protected area at conserving biodiversity. Feedback from civil society groups working in the Western Ghats suggests that it is 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 has received \$888,219 (14 percent of awarded funds), spread across 16 grants. The bulk of this investment comprises 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 has drawn in other institutions to emerge as an exciting collaboration in the field of bioinformatics in India. The Western Ghats Portal has also become an important platform for disseminating the results of CEPF grants and other projects in the region. To date, more than 40 recipients of CEPF funding have contributed map layers and other data to the portal, where their value is amplified by other data stored in the same format. In order to maximize the utility of the Western Ghats Portal as a tool for local civil society, CEPF has 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 have 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 have targeted the general public, through production of local language materials. For instance, Green India Trust has produced a series of community primers in Kannada, disseminating the results of work by other grantees, and is using 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, has 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 are targeting academic audiences, such as WILD, which is mentoring 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*. Care Earth Trust, on the other hand, is targeting district and state government in Tamil Nadu, through an ambitious project to mainstream conservation goals into different sectors and levels of public administration. In combination, these grants provide vehicles for sharing the results of CEPF grants, and making them available for use in conservation planning, applied research and environmental education.

Portfolio Overview: Strategic Direction 3

CEPF investment under this strategic direction is 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 \$650,000 (11 percent of awarded funds) following the two-year extension to the investment program.

BIODIVERSITY RESULTS TO DATE

Globally Threatened Species

Conservation Status Assessments

CEPF investments under Strategic Direction 2 aim 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 progress has been correspondingly good. The main focus of CEPF investments under this investment priority has been 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 Outreach Organisation (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 have been posted on the IUCN Red List website (www.iucnredlist.org) as a freely available dataset on the conservation status, distribution and ecological characteristics of each species. The project has 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 have now been 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 provides a solid basis for future conservation planning and action, including identification of freshwater KBAs (which is currently being taken forward for Kerala and Tamil Nadu under a follow-on grant), gap analyses of existing protected area networks and conservation legislation for the conservation of freshwater biodiversity (both of which are being 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 has been piloted by Navadarsan Public Charitable Trust).

CEPF has 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. To date, 148 reptile species occurring in the Western Ghats have been evaluated, with 23 (8 EN, 15 VU) being assessed as globally threatened. The results have been 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 the enormous 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 is an on-going project by the Indian Institute of Science, to fill gaps in distributional data on reptiles and amphibians through systematic sampling across the Western Ghats. Four years into the project, the team had generated over 5,000 point locality records for more than 350 species of frogs, lizards and snakes, and discovered new populations of several endemic species previously known only from single locations. In addition, many new species have been 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 are also being used to develop an online spatial database, and a photographic atlas for frogs, lizards and snakes of the Western Ghats.

Additional data on lesser-known vertebrates are being generated under a grant to the University of Delhi on the conservation of threatened amphibians. This project includes a component dedicated to rediscovering amphibian species that have not been reliably recorded for many years. To date, 32 field expeditions had been completed, generating important information on a number of little-known species (<http://www.lostspeciesindia.org/LAI2/>). Important results include 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. crurofulvus*, *N. sahyadri*, *N. uttarakannada*, *Tigidia sahydari* and *Idiops joida*) of spider from Uttara Kannada district, Karantaka. The new species were either named after the Sahyadris (a synonym for the Western Ghats), the district Uttara Kannada or the type locality Joida. The trapdoor spider genus *Tigidia*, which was previously known only from

Madagascar and Mauritius, was reported for the first time from India. Similarly, the new tarantula genus *Neoheterophriectus* (which belongs to the Theraphosidae family) is another Gondwanaland relict, with sister genera found in southern Africa. 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 participants at the mid-term and five-year assessment workshops suggests that this may reflect many groups’ strategic focus 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 have been the focus of species-focused conservation actions (Table 2), those initiatives that have been supported have had demonstrable impacts.

Table 2: Critically Endangered and Endangered species targeted by species-focused conservation actions funded by CEPF, as of October 31, 2013

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>Horlabiosa 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

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 diclofenac threat to vultures, 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 main center of population, where future conservation and reintroduction efforts could 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 and more secure than at the beginning, and Indian vulture had been successfully bred in captivity for the first time ever.

Work on vulture conservation is now being taken forward under grants to Arulagam, RASTA and Sahyadri Nisarga Mitra, in Tamil Nadu, Kerala and Maharashtra, respectively. The most advanced initiative is that led by Arulagam in the Moyar Valley in the Mysore-Nilgiri Corridor, where an integrated program of imaginative outreach activities is being carried out, ranging from puppet shows to street-corner meetings. The increase in awareness about the crisis facing India's vultures generated through these activities has translated into behavioral change, including a demonstrated reduction in the number of pharmacies selling diclofenac for veterinary use, and a change in perception of vultures from being associated with death to being associated with recycling. Arulagam's work has also raised the profile of vulture conservation in a region where conservation efforts hitherto focused mainly on tiger and elephant, and the organization has been invited to develop a vulture action plan for Nilgiris North Forest Division. This will ensure sustainability of vulture conservation efforts in the Moyar Valley, by integrating key actions into the working plans for the Forest Department.

Another successful initiative is a project by Snehakunja Trust, which is developing and implementing protocols for restoring populations of six globally threatened plant species through restoration of their freshwater swamp habitats. The species in question comprise one Critically Endangered species (*Syzygium travancoricum*), one Endangered species (*Myristica magnifica*) and four Vulnerable species (*Arenga wightii*, *Gymmacranthera canarica*, *Myristica malabarica* and *Ochreinauclea missionis*). Another species addressed by the project is *Semecarpus kathalekanensis* a highly localized species, endemic to freshwater swamps, which has not been evaluated under the IUCN Red List but would almost certainly qualify as globally threatened. The project is enhancing gene-flow among sub-populations, and hence the long-term viability of these species' populations, by restoring ecological connectivity along chains of swamps. By forging strong partnerships among local communities, Karnataka Forest Department and Sirsi Forestry College, the project has successfully established a network of community nurseries for raising swamp species, and undertaken pilot planting of degraded swamps. Three-and-a-half years into the project, around 20,000 seedlings, belonging to more than 30 species, have been raised and transplanted at six sites, with survival rates ranging from 30 to 80 percent, depending upon species and ecological conditions at the site. Community organizations have been established to implement the project activities and manage the restored freshwater swamps, and these organizations have been provided with training and equipment to add value to medicinal plants and other NTFPs.

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. This project has successfully promoted the designation of the former site as India's first AZE site, and engaged the general public in practical conservation action to address one of the key threats to endemic fish in the lake and surrounding streams: removal of the invasive alien African catfish (*Clarias gariepinus*). Unfortunately, the local context in the Santhampara Hills has not been conducive to advancing on-the-ground conservation efforts there, and there is a need to monitor the situation and re-engage at a more opportune time.

Other conservation actions for Critically Endangered and Endangered species implemented during the first five years of the CEPF investment program in the Western Ghats include 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 non-timber forest product collection by local communities, in order to develop a management regime that enables the macaque population to recover without threatening local livelihoods. The results of the project are being incorporated into the management plan of the new Aghanashini Lion-tailed Macaque Conservation Reserve, being 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 have already emerged. FERAL implemented a gap analysis of endemic and threatened arboreal mammals in the Periyar-Agasthyamalai Corridor. Based on 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 disseminated to the Forest Department, as well as the World Bank-supported Biodiversity Conservation and Rural Livelihood Improvement Project.

A second gap analysis has been undertaken by ZOO, making use of the results of the freshwater Red List assessments. 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 they are all threatened by habitat loss. The analysis has also shown 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. ZOO is now working to incorporate data on freshwater taxa into the management plans and working plans of the Forest Departments in the Western Ghats states.

A third gap analysis has been 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 have been identified, and the possibility of declaring the first of these sanctuaries is being discussed with the government of Kerala.

Analysis and Dissemination of Biodiversity Data

There have been three main results to date 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 has been the launch of the Western Ghats Portal (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 addresses 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 has been developed under CEPF grants to the French Institute of Pondicherry and Strand Life Sciences Ltd. The project has leveraged latest internet technologies and built state-of-the-art biodiversity informatics functionality to facilitate a change from the present 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 has been faced with many obstacles, both technical and attitudinal. Yet, preconceptions towards data quality have been challenged, and attitudes towards data sharing are beginning to change. Three years into implementation, the team has been able to position the portal as one of the leading bio-informatics platforms in India, and build a reputation for inclusiveness, cutting edge technology and scientific credibility. Over this period, the portal accumulated 192 map layers, 9,189 species pages, 328 checklists and 12,000 observations, and built an active community of almost 3,000 users. In August 2013, governance arrangements took a big step forward, with a consortium meeting at which 15 data-holding institutions agreed to work collaboratively towards the long-term sustainability of the portal.

The launch of the Western Ghats Portal has been complemented by the establishment of a special section within the *Journal of Threatened Taxa* (www.threatenedtaxa.org) to publish scientific papers emerging from CEPF projects in the Western Ghats. 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. In addition, the grantee, WILD, is providing a mentoring service to first-time authors, thereby building capacity and helping them establish a publication record in a peer-reviewed journal. To date, only five papers from CEPF grantees have been submitted to the journal, reflecting the fact that many projects are still active or have only recently ended. Nevertheless, at least four more papers are under preparation, and it is expected that more grantees will begin work on papers as more projects are completed.

With regard to local-language materials, Green India Trust has produced illustrated community primers and posters in Kannada on four themes relevant to Uttara Kannada district: cinnamon plant resources; lion-tailed macaque feeding ecology; biological corridors; and tarantula diversity. Another primer, on restoration of *Myristica* swamps, drawing on inputs from another CEPF-supported project, is under preparation. The primers are currently being disseminated to frontline Forest Department staff, NTFP collectors, farmers, school pupils and other target audiences. To reach a wider audience, radio science talks on the five themes were broadcast on All India Radio in June and October 2013. Positive results of these activities have already been observed. For instance, frontline Forest Department staff have shown interest in field identification of tarantulas, and begun sharing data on field observations with the principal investigator and others.

A similar approach has been adopted in the Anamalai Corridor, where CED and the Western Ghats Hornbill Foundation have collaborated with other grantees to prepare a range of communication materials in Malayalam, Tamil and local tribal languages. Of the 17 publications identified in collaboration with grantees, seven have so far been published as hard copies, including educational books for tribal children that introduce local wildlife and forest resources. Pipeline publications include a handbook on the Forest Rights Act, explaining the application process for community forest rights to tribal communities, and field guides to the mammals of the Anamalais, the forest trees of the Anamalais and the freshwater fishes of Kerala. Several of these publications have been taken up as pedagogical tools by Kerala Department of Tribal Affairs, which will ensure 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 central 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 does not strongly emphasize expansion of conventional protected areas but recognizes 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.

A number of CEPF grantees have piloted such models, taking advantage of provisions under the Wild Life Protection (Amendment) Act and the Forest Rights Act. Small grantee 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, has 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 Hombill 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 have been formulated in Kerala by CED and in Tamil Nadu by WILD and WWF India, and are under consideration by the relevant authorities. Collectively, these initiatives are expected to be catalytic in demonstrating the value of conservation reserves as a conservation tool in landscapes where human wellbeing and natural ecosystems are inextricably linked.

As well as promoting the establishment of model conservation reserves across the Western Ghats, CEPF grantees have also been supporting tribal communities to apply for community forest rights. While individual forest rights have been granted to tribal people in various parts of the Western Ghats, granting of community rights has proceeded slowly, and the issuance of titles is actually stayed by High Court order in one state. Hence, the CEPF-supported initiatives are very much test cases, which, if successful, will establish important precedent for wider replication. To date, one community forest resource use area (covering nearly 40,000 hectares) has been established in Vazhachal Forest Division, and applications for others are being prepared elsewhere in Kerala, as well as in Nilgiris district of Tamil Nadu.

A second community-based approach to site conservation being tested in Nilgiris district is based on declaration of sacred groves. Sacred groves are of special cultural significance to the Kurumba communities of the Nilgiri Biosphere Reserve but are not necessarily recognized by other

stakeholders, resulting in them being encroached and degraded. Keystone Foundation has been working with Kurumba communities 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 other communities. Four sacred groves have been declared under the project: Banagudi shola (21 hectares); Baviyur (42 hectares); Chedikal (22 hectares); and Kotada (11 hectares). Under a separate project in the same district, ACCORD is helping indigenous communities map their sacred groves in an attempt to have them officially recognized in local government structures.

Although creation and expansion of conventional protected areas is not a major focus of the CEPF investment program, a number of extensions to existing protected areas have arisen from WCS's work on engaging civil society in monitoring tiger prey species and threats across three landscapes in Karnataka. Results from this monitoring 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.

Strengthened Management of Production Landscapes

The CEPF investment strategy recognizes that civil society is often well placed to engage with conservation of natural habitats outside of protected areas. Accordingly, CEPF grants have been used to explore partnerships with private landholders, ranging from smallholders to large agro-industrial estates, and test innovative approaches to strengthening biodiversity management within production landscapes. Many of these grants have been under Investment Priority 1.2, which targets critical links in the conservation corridors, and biodiversity management has been demonstrably strengthened in production landscapes covering 67,957 hectares to date.

In the Sahyadri-Konkan Corridor, AERF has tested an innovative approach to incentivizing forest conservation on private land through negotiated 'conservation agreements', whereby local communities receive negotiated benefits in return for not allowing logging or conversion of their forests. To date, AERF has negotiated agreements covering 400 hectares of forest, including in the buffer zones of three CEPF priority sites. As well as being biodiversity-rich in their own right, these demonstration sites have established proof of concept for the conservation agreement approach, which has considerable potential for replication.

In the Malnad-Kodagu and Anamalai Corridors, CEPF grantees have strengthened biodiversity management within a number of reserve forests, by various means. Small grantee Prachi Mehta, for example, has promoted the introduction of measures to conserve Asian elephants and reduce human-elephant conflict across 1,500 hectares of Haliyal Reserve Forest. Another small grantee, MES Asmabi College, has 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 have been introduced into agricultural landscapes through certification of tea and coffee estates. This work has been 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 has been particularly successful with regard to tea. Two major tea brands (Tetley and Unilever) are already sourcing and marketing teas from Rainforest Alliance Certified™ farms in the Western Ghats, with one more major tea packer committed but not yet

public. With regard to coffee, one international luxury brand is exploring sourcing certified coffee from the Western Ghats, and one Indian coffee brand is exploring marketing it domestically.

The growing market for certified commodities from the Western Ghats has created conditions under which NCF has been 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 is having impacts on biodiversity conservation, through such practices as 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 is also causing estates to ensure fair treatment and good conditions for workers, invest in good occupational health and maintain good relations with local communities. 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, have been audited as having adopted sustainable agricultural practices that meet the SAN Standard.

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

Strengthened Management of Protected Areas

Although the majority of CEPF investments in site-based conservation have been located outside of conventional protected areas, several of the grants awarded under Investment Priority 1.3 have supported civil society actors to establish partnerships with state agencies to implement science-based management of protected areas. The areas benefiting from strengthened management total 176,072 hectares.

One of the key projects has been a collaboration among WCS, 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 has been conducted in eight protected areas and their 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 have adopted similar approaches to strengthening management effectiveness of protected areas, albeit on a smaller scale, by building networks of local stakeholders who can support ecological monitoring over the long term. For example, MES Asmabi College has helped to develop community-based resource monitoring across 6,000 hectares of the recently declared Parambikulam Tiger Reserve, through the recruitment and training of members of local tribal communities as hornbill watchers and nest guards. The monitoring protocols were developed in collaboration with WWF India, and focus 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 to date have been in relation to the protection of critical links among KBAs, thereby reinforcing ecological connectivity at the landscape scale. Reviewing the geographical distribution of results from north to south, ecological connectivity has been 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. However, at the beginning of the CEPF investment period, 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, has gone a long way towards bridging this gap, and 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 has prepared conservation plans to secure seven identified elephant corridors. Surveys and ground-truthing have been undertaken to map each corridor, investigate patterns of elephant movement and human-elephant conflict, and understand local perceptions towards wildlife conservation. Bottlenecks have been identified, and plans developed to re-establish or consolidate habitat connectivity, with participation of local landholders, forest department staff and other key stakeholders. Twenty-eight signboards have also been fixed along roads passing through the corridors, in order to warn drivers about the movement of elephants and reduce collisions. The plans developed under the project are being used by WTI and the relevant state Forest Departments to consolidate the seven critical links and, thereby, reduce human-elephant conflict.

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 has 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 has developed conservation reserve proposals covering the northern end of the critical link, which are currently being appraised by Tamil Nadu Forest Department.

Within the Periyar-Agasthyamalai Corridor, FERAL has been working to reinforce 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. The project has applied cutting-edge science to identify optimal designs for two habitat corridors, which are now being consolidated through incentive payments to individual landholders and communities. Using a data-driven approach, conservation payments are targeted at landholdings that offer the greatest potential return on investment in terms of enhanced ecological connectivity. During 2013, agreements were signed with individual landholders to maintain existing secondary vegetation and restore native vegetation across 4 hectares within one of the corridors. The effectiveness of these payments will be assessed in 2014, and the approach refined, prior to wider replication.

SOCIOECONOMIC RESULTS TO DATE

Delivering socioeconomic benefits to local communities is integral to many CEPF projects. Across the Western Ghats as a whole, 61 communities have received direct socio-economic benefits, in terms of increased income, food security or other measures of human wellbeing. A greater but unquantified number have received indirect benefits through the conservation and restoration of natural ecosystems that deliver essential provisioning and regulating services.

Several CEPF grantees have assisted communities to introduce more sustainable natural resource management practices. For instance, Snehakunja Trust has helped villagers install fuel-efficient ovens and NTFP driers, in order to reduce pressures on forest from fuel wood collection and add value to collection of uppage fruit (*Garcinia gummigutta*), a valuable NTFP. It is estimated that each drier installed will save from 15 to 20 metric tons of fuel wood per year. Under the same project, the grantee has established two Village Forest Committees, in order to facilitate community participation in efforts to manage and restore freshwater swamps. Among other activities, these committees have identified and cultivated 12 tree species highly valued by local people, and distributed over 1,500 seedlings among target villages. Elsewhere, Arulagam has 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 is the first time that community-based planning for sustainable natural resource management has taken place in these villages, and also the first time that stakeholders such as the Electricity Board and the Special Task Force have participated in such a process in Tamil Nadu.

Grantees are also helping tribal communities 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 grantee has 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 is supporting indigenous communities in 29 tribal gram sabhas to submit community forest rights claims.

A similar approach is being followed by WWF India in Kerala's Vazhachal Forest Division, where Kadars and Malayans from nine tribal colonies (villages) have been assisted to claim community forest rights. The claims were approved by the District Level Committee in May 2013, although the titles have yet to be issued. A program of community-based forest resource monitoring has been initiated, and WWF India is currently supporting the community members to register a management committee and develop a management plan for the community forest resource use area.

As discussed earlier, CEPF grantees are also providing 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 Ratnagiri and Sindhudurg districts of Maharashtra, inhabitants of 13 villages in AERF's project area have received direct payments under conservation agreements. Similarly, in the Shencottah Gap, FERAL has 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.

CEPF grantees have also been empowering local communities to respond to development trends and pressures that affect their wellbeing. For instance, Environics Trust has been assisting communities impacted by development projects to respond to issues of non-compliance, ecological damages and claims for compensation. To date, support has been provided to local communities in over 50 cases of actual or potential ecological damage, and notable successes have been 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 achievements have 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 has been 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 clearly 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 has progressed, however, an increasing number of grants have made this a focus, drawing on the growing body of knowledge and experience relevant to policy 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 improvement and implementation, there have been relatively few tangible impacts to date. This reflects a range of factors, 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 emerge, 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.

The RSPB project on vulture conservation included a dedicated advocacy component related to veterinary use of diclofenac. The main focus of this component shifted from public policy makers to private companies in the pharmaceuticals sector, where there was major progress in understanding the issues and engagement for resolving them.

Also in relation to species conservation, ZOO has been working to prioritize freshwater species evaluated under the Red List assessments for inclusion on the 1972 Indian Wildlife (Protection) Act. However, the schedules of protected species have been in place since 1972, and there is no defined system for prioritizing new species for inclusion that takes into account not only their biological value but also their cultural, aesthetic and commercial values as well. Hence, ZOO is encouraging the Ministry of Environment and Forests to establish a dedicated body to oversee systematic revisions of the schedules.

Other grantees have focused not on national-level advocacy but on influencing public policy at state, district and panchayat levels. One initiative in this line was a project by Keystone Foundation, which set out to mainstream environmental considerations, particularly in relation to maintenance of ecosystem services in the Coonor River basin, into the plans and policies of line departments in Nilgiris district. Although there was no mainstream adoption of recommendations emerging from the project, the district administration did invite Keystone Foundation to develop an action plan for hydrological management in selected areas within the basin, as a basis for implementation of the recommendations on a pilot basis. This is currently being taken forward under a follow-on grant from CEPF.

Another grantee to have had traction at the local level has been NCF, which has 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 have been adopted by Tamil Nadu Highways Department and engineering solutions have been introduced, such as replacement of safety barriers with ones more permeable to wildlife movement.

Public Awareness Raising

Public awareness raising has not been a major focus of CEPF grant making in the Western Ghats, although the third and fourth calls explicitly requested proposals for projects to disseminate information generated by CEPF projects via local-language materials and the popular media. 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, 15 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 has developed a variety of educational materials aimed at a wide range of target groups, and trained two or three educators from each Western Ghats state in their use. A manual, entitled *The Sahyadri Freshwater Biodiversity Conservation Teaching Guide*, has been produced in English, in a format suitable for translation into local languages, together with various supplementary materials. A series of 12 outreach programs is planned across the region, to be led by the trained educators using local-language materials. This will be complemented by outreach via popular media, engaging networks of environmental journalists.

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 have a direct focus on capacity building, all of them provide opportunities for building the capacity of civil society, as individuals, organizations or networks. As of October 2013, 42 civil society organizations (37 local and five international) and 19 individuals (all local) had been 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. To date, only five local civil society organizations have completed the final civil society tracking tool because CEPF support to them has ended. The results for these organizations are mixed: three report an increase in capacity over the period of CEPF support, one reports no change, and one reports a slight decrease. The temptation to extrapolate from this small sample should be resisted; a clearer picture is expected to emerge once more grantees have completed their final tracking tools.

In addition to capacity building of individual organizations, some projects are building civil capacity at the network scale. For example, AERF has 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 has created an issues-based network focused on the conservation of rocky plateaus. This network, which currently has more than 100 individual members, has been documenting the biodiversity, ecological and cultural values of the rocky plateaus, preparing site profiles with detailed information on key localities, and advocating measures to mitigate the impacts of tourism and other incompatible activities.

Other grantees are investing in the capacity of individuals. For example, WCS has trained more than 100 frontline Forest Department staff and 500 civil society volunteers in systematic wildlife surveys through field workshops. The trainees have undertaken the first-ever rigorous population assessment data for tiger prey species across 265,000 hectares of prime wildlife habitat within and around protected areas. Some of the volunteers have shown 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 has formed a professional network of 20 specialists on the freshwater biodiversity of the Western Ghats. The network members have received training in Red List

assessment methodology, and have the skills to keep the Red List assessments of freshwater species up to date.

Keystone Foundation has 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, and currently stands at over 100.

Finally, AERF organized a very 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.

LESSONS LEARNED

The five-year assessment workshops provided an opportunity for CEPF grantees to exchange experience on cross-cutting topics of common interest. Seven topics were discussed in total, with each being discussed by one or more break-out groups, depending upon the interests of the participants at each workshop. Each group was posed three questions: what approaches have been adopted; what has worked, what has not worked and why (i.e. conditions for success), and how can we do things better in future?

Conserving Threatened Species

Participants recognized that the dominant conservation paradigm in the Western Ghats is the conventional protected area approach, where management is targeted at the ecosystem as a whole or a small suite of charismatic species. The vast majority of globally threatened species lack targeted conservation action, even where their needs are not met by existing protected areas. It was felt that conservation funders paid greatest attention to the conservation value of species, usually following the IUCN Red List, but that these priorities did not always coincide with those of local communities, which were often based on religious and cultural values.

There were divergent views on the efficacy of protected area approaches based on charismatic species, such as Asian elephant and tiger, with some arguing that these provide useful flagships or umbrellas for other species that do not attract as much political and financial support, and others contending that they lead to inappropriate management actions for lesser known taxa (such as construction of check-dams) that may be more restricted and severely threatened. Participants felt that species recovery programs, combining *in situ* and *ex situ* approaches, seemed to work, with vultures and freshwater swamp plants being pointed to as examples. It was also felt that conservation based on cultural and religious values has worked in some instances, with conservation of sperm whale (*Physeter macrocephalus*) by fishermen in Gujarat being offered as an example (albeit one outside of the Western Ghats). One participant shared experience from marine turtle and vulture conservation projects in the Konkan Region, where it can take from 8 to 10 years to achieve social sustainability for species conservation efforts. In this light, it is notable that the duration of the CEPF investment program is only seven years, and that most initiatives supported under it are for considerably shorter periods than this.

Based upon this review of experience to date, participants formulated a number of recommendations for improving civil society's contribution to the conservation of threatened species. There was broad consensus that clear objectives need to be set for species conservation initiatives, with indicators to measure success and allow for course-correction. Some participants argued for a move away from charismatic species towards conservation of locally threatened species of significance to communities, for which approaches based on cultural values can be employed. Participants argued for species conservation to be based on sound science, not opinion, recognizing that this requires an investment in understanding species's biology and ecology. Finally, participants recommended that future establishment and management of protected areas should be based upon an ecosystem approach rather than single focal species.

Engaging Communities in Conservation

Participants reviewed a wide range of approaches to engaging local communities in conservation adopted by civil society organizations, observing that many interventions were opportunistic, were led by researchers working in a particular area, and did not necessarily fit within a neat classification. Reflecting this diversity of approaches, it was further felt that there was a wide range of experience, with some approaches thriving and others withering or even having unforeseen negative impacts. While there is no one recipe for success, a number of factors common to successful approaches were identified. First, if local people feel pride in conservation, they are more likely to participate. Second, capacity building is essential to enable local people to take ownership of conservation initiatives and not become passive observers. Third, it is important not to impose outside technical solutions on communities but to partner with them to develop locally relevant solutions. Fourth, trust can take years to build but is lost in minutes, hence conservation groups need to be open and honest from the outset and be prepared to commit to long-term involvement. Fifth, in this context, several groups reported that government funding mechanisms provide a more reliable source of funding to sustain and scale up community-based conservation actions than grant funding or philanthropic donations.

With specific reference to the community-based approaches piloted under the CEPF grant portfolio, participants felt that conservation reserves had significant advantages over conventional protected areas, by giving communities a clear role in management decision making. However, the designation does not seem to be effective unless it is adopted in a bottom-up manner with genuine participation of local communities. Regarding community forest resource use areas, participants expressed frustration at the slow progress with granting community forest rights. However, they recognized that advocates for community forest rights need to address the concerns of the Forest Department about the ability of tribal communities to manage forest resources in a sustainable fashion, as well as about potential loss of royalties and fees from commercial collection of NTFPs from reserve forests. These barriers to the implementation of the Forest Rights Act are also hindering recognition of local communities' rights over sacred groves on forest land. Meanwhile, a significant number are located on tea estates and other private land, for which there is no legal basis for recognition of communities' rights of access, let alone management, and this needs to be negotiated on an informal basis with the landowners.

Beyond the specific approaches being piloted under CEPF grants, identified barriers to successful implementation of community-based conservation fell into two categories: barriers arising from the community; and barriers arising from the project proponent. The first category includes unwillingness to adopt new methods (which may be seen as risky), over-riding need to address immediate development needs (which can prevent long-term thinking), migration of young people to urban areas, and susceptibility to pressure from vested interests. The second category includes dependence on project funding (which can leave work incomplete), limited or no participation of local communities in the design of activities (leading to unrealistic assumptions

and a lack of ownership), a failure on the part of some conservationists to recognize power imbalances inherent in their relationships with communities (leading to a perception of arrogance), and *ad hoc* interventions that do not provide answers to policy questions relevant to government. This second category of barriers, in particular, calls on conservation groups to reflect on the way they approach working with communities.

With these success factors and barriers in mind, participants made a number of recommendations for more effective engagement of local communities in conservation. The value of peer-to-peer learning was emphasized, with participants recommending that exchange visits among communities facing similar conservation challenges could be more effective than advice from outside 'experts'. Participants also stressed the need for long-term interventions, and for conservation groups to recognize from the outset that building local ownership and capacity for lasting success may require at least 10 years. In this context, participants called for reducing dependence on grant funding by mainstreaming conservation actions into panchayat budgets, micro-credit schemes or national funding mechanisms. Participants from Uttara Kannada district shared that the main source of funding for the conservation reserves established there is likely to be Karnataka Forest Department, although this could be supplemented by ecotourism revenue in some cases. Ecotourism was also identified as a potential funding source for proposed conservation reserves in Tamil Nadu's Theni district, where a feasibility study has shown that a small fee levied on existing visitor numbers could generate sufficient revenue to cover their management costs. Overall, the three key recommendations to emerge from the discussions reinforced principles of good project design: set goals and objectives with full participation of local people; clearly articulate project benefits in terms relevant to local people, such as tenure and rights; and share results with communities at project end.

Protecting and Restoring Corridors

Participants agreed that efforts to identify and map conservation corridors had not been matched by efforts to protect and restore them on the ground, not least because the technical challenges of the former are exceeded by the socio-political challenges of the latter. A range of approaches to identification of corridors have been adopted, ranging from single-species corridors to multi-species corridors, to species based upon functional/ecological connectivity. Participants were not aware of any examples of corridors based on hydrological connectivity, and observed that corridor definition was typically an externally driven technical exercise, with limited input from local stakeholders. Considering experience with the different approaches applied to date, there was consensus that future corridor identification efforts should focus on multi-species where possible and should move away from assessing structural connectivity towards a consideration of the biological requirements of target species.

The protection and restoration strategies that have been successfully adopted include land purchase (which has not been funded by CEPF), physical structures (such as canopy bridges) and financial incentives to private landholders (to adopt or retain certain land uses). Land purchase and physical structures were considered to have limited potential for wide replication, due to the high costs and considerable socio-political challenges involved, but were nevertheless mentioned as being important in specific locations, particularly where human-elephant conflict is a major issue. Financial incentives (e.g. direct payments, tax breaks, etc.) were considered to have greater potential. However, they have yet to be successfully demonstrated at scale, and challenges of sustainability and funding need to be overcome.

Participants noted that forest on private land provides ecological connectivity in many places, especially Ratnagiri and Sindhadurg districts of Maharashtra. However, private landowners do not necessarily want their forest to be registered, in case it places restrictions on how they can use

it or leads to alienation of their land. In this context, economic incentives to retain forest on private land, including ones based on sustainable harvesting of timber, may be more effective than regulatory measures.

Looking forwards, participants suggested that there was a need to standardize methods for corridor identification and to apply these throughout the Western Ghats, as this would form the basis for a standard definition of a corridor for planning purposes. At the same time, they felt that there was a need for greater stakeholder participation in corridor identification and planning, including communities, local government as well as private businesses. In order to sustain incentive mechanisms and take them to scale, participants identified a need to explore government funding mechanisms, as well as support from the private sector. In the long run, there is a need for a clear policy direction on biological corridors at state and central levels, in order to restore them on the ground and safeguard against fragmentation by incompatible developments in the transport, energy and agriculture sectors.

Mainstreaming Biodiversity into Development

Mainstreaming biodiversity into development was considered to be a broad subject, and, for the purposes of this review of lessons learned, participants defined it as occurring when conservation objectives are incorporated into the policies and programs of line departments in development sectors. Following this definition, the key role for civil society was considered to be building a bridge between government and local people, to help the community voice be heard in development decision making.

Participants held up Uttara Kannada district as a successful example of biodiversity mainstreaming, since the conservation reserve and *Myristica* swamp restoration models promoted by civil society had been taken up by government, and since a large number of hydropower projects in the district had been successfully blocked because of the activities of peoples' movements. The success factors manifest in Uttara Kannada were identified as: an enabling environment for conservation created by the Western Ghats Task Force of the state government; widespread awareness of conservation issues among the general public; social leadership provided by some religious leaders; available academic research on biodiversity; and vocal and pro-environment media.

Although these conditions are not present throughout the Western Ghats, there was broad consensus that mainstreaming biodiversity into development could happen most effectively at the district level, where the district collector's office is empowered to facilitate collaboration and data-sharing among different line agencies. In contrast, there were considered to be fewer opportunities at state and central levels, where opportunities to influence policy and programs arise infrequently (usually at the planning stage), and continual engagement with the relevant authorities is essential. Nevertheless, several participants reported a growing government acceptance of data generated by civil society, and attested to the power of maps in showing trade-offs between conservation and development goals.

With this background, participants suggested five key strategies for more effective biodiversity mainstreaming. The first was to advocate for the establishment of a dedicated task force or similar body in each state to coordinate the activities of different line departments in regard to conservation in the Western Ghats. The second was to develop an academic knowledge base as a resource for promoting environmental awareness among policy makers, journalists and the lay public. Third, it was suggested that a big difference could be made by government officers concerned about conservation issues taking them up with their colleagues. Fourth, participants felt there was a need to address the asymmetry with regard to baseline research in parts of

Maharashtra. Fifth, it was suggested that civil society groups should liaise more closely with government agencies when planning research or pilot projects, to ensure they address policy questions relevant to government and produce results in accessible formats.

Engaging the Private Sector

Private sector engagement is a relatively recent development in the thinking of many civil society groups involved in conservation in the Western Ghats. A significant proportion of organizations have serious reservations about working with the private sector, hence few participants joined discussions on this topic.

Conservation groups are still experimenting with different strategies for engaging the private sector, and no tried-and-tested approaches have yet to emerge. Nevertheless, some of the approaches that have been tested show promise, at least in certain contexts. These include: cultivating individual contacts within companies; tapping the potential of existing corporate social responsibility (CSR) activities and influencing companies' CSR policies; engaging companies with the aim of improving the environmental impact of their business practices, rather than to request philanthropic support; and building capacity of senior managers to understand conservation issues and the contribution of natural capital to their business.

Participants identified a number of barriers to closer engagement of the private sector in biodiversity conservation, most of which were rooted in the 'culture' of the conservation movement in the Western Ghats. For instance, in the eyes of many companies, all civil society organizations are activists, opposed to all development regardless of its merits. Also, civil society organizations frequently define success in terms of preventing development rather than constructive engagement to promote sustainable development. Furthermore, there is limited capacity within conservation groups to frame issues in terms relevant to business.

Looking forwards, participants suggested a number of ways in which civil society could engage more effectively with the private sector. First, employee engagement programs can be an effective means of engaging with companies and sensitizing their employees about conservation issues. Second, conservation issues need to be communicated to companies in ways that are relevant to them; in other words, civil society needs to make the business case for conservation. Third, the long-term goal of any engagement should be on changing business practices, not on leveraging funding. Fourth, there is a need for greater coordination among groups performing a watchdog role on the operations of companies in relation to environmental regulations and their own corporate policies. Finally, conservation groups that engage with business need to recognize the essential role provided by groups that oppose it, and vice versa. Activism and engagement are two sides of the same coin: without criticism, there is no space for engagement.

Building Green Economies

To frame their discussions, participants adopted a definition of a green economy as one that results in increased human wellbeing and social justice, while minimizing the ecological impacts of economic activity. It was felt that the Western Ghats had tremendous potential for the development of a green economy, especially in sectors such as tourism (especially community-based ecotourism), NTFP collection and processing, energy (through PES mechanisms for hydropower projects, for example), and agroindustry. However, it was recognized that current initiatives remain limited in scale and scope, and are not always well integrated or supported by an enabling policy and investment framework.

One area in which there has been meaningful progress with green economy development under the CEPF investment program has been with commodity certification, especially with the coffee

and tea industries. One positive development is that the number of estates applying for certification has increased over the past five years, albeit gradually. Another is that the number of certification agencies in India for the SAN standard has increased from one to five over the same period. This indicates increased demand from estates in becoming certified and introduces some degree of price competition. Nevertheless, participants identified several barriers to wider adoption of certification, not least restrictions on lopping, felling and transporting native timber trees, which create disincentives for estates to replace non-native shade species.

Participants identified a number of barriers to the wider development of a green economy in the Western Ghats, not least the technical challenges inherent in placing a value on natural capital, and the socio-political challenges of convincing the users of ecosystem services to pay for something they have enjoyed for free for so long. Another barrier was the need to educate consumers about the benefits of sustainability, in order to create market demand. However, participants warned of the risk of ‘green washing’, whereby a company undertakes purely cosmetic measures in order to brand its business or products as environmentally friendly. Another barrier to developing a green economy is the political power of actors with vested interests in the status quo, who may view environmentally sustainable and socially just business practices as threatening. Finally, a fundamental barrier to the adoption of new models, such as PES mechanisms, is their very novelty and the lack of demonstration projects in the Western Ghats.

Responding to these challenges, participants emphasized three important lessons. First, the role of government, private sector and consumers are all important, and it is not possible to develop a green economy without addressing all three. Second, there is a high demand for demonstration projects, which, to be scalable, should focus on a particular sector within a particular location. Third, there is a need for investment in building capacity for green economic development, drawing on best practice from around the world.

Sharing Biodiversity Knowledge

In India, there are extensive data holdings relevant to biodiversity and ecology but these are either not digitized or not curated in standard formats. A number of initiatives have attempted to integrate these data holdings onto a single platform, of which the Western Ghats Portal/India Biodiversity Portal has been the most successful to date. There is growing recognition, even among government institutions, that civil society has a key role to play in facilitating knowledge sharing.

Participants categorized approaches to sharing biodiversity knowledge into two categories: formal and informal. Formal approaches include: published scientific papers and reports; People’s Biodiversity Registers, mandated under the 2002 Biological Diversity Act to share local information with scientists and other people; data portals and websites, such as the Western Ghats Portal and the Environmental Information System of the Ministry of Environment and Forests; mass media; and conferences and seminars. Informal approaches include: social networks, such as Facebook; public lectures in informal gatherings; theatre groups; and SMS messaging, for instance to notify farmers about elephant movements.

Most participants agreed that publications have been useful to the scientific community and lawyers (in litigations). However, their major drawback is that they cater only to people with advanced education (and English speakers), and are not very accessible to grassroots NGOs and the lay public. People’s Biodiversity Registers were considered to be very ineffective, since most communities do not maintain them. Even though they are mandated by law, the government has generally not given much impetus to establishing Biodiversity Management Committees and maintaining registers.

Data portals and websites were cited as an increasingly popular way of disseminating and collecting biodiversity information. However, participants observed that internet access is largely restricted to the urban upper and middle classes, and a large gap exists in making these platforms accessible to the masses. The same limitation was recognized for social media. Posters, booklets and mass media were recognized as being the most useful approaches currently being used to reach the public at large, although it was noted that the potential of SMS and mobile services to reach wide audiences, particularly in rural areas, seemed to be under-realized, considering their wide availability.

There was agreement that government-led efforts at sharing biodiversity knowledge have generally not worked well (although this might reflect the composition of the break-out groups). Participants felt that data were not curated in a standardized format, data holdings were personality based or institution based, and, most importantly, data were generally not freely available. It was observed that government departments and institutions found it difficult to share information with each other, let alone release it to the general public. Participants noted, however, that the new data policy of the Government of India may change on-the-ground realities, as the Department of Biotechnology, the Department of Science and Technology and the Ministry of Environment and Forests are all starting to require that data generated with their funding are made public after a certain length of time.

In terms of how things could be improved going forwards, participants made a long list of recommendations, which are summarized here. First, there is a need to improve the quality of Public Biodiversity Registers, especially as they are compulsory by law, and because they provide a mechanism for gathering local knowledge that could have a bearing during public interest litigation. Second, there is a need for public and private funders to insist on the result of research funded by them being published in open-access journals. Third, there is a need for researchers to collaborate with journalists to translate the results of their work into popular science articles, ideally in the local vernacular. Fourth, researchers need to involve civil servants and business people in framing their studies, in order to ask questions relevant to them and disseminate results in accessible formats. Fifth, the potential for citizen science initiatives to ‘crowd source’ ecological data, for example on invasive species, at scale in a cost effective manner needs to be explored, taking advantage of mobile platforms for recording observations. Finally, it was suggested that the Ministry of Environment and Forests might have an interest in adopting the Western Ghats Portal as an official data source, especially in the context of India’s Presidency of the Convention on Biological Diversity.

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.

In order to better evaluate and focus its contributions to long-term, collaborative conservation efforts, CEPF has developed, and is in the process of testing, five long-term conservation 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 five-year assessment workshops 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-July 2013. These were then compared with the results of a similar exercise conducted during the mid-term assessment workshop, which compared the situation in 2008 with that in 2011. This allowed an assessment of change over time to be made with respect to each criterion. The synthesized results are presented in Annex 4

There was broad consensus that five years was quite a short period over which to observe significant change with regard to long-term goals. Nevertheless, when comparing CEPF grantees' perception of the situation prevailing in 2013 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 nine of these cases. Specifically, under Goal 1 (conservation priorities), significant progress was observed 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 preliminary KBAs for freshwater taxa having been identified across the Western Ghats for the first time; 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 were directly attributable to CEPF grants.

Under Goal 2 (civil society capacity), significant progress was observed with regard to human resources, and management systems and strategic planning. Participants considered that civil society, collectively, had attained a higher level of technical competence over the last five years, and that operational capacity and management structures had gradually improved for NGOs (although not for community groups). These improvements were partly attributed to new funding sources becoming available for civil society, such as CEPF. Improvements were also observed with regard to collaboration for conservation across state boundaries. Again, this was felt to be partly attributable to CEPF's role in bringing together groups from different places and with different perspectives.

Under Goal 3 (sustainable financing), significant progress was observed with regard to availability of civil society funding, and funding for livelihood alternatives. In the former case, there has been a significant increase in government funding for research, while CEPF has significantly increased the availability of 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 by the deterioration of one criterion: donor funding for biodiversity conservation from non-CEPF sources was considered to have diminished significantly over the last five years.

No substantive changes were observed with regard to Goal 4 (enabling environment). It was noted, however, that some developments over the last five years had created new opportunities for civil society to engage effectively in conservation, such as the establishment of the National Green Tribunal in 2011.

Finally, under Goal 5 (responsiveness to emerging issues), a significant improvement was observed with regard to discussion of conservation issues in the public sphere, accompanied by greater attention being paid to them by politicians. It was noted that public debate of conservation issues does not necessarily influence public policy but there are examples of this happening. These improvements were not directly attributable to investments by CEPF, though.

In spite of improvements in these areas, overall, there is still a long way to go before the long-term conservation goals for the Western Ghats are met. Participants in the five-year assessment workshops considered that, of the 25 criteria assessed, only three of them had been fully met by 2013: 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, 15 were assessed as partially met and seven were assessed as not met. The goals with the greatest number of criteria unmet were Goals 3 (sustainable financing) and 5 (responsiveness to emerging issues), with two each.

CONCLUSION

The CEPF investment in the Western Ghats is being made 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, is eclipsed by government investment in conservation and major donor-funded programs in the forestry sector. On the other hand, resources available to civil society are more meagre, and CEPF has become one of the most important sources of grant funding available to groups working on biodiversity conservation in the Western Ghats.

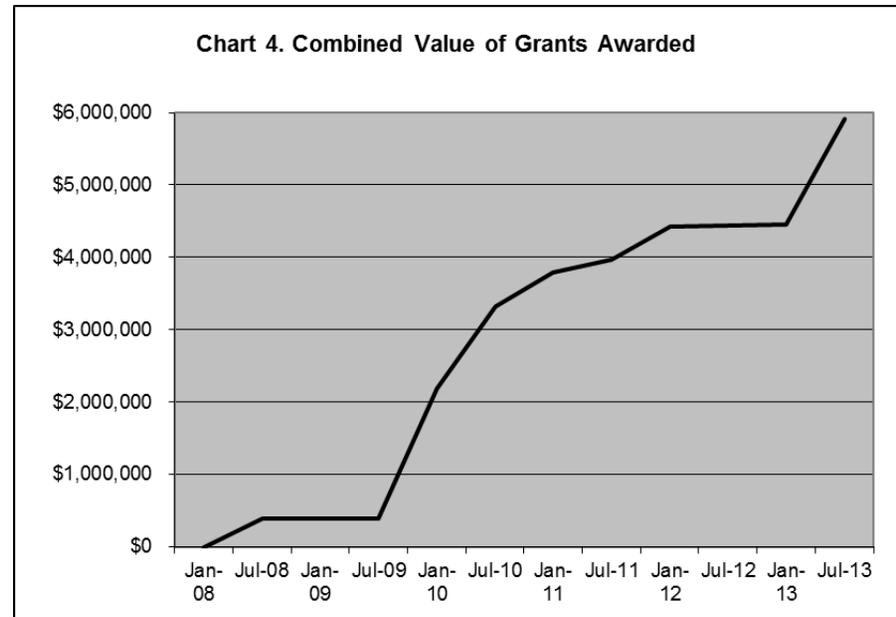
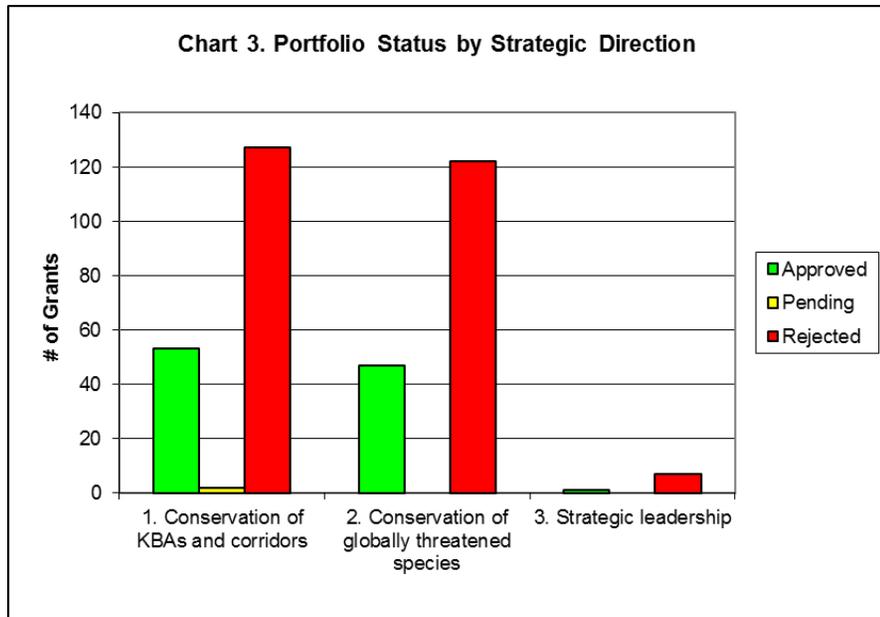
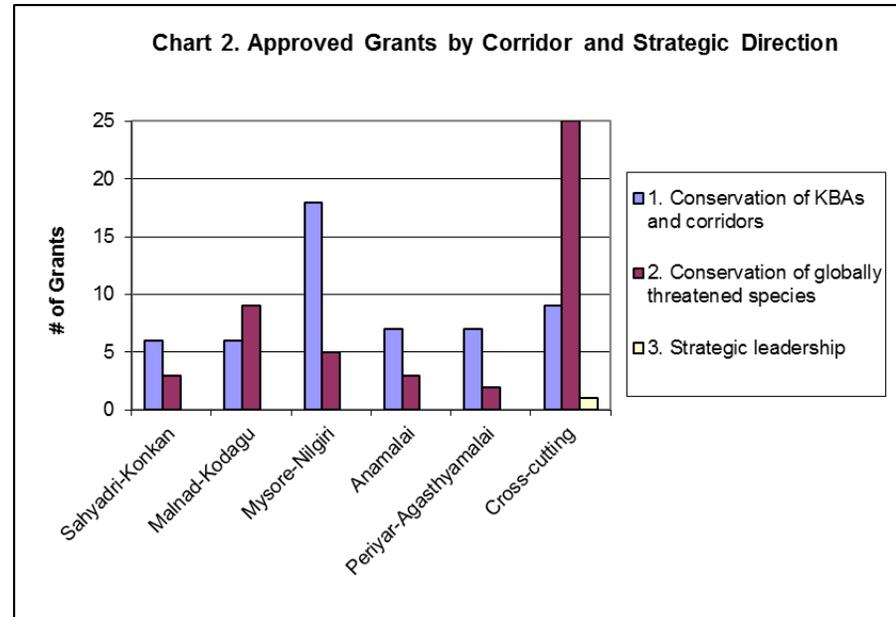
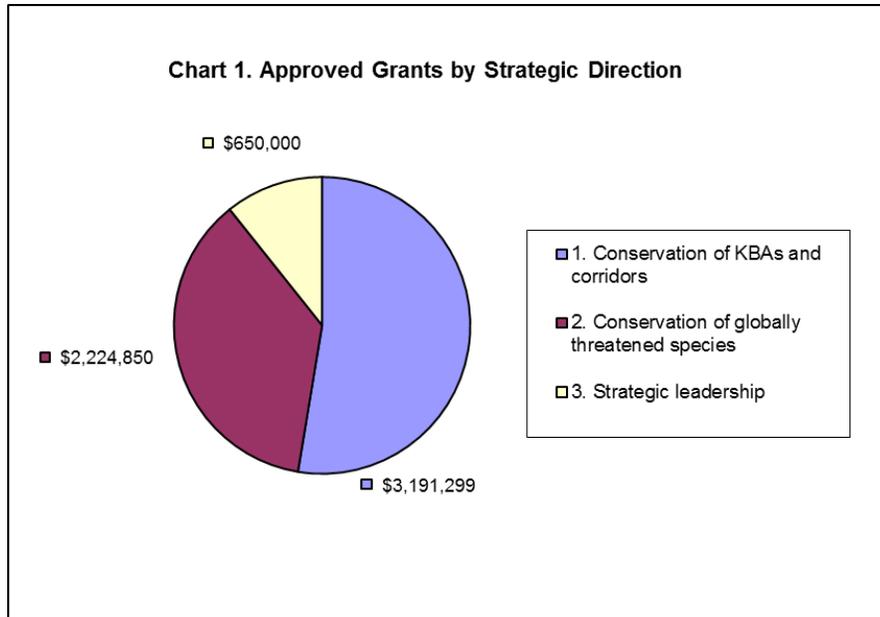
In this context, CEPF investments have complemented on-going investments in conventional protected areas by demonstrating alternative conservation models with a greater role for local communities in governance, mainstreaming conservation into production landscapes, and addressing the needs of highly threatened species requiring focused conservation action. Over the first five years of the investment program, CEPF grants have contributed to a growing body of

knowledge and good practice models that can inform the development of government policy that optimizes biodiversity conservation within an overall program of inclusive, green growth.

If CEPF is to be an agent of change, one area in which there needs to be greater emphasis placed during the last two years of the program is documenting and disseminating results, among the conservation community and, critically, to government at different levels and in different sectors. This will require targeted efforts to mainstream recommendations emerging from CEPF grants into sectoral policy and leverage support for new conservation models from existing funding mechanisms, such as the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) and the Green India Mission. CEPF has already awarded a number of grants for this express purpose, and these will be complemented by activities led by the RIT.

One area in which CEPF investment has already been transformative is 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 has enabled a number of smaller and more nascent organizations to grow in capacity and credibility over the past five years, its more significant impacts have been in bringing together groups with complementary capacities and different (sometimes conflicting) perspectives around a common agenda. This has been achieved through face-to-face meetings, a shared web-based platform, and numerous small interactions facilitated by the RIT. In this way, the program has 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 October 31, 2013



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>61 civil society actors have received CEPF grants, including ATREE as the RIT. Of these, 5 are international organizations, 37 are local organizations and 19 (all small grantees) are individuals.</p> <p>8 alliances and networks have been forged:</p> <ul style="list-style-type: none"> (i) Applied Environmental Research Foundation (AERF) has formed a network of civil society groups engaged in conservation in the northern Western Ghats; (ii) Environics Trust has created a website called Western Ghats EIA Watch to network stakeholders to monitor and engage in the environmental approval process for development projects; (iii) Keystone Foundation has founded the Nilgiri Natural History Society to network and exchange information among organizations and individuals with interests in Nilgiri Biosphere Reserve; (iv) Rainforest Alliance and Nature Conservation Foundation have forged an alliance for setting standards for sustainably produced coffee and tea; (v) IUCN's Freshwater Biodiversity Unit, through its local partner Zoo Outreach Organization, has created a network of freshwater biodiversity experts to update the IUCN Red List of Threatened Species; (vi) The French Institute of Pondicherry, Strand Life Sciences Ltd and several other data-holding institutions have forged an alliance to develop the Western Ghats Portal as an open-access, on-line data repository on Western Ghats ecology; (vii) Biome Conservation Foundation has formed a civil society network for conservation of rocky plateaus in the Sahyadri-Konkan corridor; (viii) Wildlife Information Liaison Development Society has established a network of educators and journalists who can raise awareness of threatened freshwater biodiversity and reptiles. <p>1 policy has been influenced to accommodate biodiversity:</p> <ul style="list-style-type: none"> (i) Tamil Nadu Highways Department has introduced measures to minimize road kill of wildlife in the Anamalai Corridor.

	80 key biodiversity areas have new or strengthened protection and management guided by a sustainable management plan.	Management has been strengthened at 23 KBAs: Agumbe Reserve Forest (RF); Amboli RF; Bhadra Wildlife Sanctuary (WLS); Cauvery WLS; Chandoli National Park (NP); Dandeli WLS; Haliyal RF; Indira Gandhi WLS; Kollegal Forest Division (FD); Kotagiri-Longwood Shola; Koyana WLS; Kudremukh NP; Malayathur FD; Mookambika WLS; Mudumalai WLS; Nemara FD; Nilgiri North FD; Parambikulam WLS; Periyar Tiger Reserve (TR); Sharavathi WLS; Someshwara WLS; Talaimalai RF; Vazhachal FD.
Intermediate Outcomes	Intermediate Indicators	Progress
<p>Outcome 1: 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>Number of hectares of key biodiversity areas with strengthened protection and management.</p>	<p>Management has been strengthened at 13 protected areas, equivalent to 65 percent of those targeted: Aghanashini Lion-tailed Macaque Conservation Reserve (CR); Anamalai TR; Bedthi CR; Bhadra TR; Dandeli Hornbill CR; Mookambika WLS; Mudumalai WLS; Parambikulam WLS; Periyar TR; Shalmala Riparian Ecosystem CR; Sathyamangalam WLS; Sharavathi 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, have integrated biodiversity conservation into management practices of production landscapes, including reserve forests, private forests, and tea and coffee estates.</p> <p>29 projects, equivalent to 54 percent of the 54 grants awarded under Strategic Direction 1, have enabled stewardship of biodiversity and ecosystem services by local communities.</p> <p>382,728 hectares of KBAs have strengthened protection and management: (i) training 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; (ii) 50,059 hectares within Cauvery KBA, 24,806 hectares within Dandeli KBA and 22,586 hectares within Someshwara KBA</p>

	<p>Number of hectares in newly established or expanded protected areas.</p>	<p>covered by extensions to existing protected areas; (iii) 40,000 hectares within Vazhachal KBA designated as a community forest resource use area; (iv) 16,000 hectares within Mudumalai, Nilgiri North Forest Division and Talaimalai KBAs covered by community conservation actions; (v) 12,337 hectares within Mookambika KBA benefit from extension of the WLS; (vi) 6,000 hectares within Parambikulam KBA and 4,400 hectares within Nenmara, Vazhachal and Malayathur KBAs benefit from community-based natural resource management; (vii) 2,300 hectares within Periyar KBA benefit from manual removal of an alien invasive species (African catfish); (viii) 1,500 hectares in Haliyal KBA benefit from improvement management of human-elephant conflict; (ix) 250 hectares of forest adjacent to Kotagiri-Longwood Shola KBA and 200 hectares adjacent to Indira Gandhi KBA benefit from strengthened conservation management within certified tea and coffee estates; (x) 90 hectares of forest on private land within Chandoli KBA, 40 hectares within Amboli KBA and 20 hectares within Koyna KBA covered by conservation agreements with private landowners; (xi) 88 hectares within a vital wildlife corridor connecting Kudremukh KBA with adjoining shola forest have enhanced protection; (xii) 75 hectares of freshwater swamps within Sharavathi KBA are under restoration and long-term management; (xiii) 37 hectares of agricultural land in two unprotected enclaves within Dandeli KBA have biodiversity-friendly management practices.</p> <p>Protected area coverage in the Western Ghats has increased by 191,306 hectares through the creation of new and expansion of existing protected areas: (i) Cauvery WLS has been expanded by 50,059 hectares (from 52,695 to 102,754 hectares); (ii) Vazhachal Community Forest Resource Use Area has been declared, covering 40,000 hectares; (iii) Aghanashini Lion-tailed Macaque CR has been declared,</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>covering 29,952 hectares (iv) Dandeli WLS has been expanded by 24,806 hectares (from 63,835 to 88,641 hectares); (v) Someshwara WLS has been expanded by 22,586 hectares (from 8,840 to 31,426 hectares); (vi) Mookambika WLS has been expanded by 12,337 hectares (from 24,700 to 37,037 hectares); (vii) Bedthi CR has been declared, covering 5,731 hectares; (viii) Dandeli Hornbill CR has been declared, covering 5,250 hectares; (ix) Shalmala Riparian Ecosystem CR has been declared, covering 489 hectares; (x) 4 sacred groves totaling 96 hectares have been restored and placed under community management: Bhaviyur (42 hectares); Chedikhal (22 hectares); Banagudi shola (21 hectares); and Kotada (11 hectares).</p> <p>7 partnerships have been established to implement progressive science-based management, conservation and monitoring of priority sites: (i) AERF has forged community-civil society partnerships to enhance conservation of forests on private lands in the Sahyadri-Konkan Corridor; (ii) Amitha Bachan has established a protocol for biodiversity monitoring, engaging Kadar tribal people, sponsored and supported by Kerala Forest Department in Vazhachal Forest Division; (iii) Arulagam has facilitated partnerships among communities, local government and civil society for conservation of biodiversity along the Moyar River; (iv) Foundation for Ecological Research, Advocacy and Learning has forged partnerships with local tribal communities for monitoring wildlife usage of a proposed ecological corridor; (v) Keystone Foundation has forged partnerships among communities, local government and civil society for the conservation of hill wetlands within Nilgiri Biosphere Reserve; (vi) Snehakunja Trust has established a protocol for restoration of freshwater swamps, with participation and support from the Forest Department, Sirsi Forestry College and local communities;</p>
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		(vii) Wildlife Conservation Society has 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.
<p>Outcome 2: 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 has been strengthened at 13 protected areas, equivalent to 67 percent of those targeted (see above for details).</p> <p>382,728 hectares of KBAs have strengthened protection and management (see above for details).</p> <p>Protected area coverage in the Western Ghats has increased by 191,306 hectares through the creation of new and expansion of existing protected areas (see above for details).</p> <p>The status and distribution of 608 species of aquatic plant has been assessed, and the results disseminated via the Red List of Threatened Species, where they can be used to inform conservation action.</p>
<p>Outcome 3: 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>To date, 16 large and 22 small grants have closed. Of these, 13 large and 19 small grants were assessed as having met or exceeded expectations with regard to delivery of expected results in the final performance scorecard.</p> <p>Progress is on or ahead of schedule for 20 of the 23 deliverables in the logical framework for the RIT grant. The three deliverables where progress is behind schedule relate to communication of results to state forest departments and other key stakeholders.</p>
Strategic Funding Summary	Amount	Investment Period
Original Spending Authority	\$4,500,000	May 1, 2008 to April 30, 2013
Revised Spending Authority	\$6,077,000	May 1, 2008 to June 30, 2015

Annex 3 – List of CEPF Approved Grants, as of October 31, 2013

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

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: \$59,770

Grant Term: 06/13 - 05/15

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: \$99,186

Grant Term: 06/13 - 04/15

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: \$13,872

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: \$36,000

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: \$90,620

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 - 06/14

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 - 12/13

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: \$129,812

Grant Term: 06/13 - 05/15

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: \$9,900

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 - 05/15

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: \$14,121

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: \$75,000

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: \$19,958

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: \$18,000

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: \$19,998

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: \$18,496.27

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: \$11,469.14

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: \$19,465

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

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: \$19,779

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 Udupi 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: \$19,989

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 - 05/15

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: \$18,990

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 - 03/15

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: \$199,980

Grant Term: 07/10 - 06/14

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 - 11/14

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: \$18,963

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: \$18,366

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 - 05/15

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: \$1,130

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: \$18,889

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 (\$241,303 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 (\$84,744 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: \$18,470

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: \$29,975

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 - 12/13

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: \$69,996

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: \$17,260

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: \$19,000

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: \$12,123

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: \$19,525

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: \$19,992

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: \$36,000

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: \$19,998

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 - 05/15

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: \$116,106

Grant Term: 01/10 - 12/14

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 - 06/14

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: \$17,820

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 - 12/13

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: \$39,000

Grant Term: 01/12 - 12/13

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 - 03/14

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: \$650,000

Grant Term: 05/08 - 04/15

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		2013		Notes
i. Globally threatened species. 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 gap that remains is terrestrial plants: only 332 plants have been assessed – less than 10% of the total.
		Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
ii. Key Biodiversity Areas. 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 2011, preliminary freshwater KBAs were identified under a CEPF grant; in 2013, these were being refined for Kerala and Tamil Nadu. There is still no broad acceptance of KBAs among civil society and the forest department.
		Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
iii. Conservation corridors. 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. Conservation plans. 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 not adopted or 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. The reports involved multiple stakeholders but have not been accepted by all parties.
		Partially met		Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
v. Management best practices. 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		2013		Notes
i. Human resources. 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 2013. 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. Management systems and strategic planning. 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 not for community groups. Between 2008 and 2013, 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. Partnerships. 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 2013, new cooperation mechanisms had emerged (e.g. the Western Ghats Portal), and were being formalized. CEPF has 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. Financial resources. 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 slightly between 2008 and 2013 due to the availability of grants from CEPF and other donors. Small, local groups still face severe financial challenges, and need capacity building in fundraising. Donor priorities are shifting from conservation, and NGOs have not yet learned how to tap into government programs. Project funding creates uncertainty and is a major barrier to long-term planning and delivery.
		Partially met		Partially met		Partially met	
		Fully met		Fully met		Fully met	
v. Transboundary cooperation. 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 has been instrumental in bringing NGOs, activists and other actors from different states together, although the future direction of the movement is unclear.
		Partially met		Partially met	X	Partially met	
		Fully met		Fully met		Fully met	

Goal 3: Sustainable financing

Criterion	2008		2011		2013		Notes
i. Public sector funding. 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 have become available, such as CAMPA and Green India Mission. However, these are being released slowly, towards unstrategic priorities and civil society groups have not learned how to access them. Most public-sector funding for conservation is invested in staff costs and infrastructure, with little for operational management.
	X	Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
ii. Civil society funding. 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, there has been an increase in government funding for research, while CEPF has significantly increased availability of donor funding for conservation. Nevertheless, many smaller NGOs have very limited funded, while a few larger, mainly urban, NGOs secure the majority of funds but may not use them as efficiently. FCRA regulations are a major barrier to accessing foreign funds. Between 2008 and 2013, changes to the direct tax code and the FCRA have made it more difficult for civil society to access funding.
		Partially met		Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
iii. Donor funding. Donors other than CEPF have committed to providing sufficient funds to address global conservation priorities in the region.		Not met		Not met	X	Not met	Other than CEPF, no other major funding agency is supporting biodiversity conservation at the landscape scale in the Western Ghats. Major donor agencies, such as the Ford Foundation and the Tata Trusts, have moved out of conservation. Few donor agencies make long-term commitments, causing discontinuity in conservation efforts.
	X	Partially met	X	Partially met		Partially met	
		Fully met		Fully met		Fully met	
iv. Livelihood alternatives. 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 local communities have emerged since 2008, most notably the National Rural Employment Guarantee Scheme. Other livelihood alternatives, such as incentive payments for conservation, have been piloted at a small number of CEPF priority sites.
		Partially met		Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
v. Long-term mechanisms. 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	2013	Notes
i. Legal environment for conservation. Laws exist that provide incentives for desirable conservation behavior and disincentives against undesirable behavior.	Not met	Not met	Not met	There has been no significant change in the legal environment for conservation between 2008 and 2013. Multilateral Environmental Agreements are reflected in national laws but clear procedures for implementation are lacking. Strong national conservation laws exist, although these mainly focus on disincentives (sanctions) for undesirable behavior. Some laws (e.g. Forest Rights Act) create positive incentives but more incentives are needed.
	X Partially met	X Partially met	X Partially met	
	Fully met	Fully met	Fully met	
ii. Legal environment for civil society. Laws exist that allow for civil society to engage in the public policy-making and implementation process.	Not met	Not met	Not met	The Right To Information Act and other laws create opportunities for civil society to influence policy making and implementation. Many civil society groups do take advantage of these opportunities, although many express frustration that their recommendations are often ignored by policy makers. New opportunities were created by the establishment of the National Green Tribunal in 2011.
	Partially met	Partially met	Partially met	
	X Fully met	X Fully met	X Fully met	
iii. Education and training. Domestic programs exist that produce trained environmental managers at secondary, undergraduate, and advanced academic levels.	Not met	Not met	Not met	There are about 10 training programs in India on environmental management and ecology exist but few are of high quality. Lack of employment opportunities is a disincentive to students following these courses. 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. Transparency. 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. Enforcement. 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. However, these agencies are constrained by insufficient, under-resourced, under-trained and unmotivated staff. Most protected areas have demarcated boundaries but regular enforcement patrolling occurs in less than 70 percent of protected areas. Less than 10 percent of arrests lead to conviction or penalty.
	Partially met	Partially met	Partially met	
	Fully met	Fully met	Fully met	

Goal 5: Responsiveness to emerging issues

Criterion	2008		2011		2013		Notes
i. Biodiversity monitoring. 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 2013, there has been 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 (tiger, elephant, etc.) across the region; for other species, 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. Threats monitoring. Nationwide or region-wide systems are in place to monitor status and trends of threats to biodiversity.	X	Not met	X	Not met	X	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 is monitoring forest diversion but there are gaps because forest clearance is not required for windmills, quarries, railways or conversion of private forest.
		Partially met		Partially met		Partially met	
		Fully met		Fully met		Fully met	
iii. Ecosystem services monitoring. 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. A TEEB study for India began in 2011 and might do this.
		Partially met		Partially met		Partially met	
		Fully met		Fully met		Fully met	
iv. Adaptive management. Conservation organizations and protected area management authorities demonstrate the ability to respond promptly to emerging issues.		Not met		Not met		Not met	Some conservation organizations began working on emerging issues over the period 2008 to 2013. Adaptive management often takes place in protected areas that have charismatic species. Conservation organizations do respond to emerging issues but it is patchy. A key factor is informed and effective civil society networks.
	X	Partially met	X	Partially met	X	Partially met	
		Fully met		Fully met		Fully met	
v. Public sphere. Conservation issues are regularly discussed in the public sphere, and these discussions influence public policy.		Not met		Not met		Not met	Between 2008 and 2013 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 to Date
Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society	
Target 1. 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; hundreds of people directly involved in public awareness raising
Target 2. 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 being mainstreamed into state, district and panchayat development planning and policy in Tamil Nadu, with a focus on targeted geographies and sectors
Target 3. 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 and conservation auctions
Target 4. 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 have been 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
Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use	
Target 5. 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
Target 7. 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
Target 9. 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 to Date
<i>Strategic Goal C: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</i>	
Target 11. 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	More than 190,000 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
Target 12. 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 13 globally threatened species, with some core populations stabilized or increased
<i>Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services</i>	
Target 14. 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; payment for ecosystem service models for water, non-timber forest product (NTFP) provisioning and pollination services being developed
<i>Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building</i>	
Target 18. 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; indigenous communities engaged in development of sustainable harvesting of NTFPs within community forest resource use areas; sacred groves restored and recognition of indigenous communities' rights of access and management promoted
Target 19. 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, and collated data already being applied