

**Farmacia Viva Project Proposal**

We are proposing to support the creation of a community-run medicinal forest garden, *Farmacia Viva* (Living Pharmacy), in Paoyhan, a rural indigenous (Shipibo) community in the Peruvian Amazon. The aim of *Farmacia Viva* is to revitalize traditional healing and improve access to important medicinal plants in the community. This project is based on the premise that environmental health and human health are intimately linked<sup>1</sup>. Through the restoration of medicinal trees and plants, *Farmacia Viva* aims to improve human health by increasing access to traditional, natural medicines and in turn strengthen the ecosystem health. The hope is that this project will become a centerpiece for community organizing, development, health, and education – eventually generating opportunities for sustainable livelihoods, and providing a venue for learning and teaching traditional practices.

*Farmacia Viva* is driven by the work of a community-run and community-initiated committee, through conversations that developed during a participatory action research process with Alianza Arkana. The self-stated (translated) goals of the committee are “*Through the reforestation of medicinal species, and the development of a learning center, we hope not only to reconnect our community-members with their millennial knowledge for improving their health, but also to generate a sustainable economy that will boost community welfare.*” The funds we receive will be used to finance basic expenses for inventory of the first 2 hectares of the garden, to build a simple house at the garden site, to train community members in stewardship and regenerative design (permaculture) principals, to develop a sustainable management plan with the community, and to create and print a medicinal plants booklet. We hope to sustain the garden with at least one year’s worth of start-up funding for stewardship and maintenance costs until it

is able to generate its own funds. Alianza Arkana will continue to facilitate the participatory process, with the aim of guiding *Farmacia Viva* towards self-management.

### **Background, Past Research, & Participatory Context**

The Native Community of Paoyhan is located on the Ucayali River, several hours downstream from the city Pucallpa. The approximately 1500 people who live there are part of the Shipibo-Konibo (Shipibo) ethnic group that is indigenous to the region. The Shipibo are known for their vast knowledge of medicinal plants growing in their forests. However, due to extractive logging, many of the plants that were once used for medicines are now difficult to find – one may have to travel by foot or boat several hours to locate certain plants, or get them from other communities. Traditional healing plants and practices are important for the health of community members, and are more often used than western healthcare, especially by women<sup>2</sup>. Access to western healthcare is limited to a small health post, and for any type of comprehensive medical care, travel and treatments are often prohibitively expensive. Although Paoyhan has several reputable traditional healers, there is concern about the loss of this knowledge as these healers grow older.

In 2017, Alianza Arkana's researcher coordinator Laura Dev, and other volunteers initiated a participatory process on regenerative solutions and climate change in cooperation with leaders in the community. From these discussions, the community participants decided to form a committee for the protection and reforestation of medicinal plants for community benefit, and the idea of *Farmacia Viva* was born. Alianza Arkana offered volunteer support and help with administration and training. The Director of Permaculture for Alianza Arkana, Marcos Urquía, who is also Shipibo, has projects in other communities that combine traditional forest

management with tropical permaculture design. His work was inspirational for the people of Paoyhan, and he helped them develop the vision and plan for *Farmacia Viva*.

*Farmacia Viva* arose in response to health problems faced by the community, high cost of treatments, loss of ancestral knowledge, and the awareness that certain traditional plant medicines are effective for treating many conditions, including wounds, illnesses, and infections. Other medium-term directions (within 3-5 years) for Farmacia Viva are: to generate sustainable enterprises from botanical products; to create an intra- and inter-community educational center on use and stewardship of medicinal plants, also connecting internationally with researchers and tourists; and lastly, to pilot an innovative intercultural health bridge, incorporating traditional medicines with the local health post. Since October 2017, the community members have formed a six person committee, visited another permaculture project, requested and received five hectares of communal land to implement their project, and developed a set of goals and a vision statement. They have also begun clearing and demarcating the land for the project. Researchers Michael Coe and Laura Dev have conducted ethnobotanical interviews cataloguing over 75 plant species and their uses. We will select at least 30 of these species to include in the garden based on usefulness and relative scarcity. In collaboration with healers, I also plan to create a tri-lingual booklet in Spanish, Shipibo, and English, with photos, uses, and preparations of each plant. This could be used as a local reference and be incorporated into the educational curriculum.

### **Theory & Relevance**

Because of widespread poverty, there are many health issues in Paoyhan, with high death rates for infants, and lower life expectancy than the general Peruvian population. Researchers attribute this to poor sanitation, nutrition, and environmental conditions in indigenous communities<sup>2</sup>. Health issues in poor populations may be more socially and environmentally

related than they are to sanitation<sup>1</sup>. *Farmacia Viva* addresses these issues in several capacities: by improving the natural environment, along with the local healthcare system, while also generating more sustainable incomes, and strengthening community connectedness and cultural heritage. Furthermore, it will ideally provide ongoing training for community members in several fields, creating greater capacity for self-governance and sustainable enterprise in this community.

*Farmacia Viva* is most innovative for how it holistically links the fields of environmental design, forest management, ethnobotany, public health, and traditional indigenous knowledges, while remaining an indigenous, community-directed project. Because of our dedication to the community-based participatory process, the project, by design, advances the goals and wellbeing of the community-members under their own direction. *Farmacia Viva* is in-line with the multi-tiered health solutions suggested by Goy and Waltner-Toewes for this region of Peru<sup>2</sup>, which include self-determination as important for health in rural communities. Participation in decisions that affect one's environment may also foster a sense of wellbeing and connectedness<sup>3</sup>. This project will also be a model of innovative community design, from alternative governance modes, to advances in community-based forest management, intercultural health, and environmental education.

## Project Plan

<b>Short Term Project Plan 2018</b>	
<i>March - April</i>	Demarcate the 5-hectare parcel (Committee)
<i>May</i>	SWOT analysis (strengths, weaknesses, opportunities, threats) of the land and project Propose a plan based on the analysis (Marcos Urquía and Committee) Begin translation and editing of medicinal plants booklet (Laura Dev, Michael Coe, Community members)
<i>June</i>	Create walking paths through the garden parcel (Committee) Construct a simple house at the garden site (Committee) Label, inventory, and map all the species found in the parcel (Committee & Marcos Urquía) Training for community and committee in permaculture principles (Marcos Urquía) Focus group: develop self-management scheme. (Laura Dev, Marcos Urquía, Committee)
<i>July</i>	Permaculture training intensive for 2 community stewards (Marcos Urquía) Training for the committee on financial administration (Alianza Arkana)
<i>August - December</i>	Maintenance of garden, implementation of self-management scheme (Committee) Finalize and print medicinal plants booklet (Laura Dev) Curriculum development on medicinal plants use & management (Committee, Community)
<b>Medium-Term Directions (as developed by the community committee)</b>	
<i>2019 - 2024</i>	Establish sustainable enterprises with products from the garden Establish intercultural health pilot between the health post and the <i>Farmacia Viva</i> Create education center, linking with communities, institutions, researchers, and tourists

<sup>1</sup> Lindheim, R., & Syme, SL (1983). Environments, People, and Health. *Annual Review of Public Health*, 4(1).

<sup>2</sup> Goy, J., & Waltner-Toews, D (2005). Improving Health in Ucayali, Peru: A Multisector and Multilevel Analysis. *EcoHealth*, 2(1).

<sup>3</sup> Lindheim, R. (1985). New design parameters for healthy places. *Places*, 2(4).