

Center for Amazon Community Ecology

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ORGANIZATION AND PROJECT PROFILE FOR GLOBAL GIVING CAMPAIGN

PROJECT TITLE: Empower Amazon Artisans & Forest Conservation

OFFICIAL PROJECT TITLE

Sustainable harvest and marketing of value-added non-timber forest products (NTPFs) with indigenous communities in the Ampiyacu River region of the Peruvian Amazon.

CACE MISSION AND HISTORY

ORGANIZATION MISSION

The Center for Amazon Community Ecology (CACE) was founded in 2006 to promote the understanding, conservation and sustainable development of human and other biological communities in the Amazon region. We conduct research on the ecology and sustainable harvest of non-timber forest products (NTPFs) and work with forest-based communities to sustainably manage and market value-added NTPFs as sustainable alternatives to economic activities that damage the forest. For the past six years, we have been studying the ecology, management and market potential of resins and other aromatic rainforest plants and worked with native and campesino communities to develop innovative designs and markets for plant-based handicrafts. We return part of the proceeds from our sale of crafts to our partner communities to support their basic needs in health, education and conservation.

COPAL RESIN AND ESSENTIAL OILS RESEARCH



CACE began studying resin from copal (Burseraceae) trees at a Peruvian government research station at Jenaro Herrera on the Ucayali River in 2006 and extended it to a Bora native community along the Ampiyacu River in 2009. We have focused on copal because diverse species are found throughout the Amazon, their resin may be transformed into a valuable non-perishable NTFP, and it represents a compelling example of the complex ecology in tropical forests. Our work has documented how a few obscure bark-boring weevils provoke the formation of resin lumps on select copal trees. Forest peoples have long collected this resin for illumination, caulking boats, and ceremonial incense. A suite of stingless bees that are major rainforest tree pollinators also harvest copal to make their nests.

This applied research will set the standard for the sustainable harvest of this resource by understanding the life cycle of the weevils and measuring how long it takes for the resin to accumulate on trees after lumps are collected. We have also conducted experimental wounding studies to compare the yield and time investment from manual harvest to collecting resin lumps made by weevils. Finally we have partnered with a several essential oil buyers who focus on markets for specialty perfumes and aromatherapy to assess the quality and quantity of essential oil distilled from different species and ages of copal resin. Beyond generating potential economic benefits for the community, this research has also given several dozen Peruvians income as field assistants and know-how to study and manage complex local natural resources.



In 2013 we began to broaden our exploration of aromatic plants and other exudates in a joint project with Camino Verde – an NGO based in southern Peru that is an active member of the Global Giving network. We worked with them to plant 900 rosewood tree seedlings at the village of Brillo Nuevo to produce a supply of this known source of fragrant essential oil and jointly explore the yield and quality of oils from sister species of “moena” (Lauraceae) trees in the northern and southern Peruvian Amazon. We are now also cooperating with campesino families in the town of Tamshiyacu to harvest and distill oil from rosewood trees planted there around 2002 with our new distiller.

HANDICRAFT DEVELOPMENT AND MARKETING



CACE's other major activity is assisting native artisans to develop and sell plant-based crafts to support sustainable livelihoods and the well-being of their communities and forest environment. In 2006, we bought a few fans and woven bags from one artisan in Jenaro Herrera. Five years later we helped eight women from her town to incorporate a craft association. We first bought woven baskets and frogs from the village of Chino in 2008; eight visits later we know the names and stories of the twenty members of their Huacamayo cooperative. That same year we bought a few necklaces from an artisan in the Bora village of Brillo Nuevo in the Ampiyacu River region and returned in 2009 to begin a pilot project to help their artisans increase the variety and sale of their handicrafts.

The Ampiyacu project has now grown to include six villages including at least one from the four ethnic groups in the area. Artisans have used their traditional weaving techniques, knowledge of local flora and fauna and abundant imagination to produce hundreds of unique models of belts, guitar straps, maracas, dog leashes and collars, hot pads, cell phone and coin pouches, hat bands, hair barrettes, bags, water bottle carriers, earrings, bracelets, necklaces, and Christmas tree ornaments. Many of the woven items are based on the patterns of colorful snakes that women see in their forest. The overall growth of our craft program has allowed CACE to buy almost 7500 crafts from 250 artisans in 22 communities in Peru and Brazil that now include Maijuna, Matses, and Yagua villages in other Loreto watersheds.



SUSTAINABLE HARVEST OF PLANTS FOR HANDICRAFTS



Successful marketing of handicrafts has sometimes led to the overharvesting of key raw materials used to make them so CACE is working with its native partner communities to establish principles of sustainable harvesting before demand outpaces local supply. We have conducted surveys in the secondary forests of Brillo Nuevo with artisans to measure the abundance of chambira palm trees whose fibers are used to make almost all woven products. We have also bought slender pruning saws for artisans to harvest the young spears of chambira leaves since using machetes often damages other leaves needed to keep the tree healthy. We have also helped artisans plant new chambira plants in one old field and helped another create communal garden for the dye plants used to color the chambira fibers before weaving.

GIVING BACK TO PARTNER COMMUNITIES THROUGH THE CACE SOCIAL REBATE

In addition to helping artisan families create an alternative to income from logging, hunting, and slash and burn farming, CACE returns 20% of net craft sales to our partner communities to help fund their needs in health, education and conservation. Craft rebates from jewellery sales have been used to buy basic office and medical supplies for Jenaro Herrera's schools and health post since 2007. General assemblies in Chino have chosen to use their social rebates from CACE basket sales to buy school supplies for children, lumber to make desks and materials to make a new bathroom for its primary school. Brillo Nuevo has used its craft fund to buy medicines, build a community pharmacy and support an emergency medical fund for village residents. They have also bought saw heads to be mounted on poles to harvest chambira spears instead of using machetes which can easily damage adjoining stems.



PROJECT MANAGEMENT



CACE activities are carried out on a day-to-day basis by Executive Director, Dr. Campbell Plowden, project manager Yully Rojas based in Iquitos, Peru, a field assistant in Jenaro Herrera, Peru, and a local coordinator in Brillo Nuevo. Other field assistants and contractors are hired to meet special project needs. CACE is governed by a six-person board that includes CACE founder and tropical ecologist Dr. Campbell Plowden, ethnobiologist Dr. Michael Gilmore, forestry researcher and extensionist Dr. Jim Finley, food science and indigenous knowledge specialist Dr. Audrey Maretzki, reforestation specialist Robin van Loon and environmental educator Kat Alden. Seven other scientists and educators serve on our advisory board. Other volunteers who are primarily students at nearby Penn State University periodically contribute to the organization as writers, photographers, videographers, and marketing support people.

FUNDING FOR CACE AND ITS PROJECTS



CACE and its programs have been funded with a range of small and large donations directly from individuals and small businesses and through GlobalGiving, grants from foundations (Rufford Small Grant Fund, Marjorie Grant Whiting Center, New England Biolabs Foundations, Musicians United to Sustain the Environment), proceeds from the sale of crafts and other rainforest theme merchandise (photos, greeting cards, and t-shirts), and contributions for presentations.

THE PERU AMAZON NTFP PROJECT- PROJECT SUMMARY



This project will enhance forest conservation in the Peruvian Amazon by promoting the sustainable harvest and marketing of value-added non-timber forest products (NTFPs). The main project sites will be five indigenous communities near the 1.07 million acre Ampiyacu-Apayacu Regional Conservation Area. Our project team will work with Bora, Huitoto, Ocaina and Yagua native communities in this high biodiversity region to: 1) survey and sustainably harvest wild plants used for making value-added products, 2) promote the planting of trees that yield important NTFPs, 3) produce essential oils from aromatic plants, 4) create innovative high-quality crafts from local plants with traditional weaving techniques, and 5) build artisan and community capacity to market these products as alternatives to economic activities that damage natural forests. In-depth research on the sustainable harvest of aromatic copal resin conducted at Jenaro Herrera will support this work.

The project is now developing relationships with Maijuna native communities to develop handicrafts and essential oils. CACE project partners are the Federation of Native Communities of the Ampiyacu (FECONA), the Federation of Maijuna Native Communities (FECONAMAI), Camino Verde, the Instituto del Bien Comun, the Field Museum of Chicago, Project Amazonas, PROCREL and the Institute for Investigation of the Peruvian Amazon.



PROJECT GOALS AND SITES



A primary goal for this project is to catalyze forest conservation and community development in the 433,000 hectare Ampiyacu-Apayacu Regional Conservation Area in northern Peru by empowering native communities to sustainably harvest and market value-added NTFPs including essential oils and innovative fair-trade handicrafts as an alternative to destructive logging and cash-crop agriculture. This strategy treats rich biodiversity and traditions as assets to improve livelihoods so communities will have tangible incentives to safeguard the area's 1,500 plant and 700 vertebrate species. The main project sites are six of the fourteen native communities in the region: Brillo Nuevo (Bora), and Nueva Esperanza (Ocaina) along the Yaguasyacu River and Puca Urquillo Bora, Puca Urquillo Murui (formerly known as Huitoto), Santa Lucia de Pro (Yagua) and San José de Piri (Yagua) along the Ampiyacu River.

Long-term research on copal resin at the Jenaro Herrera research station on the Ucayali River supports parallel studies on this aromatic tree in progress at Brillo Nuevo. We are now beginning to work with the Maijuna communities of Nueva Vida and Sucusari in the Napo River region to develop handicrafts and copal oil.

DEVELOPING ESSENTIAL OILS FROM AROMATIC TREES



This project will help build the capacity of native communities to assess the abundance, sustainable harvest and economic potential of copal and aromatic trees by combining their natural curiosity and traditional knowledge of forest plants and wildlife with new forest inventory and technical skills. It will work with native woodsmen to sustainably harvest parts of aromatic plants and distil them into fragrant essential oils. Marketing these oils would be one new way to generate income without imposing severe impact on the forest. Baseline studies on the ecology of copal resin and sustainable harvest of this

resource will continue at both Jenaro Herrera and Brillo Nuevo.



The CACE Project Manager, Copal researcher, Local Project Coordinator, and a rotating team of native woodsmen will map the location of copal, moena and other aromatic trees and plants, collect samples of resin and leaves, and distill them to assess the quantity and quality of the essential oil extracted from them. Trees where resin has been harvested from will be revisited to monitor its recovery. This information also will be used to devise a management plan with the native communities and help the provincial government establish sustainable harvest guidelines for similar enterprises in the region.



CACE has cooperated with Camino Verde, an NGO based in southern Peru, to raise 900 rosewood tree seedlings at Jenaro Herrera and transplant them into secondary forest sites (“purmas”) of five families in Brillo Nuevo. This reforestation project will have long-term benefits since we expect residents will be able to start harvesting leaves from these trees in early 2016 to distill them into a fragrant and marketable essential oil. Before these trees reach harvestable size, we are gaining experience with this process by working with families from the town of Tamshiyacu to distill leaves and branches from trees planted there around 2002.

During this project, a cadre of woodmen will know how to use basic forestry equipment (GPS, compass, climbing spikes, pole pruner, and hand pruner) to conduct a basic survey of forest resources, preserve specimens for identification, and sustainably harvest resin and leaves from forest trees. Essential oil samples will be chemically analysed and examined by fragrance company specialists to assess their commercial potential.



EMPOWERING ARTISANS TO PRODUCE INNOVATIVE HANDICRAFTS



The handicraft component of this project will work with artisans from all five community partners in the project. Encouraging these artisans who are mostly women to develop new woven products incorporating snake patterns and native motifs has already begun to transform craft making in Brillo Nuevo village from an individual pursuit to a more collective endeavour. The process is infused with creativity, skill sharing, cultural richness, ecological concern, and pride that craft sales can help fund immediate community needs. We are seeking to strengthen newer relationships with Bora and Huitoto artisans from the twin-village of Puca Urquillo, Ocaina artisans from Nueva Esperanza, and Yagua artisans from Santa Lucia de Pro and San José de Piri.

CACE works closely with our partner artisans to develop new products and models of handicrafts. We began by buying and trying to sell some of the crafts they were already making. Customers who liked these often suggested ideas for ways to improve these or make whole new products. We now aim to develop signature products or models with each partner community. In Brillo Nuevo, where we have been working the longest, artisans are refining designs for belts, net bags and hot pads (trivets), dog collars and leashes, and guitar straps woven with chambira palm fiber. See the special brochure about the Amazon



Guitar Strap for the full story on this unique product for musicians. We are working with weavers in Nueva Esperanza to develop a line of coin purses and cell phone carriers. In San José de Piri, Yagua women are making samples of a doll-sized woven hammock. Artisans from Puca Urquillo have made great progress developing diverse models of Christmas tree ornaments that double as hand rattles. Most are made from small calabash fruit pods – some

are etched with wildlife figures, others are covered with colored chambira fiber. The newest models are woven miniature jungle animals like armadillos.



IMPROVING HANDICRAFT QUALITY



Our Project Manager visits our partner communities every month to place craft orders that village associations divide among their members according to their talents and enthusiasm. We encourage artisans to share their skills with each other informally and organize larger skill-sharing workshops within and between villages so the most accomplished artisans can show their peers how to make the new and more complicated products. The project



manager inspects finished items and suggests ways the artisan may improve it if necessary. We are also encouraging artisans to form their own groups to take responsibility for the quality of crafts offered for sale and producing illustrated materials and videos to show larger numbers of artisans to make the most popular models of crafts.

BUILDING A CRAFT MARKET BASED ON SUSTAINABLE PALM HARVEST



Most handicrafts made in the Ampiyacu region (and northern Peruvian Amazon) are woven from fibers of the chambira palm tree. Artisans harvest a spear (“cogollo”) of young leaves from a palm that has grown naturally in one of their fallow agricultural fields (“purmas”) that is reverting to forest. There always used to be enough chambira for artisans to harvest in a casual way when the demand for crafts from these remote villages was low. As the demand for handicrafts grows, however, the communities need to harvest chambira with greater care and increase its abundance.

The CACE project will help the communities create a sustainable supply of chambira palm for craft making in several ways: 1) we give each pair of artisans a slender pruning saw to harvest a chambira “cogollo.” This will allow them to cut a spear without damaging the healthy leaves next to it that frequently occurs when harvesting chambira with a machete; 2) we helping artisans to measure chambira trees in their “purmas.” Results will show how many crafts they can make from their current stock; 3) we will support collective artisan “mingas” (work parties) to enrich their purmas with transplanted chambira palm seedlings, 4) we will encourage artisans to leave some chambira trees unharvested so each plot will have at least one large tree to produce seedlings in the future.



COLLABORATING WITH ARTISANS TO EDUCATE THE PUBLIC AND CRAFT BUYERS



Native artisans from the Ampiyacu region have always been able to sell their crafts to shops that cater to tourists in the city of Iquitos. The reason this option has not been very attractive for most is that getting to the city is a long and costly trip for them, and the tourist markets are glutted with low-priced bags, hammocks, and jewellery made by hundreds of artisans. The CACE project offers our partner native artisans a chance to sell their unique crafts to more

lucrative markets in the U.S. and other countries. This effort will best succeed if potential customers feel connected to a craft and the people, plants and places that went into making it. We want them to understand how their purchase can help put an artisan’s child through school, build a pharmacy for the community, and bring back a species of tree that was almost wiped out.



We will work closely with our partners to record their accomplishments, challenges and dreams for themselves, their family, and community. These rich stories will be presented in long and short forms on handicraft tags, product brochures, the CACE blog, newsletter, website and the upcoming online Amazon Forest Store. To supplement photos taken by the Project Leader and Project Manager, we will train some of our younger artisans and field assistants to use a camera and video to help document these processes and their daily lives.

This project’s ultimate goal is not to make new products; it is to help forest-based communities realize that cultivating their imagination and cultural traditions, intimate knowledge of nature, and entrepreneurial skills can improve their standard of living without destroying their forest or relying on charity.

GIVING BACK TO PARTNER COMMUNITIES: THE CACE SOCIAL CONTRACT



A “Fair Trade” product usually means the item was made by people paid a fair price for their labor in decent working conditions. CACE aims to surpass these criteria by adding a third component to the social contract with our partner communities. We set aside 20% of the proceeds from crafts we sell made by artisans from their community into a “Social Rebate” fund. These funds are then used to support health, education or conservation needs in that community. With small communities like the



native villages in the Ampiyacu region, CACE informs the whole community how much is in their account and then leaves it to this general assembly to decide how these funds will be used. Brillo Nuevo has used rebate funds so far to buy some pruning saws for careful palm harvest, buy medicines and build a public pharmacy.

PROJECT TEAM

Project Leader - Dr. Campbell Plowden has worked since 1985 as a researcher, advocate, policy analyst, teacher and community project leader focused on tropical forest conservation and community development. He is an expert on the ecology, management and marketing of non-timber forest products and Founder and Executive Director of CACE. Campbell is active in his Friends Meeting in State College, PA and conducts conflict resolution workshops through the Alternatives to Violence Project (AVP).

Project manager - Yully Katy Rojas Reategui is an agronomist with more than seventeen years of experience working with natural resource and community projects in the Amazon. She is CACE's Peru representative and Ampiyacu Project Manager. She leads the copal survey team and supervises Local project coordinators and handicraft activities.

Local project coordinator – Lucio Roque has been a regular member of the forest survey teams in Brillo Nuevo. He is also an artisan and respected leader in Brillo Nuevo who chose him to be Local project coordinator in late 2014.

Copal research assistant - Italo Melendez is a resident of Jenaro Herrera who has been the principal CACE field assistant for our studies on the ecology and sustainable harvest of copal resin at the Jenaro Herrera Research Station since 2006. He is now helping CACE and Camino Verde to locate copal, rosewood and other aromatic species around the Ucayali and other primary forests in Loreto.

OTHER PROJECT PARTNERS

Camino Verde – CV is a non-profit group that conducts research, conservation and education programs related to forests, communities and preservation of indigenous knowledge in the southern Peruvian Amazon. CACE is collaborating with Camino Verde to combine its experience with reforestation and CACE's knowledge of NTFPs to plant rosewood seedlings at Brillo Nuevo, develop new essential oils and a sustainable harvest system for the medicinal latex "sangre de grado" (dragon's blood).

Federation of Native Communities of the Ampiyacu - FECONA is the association that represents 14 indigenous communities in the Ampiyacu-Apayacu region. Its officers are CACE's primary conduits to coordinate project activities in the region.

Federation of Native Maijuna Communities - FECONAMAI is the association that represents four Maijuna indigenous communities in the Napo and Putumayo River region.

Project Amazonas – PA is a US and Peruvian NGO that conducts medical service trips, conservation, and education projects with local communities in the northern Peruvian Amazon with support from Margarita Tours. PA provides logistic support for the CACE Handicraft project and shares an operation base with CACE in Iquitos to support project activities in the region.

Instituto del Bien Comun - IBC is a Peruvian community support NGO that worked closely with FECONA to establish the Ampiyacu-Apayaco Regional Conservation Area. CACE has received logistic support from IBC for its work with the Ampiyacu communities including co-sponsorship of a handicraft skill-sharing workshop. CACE and IBC are the only two NGO members of the management committee for the RCA.

The Field Museum - The Field Museum (of Chicago) is an educational institution concerned with the diversity and relationships in nature and among cultures. It conducted biodiversity inventories that helped establish the Ampiyacu-Apayacu Regional Conservation Area and has helped develop "Quality of Life" plans with all of the Ampiyacu native communities. CACE cooperated with this group to conduct a series of workshops with Ampiyacu artisans in 2014 to improve their leadership, organization and communication skills.

Institute for the Investigation of the Peruvian Amazon – IIAP is the Peruvian government agency that operates a field station at Jenaro where CACE studies copal ecology and sustainable harvest. IIAP has helped CACE obtain research and export permits and has grown the rosewood tree seedlings destined for planting in Brillo Nuevo at its nursery at Jenaro Herrera. IIAP has also been helping Ampiyacu native communities market some handicrafts in Lima.

L'Oeil du Vert - This specialty fragrance company based in Los Angeles is advising CACE on resin distillation techniques and evaluating essential oil samples for commercial potential.

National University of the Peruvian Amazon (Iquitos, Loreto) – A UNAP agronomy professor has been a joint advisor to a CACE researcher studying copal resin ecology at Jenaro Herrera. CACE works with its herbarium and zoology museum to identify and obtain research permits for its plant and insect specimens.

Program for the Conservation of the Regional Ecosystems of Loreto – PROCREL is a regional government agency that has worked with forest-based communities to establish conservation zones and establish local craft enterprises. CACE will seek PROCREL's assistance to establish management guidelines for copal based on our work and help build the organizational and marketing capacities of artisans in the Ampiyacu native communities.

Cayetano Heredia University – CACE works with the Natural Products laboratory of this university based in Lima to use its GC-MS equipment to analyze the composition of copal and rosewood oil samples to verify their quality.

PROJECT BUDGET

The Peru Amazon handicraft and sustainable forestry project is ongoing. The budget presented below describes the categories and amount of funds needed to fund this project through GlobalGiving and other sources for 16 months.

Category & Sub-category	Amount \$US
Communication and Outreach	4,000
Internet, telephone, delivery, copying, printing	1,000
Production of video and written education and marketing materials	3,000
Equipment	7,100
Field equipment and medical supplies	1,500
GPS and other resin and leaf collection supplies	500
Processing and preserving resin and leaf samples	300
Resin and leaf distillation equipment	1,000
Chambira harvesting and tree planting supplies	600
Computer, video, camera equipment	2,000
Seeds and seedling production	1,200
Fees & Services Total	4,200
Permits, contributions to native associations	1,200
Professional services (legal, graphic design, repair)	1,400
Chemical analysis services	1,600
Stipends Total	26,600
Project leader	4,000
Project field manager	14,000
Local project coordinator	2,400
Field assistants for forest surveys and plant monitoring	3,000
Handicraft workshop leaders	1,200
Interns to support artisan training programs	2,000
Travel Total	10,600
Food for tree planting volunteers	600
Project staff international and domestic airfare, food and lodging	5,000
Project team and workshop leader domestic travel	5,000
Grand Total	52,500