



# AMAZON CONSERVATION ASSOCIATION ANNUAL REPORT 2012



**FROM THE ANDES TO THE AMAZON:** CONSERVING THE HEADWATERS OF THE WORLD'S GREATEST WATERSHED



Four decades ago, as a geology student, I explored the eastern Andes mountains where they rise steeply out of the Amazon rainforest. I learned firsthand how the massive upheaval of these mountains and their juxtaposition to the Amazon produced a geography of unparalleled complexity.

After subsequent travels around the world and a long career in conservation, I have developed a deeper appreciation of the tremendous indigenous culture, agricultural crop diversity, and flora and fauna of this particular region. Of all the environmental hotspots that we must protect, I consider the western Amazon headwaters and the surrounding region to be paramount.

In 2009, I joined the Board of Directors of the Amazon Conservation Association. I have slept and walked in their field sites, attended meetings with government officials, and visited local communities with them. No other organization is as committed to the conservation of this critical geography, its people and its ecosystems. This is an organization that puts its resources to work on the ground.

In fact, I'd say ACA is the best organization that I have worked with in my 40 years in conservation, including my time as Secretary of the Interior. Please join me in supporting their efforts.

A handwritten signature in black ink, which appears to read "B. Babbitt". The signature is fluid and cursive, with a long, sweeping underline.

Bruce Babbitt



**Dear Friend of Amazon Conservation,**

2012 was an exciting and productive year for our organization. Thanks to your generous support, we succeeded in establishing four new conservation areas, totalling more than 46,000 acres, and laid the groundwork for creating nearly half a million acres of new protected areas in the coming years. We also established a million-dollar trust fund to help protect the Los Amigos Conservation Concession – a fund specifically designed to protect the 360,000-acre concession from the threat of deforestation, illegal mining, and land clearing for agriculture. Further supporting these efforts, we expanded our scientific research programs and reforested critical habitat in the buffer zone of Manu National Park.

Additional funding enabled our work with indigenous and local communities to expand. We strengthened our collaborative efforts to improve the livelihoods of 34 communities by creating ecotourism and agroforestry opportunities, developing native fish farms, and constructing sustainable agricultural programs. Bolstering our community work, our educational programs grew to include 13 new communities, benefiting more than 1,000 children and adults through workshops and interactive field exercises.

We also initiated a multi-year investment in our three biological stations to expand our conservation efforts, enhance the educational experience for students and visitors, increase our ability to attract scientific researchers, and strengthen our collaboration with local communities. With new dorm and dining facilities, Villa Carmen Biological Station can now host up to 60 researchers, students, and volunteers at a time, and has successfully installed aquaculture ponds and experimental biochar ovens. Wayqecha Cloud Forest Biological Station can host up to 40 researchers, students, and volunteers, has renovated its cabins, and installed a stunning orchid trail with over 130 orchid species. We have also upgraded the facilities at the Los Amigos Biological Station with new roofs, and more extensive renovations are planned for the future.

Collectively, these efforts build a strong foundation for further advances in 2013 and beyond. None of these achievements could have been possible without your generous support. You allowed us to advance our mission to conserve biodiversity and improve livelihoods where the Andes meet the Amazon! Thank you so much.

Sincerely,



Jeff Woodman

*Surrounded by tree ferns, Daniel Huamán looks up from below the canopy walkway at ACA's Wayqecha Cloud Forest Biological Station.*





# WHAT WE DO

**The Amazon Conservation Association** (ACA) works to conserve the biological diversity of the Amazon basin. Our efforts are geographically focused in the headwaters of the Amazon, where the rainforest meets the Andes in southeastern Peru and northern Bolivia. This area has long been recognized as one of the most biologically rich regions on Earth.

ACA's approach is based on scientific research, protection of critical habitats, sustainable use of natural resources, environmental education and training for local stakeholders, and directly addressing threats as they emerge. ACA currently protects more than 2.2 million acres of Amazonian rainforest through conservation concessions, biological research stations, and sustainable livelihood and reforestation projects, while working with 34 communities in the Andes–Amazon region.

Using cutting-edge science and innovative conservation tools, ACA is creating models for others to follow. We established the world's first conservation concession, manage some of the best research stations in the tropics, and help local communities manage and protect their forest resources.

ACA implements projects jointly with two main partner organizations, the *Asociación para la Conservación de la Cuenca Amazónica* (ACCA) in Peru and the *Asociación para la Investigación y Conservación de Ecosistemas Andino-Amazonicos* (ACEAA) in Bolivia, as well as with local and regional governments and the community members who are the guardians of high-biodiversity forests across this landscape.

*ACA co-founder Enrique Ortiz (left) and Francisco Llacma of the Wayqecha Cloud Forest Biological Station (see page 16) at Tres Cruces, the highest point in Manu National Park.*

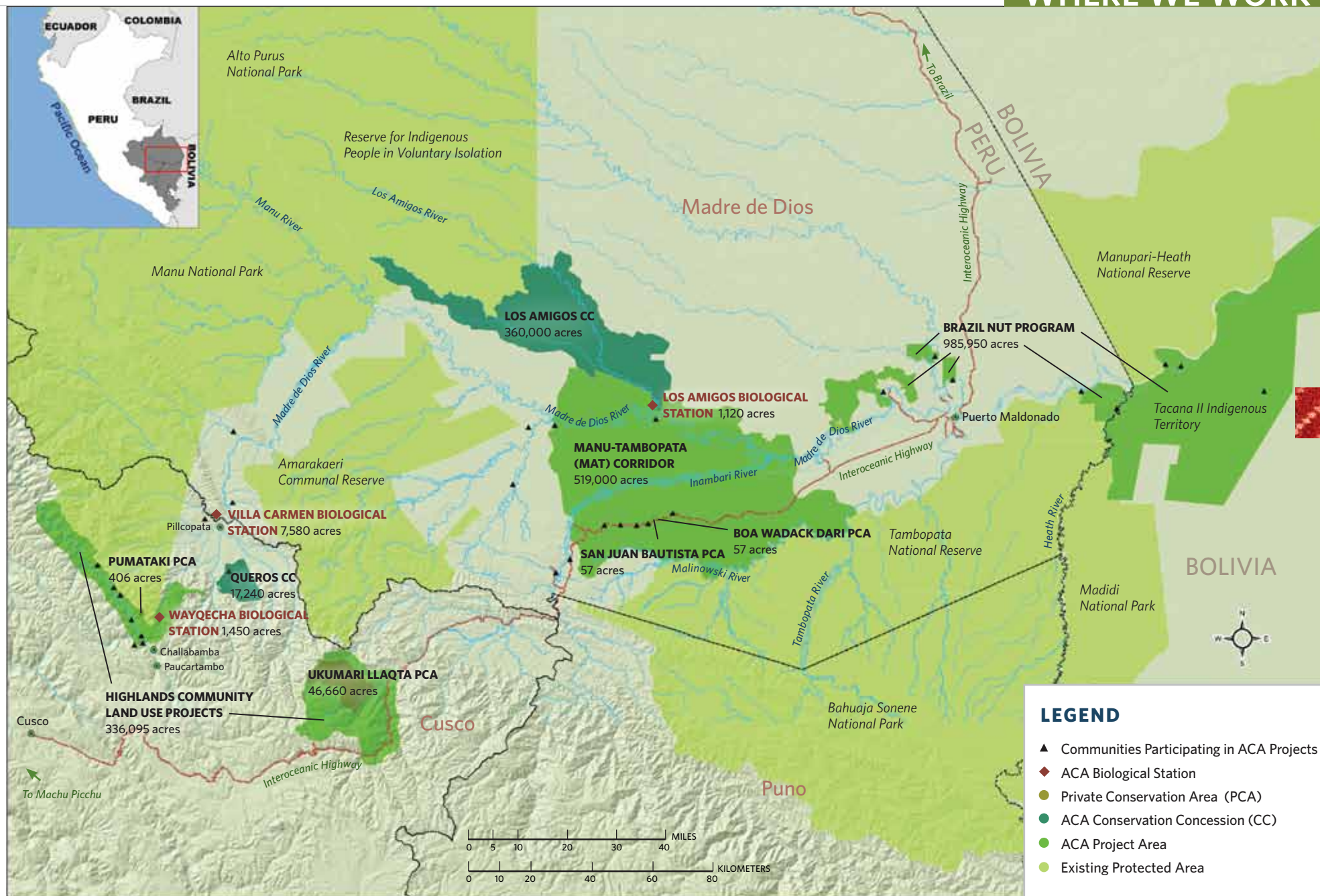
## ACA'S PROGRAMMATIC AREAS

- Landscape conservation planning & management
- Scientific research & education
- Sustainable enterprise
- Policy & governance
- Indigenous peoples & local communities
- Major threats identification, analysis, & response





# WHERE WE WORK



## THE MANU-TAMBOPATA CORRIDOR INITIATIVE

**The recent paving** of the Interoceanic Highway through Madre de Dios, Peru has increased deforestation threats in previously remote sections of the Amazon rainforest. Newfound access creates vulnerability to illegal logging, secondary road-clearing, hunting, expansion of farms and ranches, and the rapid spread of illegal gold mining. These activities, in turn, threaten to sever ecological links between Manu National Park, the Los Amigos Conservation Concession, and the Tambopata National Reserve.

Preserving continuous stretches of forest in this vital region of the southwestern Amazon is essential. Without it, species such as jaguars, macaws, and white-lipped peccaries, whose long-term survival depends on using large territories, will instead be confined to forest fragments.

To safeguard these ecological connections and to preserve forest cover across the area, ACA developed the Manu-Tambopata (MAT) Corridor initiative. The corridor includes a mosaic of land uses, including protected areas and areas zoned for economic activity. It was designed with input from researchers, communities, and regional authorities to ensure thorough consideration of social, political, and ecological dynamics.

ACA has developed a broad portfolio of conservation tools and strategies within this multifaceted landscape for its diverse stakeholders. This includes establishing conservation-friendly economic alternatives in rural communities, increasing access to markets for local goods, building capacity for better land management, creating and supporting protected areas, and improving environmental governance and education.

*A young student learns about Amazonian wildlife with educational materials from the MAT Corridor project.*

*Beneficiaries of the MAT aquaculture project catch fish to be sold in a thriving regional market.*







*A farmer supported by the project proudly displays the cacao pods he grew on his agroforestry plot.*

Covering 519,000 acres, the MAT Corridor is the Amazon's most ambitious biological corridor initiative. Now in its fourth year, this program has:

- Organized timber concessionaires to improve the management of more than 420,000 acres of forest;
- Increased scientific understanding of the Corridor through research focused on biodiversity, forest connectivity, the impacts of deforestation, and the effects of mercury pollution from gold mining;
- Helped establish the first two private conservation areas and the first two regional conservation areas in Madre de Dios;
- Created conservation-compatible economic alternatives for local communities, including:
  - Agroforestry – by planting over 46,000 useful tree species for 90 local farmers
  - Aquaculture – by installing 33 new native fish ponds
  - Ecotourism – by supporting local ecotourism initiatives, including the launch of a community enterprise described in the case study to the right
- Provided environmental education for children and adults, by:
  - Broadcasting a weekly MAT Corridor radio show with information on conservation, sustainable enterprise and civic engagement
  - Training teachers to integrate environmental topics into curricula in all 13 Corridor schools
  - Leading environmental education programs for more than 1,035 local schoolchildren
- Supported the declaration of the first two 'private conservation areas' (forest reserves on private land) in Madre de Dios;
- Assessed the local applicability and feasibility of REDD+ (the strategy known as Reducing Emissions from Deforestation and Forest Degradation "plus" forest conservation and sustainable management) as a conservation finance mechanism in coordination with regional policy-makers and local stakeholders;
- Provided strategies to improve governance in the Corridor, such as providing free legal support to Corridor residents suffering illegal invasions by gold miners.

## NOTE FROM THE FIELD

### Partnering with the Santa Rita Alta Community

Like other small villages along the Interoceanic Highway in Madre de Dios, the residents of the community of Santa Rita Alta depend primarily on subsistence agriculture and informal timber extraction to make a living. Paving the highway provided greater access to markets, services, and urban areas, but the community understood that it was also leading to uncontrolled development and loss of the forest resources they intended to pass down to their children. ACA's analysis showed that the community's forests were likely to be almost totally lost within a few years in the business-as-usual scenario.

Santa Rita Alta enthusiastically worked with ACA to develop an economic alternative that would not damage their forests. Today, the community is fulfilling its dream of implementing an ecotourism project. Nine community households have pooled the 2,362 acres they collectively control and are working together to run a roadside restaurant and scenic rest stop with cabins and trails. Named after the Amazonian clay licks where birds and mammals gather to eat, *La Collpa* was officially inaugurated in November 2012, and has been profitable in every month since. To ensure its success, ACA provided support throughout the process with market research, development of management plans, construction, and training in business and customer service skills.

*La Collpa* purchases products from other MAT Corridor aquaculture and agroforestry projects and sells fruits and handicrafts produced by local associations.

*Members of the Santa Rita Alta community pose in front of their new roadside restaurant, an eco-friendly business that helps protect the forest along the Interoceanic Highway.*



## HIGHLAND RESOURCE MANAGEMENT MODELS & CONSERVATION FINANCE

**Headwater mountain forests** along the eastern slopes of the Andes play a critical role in the health of the entire Amazon Basin. For example, cloud forests regulate water quality and quantity for forests and human communities in the lowlands below. Their rivers support the migratory fish populations that spawn in upland streams and then provide food for communities across the Amazon region.

Cloud forests are threatened by constant, unplanned expansion of agricultural fields and livestock pastures by highlands communities. Fires used to clear land frequently blaze out of control and consume large expanses of the forest. Deforestation and agricultural practices that leach nutrients from soils and generate erosion further contribute to the degradation of mountain ecosystems.

*Community members tend tree seedlings to be planted for reforestation and agroforestry initiatives.*

ACA's conservation strategy in the culturally and biologically diverse Cusco highlands includes a portfolio of activities to reduce deforestation and develop models for natural resource management at the community level, while also addressing broader policy needs. The activities are cooperatively designed and implemented with stakeholders, including communities as well as local and regional forest managers and decision-makers.

As part of this broader highlands conservation strategy, ACA has worked with communities to test conservation finance mechanisms, including REDD+ (Reducing Emissions from Deforestation and Forest Degradation). These projects aim to incentivize conservation by compensating forest users for employing techniques that reduce harmful greenhouse gas emissions. More on-the-ground experience is needed to ensure that these compensation projects are feasible, scientifically rigorous, socially just, and ecologically sustainable. Baselines and pilot projects that provide this information will aid policy-makers and regulators in developing reliable policy, legislation, and practice.







*Children hold the chickens their family received through a payment-for-forest-conservation pilot project.*

Results from ACA's implementation of community land-use management models from 2009 to 2012 include:

- Created and equipped volunteer fire brigades in six communities that lack access to municipal fire-fighting support, including training for over 175 people in forest fire prevention and control;
- Planted more than 195,000 trees to reforest degraded areas on communal territories;
- Established two private conservation areas within community territories;
- Implemented pilot models of sustainable agriculture with 40 farmers, including:
  - Growing organic crops that nourish soils depleted by poor agricultural practices and integrating agroforestry systems into traditional potato crops
  - Fencing livestock that harm forests
  - Creating compost systems for livestock waste
  - Reincorporating traditional practices such as terracing to reduce erosion
- Tested models for participatory and fair distribution of financial benefits from conservation finance mechanisms, such as REDD+ projects, in three highlands communities that manage significant forest resources. Specifically:
  - Developed accessible models of greenhouse gas emissions, deforestation, and opportunity cost for the Cusco region in accordance with Voluntary Carbon Standard methodology as tools to prepare the region for REDD+ and to help small- and medium-sized projects enter the market;
  - Tested participatory, community-based systems for transparent and fair distribution of financial benefits from Payment for Ecosystem Services projects that help both families and forests;
  - Created and implemented local models for natural resource governance that have aided two municipal governments in building new environmental management institutions;
  - Established the regional-level Cusco Roundtable on REDD+ and Payments for Ecosystem Services;
  - Supported a technical working group on forest fires;
  - Developed legal contracts for community Payments for Ecosystem Services projects
- Supported cutting-edge science to fill in critical gaps in the understanding of highlands ecology, including:
  - Impacts of cattle on cloud forest regeneration
  - Greenhouse gas fluxes along the altitudinal gradient
  - Forest fire dynamics and behavior.

## STAFF PROFILE

### Marlene Mamani (Cusco, Peru)

Marlene Mamani grew up on a small farm in Calca surrounded by the Andean highland landscapes that she works to conserve today as ACA's Project Coordinator for Highlands Resource Management. A native Quechua speaker, she works closely with Quechua communities on forest conservation, sustainable agriculture, and fire prevention.

Marlene got her professional start as a biology field assistant in 1997, combining her traditional knowledge of indigenous use of wild plants with scientific studies of botany. Marlene obtained a biology degree from the University of San Antonio Abad in Cusco in 2002 and then worked as a research assistant with several internationally-known scientists from 2003 to 2009 focusing on cloud forests in the upper reaches of Manu National Park. Despite her fascination with research, some questions troubled her: "What will happen if the communities living next to Manu run out of resources and begin to invade the park?" and "If the forests disappear, what use will our research be?"

Talking through these issues with her research mentor and ACA board member, Dr. Miles Silman, he recommended that she consider a career in conservation. Marlene joined the ACA team in 2010 and quickly became indispensable to the project's success. Sharing a native language and common experience with ACA's community partners allowed Marlene to build strong relationships and share her passion for conservation with them. Marlene's work is essential to ensuring that ACA's efforts have a durable conservation impact.

In 2012, Marlene earned her Master's degree in Forestry and Forest Resources Management from one of Peru's most prominent universities, La Molina in Lima. She's now finalizing her thesis on quantification of above-ground carbon stocks in the highlands around Manu National Park and directing ACA's research on the impact of livestock grazing on cloud forests.



## SUSTAINING INDIGENOUS COMMUNITIES AND THEIR FORESTS: BRAZIL NUTS AND BEYOND

**Brazil nut harvesting** provides more than half the yearly income for thousands of families in the Amazon and protects millions of acres of forest from deforestation. Brazil nut trees, native to the Amazon basin, are some of the largest in the rainforest, growing to 165 feet tall and living several hundred years. These trees only produce their selenium-rich nuts when growing in a healthy rainforest ecosystem. The income that families derive from harvesting nuts therefore serves as an incentive for forest protection.

Since 1999, ACA's "Conserving Brazil Nut Forests" program has supported more than 500 harvester families in the protection of nearly two million acres of rainforest. Today, our work is focused on preserving forests and improving livelihoods by supporting indigenous communities that harvest Brazil nuts. Toward that end, we are partnering with AFIMAD, an indigenous forestry association in Madre de Dios, Peru to aid communities that harvest Brazil nuts in and around the Tambopata National Reserve and Bahuaja Sonene National Park. In Bolivia, we work with indigenous Tacana Brazil nut harvesters along the Madre de Dios River just north of Madidi National Park.

ACA's support for these harvesters includes technical assistance to locate and map all Brazil nut trees in their territories, preparation of management plans, help with required paperwork, training and funding to achieve organic and/or Fair Trade certification, organizational strengthening to manage business enterprises, and help in negotiating favorable terms with buyers. In the indigenous village of Boca Pariamanu in Peru, ACA's involvement helped to ensure that harvesters were paid more than double what they had previously earned for their

*In Peru, Brazil nut harvesters (known in Spanish as castañeros) lease government lands called Brazil nut concessions for 40-year periods, allowing the harvesters and their families to earn an income while protecting the standing forest (left). In Bolivia, a Tacana woman spreads out Brazil nuts to dry (right).*



Brazil nuts. This increased income resulted from improved production, organic certification, and negotiating as an association rather than individually. Likewise, in Bolivia we helped the Tacana negotiate a sale price 40 percent higher than what they had obtained previously by leveraging improved post-harvest practices.

### NEWS FROM THE FIELD

#### New Program Scales Up Work with Indigenous Livelihoods

In 2012, ACA was awarded a new grant from the Inter-American Development Bank (IDB) to support forest conservation and sustainable livelihoods for indigenous communities in southern Peru. Developed cooperatively with our community partners, this project will help protect over 260,000 acres of Amazonian forest while improving incomes and food security for more than a thousand families in remote indigenous communities in the Peruvian Amazon.

Communal indigenous territories cover 15 percent of Peru's Amazon region – an estimated 25 million acres of forest lands – and provide the natural resources that indigenous households depend on. Accelerating development and expansion of the agricultural and inhabited frontier in southern Peru presents imminent threats to communities' livelihoods, cultural traditions, and forest resources.

ACA will use this grant to scale up sustainable development efforts with seven long-term community partners. We will work with them to provide new income-generating tools that protect their forests, are culturally appropriate, and coincide with their traditional practices. Objectives include improving management of communally-owned forest lands, developing income-generating pilot projects for aquaculture, ecotourism, agroforestry and non-timber forest products, and building technical, organizational and management capacity. These partnerships will improve livelihoods and strengthen indigenous governance of natural resources.



*Members of a Matsigenka indigenous family that will be benefiting from ACA's new IDB-funded project.*



## PARTNERING TO CONSERVE BOLIVIA'S FORESTS

**ACA has been working in Bolivia since 2004** to protect the unique biodiversity of Pampas del Heath, a mixed forest and savanna ecosystem of the Bolivian Amazon. In 2012, ACA partnered with the Bolivian Association for the Investigation and Conservation of Andean-Amazonian Ecosystems, or ACEAA, to support sustainable livelihoods projects and land-use planning for more than 840,000 acres of indigenous territories north of Madidi National Park.

ACEAA works with 35 different stakeholder groups, including producers' associations, indigenous and campesino organizations, and government entities. They have strong alliances with the Tacana indigenous peoples of the Madre de Dios River, who aim to manage the extensive forest lands that they control in a way that supports biodiversity conservation while improving the lives of community members.

ACA and ACEAA have supported the Tacana with Brazil nut management plans, helping the Tacana negotiate a sale price 40 percent higher than what they had obtained previously by using improved post-harvest practices. We are also helping to identify other non-timber forest products that can be sustainably harvested while ensuring that the forest ecosystem is preserved.

In order to help find markets for forest-friendly products, ACEAA hosted a business roundtable and product fair in Bolivia's capital city in December 2012. This event brought together 20 producers' associations offering eco-friendly products such as cacao, Brazil nuts, tropical fruits, and ecotourism services to institutional buyers and the general public.



*The Tacana community of Las Mercedes meets to discuss natural resource management with ACEAA staff.*

The events resulted in business relationships valued at over US\$150,000 – an unprecedented achievement for this type of event in Bolivia.

ACEAA also supports the management of protected areas in northwest Bolivia. Working closely with the director of Madidi National Park – one of Bolivia's most important protected areas and a global conservation priority – ACEAA helped appoint a technical board to advise the park on conservation strategies, and reactivated the Park's management committee after four years of inactivity.

## Using Science to Manage Natural Resources

Starting in 2007, ACEAA led the Tacana indigenous communities of the Madre de Dios River in a project to track their rate of subsistence hunting and fishing. With the participation of 69 hunters and 44 fishermen from four communities over six years, the endeavor has yielded important results in identifying any species that might be over-hunted or over-fished. The study has shown that the primary species hunted by the Tacana has been the white-lipped peccary, followed by agoutis and tapirs. Thanks to the development of integrated forest management plans, there is now a balance between the population of these species and the rate at which each is hunted, ensuring their survival over time. Tacana fishermen have,

for example, learned to catch and consume a broader variety of fish so as to reduce pressure on any single species.

The study also found that a growing number of invasive paiche fish (*Arapaima gigas*) were being caught. The paiche were accidentally introduced to local rivers after flooding allowed them to escape from fish farms near the Madre de Dios River in Peru. Their rapid reproduction is putting native species at risk, and prompted the formation of the Tacana Paiche Fishermen's Association. The association targets paiche in the Madre de Dios River and its tributaries as a way to reduce their numbers in order to allow native fish species to recover.

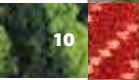


*Young fisherman from the Tacana community of Las Mercedes.*



**"The work of ACA is inspiring and innovative. No other conservation organization has a stronger scientific foundation for its work, nor a better engagement with the human aspects of conservation, from local communities to government and business."**

ANNE LAMBERT, MANAGING DIRECTOR, INTERNATIONAL CONSERVATION FUND OF CANADA





## LOS AMIGOS CONSERVATION CONCESSION

**ACA established the Los Amigos Conservation Concession** in 2001 – the first private conservation concession in the world. Located in the Los Amigos watershed in the department of Madre de Dios in southwestern Peru, the 360,000-acre concession borders the world-famous Manu National Park, and is a mosaic of terrestrial and aquatic habitats, including old-growth Amazonian forest, palm swamps, and bamboo thickets. Flora and fauna are abundant, and work at the concession focuses on forest protection research, natural resource management training, and conservation education.

In June 2012, Peru's first trust fund for a conservation concession was officially created for the ongoing conservation of the Los Amigos Conservation Concession. The International Conservation Fund of Canada (ICFC) established the \$1 million endowment to allow ACA to continue working to protect the region from unsustainable development, gold mining, hunting, and illegal timber harvesting. The interest generated by the fund will be used to finance the ongoing management and monitoring costs of the concession.

**What is a conservation concession?** In Peru, as in other countries in Latin America, a substantial portion of land is publicly owned. Conservation concessions entrust long-term protection of publicly owned land to non-profit institutions or other entities in exchange for investments in conservation and sustainable development. This allows private organizations such as ACA to assist the Peruvian government in achieving national biodiversity conservation goals.



View from Los Amigos

### TESTIMONIAL

#### Preserving a Safe Harbor

*Los Amigos is of great conservation value to the world because it represents one of the most biodiverse tropical forests in the Amazon basin, with thousands of species found in abundances that are hard to match anywhere else on the planet. Ironically, Los Amigos also rests in the heart of Peru's most volatile and rapidly changing region, with gold mining, logging, ranching, agriculture (including biofuels), and population growth and migration posing enormous threats to biodiversity. While the larger region is losing unique tropical forest habitat, Los Amigos stands as a safe harbor for countless species, many of which remain unknown to science. The Los Amigos concession is strategically situated, not only to protect the forests that it immediately represents, but also to provide a critical piece of corridor for the migration of species that will be required to survive the wave of land-use change throughout the larger region.*

*Los Amigos is also a critically important concession for long-term ecological research. It is central to many scientific research programs that depend upon the maintenance of a large contiguous ecosystem for studies ranging from carbon cycling to biodiversity to climate change. For example, the Carnegie Institution is the world leader in regional carbon-biodiversity monitoring, and we have made Los Amigos one of only a few core long-term "research landscapes" in the world. A research landscape requires hundreds of thousands of hectares to be useful, since changes in biodiversity happen at that scale, and not the scale of tiny reserves.*

—DR. GREGORY R. ASNER, DEPARTMENT OF GLOBAL ECOLOGY,  
CARNEGIE INSTITUTION FOR SCIENCE

**ACA and our partners** are working to support the creation of new protected areas in the most vulnerable zones around the perimeter of Manu National Park, greatly expanding protection along the slopes of the eastern Andes, and enhancing ecological connectivity to nearby protected areas. In 2012 alone, four new private conservation areas (PCAs) were created with ACA's support. PCAs are privately owned lands of biological, environmental, or scenic importance that are legally designated as conservation areas by Peru's National System of Protected Areas. The four new PCAs that ACA helped create are:

### UKUMARI LLAQTA (JAPU COMMUNITY, CUSCO)

The highland community of Japu created the 46,196-acre Ukumari Llaqta PCA (meaning "land of the spectacled bear" in Quechua) in Peru's Cusco department to help protect their rich montane forests, home to an extraordinary number of species including the Andean fox, white-tailed deer, and the endangered bear for which it is named. Ranging from Andean highlands to Amazonian foothills, this conservation area ensures a refuge for those species expected to migrate upslope to escape the impacts of climate change.

### PUMATAKI (PILCO GRANDE COMMUNITY, CUSCO)

The 406-acre Pumataki PCA (see inset at right) was designated by the Pillco Grande community in the department of Cusco, and shares its eastern border with Manu National Park. Pumataki, meaning "the land where the puma sings," is home to grassland and cloud forest ecosystems located within a broader area facing rapid deforestation. This new PCA is home to hundreds of species, including the puma, and contains the headwaters of the Pilcomayo River.

### SAN JUAN BAUTISTA (LOCAL FAMILY, MADRE DE DIOS)

The 57-acre San Juan Bautista PCA, located in the buffer zone of the Tambopata National Reserve in the department of Madre de Dios, was created by a local family interested in a more sustainable lifestyle. ACA provided technical and legal support, including mapping and species inventories. While small in size, this area represents a key conservation commitment due to its location in the midst of an area rapidly being impacted by illegal gold mining. PCA status will provide the family with stronger legal protection against invasion of its forests by miners.

### BOA WADACK DARI (LOCAL FAMILY, MADRE DE DIOS)

The 57-acre Boa Wadack Dari PCA was created in response to a request from a local family in Madre de Dios who made it their goal to show locals that they can – and must – think about the future of the forests and their children while living their daily lives. Protection of this palm forest will decrease pressure on the adjacent Tambopata National Reserve, and help maintain habitat for a number of vulnerable species that are being displaced by mining and agricultural activities in the area, such as jaguars and blue-headed macaws.

### NOTE FROM THE FIELD

## Protecting the Land Where the Puma Sings

Four years ago, farmer José Luis Peña allowed his herd of over 100 cattle to graze freely within Manu National Park and cleared pristine cloud forest to plant crops by lighting fires. Today, José Luis is president of a community-managed private conservation area and uses new, sustainable agricultural techniques. His focus now is on creating a conservation-based economy for his family and community.

ACA has been working for the last several years with José Luis and the rest of his community of Pillco Grande, high in Peru's southern Andes, to promote conservation around Manu. Swaths of cloud forest were disappearing due to clearing for new agricultural lands. On numerous occasions, fires set to regenerate cattle pastures blazed out of control, spreading into the national park. The region had begun to experience more landslides as tree cover was lost, and birds and mammals that the residents had seen as children were no longer present.

José Luis felt he had to take action. Together, ACA and the Pillco Grande community worked to develop and implement a plan to conserve what José Luis now saw as their most important natural resource: the Pumataki Forest. *Pumataki* is Quechua for "the land where the puma sings."

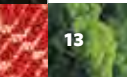
Adjacent to the community of Pillco Grande, the Pumataki Forest is located in the buffer zone of Manu – a UNESCO Biosphere Reserve and one of the world's most biodiverse parks. The process of creating the Pillco Grande-Pumataki PCA began in 2008, and was neither quick nor easy. Yet José Luis and representatives of ACA persevered in their efforts to gain the support of the whole community for conserving their forest resources.

Today, community park guards trained by ACA regularly patrol the 406-acre private conservation area. Pillco Grande is also working to attract ecotourists and researchers to capitalize on their decision to protect this forest, with its draws of pumas, spectacled bears, and amazing bird diversity. To complement this work, ACA has sponsored projects focused on agroforestry, reforestation, and sustainable agriculture, and has also trained and equipped a volunteer fire brigade.

*"The forest helps the community here in Pillco Grande and it also helps the community of the entire world."* —JOSÉ LUIS PEÑA



*Indigenous Wachiperi patrolling Peru's first indigenous conservation concession, created in 2008 with ACA's support.*





## LOS AMIGOS BIOLOGICAL STATION

**Established in 2000**, Los Amigos Biological Station was built on the conviction that the greatest forest on earth deserves the best research centers in the world. The 1,119-acre station is situated in the lowland Amazonian forest at the base of Peru's southern Andes, at the tip of a peninsula on a high terrace between the Madre de Dios and Los Amigos rivers. The landscape is a mosaic of terrestrial and aquatic habitats, including palm swamps, bamboo thickets, oxbow lakes, upland forests and floodplains. The station is immediately adjacent to the 360,000-acre Los Amigos Conservation Concession.

Since its establishment, more than 450 researchers have conducted over 213 research projects at the station, addressing botany, conservation biology, geology, hydrology, and zoology, as well as inventories of over 30 different taxa, from copepods to marsupials. Nearly 100 field courses have been held at the station with students from Peru and around the world. Los Amigos is also a training site for young Amazonian scientists, offering opportunities for area students to visit the station for a hands-on learning experience in tropical ecology and environmental issues.

### Los Amigos Biological Station at a Glance:

- Established in 2000
- More than 230 peer-reviewed papers published based on research at Los Amigos
- 4,300 species of flora and fauna recorded to date (37 new species described)
- 60+ miles (95+ km) of trails



Left: Los Amigos offers outstanding biodiversity for pioneers in tropical science. Right: A researcher climbing the canopy tower.

### TESTIMONIALS

*Efforts to build bricks-and-mortar institutions for the long haul are historically rare in Amazonia, and that is one of the leading reasons why the region's forests are now so threatened. Los Amigos – a model protected area, model research station, model training center, and model partnership rolled into one – is precisely the sort of institution that's so badly needed to supercharge a new generation of tropical conservationists.*

—DR. NIGEL PITMAN, CENTER FOR TROPICAL CONSERVATION, DUKE UNIVERSITY

*Since its establishment, [Los Amigos] has fostered an unparalleled number of scientific projects, courses and workshops, and has been integral in building capacity and conserving biodiversity. No other place in South America has been so productive for science, education and conservation.*

—DR. TROND LARSEN, DIRECTOR, RAPID ASSESSMENT PROGRAM, CONSERVATION INTERNATIONAL

*I deeply admire the work you've done supporting conservation in the Andes–Amazon region, and I appreciate very much the opportunities you're giving young Peruvian biologists to become experts in their fields, realize their academic dreams, and improve themselves personally and professionally.*

—LUIS SUÁREZ, COMPLETING A MASTER'S THESIS AT PERU'S LA MOLINA UNIVERSITY



## VILLA CARMEN BIOLOGICAL STATION

**Located near** the Piñi Piñi and the Tono Rivers in the Manu Biosphere Reserve, the Villa Carmen Biological Station is a center for multiple types of research and a platform for deepening our work and relationships with local communities. The station and 7,600-acre reserve consist of highly diverse flora and fauna that span a wide variety of habitats including old-growth rainforest, lower mountain forest, secondary forests, streams, rivers, and waterfalls. It is also one of the richest sites to view or study bird diversity in the world, with over 500 species known in the area. The station neighbors several indigenous Matsigenka communities and the Wachiperi Haramba Queros Conservation Concession, the first conservation concession in Peru run by an indigenous community, established with assistance from ACA.

Villa Carmen is a model site for developing a local conservation-based economy including sustainable agriculture, agroforestry, and ecotourism. Researchers are exploring new innovations in carbon-based finance such as biochar production, and value-added processing for bamboo, native fruits, and other sustainably-sourced products.

The goals of our work in sustainable agriculture are to learn, document, and demonstrate best practices to surrounding communities, while at the same time increasing the station's self-sufficiency in food production. Additionally, Villa Carmen serves as a living laboratory for visiting researchers, students, conservation practitioners, and nature enthusiasts from Peru and around the world.

The Villa Carmen agricultural extension program was started in 2012 and included organizing three district-wide workshops, co-organizing a provincial plantain and banana fair, and offering numerous tours and lectures for adults and school children from elementary through high school. In May 2012, Villa Carmen hosted the first International Workshop on Sustainable Agriculture, where participants examined the global perspectives of world experts alongside the local experiences of Amazonian farmers.



### **Villa Carmen Biological Station at a Glance:**

- Established in 2010
- 25 research projects hosted since inception
- 551 species of flora and fauna recorded to date
- Sustainable agriculture plots
- 25+ miles (40+ km) of trails

*Visitors to Villa Carmen can explore its rich forests and vast network of rivers and streams.*

### **NOTE FROM THE FIELD**

## Pioneering Sustainable Agriculture and Biochar Technology

Mariana Estrada González, a student pursuing a degree in agricultural sciences and engineering from EARTH University in Costa Rica, served as one of ACA's first sustainable agriculture interns at Villa Carmen Biological Station in 2012, coordinating the development of a biochar project. Biochar is a form of charcoal produced by cooking plant biomass under reduced levels of oxygen at temperatures of 750° – 1,110°F. Biochar's highly porous surface is ideal for the growth of beneficial soil fungi and bacteria. When introduced to tropical soils, biochar not only stores carbon for thousands of years, it also improves soil texture and aeration, retains fertilizer and nutrients, and boosts plant yields by as much as 40 percent.

Contributing to the ongoing biochar project at Villa Carmen, Mariana's work aimed to establish sustainable and accessible biochar production for small-scale farmers in the region. In a two-step process, biomass consisting primarily of abundant and fast-growing bamboo is converted to biochar, which is then applied to crops of pineapple, corn, and yucca. The project maintains control plots of the same three crops that are grown without biochar.

A robust biochar program has the potential to increase crop yields, sequester carbon, lower deforestation rates, and reduce carbon emissions. The enthusiastic participation of students like Mariana allows these projects to reach their full potential and yield benefits for both local communities and the environment.



## WAYQECHEA CLOUD FOREST BIOLOGICAL STATION

### THE WAYQECHEA CLOUD FOREST BIOLOGICAL STATION

In 2005, ACA created Peru's only permanent field research center focused on cloud forest ecology and management. This 1,400-acre research center, called Wayqecha ("little brother" in Quechua), sits more than 9,800 feet above sea level. The station is located in the Kcosñipata Valley in the department of Cusco in southeastern Peru, and serves as a protected buffer for Manu National Park.

The Wayqecha Cloud Forest Biological Station is situated in one of the world's most important biodiversity hotspots, where the eastern slopes of the tropical Andes meet the Amazonian lowlands. Tremendous variations in climate are observed as the landscape sweeps from snow-capped mountains to the treeless plains and dry valleys of the altiplano before a sudden descent into steep cloud forests and the broad expanse of the low-lying Amazon floodplain. This topographic complexity has resulted in an exceptional array of habitats sustaining a vast number of species, including the Andean cock-of-the-rock, the spectacled bear, and countless species of birds and orchids.

Wayqecha is also home to the world's first high-elevation cloud forest canopy walkway. Ranging in height from 65 feet to 144 feet above the forest floor, the walkway provides an unparalleled view of the forest below and the animals that inhabit it. Visitors will often see

*In 2012, an ACA-funded research team discovered at Wayqecha Centrolene Sabini, the 7,000th amphibian species in the world (according to AmphibiaWeb at UC-Berkeley), left. Wayqecha has a bird list of over 197 species to date, and areas surrounding the station include hundreds more, including this Masked Trogon, right.*



scientists at work studying everything from the nearly 200 native orchid species to the effects of climate change.

### Wayqecha Biological Station at a Glance:

- Established in 2006
- 81 research projects hosted since inception
- 69 publications produced
- 625 species of flora and fauna recorded to date (25 new species described)
- 9+ miles (15+ km) of trails

### STAFF PROFILE

## Revered Wayqecha Cook Discovers Passion for Nature Photography & Conservation

Francisco Llacma changed the course of his life when he discovered his passion for biodiversity conservation. Francisco, known to friends as "Panchito," was born in Chamaca, a small village located on the far outskirts of Cusco. He left the farming traditions of his past to pursue a career as a chef, and for the past six years has been the head cook at the Wayqecha Biological Station.



In the cloud forest, he discovered his affinity for orchids, and now works photographing and writing about these as well as wildlife with expert-level skill and precision. Francisco has used his photographs and wildlife observations to contribute to numerous discoveries, research, publications, talks, articles and field reports. He also helped create a training program for area tour guides that tells the story of cloud forest wildlife and the importance of protecting it. He is an invaluable member of the our team, and an inspiration to his colleagues and fellow conservationists.





*Clouds around the Wayqecha Biological Station generate frequent rainbows.*



A first-person perspective from the bow of a red boat on a wide river. The boat's red hull and wooden deck are visible in the foreground. The river is calm and brownish, stretching to a distant shoreline with green trees. The sky is a deep blue with large, white, fluffy clouds.

**"An incredibly effective, practical,  
science-based organization – key  
to the future of the Western Amazon."**

DR. THOMAS LOVEJOY



## REVENUE AND SUPPORT

Grants & donations from organizations	\$1,177,941	51.8%
Contributions from individuals	531,025	23.3%
Research station income	523,229	23.0%
Interest income	16,672	0.7%
Other income	22,255	1.0%
In-kind contributions	3,972	0.2%
<b>Total Income ACA 2012</b>	<b>\$ 2,275,094</b>	

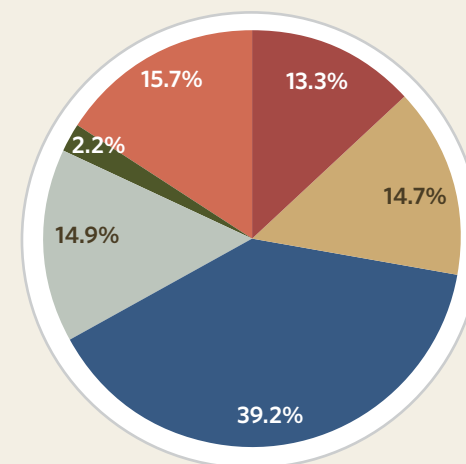
## EXPENSES

<i>Program services</i>	
Conservation	\$421,595
Research	466,762
Sustainable Livelihoods	1,242,785
Education & Training	471,307
<b>Subtotal program services</b>	<b>\$2,602,449</b>
<i>Support services</i>	
Fundraising	70,706
Management & general	497,688
<b>Subtotal support services</b>	<b>\$568,394</b>
<b>Total Expenses ACA 2012</b>	<b>\$3,170,843</b>



ACA has a 4-star rating from Charity Navigator, the leading charity evaluator in America.

## ACA EXPENSES 2012



- Conservation
- Research
- Sustainable Livelihoods
- Education & Training
- Fundraising
- Management & General

Figures show consolidated totals for ACA and its partners in Peru and Bolivia.

## Board of Directors – ACA (US) and ACCA (Peru)

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VP for Programs  
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### Kurt Holle

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Founder, Rainforest Expeditions  
LIMA, PERU*

### Walter Wust

*ACCA Board member  
Director, Wust Ediciones  
LIMA, PERU*

## Staff

### Executive Director: Jeff Woodman

**Total staff:** 67 (ACA, ACEAA, and ACCA)

**Offices:** Washington, D.C., USA (ACA) ..... 7 staff  
La Paz, Bolivia (ACEAA) ..... 3 staff  
Lima, Peru (ACAA) ..... 3 staff  
Cusco, Peru (ACCA) ..... 35 staff  
(includes Wayqecha & Villa Carmen)  
Madre de Dios, Peru (ACCA) ..... 19 staff  
(includes Los Amigos)

*All positions current as of July 2013*

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BACK COVER: Trond Larsen

### Design

*Jennifer Paul Design*





*ACA's work to protect vast tracts of forest provides  
a home for species such as the jaguar to survive.*





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