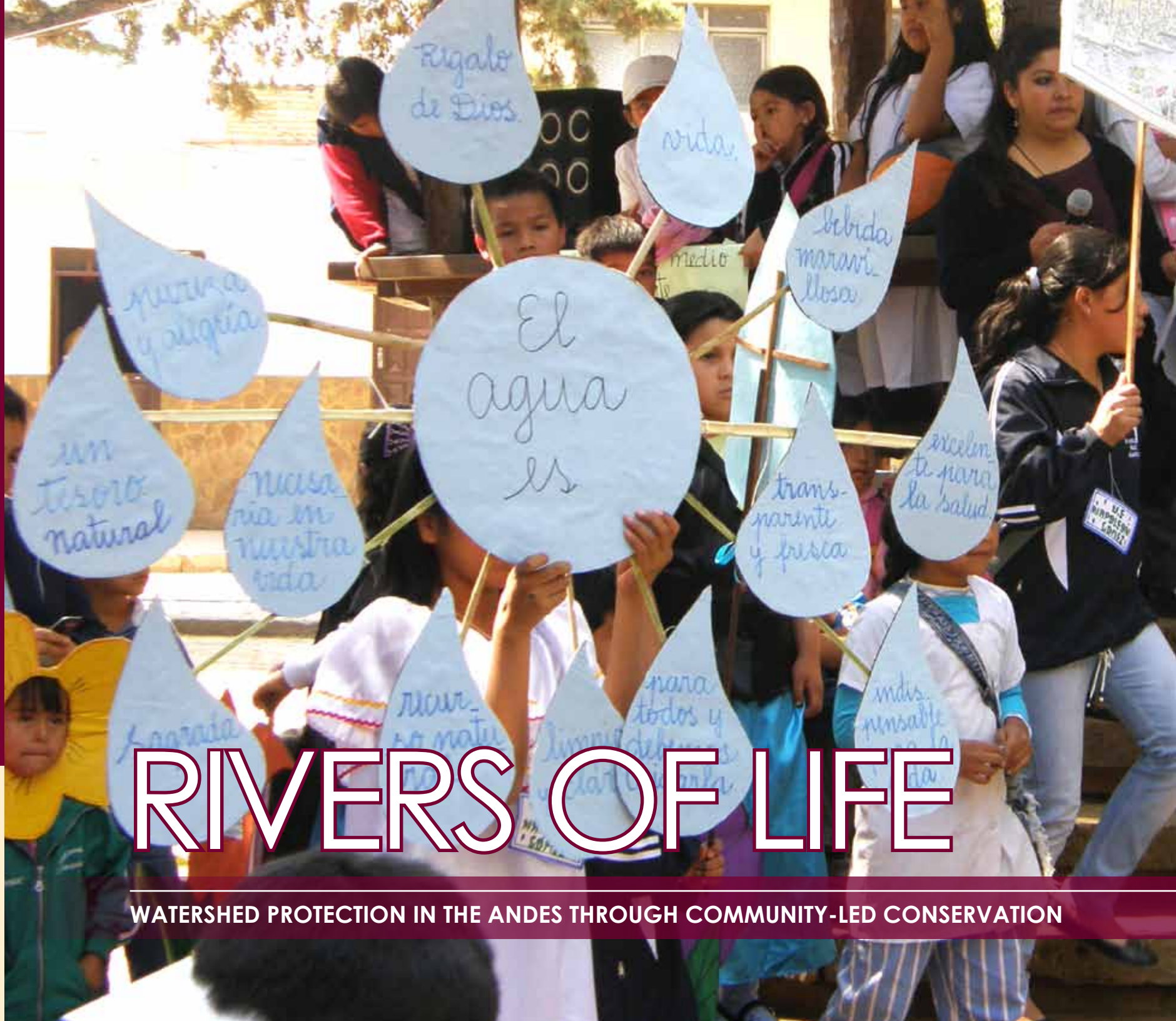




RARE PROGRAM FOR AZE HABITAT AND
WATERSHED PROTECTION



RIVERS OF LIFE

WATERSHED PROTECTION IN THE ANDES THROUGH COMMUNITY-LED CONSERVATION



RARE
Inspiring conservation

Zero Extinction



A TREASURE UNDER THREAT

ANCHORING CONSERVATION IN THE COMMUNITY

On the shoulders of high Andean mountains are páramo and cloud forest ecosystems notable for their water and fog-trapping plants. These ecosystems are regarded as some of the greatest fresh-water systems in the world, supplying irrigation, electricity, and drinking water to tens of millions of people throughout South America, including cities such as Bogotá, Colombia and Quito, Ecuador.

The Tropical Andes represents less than one percent of the world's land area yet contains over 15% of all plant life. It is also home to more than 570 mammal species, and 664 species of amphibians—450 of which are threatened.

Deforestation in the Andes has increased considerably since the 1970s. If deterioration of the natural systems continues, rural Andean communities will lose the natural resource base on which they and millions of others depend.

In many cases, rural communities are the chief threat to these habitats; these same communities also provide the best opportunity for lasting conservation. Rare is working with local partners in Colombia, Ecuador, Peru, and Bolivia to implement community-based solutions that will slow habitat loss at critical watershed sites; improve the protected status of critically endangered species; and provide economic incentives for local communities to support conservation.

“ RARE ATTENDS TO CONSERVATION WHERE IT HAS ULTIMATELY THE MOST LASTING EFFECT, THROUGH EDUCATION TUNED TO THE CULTURE AND NEEDS OF LOCAL PEOPLE.”

— E. O. WILSON, PULITZER PRIZE-WINNING AUTHOR AND CONSERVATIONIST

RARE PROGRAM FOR AZE WATERSHED PROTECTION

In partnership with the Global Environment Facility (GEF) and the Alliance for Zero Extinction (AZE), Rare has launched a \$4 million, three-year habitat protection program at 12 sites throughout the Andes. With training and support from Rare, local partner organizations will implement the program. They will:

- (1) Run outreach campaigns to build community awareness and support
- (2) Train local farmers to use more conservation-friendly alternatives that improve their own livelihoods
- (3) Demonstrate successful community-driven solutions that can be replicated

The program will impact more than 200,000 hectares of watershed and an estimated 260,000 people. It will also establish a network of local leaders and constituents to support broader efforts to protect the Andes region.

RARE'S SUPPORTERS INCLUDE:





ENDANGERED
Marañón poison frog
(Dendrobates Mysteriosus)
 Habitat part of Rare campaign site
 in Cajamarca Region, Peru



CRITICALLY ENDANGERED
Black-Breasted Puffleg
(Eriocnemis nigrivestis)
 Habitat part of Rare campaign site
 in Pichincha, Ecuador



ENDANGERED
Pristimantis Rain Frog
(Pristimantis percultus)
 Habitat part of Rare campaign
 site in Loja, Ecuador

A FOCUS ON CRITICAL HABITATS



PARTNERING WITH TWO CONSERVATION LEADERS

The Alliance for Zero Extinction (AZE), a consortium of over 60 of the world's leading biodiversity conservation organizations, identifies 595 terrestrial sites around the world that are home to 794 of the world's most threatened species.

Without comprehensive, locally-driven conservation efforts, many of the AZE species are unlikely to survive this century. The principal threats to AZE sites include local land use patterns such as habitat loss from expanding agriculture and pastures, small scale wood extraction, and fire.

The vision for Rare's program of work in the Andes is to turn the tide of habitat loss and species extinction at a suite of AZE sites. Working with the AZE and the **Global Environment Facility (GEF)**, Rare has assembled a cohort of sites and local partners to pilot a replicable model for reducing deforestation. The methodology and know-how is likely to benefit scores of other AZE sites around the world. Ultimately, establishing a community of practice is likely to build greater commitment to the AZE portfolio of restricted range and critically endangered species.



ENDANGERED

Marvelous Spatuletail

(*Loddigesia mirabilis*)

Habitat part of Rare campaign site
in Chachapoyas, Peru



ENDANGERED

Yellow-eared Parrot

(*Ognorhynchus icterotis*)

Habitat part of Rare campaign site
in Tolima, Colombia



**CRITICALLY
ENDANGERED**

Loja Water Frog

(*Telmatobius cirrhacelis*)

Habitat part of Rare campaign
site in Loja, Ecuador

“ CONSERVATION OF AZE SITES IS THE SOUL OF CONSERVATION. WE MAY BE ABLE TO CONTROL WHERE THE WATER FLOWS AND FORESTS GROW, BUT WE CANNOT LEAVE THE SPECIES BEHIND. THEY ARE THE KEYSTONE TO ULTIMATE CONSERVATION SUCCESS. **PROTECTING THEM WILL BE CRITICAL TO OUR OWN FUTURE.**”

— MONIQUE BARBUT

CEO AND CHAIRPERSON,
GLOBAL ENVIRONMENT FACILITY (GEF)



WATERSHED DEGRADATION

DESTRUCTION OF AZE SPECIES' CLOUD FOREST HABITAT THREATENS WATER SUPPLY AND QUALITY

Agricultural expansion, livestock grazing, fire, and small-scale logging for timber and fuel wood are the primary causes of deforestation in the Andes. These activities threaten critical habitat for hundreds of species on the edge of extinction. As the human population continues to grow, the need for food and fresh water is accelerating. The encroachment of livestock into upstream forested areas jeopardizes the production of food in the flood plains downstream. Communities are only beginning to recognize that it is worthwhile

to compensate the small costs of habitat protection upstream for the larger benefits of water flows to downstream areas.

Long term survival for many AZE species may rest on the ability of local wildlife advocates to harness some of the value of intact cloud forests to a sustainable mechanism for compensating costs of upstream habitat protection.

“ TO STRENGTHEN
THE PROTECTION OF
WATER RESOURCES,
WE MUST
LOOK FOR AN
ECONOMIC
SOLUTION
TO GET PEOPLE TO
PROTECT THE AREA.”

— HERMOGENES MONTEÑO,
FUNDACIÓN NATURA BOLIVIA

Water's Journey Through the Communities of the Andes

HIGHLANDS

Benefit: Healthy forests trap water and prevent flooding and runoff.

Threat: Deforestation and open cattle grazing decrease water supplies.



LOWLANDS

Benefit: Farmers rely on upstream water supplies to cultivate crops for the entire region.

Threat: Livestock upstream can compromise water quality.



URBAN AREA

City dwellers rely not only on the highlands for water but also on the lowlands for food and hydroelectricity





RARE'S APPROACH

REPLICATING CONSERVATION SOLUTIONS THAT WORK

Rare specializes in behavior change for conservation by tackling global conservation threats that human actions can influence, like deforestation, overfishing, climate change, and species extinction.

In a world of these seemingly insurmountable challenges, bright spots do exist—often in remote or small communities. Rare surfaces the conservation solutions that have worked; it then teams up with local implementing partners to adapt and replicate these practices in communities around the world.

Effectively implementing a community-based solution means providing economic incentives, training in more sustainable practices, access to new tools and technologies, or even

improved social status. Rare trains local implementing partners to design and execute **Pride campaigns** — so named because they inspire people to take pride in the species and habitats that make their communities unique while creating real incentives and alternatives to change environmentally destructive behaviors.

In the Andes, Rare is partnering with 12 local organizations across four countries who will implement reciprocal watershed agreements aimed at reducing deforestation. This effort is modeled on a successful program led by **Fundación Natura Bolivia**. Rare has worked closely with the Fundación Natura Bolivia team as well as other scientific, technical, and policy experts to adapt the model for replication.



Critical to the long-term success and sustainability of these projects is building local support for these new behaviors. Pride campaigns also inform, persuade, and mobilize the community around adopting a new behavior.

Monitoring social and conservation impact is deeply ingrained in Rare's approach. Rare has developed sophisticated tools for monitoring social and behavioral change, while leveraging a network of partners and specialists to track scientific data related to the desired conservation result. In this project Rare will also use control sites as part of the evaluation and impact testing. Researchers will carefully measure the impact on habitats and biodiversity at target sites relative to the control sites.

Rare develops local leaders who go on to have a sustained impact in their communities. Pride campaign managers who successfully complete their project earn a Master's degree in Communication with an emphasis on conservation. Rare's training program has been accredited by the **University of Texas at El Paso**. In the Andes, Rare's team in Guadalajara, Mexico provide training and mentoring along with professors from **ITESO (Instituto Técnico de Estudios Superiores de Occidente)**.



Los Negros Valley, Bolivia

B

C

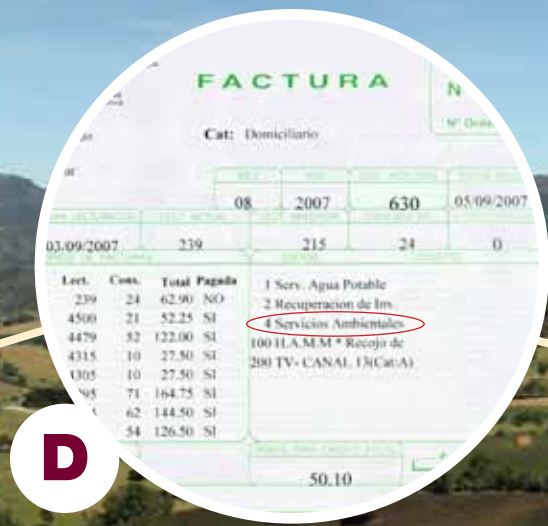
A. Along the Los Negros River, 35 kilometers separate the highland community Santa Rosa from lowland community Los Negros. Irrigation canals carry water to 1,000 hectares in Los Negros, which provides the markets of nearby Santa Cruz with a continuous supply of carrots, lettuce, and other vegetables.

B. In the last 20 years, dry season water flows in Los Negros were down more than 50%. Lowland landowners pointed to upstream deforestation as a cause.

C. In 2003, Fundación Natura Bolivia facilitated agreements between highland and lowland farmers. Downstream water users would compensate upstream farmers annually for watershed habitat protection.

A CONSERVATION BRIGHT SPOT

RECIPROCAL AGREEMENTS FOR WATERSHED SERVICES



D

D. The lowland local water cooperative collects the funds through monthly water bill fees equivalent to approximately US\$0.50 per household. All water users in Los Negros participate. A third party oversees the fund.



E

E. Payment comes to highland farmers in the form of one beehive and honey production training for every ten hectares of water-producing cloud forest they protect. Hives produce ~60 kg of honey per year which fetches a price of ~US\$5/kg. More than 400 bee boxes have been distributed to date. The program has also expanded to include barbed wire and fruit trees.



F

F. Highland and lowland farmers work together to monitor forest and water conservation. They are trained to use GPS receivers to identify individual and demarcated areas of conservation. To date, more than 3,500 hectares have been preserved.

At the heart of Rare's Andes program is a demonstrated conservation solution: Reciprocal Agreements for Watershed Services. These agreements are based on the principle that users and beneficiaries of a natural resource should compensate those who safeguard the resource. Fundación Natura Bolivia started implementing the agreements in the Los Negros River Valley in 2003. Rare is partnering with Fundación Natura Bolivia to adapt and replicate the agreements in other Bolivian sites as well as Colombia, Ecuador, and Peru.





THE POWER OF COMMUNITY PRIDE

ACCELERATING THE ADOPTION OF CONSERVATION BRIGHT SPOTS

Widespread community buy-in and support will accelerate the adoption of reciprocal agreements for watershed services. Rare's Pride campaigns employ the power of social marketing to engage people and change behaviors.

Shifting social norms requires changing both hearts and minds. Pride campaigns target both. Rare works with implementing partners to answer the questions: "What is the change we are working toward and what needs to happen for this change to come about?" The answers to those questions form the basis of the campaign strategy.

Pride campaign managers will implement marketing strategies that target various segments of the community

in ways most likely to change awareness, attitudes, and behaviors. For example, cooking contests are often used to engage women, school children learn about the importance of water conservation through puppet shows and art contests, farmers discuss how best to market honey. All of these activities are reinforced with songs, posters, fact sheets, campaign mascots, festivals, and radio spots.

By combining demonstrated conservation solutions with compelling social marketing, Rare and its partners will be able to deliver measurable results. In the Andes, that means cleaner water, reduced deforestation, and the preservation of habitat for critically endangered species.



The twelve campaign managers that make up the first cohort in the Program for Watershed Protection.

GLOBAL NETWORK FOR CHANGE

SPARKING CONSERVATION CONVERSATIONS

Launching 12 sites focused on the same issue creates a powerful learning network. Rare's online conservation platform, **RarePlanet**, connects local Pride campaign managers, watershed experts, and conservation advocates around the world. They share stories, compare approaches and refine best practices for local reciprocal

agreement programs. RarePlanet also provides a real-time view into the progress of every Pride campaign, offering donors and partners one of the most transparent project management systems in conservation.

SUCCESSFUL WATERSHED PROTECTION

In the Andes, Rare seeks to strengthen watershed protection in four ways:

1 DEVELOP LOCAL CONSERVATION LEADERS

Twelve local conservation leaders have a replicable model to launch additional projects to protect Andean watersheds.

2 STRENGTHEN COMMUNITY SUPPORT FOR WATERSHED PRESERVATION

Hundreds of communities have adopted cooperative agreements that make it economically viable for highland farmers to protect watersheds and adopt more sustainable agricultural practices.

3 ACHIEVE LASTING CONSERVATION

Reduce deforestation in more than 200,000 hectares of protected areas in the world's most ecologically diverse ecosystems.

4 PROTECT CRITICAL HABITATS

Raise the profile of important AZE sites within both national and global biodiversity and ecosystem-services policy frameworks.



CLEAN AND PLENTIFUL WATER

"Water is more valuable than gold" reads this street graffiti, found in Quito, Ecuador. Nowhere is this more true than in the watershed areas of the Andes.



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