

## **CEPF and Poverty Reduction: A Review of the CEPF Upper Guinean Forest Ecosystem Portfolio for the Guinean Forests of West Africa Hotspot**

**December 2006**

The benefits from intact habitats and healthy ecosystems extend well beyond biodiversity. This report is part of an ongoing effort by the Critical Ecosystem Partnership Fund (CEPF) to analyze the relationship between the projects it supports and poverty reduction.

This analysis includes a socioeconomic study across the CEPF geographic funding area and a project- and portfolio-specific assessment performed through administering questionnaires to grantees. The socioeconomic information provides CEPF with more detailed information about the areas where it invests, and can be layered with existing biodiversity data to present a more comprehensive picture of the priority areas. Project-specific information, collected through questionnaires, provides specific data on key indicators agreed upon by the CEPF donor partners. In addition, this report incorporates narrative examples of how CEPF-supported conservation projects contribute to poverty reduction.

The project-level information is presented in a standard format agreed upon with the CEPF donor partners that is then globally aggregated as a part of the regular quarterly reporting to the partners. This approach has so far been completed in ten regions: Atlantic Forest, Cape Floristic Region, Guinean Forests of West Africa, Madagascar and Indian Ocean Islands, Philippines, Southern Mesoamerica, Succulent Karoo, Sundaland, Tropical Andes, and Tumbes-Chocó-Magdalena. The following report presents the results from the Guinean Forests of West Africa biodiversity hotspot, emphasizing CEPF's investments in the Upper Guinean Forest Ecosystem within this hotspot.

The Upper Guinean Forest Ecosystem extends from Guinea eastward into Sierra Leone, Liberia, Côte d'Ivoire, Ghana, and Togo (Figure 1). Within this portion of the hotspot, CEPF investments emphasize forest conservation and the remarkable biological diversity that the forests of this region contain. CEPF investment strategies emerged from a Conservation Priority-setting workshop held in Elmina, Ghana, in 1999 that assembled experts from nearly 30 countries to discuss conservation challenges in the Guinean Forests of West Africa. Beyond a general focus on conserving forest and the biodiversity it contains, CEPF-funded projects seek to coordinate approaches to biodiversity conservation in the region through supporting connectivity among forest fragments as well as among agencies, groups, and policies. The CEPF investment strategy focuses on avoiding further fragmentation of the remaining forests via establishing connections among forest fragments—through promoting biophysical links, supporting standardized management approaches, working with agencies that have not traditionally coordinated their activities across national borders, and promoting regulations and policy instruments that would harmonize approaches to biodiversity conservation.

Data from various complementary sources were used for the analyses presented in this report. For the entire region and each conservation area, we compiled and examined available socioeconomic data for the six countries that contain the Upper Guinean Forests. For individual projects, we collected and analyzed data from CEPF grantees. This report summarizes the data analysis at a regional scale, at a corridor scale, and for individual projects.

Figure 1. CEPF-funded projects in the Upper Guinean Forest Ecosystem, Guinean Forests of West Africa Hotspot



**Initiative-Wide (Regional) Level**

The Guinean Forests of West Africa Hotspot includes parts of ten countries in West Africa. Six of these—Côte d’Ivoire, Ghana, Guinea, Liberia, Sierra Leone, and Togo—occur in the Upper Guinean Forest Ecosystem of the hotspot and are included in this analysis. West Africa is a region of extreme poverty, and the countries that contain the Upper Guinean Forest Ecosystem are no exception. For the five countries with standard development indicators available, measures such as the Human Development Index and the Human Poverty Index show that these countries rank below most other less-developed countries in the world (Table 1). The three countries in the Upper Guinean Forest with reliable income data—Côte d’Ivoire, Ghana, and Sierra Leone—have large proportions of their populations surviving on \$1 or \$2 per day.

Table 1. National development and poverty levels for Côte d'Ivoire, Ghana, Liberia, and Sierra Leone

	<i>Côte d'Ivoire</i>	<i>Ghana</i>	<i>Guinea</i>	<i>Liberia</i> <sup>a</sup>	<i>Sierra Leone</i>	<i>Togo</i>
Human Development Index: value (rank <sup>b</sup> )	0.421 (#164)	0.532 (#136)	0.445 (#160)	NA	0.335 (#176)	0.495 (#147)
Human Poverty Index: value (rank <sup>b</sup> )	41.5 (#82)	33.1 (#58)	52.0 (#96)	NA	51.9 (#95)	39.0 (#72)
% population living on less than \$2 per day <sup>c</sup>	48.8	78.5	NA	NA	74.5	NA
% population living on less than \$1 per day <sup>c</sup>	14.8	44.8	NA	NA	NA	NA

a: Measures unavailable for Liberia due to civil unrest

b: Rank among less developed countries globally, 2004

c: Average, 1990-2004

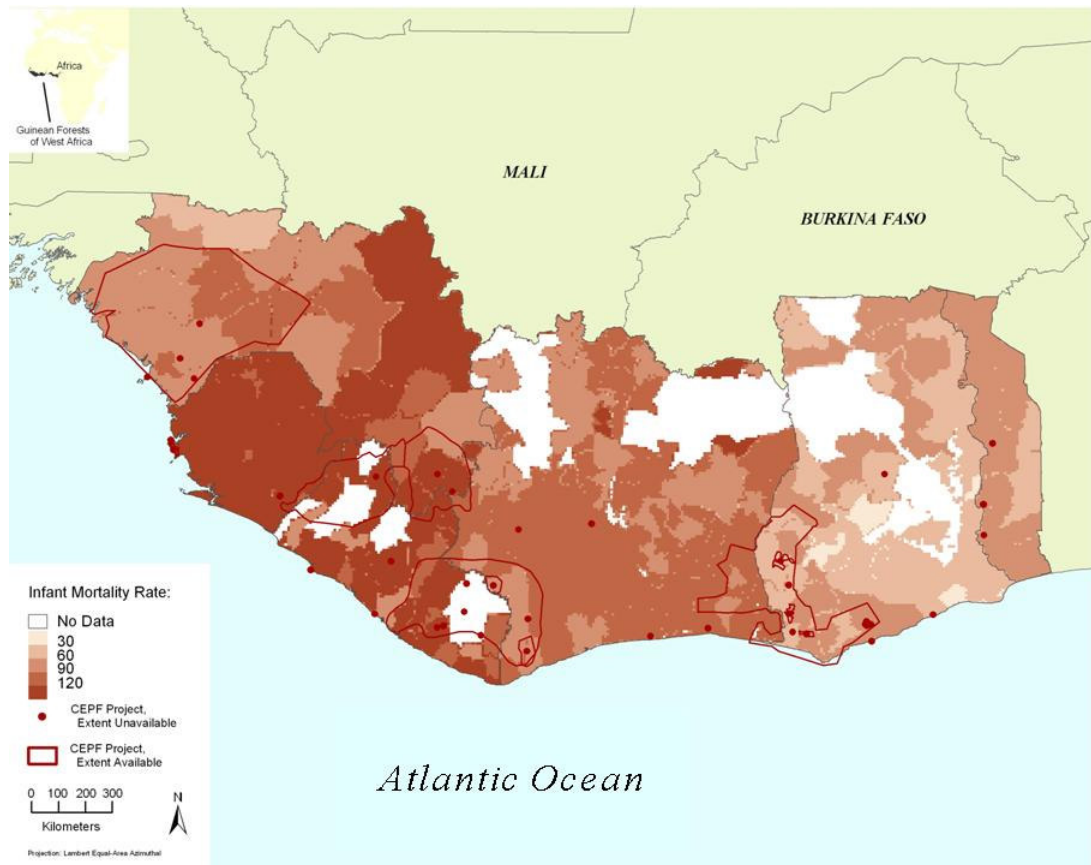
Source: United Nations Development Programme-Human Development Reports online:  
<http://www.undp.org/hdr2006/statistics/countries/>

### Corridor Level

To explore the socioeconomic context of CEPF corridors in the Guinean Forests of West Africa Hotspot, this study examined measures of poverty available for the six countries that occur in this region. Reliable, recent statistical data that would serve as poverty indicators in general are not widely available for this portion of Africa, at least for small geographic units that would enable the mapping and examination of the spatial arrangement of poverty. As noted in Table 1, data are particularly scarce for Liberia. For the remaining five countries in the Upper Guinean Forest Ecosystem, we mapped infant mortality rate and percent of children underweight as indicators of the levels of poverty occurring in various parts of each country.

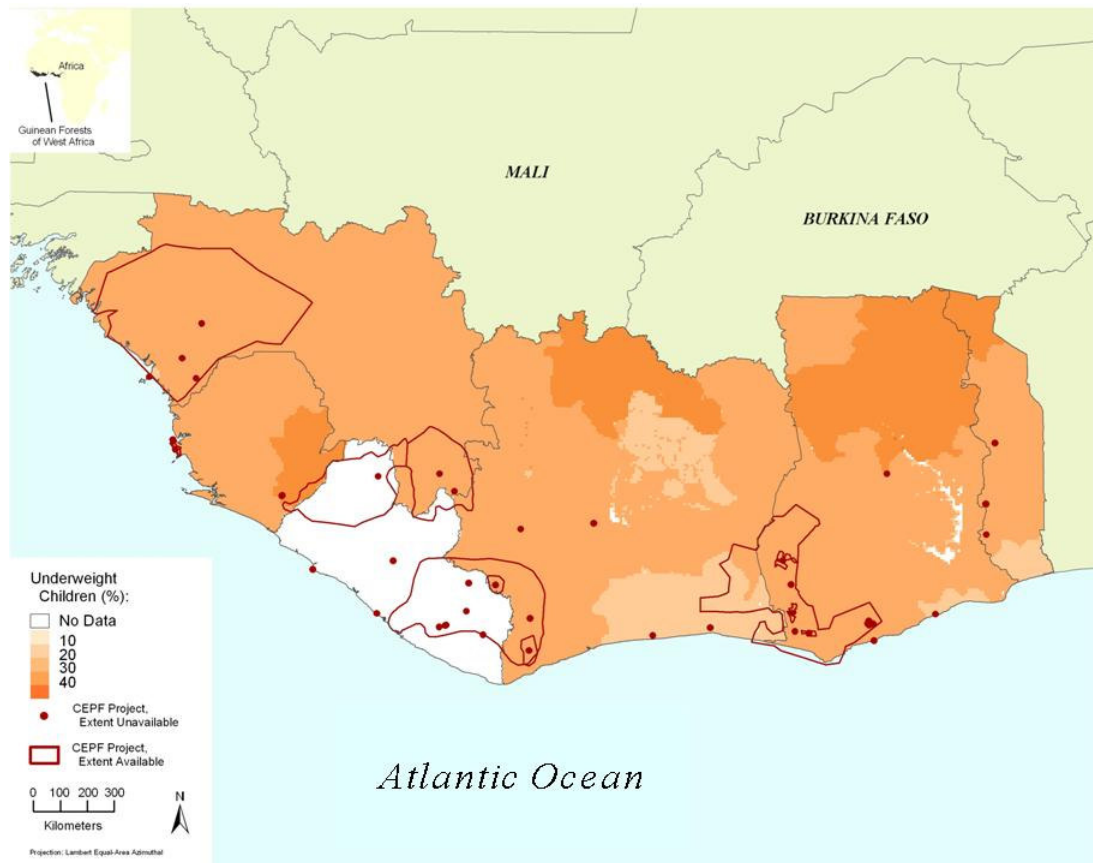
Figure 2 shows the distribution of infant mortality rate in 2000, defined as the number of infants who died in the first year of life per 1,000 live births. Most CEPF investments were located in places with infant mortality rates of 90 or higher, indicating that 9 percent or more of the infants born die in the first year of life. Although these are not the places with the highest infant mortality in the region, they clearly mark locations with dire human conditions.

Figure 2. Infant Mortality Rate, Upper Guinean Forest Ecosystems, 2000 (Data source: [http://www.ciesin.columbia.edu/povmap/ds\\_global.htm](http://www.ciesin.columbia.edu/povmap/ds_global.htm))



Mapping the percentage of children aged five years or less who are underweight also indicates that CEPF investments often occurred in areas with difficult human conditions (Figure 3). Once again, CEPF projects did not occur in the absolute worst locations with respect to incidence of underweight children. However, they did often occur in areas with very poor conditions—localities generally with one-fourth or more of the young children categorized as underweight.

Figure 3. Percentage of Underweight Children, Upper Guinean Forest Ecosystem, 2000 (Data source: [http://www.ciesin.columbia.edu/povmap/ds\\_global.htm](http://www.ciesin.columbia.edu/povmap/ds_global.htm))



To place the analysis of socioeconomic variables in context, we tabulated results for the six countries in the Upper Guinean Forest Ecosystem. For infant mortality rate, we compared the value for each administrative unit (county level and smaller) co-occurring with a CEPF project against the national rate for the country that contains it, identifying all administrative units with worse conditions than the country that contained them. For percentage of children underweight, we compared the value for the same administrative units in all countries except Liberia (where data are unavailable) with the national rate for the country that contains it, again identifying all units with worse conditions than the country that contained them. Results appear in Table 2. In the case of infant mortality rate, our analysis indicates that in three of the six countries infant mortality tends to be worse in administrative units associated with CEPF priority areas than the national average. In the case of percentage of children underweight, in two of the five countries for which we had data child hunger tends to be worse in administrative units associated with CEPF priorities than the respective national averages. In interpreting these results, it is important to remember that the national averages for the two measures considered indicate very poor human conditions for all six countries in the Upper Guinean Forest Ecosystem; conditions better than national averages for infant mortality and underweight children do not necessarily represent acceptable levels of human well-being for either indicator.

Table 2. Infant Mortality Rate and Percentage of Children Underweight in Political Administrative Units Co-occurring with CEPF Investments in the Upper Guinean Forest Ecosystem, 2000: (based on data from [http://www.ciesin.columbia.edu/povmap/ds\\_global.htm](http://www.ciesin.columbia.edu/povmap/ds_global.htm))

Country	% Administrative Units Worse than National Average		
	Administrative Units <sup>a</sup>	Infant Mortality Rate <sup>b</sup>	Children Underweight
Côte d'Ivoire	36	61.1	38.9
Ghana	20	95.0	70.0
Guinea	32	28.1	25.0
Liberia	29	48.3	NA
Sierra Leone	5	60.0	40.0
Togo	3	0.0	100.0
<b>Total</b>	<b>125</b>	<b>53.6</b>	<b>42.7</b>

a: Political administrative units, equivalent to counties or smaller, that co-occur at least partially with CEPF investments

b: Infant deaths in the first year of life per 1,000 live births

### Individual Project Level

To examine how CEPF projects contribute to poverty reduction in the Guinean Forests of West Africa, we surveyed CEPF grantees to gather project level data. To date, 15 percent of the 72 region-specific projects in the portfolio have completed questionnaires (Table 3). The data in the table below represent the information collected from the 11 projects that responded to the questionnaire.

Table 3. Summary from CEPF questionnaire responses, Guinean Forests of West Africa (Upper Guinean Forest Ecosystem)

Indicator	Strategic Direction <sup>a</sup>					Total
	1	2	3	4	5	
No. Projects Reporting	3	1	1	1	5	<b>11</b>
CEPF Funding <sup>b</sup>	413,918	14,876	343,520	100,000	76,974	<b>949,288</b>
No. Projects Offering Training	1	1	1	1	4	<b>8</b>
Workshops Offered	1	1	0	16	11	<b>29</b>
Jobs Created	72	6	2	170	41	<b>291</b>
Persons Trained	20	2	100	50	237	<b>409</b>
Organizations Created or Strengthened	8	0	0	10	52	<b>70</b>
Network or Alliance Organizations	6	15	0	22	34	<b>77</b>

a: Strategic directions for Guinean Forests of West Africa:

1. Strengthen local civil society
2. Hotspot biodiversity information system
3. Promote conservation corridors concept
4. Public awareness, education, outreach
5. Small grants (biodiversity action fund)

b: US dollars

A key finding of this study is that CEPF grantees report both direct and indirect contributions to poverty reduction. Direct contributions include job creation and training. Indirect contributions to poverty reduction include the creation or strengthening of local organizations. Several indirect contributions are difficult to summarize statistically. Other indirect effects, such as indirect job creation or economic multiplier effects, were beyond the scope of this study.

We used the three-heading framework on the links between biodiversity conservation and poverty reduction, presented to the 7<sup>th</sup> Meeting of the Donor Council in November 2004, as the basis for information-gathering from individual projects. Selected results of analyzing the questionnaire data appear below under those same headings: Building Income or Assets for the Poor, Facilitating Empowerment of the Poor, and Reducing Vulnerability and/or Enhancing Poor People’s Security.

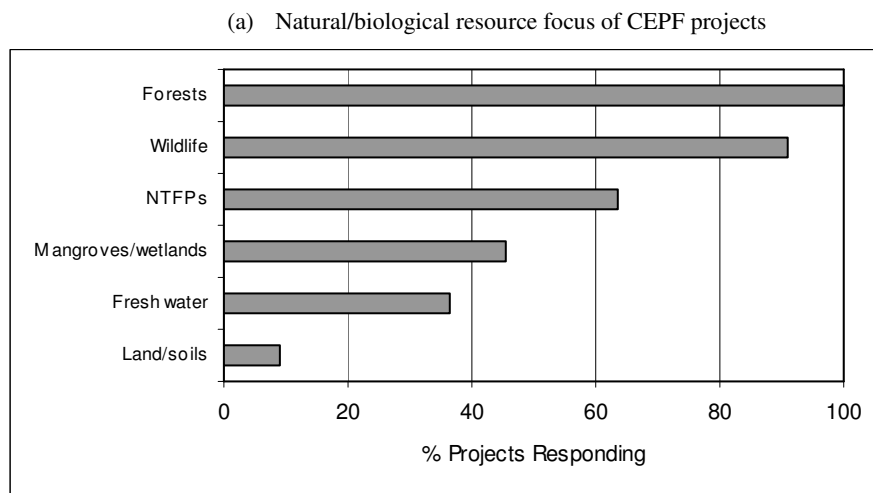
Building Income or Assets for the Poor

To obtain information from CEPF projects on building income or assets for the poor, the questionnaire focused on the following issues:

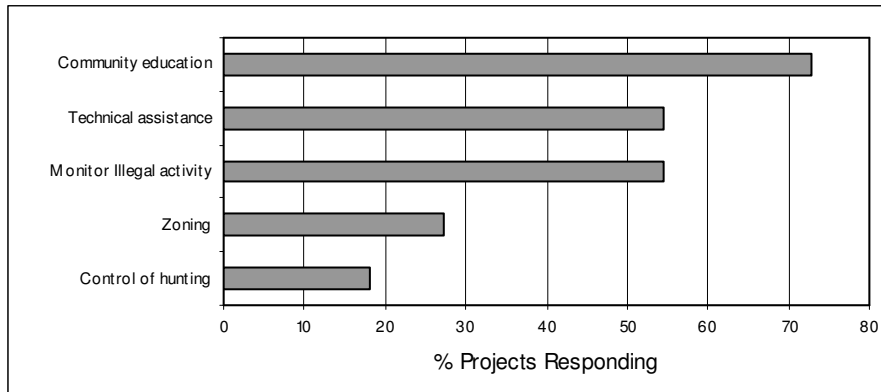
- biological and natural resource assets;
- human resource assets;
- conditions for secure management: household or community; and
- conditions for secure management: civil society.

In the Guinean Forests of West Africa portfolio, all projects responding to the questionnaire identified forests as an area of focus (Figure 5a), consistent with the CEPF goal of conserving remaining forest in this region. All but one project responded that wildlife, in general, was a focus of resource management as well, with more than half indicating attention on nontimber forest products (NTFPs). Projects used a variety of methods to engage communities in resource management, with an emphasis on community education about the benefits of conserving natural resources, providing technical assistance on sustainable approaches to conservation and management, and monitoring illegal activities (primarily illegal resource extraction) (Figure 5b). Management of natural and biological resources is extremely important for poor rural communities in the Guinean Forests of West Africa that depend on the products of healthy ecosystems for much of their food, fuel, clothing, medicine, and shelter.

Figure 5. CEPF projects and the management of natural and biological resource assets in the Guinean Forests of West Africa Hotspot

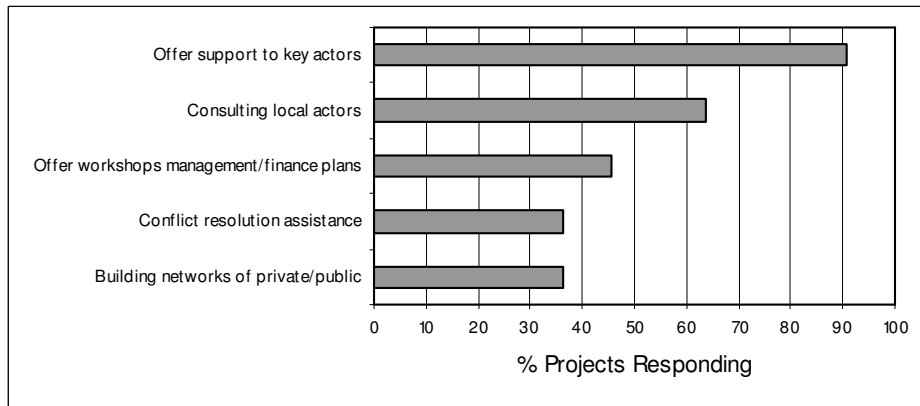


(b) Principle method used for community engagement



Questionnaire responses reflect the focus of CEPF investments in the Guinean Forests on engaging and coordinating a variety of organizations in the conservation of remaining forest ecosystems. Most grantees responding to the questionnaire noted that they engaged key stakeholders to convey the negative effects of resource degradation, and they create or support mechanisms to engage civil society in conservation through stakeholder consultation (Figure 5c). Nearly half the respondents also reported that they offered workshops to develop management or business plans for conservation efforts. In general, CEPF grantees in the hotspot work with local community organizations or promote multi-actor networks that assemble different stakeholders, supporting activities that improve resource management.

(c) Ways projects aid civil society or build alliances



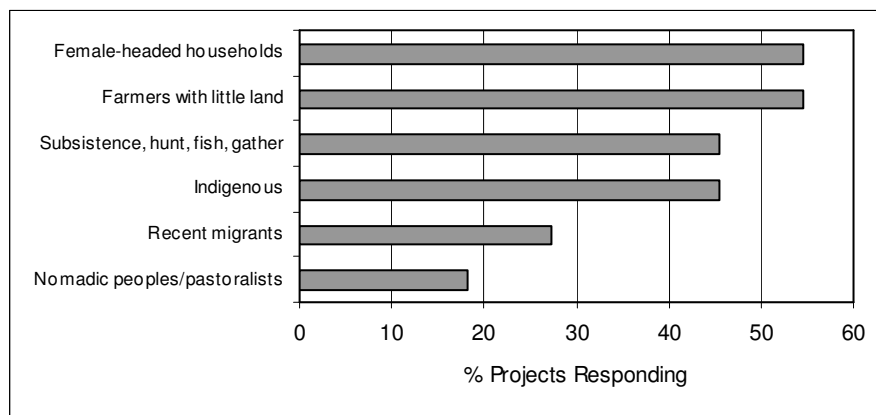
CEPF projects in the Guinean Forests of West Africa Hotspot contributed to secure management at both the household and community levels; questionnaire responses indicated the creation or strengthening of 70 local organizations and the building of alliances between these organizations and 77 other institutions. All of these efforts to create or strengthen local organizations and networks help empower local rural communities by increasing the information flowing to them and improving their capacity to respond to markets, government, projects, the legal system, or other sources of change. Effective local institutions have been shown to use such capabilities to help reduce poverty in the communities where they work. In addition, they provide the basis for more effective conservation throughout the region through coordinated efforts that seek to conserve key fragments of remaining forest.

One project that pursued conservation through facilitating interaction among different groups, in the process contributing to the compilation and dissemination of data on traditional areas and knowledge, was managed by the Conserve Africa Foundation. The foundation worked with local partners to establish the Phytomedica Network, a much-needed online discussion list on medicinal plants, traditional medicine, and pharmacopoeia in Africa. An estimated 80 percent of the population of sub-Saharan African countries relies on traditional plant-based medicines, and according to the World Health Organization and others, many of these countries ought to receive greater benefits from drugs successfully developed from local plants. Now in its fifth year, the network brings together more than 1,000 researchers, conservationists, and traditional and modern medical practitioners to share experiences in the area of medicinal plants and traditional medicine. Not only does the network reduce the need for travel, but it also allows members from all backgrounds, including traditional healers and multilateral donors, to address key issues such as conservation and sustainable use of threatened species, traditional health systems, commercialization of and trade in medicinal plants, legislation, intellectual property rights, and indigenous knowledge. The network is playing a growing role in tackling the problems of overharvesting, helping local people understand the need for sustainable harvest of rarer plants.

Facilitating Empowerment of the Poor

CEPF investments in biodiversity conservation often help empower the poor. Many CEPF investments directly support civil society efforts to help communities and local people participate in and benefit from conservation efforts. The questionnaire collected data on the categories of poor people engaged by CEPF projects. More than half the projects that responded reported working with female-headed households and farmers with little land (Figure 6). Nearly as many projects reported engaging indigenous peoples and subsistence practitioners.

Figure 6. Categories of poor families engaged by CEPF-funded projects in the Guinean Forests of West Africa Hotspot



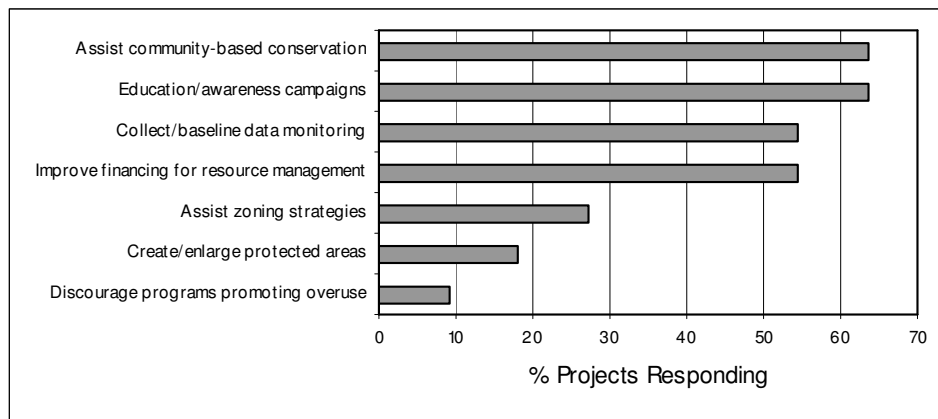
One CEPF-funded project that worked with subsistence hunters to help reduce the degradation and depletion of natural resources was Fauna and Flora International’s Hunting and Bushmeat Initiative in the Mount Nimba Biosphere Reserve of Guinea. Project staff joined nearly 80 hunters in local communities to collect baseline data on species hunted, hunting grounds, and the hunters involved. Together, they analyzed those data to understand the socioeconomic importance of hunting locally, ultimately making clear the stark choice facing the hunters and their families: hunting wildlife to extinction or managing it sustainably. In two communities where there had been no conservation interventions for several decades, hunters were open to ideas and willing to collaborate. They unanimously decided to stop hunting and to remove their wire snares and traps from the forest reserve. In the community of Seringbara, however, previous anti-poaching efforts, some particularly repressive, resulted in hunters concealing their activities and having a general suspicion of outsiders. In order to restore trust here, Fauna and Flora International held meetings that included hunters from communities in other areas to discuss hunting practices and traditional relationships with wildlife and to introduce the idea of a participatory approach to wildlife management. Ultimately half of the hunters from Seringbara joined with those from Gbakore and Zouguepo to form an association to run a participatory wildlife management scheme with the Nimba Mountain Reserve authorities. The project also helped train 10 local people to take tourists with them on hunting trips.

Reducing Vulnerability and/or Enhancing Poor People’s Security

The questionnaire solicited information on reducing resource depletion, resource degradation, and effects of shocks and disasters. Nearly two-thirds of the respondents reported supporting community-based conservation and providing education and awareness campaigns on endangered species (Figure 7a). More than half of the projects that answered the questionnaire indicated that they collected data to establish baselines and monitor natural resource harvests, and took steps to improve financing for resource management.

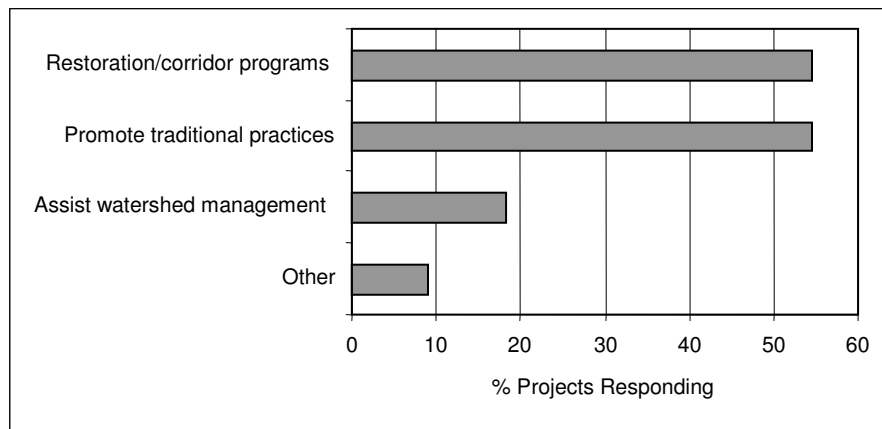
Figure 7. CEPF projects and reducing vulnerability in the Guinean Forests of West Africa Hotspot

(a) Methods used to reduce resource depletion



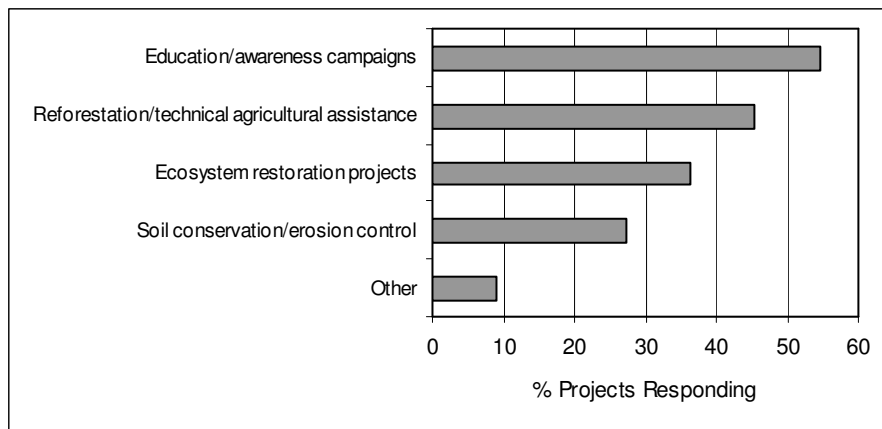
The most common method of reducing resource degradation was through implementing restoration and landscape management and through promoting traditional resource management practices (Figure 7b). CEPF-funded activities once again focused primarily on the forest ecosystems, seeking to help maintain the remaining forest and restore forest that has been lost. These activities not only support better resource management for biodiversity conservation, but also are extremely important in helping to maintain (or restore) the natural resources relied upon by so many of the rural poor in the Guinean Forests.

(b) Methods used to reduce resource degradation



Several CEPF grantees reported that their projects helped to reduce community vulnerability to shocks and natural disasters. Projects reduced vulnerability primarily through education and awareness campaigns to help reduce human impacts on natural resources, used by more than half of the respondents to the questionnaire (Figure 7c). CEPF investments in the region also frequently used technical assistance in reforestation and agriculture, thereby creating (or helping to conserve) habitat that reduces the impacts of severe natural events. Such measures are important in areas where the challenge of meeting basic human needs can lead people toward activities that increase their vulnerability to severe events—such as broad deforestation that increases susceptibility to impacts from storms or the effects of drought—and where other types of protection from shocks and disasters, and assistance following such events, are unavailable.

(c) Methods used to reduce vulnerability to shocks and natural disasters



One grant in the Guinean Forests of West Africa Hotspot that helped reduce the depletion of natural resources, while at the same time providing jobs to local communities, was managed by the Kuapa Kokoo Farmers Union of Ghana. The union encouraged 700 farmers to practice sustainable agricultural techniques such as biological pest control, replanting suitable tree species, refraining from chemical spraying as a routine practice, and participating in the democratically run Kuapa Kokoo district cooperative units. Kuapa Kokoo developed best practice guidelines, in written and visual format, for a training of trainers program. The union initially worked with farm leaders from 86 communities around the Kakum Conservation Area, building their capacity to farm sustainably. In turn, these farm leaders taught groups of farmers in field schools in each community. The project also helped to increase the number of women involved in farming and raise awareness of the principles of fair trade among participants. Furthermore, the reduced expenditure on chemicals and increased yields has contributed to an improved standard of living for many participants. Ghana's Ministry of Food and Agriculture is now encouraging the implementation of these best practice guidelines in many cocoa-growing areas across the country.

### **Conclusion**

West Africa remains one of the poorest regions on Earth. Available socioeconomic data confirm that CEPF-supported projects in the Guinean Forests of West Africa Hotspot—notably in the Upper Guinean Forest Ecosystem—occur in areas of considerable poverty. Within this region, CEPF projects directly and indirectly contribute to poverty reduction and improve human conditions while achieving their primary objective of biodiversity conservation. Conservation efforts focus on the forests that once dominated this region, aiming to help conserve the larger remaining forested tracts and, in many cases, restore forests in areas that no longer contain such ecosystems. Direct impacts of the CEPF investments included creating jobs and providing training to local peoples, effects of the latter expanding beyond conservation to other aspects of life in the region. Indirect impacts include creating local organizations, strengthening civil society, and other activities that help maintain and restore the ecosystems upon which many in this particularly poor region rely.