

**CEPF and Poverty Reduction:  
A Review of the CEPF Tropical Andes Portfolio**

**November 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 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 five regions: Atlantic Forest, Philippines, Southern Mesoamerica, Succulent Karoo, and Tropical Andes. The following report presents the results from the Tropical Andes, emphasizing the Vilcabamba-Amboró biodiversity conservation corridor in that hotspot.

CEPF's Tropical Andes ecosystem profile focuses on the forest ecosystem of the Vilcabamba-Amboró Corridor, located in Bolivia and Peru (Figure 1). The emphasis of CEPF funding in this corridor is to catalyze transboundary coordination of conservation activities between these two countries, and to coordinate grantees in the region to achieve a common conservation vision for the corridor.

Data from various complementary sources were used for the analyses presented in this report. For the entire region and the corridor, we compiled and examined available socioeconomic data from Bolivia and Peru. 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. Map of the Vilcabamba-Amboró Corridor within the Tropical Andes Hotspot



### Initiative-Wide (Regional) Level

The Tropical Andes Hotspot includes parts of seven countries in the western portion of South America. Bolivia and Peru each compose about 26 percent of the 1.5 million square kilometers that make up the hotspot. In 2000, Bolivia accounted for about 10 percent of the hotspot population, whereas nearly 15 percent of the region’s population lived in Peru that same year. Bolivia is one of the poorest nations in the western hemisphere and is characterized by widespread poverty, propositions borne out by standard development indicators such as the Human Development Index and the Human Poverty Index (Table 1). Poverty in Peru generally is considered to be less extreme than that of Bolivia, though larger percentages of Peru’s population survive on \$1 and \$2 per day than in Bolivia. Much of the hotspot consists of rural mountainous areas, with some noteworthy exceptions such as Bogota, Caracas, Cuzco, and Quito that account for much of the human occupation of the hotspot.

Table 1. National development and poverty levels for the Tropical Andes

	<i>Bolivia</i>	<i>Peru</i>
Human Development Index: value (rank <sup>a</sup> )	0.687 (#113)	0.747 (#82)
Human Poverty Index: value (rank <sup>a</sup> )	13.9 (#30)	12.8 (#19)
% population living on less than \$2 per day	34.3	41.4 ('83-00)
% population living on less than \$1 per day	14.4	15.5 ('83-00)

a : Rank among less developed countries globally

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

### Corridor Level

To explore the socioeconomic context of the CEPF corridor in the Tropical Andes Hotspot, this study examined measures of poverty available for Bolivia and Peru. In the case of Peru, we used selected data from the 2005 census of population and housing for small geographic units called *districts* to measure poverty within the Vilcabamba-Amboró Corridor and beyond, focusing on illiteracy, housing units lacking adequate water sources (those obtaining water from rivers or elsewhere), and housing units lacking adequate waste treatment (those lacking access to public sewer systems and septic tanks). In the case of Bolivia, efforts by the World Bank to estimate and map poverty in small areas enabled the direct analysis of poverty, here measured at the level of the *municipality*. Poverty measures used are percentages of population below the national poverty line and below a lower poverty line, the latter indicating instances of more extreme poverty, based on statistical data collected in 2001. Mapping the percentages of Peruvians incapable of reading, and of housing units lacking access to adequate water sources and waste disposal, indicates that many of the districts occurring in the corridor exhibit conditions worse than the national averages of this relatively poor country (Figure 2). Similarly, mapping percentages of population in Bolivia below the national poverty line and below a lower poverty line reveal the enormous amount of poverty that exists in the Vilcabamba-Amboró Corridor (Figure 3).

Figure 2. Poverty Indicators for Peru, 2005: Illiteracy; Housing Units Lacking Adequate Water Source, Housing Units Lacking Adequate Waste Treatment (Data source: Instituto Nacional de Estadísticas e Informática, Censo Nacional de Población y de Vivienda 2005, <http://www.inei.gov.pe/>)

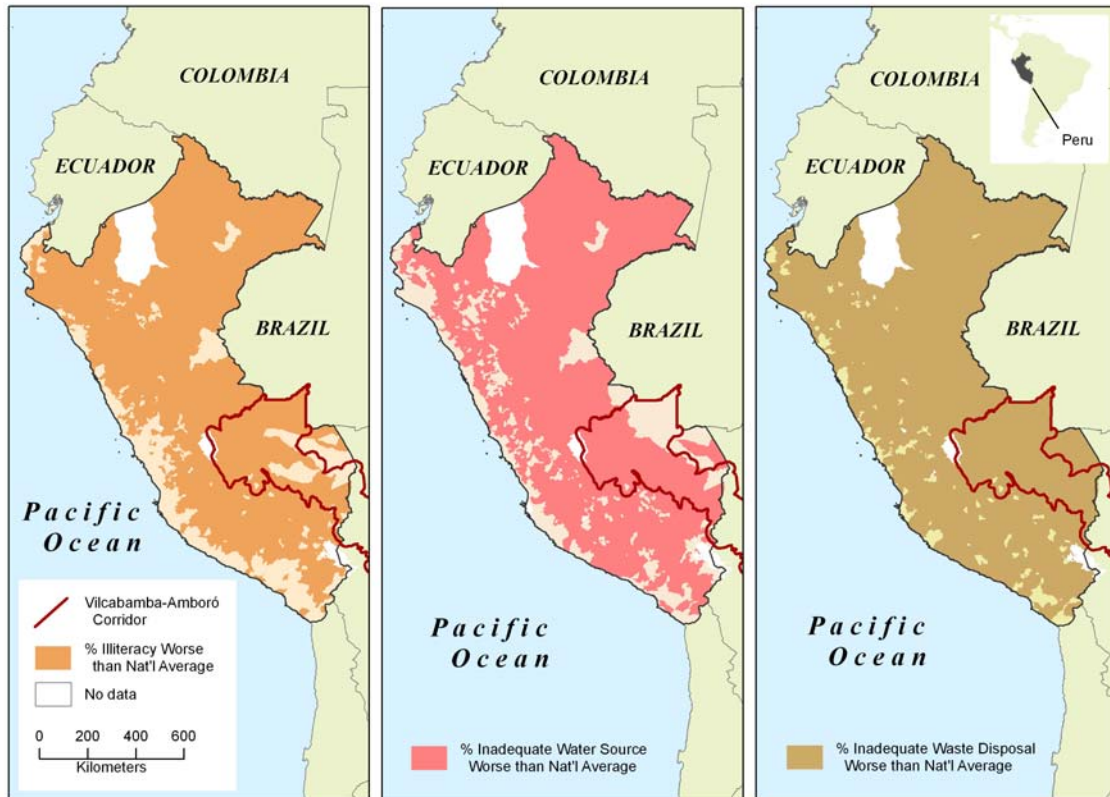
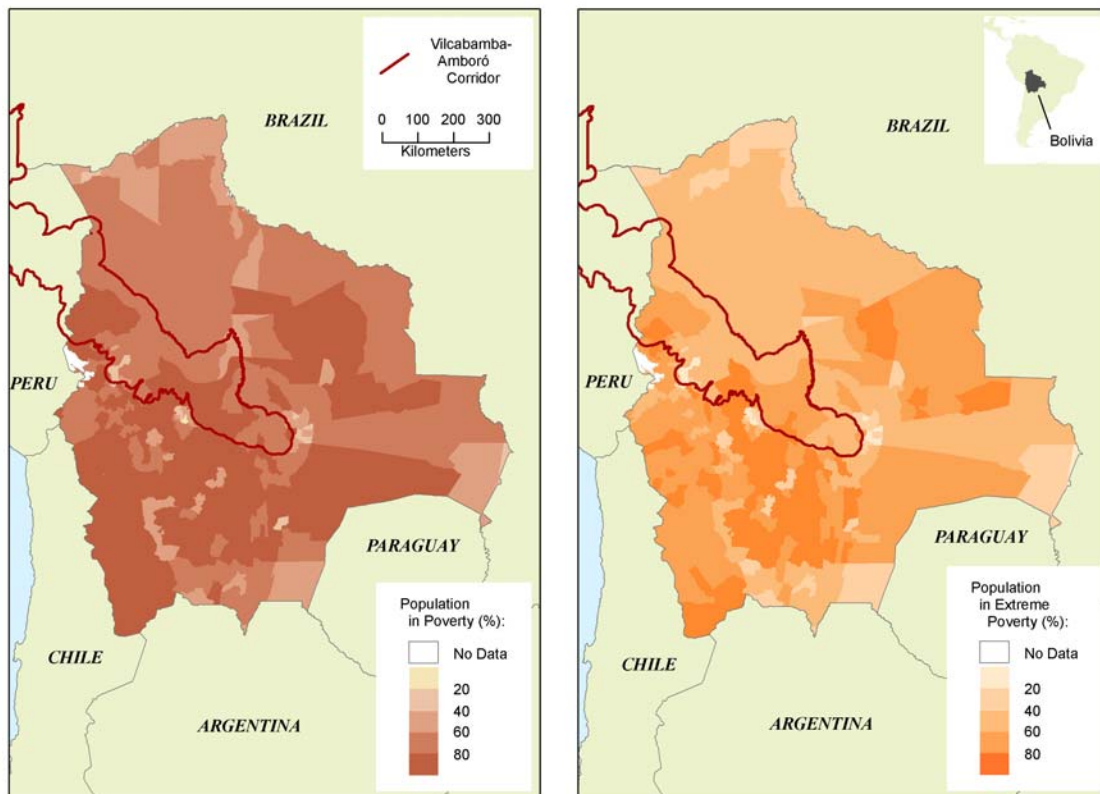


Figure 3. Poverty in Bolivia, 2001: Proportion of Population Below Poverty Line, and Below Low Poverty Line (Data source: Poverty Mapping Project: Small Area Estimates of Poverty and Inequality, <http://www.ciesin.columbia.edu/povmap/>)



To place the analysis of socioeconomic variables in context, we tabulated results for Peru and Bolivia. In the case of Peru, we compared the measures for the three indicators examined—illiteracy, lack of access to adequate water sources, and lack of adequate waste disposal—for districts occurring at least partially within the Vilcabamba-Amboró Corridor to districts lying outside the corridor (Table 2). Results indicate that conditions in the corridor are worse, often markedly, than elsewhere in Peru, even in a nation where poverty is widespread. In Bolivia, we tabulated the percentages of municipality populations lying at least partially inside the corridor that fall below the national poverty line and the lower poverty line (Table 3). Once again, we see evidence of considerable poverty within the corridor. At least one-fourth of the population of *all* municipalities in the corridor fell below the national poverty line, with three-quarters of the population in nearly 50 percent of those municipalities living in poverty.

Table 2. Selected poverty indicators for districts in Peru that occur at least partially in the Vilcabamba-Amboró Corridor compared to the remainder of the country: 2005 (based on data from Instituto Nacional de Estadísticas e Informatica, Censo Nacional de Población y de Vivienda 2005, <http://www.inei.gov.pe/>)

Geographic Area	Total Districts	Worse than National Average		
		Illiterate	Inadequate water <sup>c</sup>	Inadequate sanitation <sup>d</sup>
Within corridor	70 <sup>a</sup>	87.1%	87.1%	97.1%
Outside corridor	1,743 <sup>b</sup>	70.7%	86.2%	64.0%

a: Excludes 2 districts for which no data were available

b: Excludes 15 districts for which no data were available

c: Housing units obtaining water from river or “other”

d: Housing units with no connection to public system or septic tank

Table 3. Percentages of populations in Bolivian municipalities occurring at least partially in the Vilcabamba-Amboró Corridor that fall below selected poverty lines: 2001 (based on data from Poverty Mapping Project: Small Area Estimates of Poverty and Inequality, <http://www.ciesin.columbia.edu/povmap/>)

Percentage	Poverty Line	Lower Poverty Line <sup>a</sup>
Greater than 25%	100.0%	98.5%
Greater than 50%	92.5%	64.2%
Greater than 75%	49.2%	23.9%

a: Lower poverty line indicates extreme poverty

### Individual Project Level

To examine how CEPF projects contribute to poverty reduction in the Tropical Andes, we surveyed CEPF grantees to gather project-level data. To date, 50 percent of the 34 region-specific projects in the portfolio have completed questionnaires (Table 4). The data in the table below represent the information collected from the 17 projects that responded to the questionnaire.

Table 4. Summary from CEPF questionnaire responses, Tropical Andes

Indicator	Strategic Direction <sup>a</sup>						Total
	1	2	3	4	5	6	
No. Projects							
Reporting	0	0	9	2	2	4	17
CEPF Funding <sup>b</sup>	0	0	411,203	48,561	140,152	28,867	3,455,380
No. Projects							
Offering							
Training	0	0	3	1	2	1	7
Workshops							
Offered	0	0	30	20	5	1	56
Jobs Created	0	0	196	4	15	10	215
Persons Trained	0	0	1,639	40	600	2	2,291
Organizations							
Created or							
Strengthened	0	0	22	3	4	1	30
Network or							
Alliance							
Organizations	0	0	45	20	20	1	86

a: Strategic directions for Tropical Andes:

- |   |  |
|---|--|
| 1. Transboundary Coordination                                   | 4. Awareness and Education                                 |
| 2. Strengthening Bi-National Protected Area Systems             | 5. Strengthening Environmental and Legal Policy Frameworks |
| 3. Community-based Conservation and Natural Resource Management | 6. Electronic Information Exchange                         |

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 CEPF 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

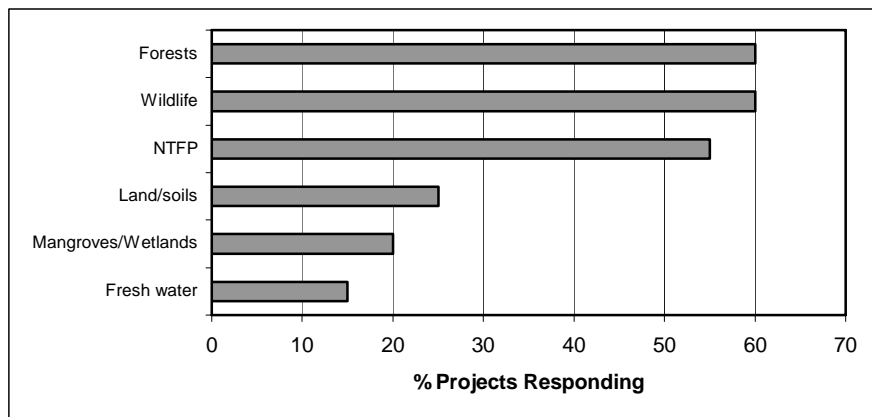
To obtain information from CEPF projects on building income or assets for the poor, the questionnaire focused on the following issues:

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

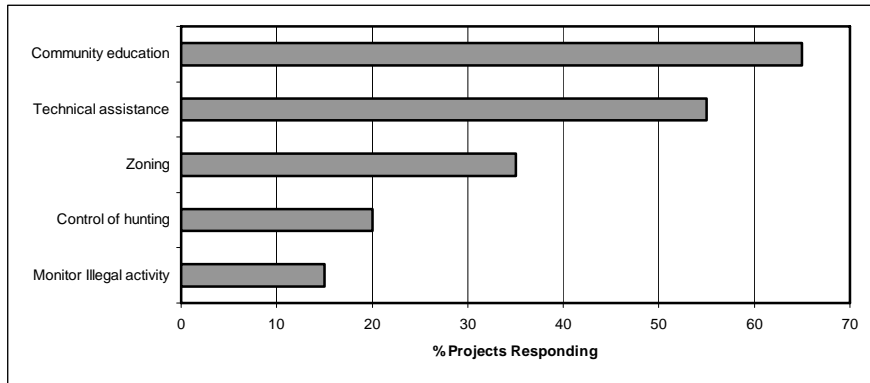
In the Tropical Andes portfolio, project support to improve resource management mainly focused equally on forests and wildlife, with more than half the projects responding also indicating attention on nontimber forest products (NTFPs) (Figure 5a). These emphases are consistent with the overall CEPF focus on the Vilcabamba-Amboró forest ecosystem. Fewer projects involved land and soils, mangroves and wetlands, and fresh water. Projects used a variety of methods to engage communities in resource management, with an emphasis on community education about the consequences of wise and unwise management, technical assistance, and zoning (Figure 5b). Management of natural and biological resources is extremely important for poor rural communities 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 Tropical Andes Hotspot

(a) Natural/biological resource focus of CEPF projects

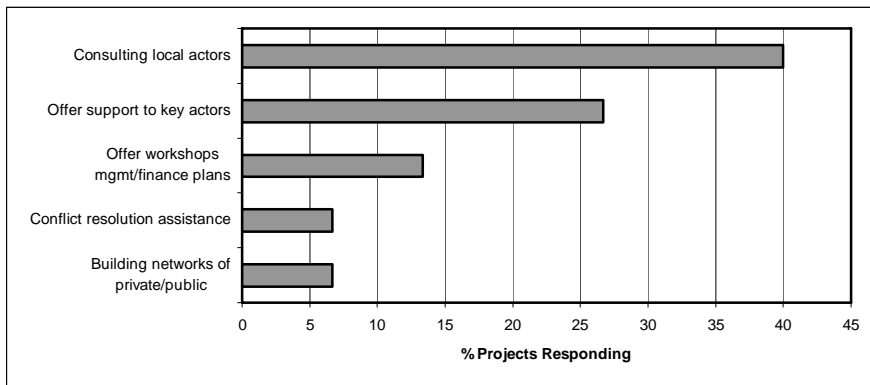


(b) Principle method used for community engagement



The focus of most grantees in this portfolio is on corridor-scale conservation, and actions that occur beyond household scales. Such corridor-scale actions include engaging local actors and offering training to them, organizing workshops, and building networks to help safeguard globally threatened species and their habitat. Grantees work with local community organizations or promote multi-actor networks that assemble different stakeholders, supporting activities that improve resource management (Figure 5c).

(c) Ways projects aid civil society or build alliances



CEPF projects have provided training in management and finance planning, along with direct support to help these groups become successful and independent. This is particularly relevant when considering the representation of civil society organizations and small stakeholder groups in this portfolio: local groups generating capacity for sound resource, project, and financial management and awareness of the conservation priorities of their corridor and regional landscape can apply these skills to actions supporting poverty reduction.

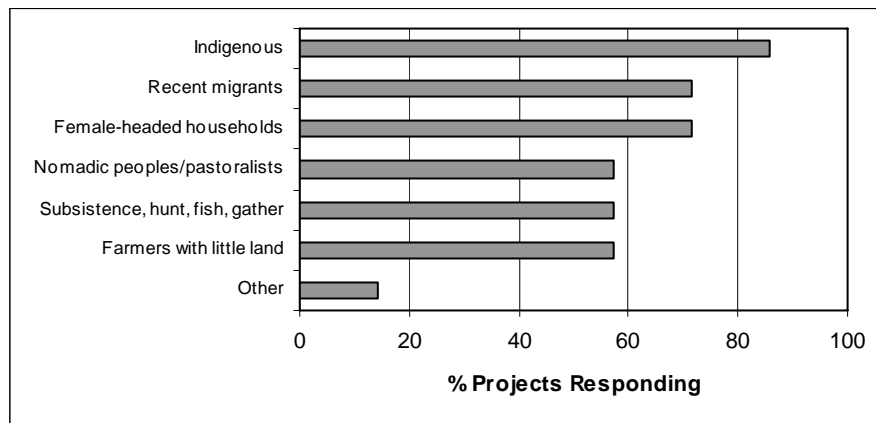
Finally, CEPF projects in the Tropical Andes Hotspot contributed to secure management at both the household and community levels; questionnaire responses indicated the creation or strengthening of 30 local organizations and the building of alliances between these organizations and 86 other institutions. 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 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.

One project that helps aid civil societies and build alliances is being implemented by Peruvian ecotourism pioneers Selva Reps. Support from CEPF enabled the organization to hold three workshops between tour operators, conservation specialists, and indigenous community leaders from the Ecuadorian, Peruvian, and Bolivian Amazon who had established private sector-community ecotourism programs. Although the programs were running successfully independently, many of the individuals involved were having difficulties solving operational problems and developing their businesses due to their geographic isolation and lack of contact with others running similar enterprises. Workshop topics included identifying the terms of the partnerships themselves, managing the distribution of economic resources, understanding the process for transferring hotels into the hands of the communities, and facing the difficulties of changing from a subsistence livelihood to running an independent business. The project not only helped participants to work together to define best practices for this type of community business, but also established an ongoing forum for exchange between indigenous leaders involved in ecotourism.

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. Unfortunately, only seven projects (21 percent) were able to quantify the types of local family groups engaged. Those who were able to respond worked primarily with indigenous families, recent migrants, and female-headed households (Figure 6).

Figure 6. Categories of poor families engaged by CEPF-funded projects in the Tropical Andes Hotspot





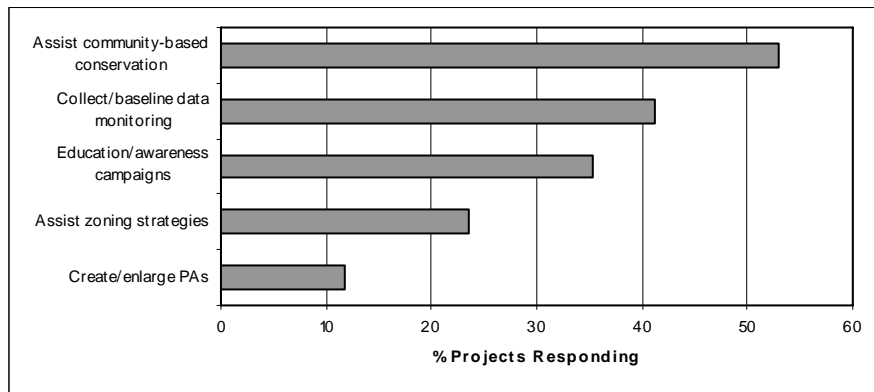
One example of a project supported by CEPF that helps local people of limited means participate in and benefit from conservation efforts involved Brazil nut farmers in the remote Amazonian region of Madre de Dios. The Amazon Conservation Association (ACA) worked with a Peruvian conservation group, Asociación para la Conservación de la Cuenca Amazónica, and the Peruvian National Institute for Natural Resources to establish long-term contracts with 130 local Brazil nut harvesters to create formal concessions in a 225,000-hectare area. Furthermore, as most harvesters in the region are small-scale, they were ill-equipped to counter the unsustainable logging that is the other major source of income among local people. In partnership with other land titling initiatives in the area, the project successfully stabilized local land tenure, providing an economically viable alternative to such logging. A second grant to ACA is helping to develop another 300 Brazil nut concessions in Madre de Dios; there is considerable potential for the scheme to be expanded among small-scale Brazil nut producers in Bolivia and Brazil.

Reducing Vulnerability and/or Enhancing Poor People’s Security

The questionnaire obtained information on reducing resource depletion, resource degradation, and effects of shocks and disasters. Three-quarters of respondents reported that their projects addressed resource depletion. The primary means of achieving this goal was through community-based conservation, assisting in baseline monitoring/data collection, and education and awareness campaigns (Figure 7a).

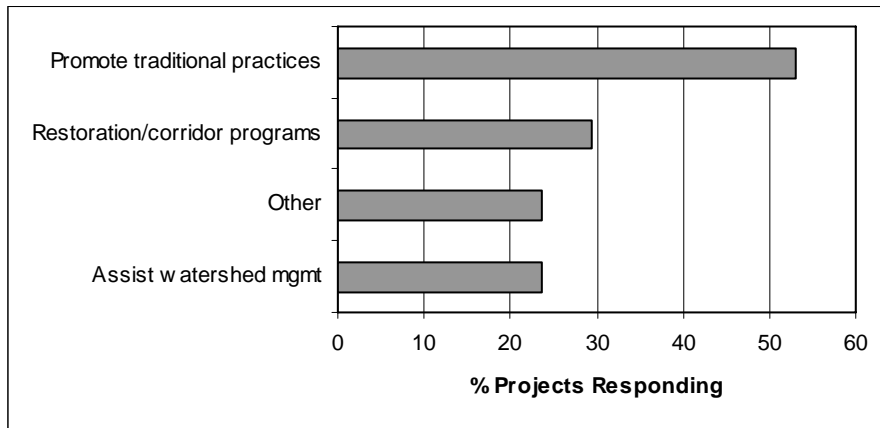
Figure 7. CEPF projects and reducing vulnerability in the Tropical Andes Hotspot

(a) Methods used to reduce resource depletion



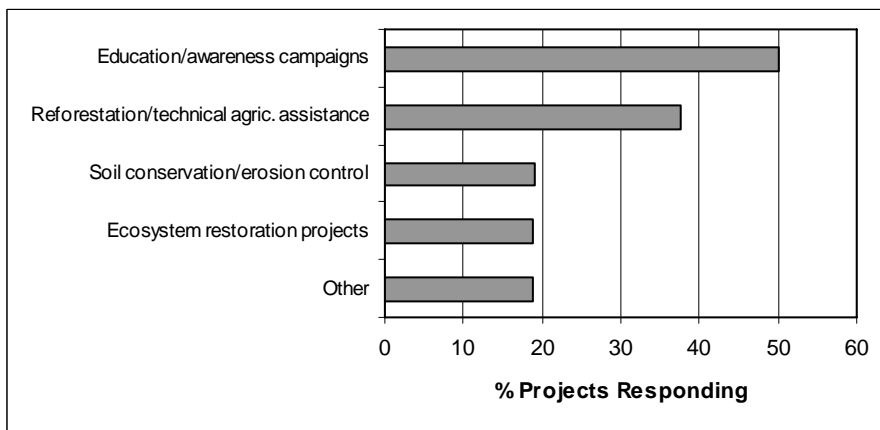
The most common method of reducing resource degradation was through promoting traditional practices and implementing restoration and corridor programs (Figure 7b). These activities not only support better resource management in wildlife corridors and riparian areas, but they are also extremely important for the poor. Projects also sought to reduce resource degradation by assisting with watershed management and promoting traditional land use practices. Once again, actions that improve local resource management are vital to the poor, as maintaining the quality of these resources is essential to the survival of rural people with limited means.

(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 through education and awareness campaigns and through technical assistance in reforestation and agriculture, thereby informing local peoples about the importance of conservation in the context of community vulnerability and creating (or conserving) habitat that reduces the impacts of severe natural events (Figure 7c). Such measures are important in areas where the challenge of meeting basic human needs can lead people towards 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



A project supported by CEPF that helped reduce the degradation of natural resources occurred in the buffer zone of Apolobamba National Park. This project, managed by the Bolivian conservation group TRÓPICO, successfully supported the municipality of Tipuani and a local mining cooperative to develop alternative livelihoods for local communities in areas where unsustainable small-scale gold mining had degraded the environment and exhausted natural resources. The project helped local people identify suitable indigenous tree species for reforestation, establish a nursery for fruit and timber species, and plant a pilot plantation of 50 hectares. TRÓPICO trained about 200 people in reforestation and agroforestry techniques. The organization also worked in 14 communities to develop innovative techniques for the sustainable management of the most important nontimber resource of the area, the *milpesos* palm.

### **Conclusion**

Available socioeconomic data indicate that CEPF-supported projects in the Tropical Andes Hotspot—notably in the Vilcabamba-Amoró Corridor located in Bolivia and Peru—occur in areas of considerable poverty. Within these areas of poverty, CEPF projects directly and indirectly contribute to poverty reduction and improve human conditions while achieving their primary objective of biodiversity conservation. Direct impacts include creating jobs and providing training to local peoples. Indirect impacts include creating local organizations, strengthening civil society, and other activities that maintain and restore the ecosystems upon which many poor people in the corridor rely.