

VETIVER HANDICRAFT PRODUCTION: AN INNOVATIVE FOCUS ON COMMUNITY DEVELOPMENT AND POVERTY ALLEVIATION IN RURAL VENEZUELA

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ABSTRACT

The Vetiver “Fundacion Empresas Polar” Project (VFEPP) has been conducted in an wide and diverse geographic zones, having trained approximately 11.000 people.

Five years ago, (VFEPP) started the Vetiver Project with the following general objectives: (i) to alleviate social disparities, (ii) to promote the making of vetiver handicraft as an initial step in the execution of an integral, economic ecological and social development project. (iii) to develop markets for vetiver handicraft in Venezuela. (iv) to increase participation of the poor population. (v) to stimulate the fight against the destruction of the natural resources and (vi) to enhance the spiritual and moral value through appropriate dynamics.

The innovative approach of the PVFEP is aimed at raising interest in vetiver handicraft in participants: women, young people, children and later, to the whole family. The activities begin through the conference *Why vetiver? An economic, ecological and social project*. Shortly after that the training of the vetiver handicraft begins and connecting the participants to the market, setting basic principles for quality; which occurs very quickly (in some cases in a month). It provides extra income to the families, the community develops a great interest in the Project, the reason why the planting of vetiver with the intention of producing fiber is promoted, on sites close to the houses where erosion, and contaminated waters are the common ecological problems. The social aspect is focused on the principle of motivating the self-esteem, the community participation, the respect to their political, religious and cultural values. Music is a very important companion through sharing songs, directed readings and games, whose contents have been analyzed previously by professionals in the educational area. The groups consolidate through the local leaders and the position of the local coordinator is selected within the participants, by their personal conditions and disposition towards the handicrafts.

The participation of the PVFEP in each locality has a minimum of three years, and a maximum of five years, until the participants have been consolidated through businesses, companies, association or cooperatives. This methodology of work has been transferred to other government and private institutions, through strategic associations with the intention of promoting the use of vetiver in Venezuela. The development of the VFEPP is sustained by academic activities, supported too by national universities, and Research and Development projects.

Key words: Handicraft, communitarian development, erosion control, waste water tertiary treatment

1.0 INTRODUCTION

Although Vetiver has been in Venezuela for more than one hundred years, it is in the last 20 years that it has reached a very important height, and its presence has been expanded to many places of the country. The VFEPP has contributed to this expansion and dissemination of this plant in diverse geographic spaces, in the last five years. It has promoted and supported researches jointly with the Central University of Venezuela, Romulo Gallegos University and Simón Rodríguez University, “núcleo Canoabo” and with private companies; such as Pepsi Cola Venezuela-Agua Minalba, and Caucagua, Polar Brewery C.A, “Planta San Joaquin” and Polar Brewery C.A, “Planta Oriente”.

2.0 MATERIALS AND METHODS

The scheme used by the VFEPP is focused on an community integral development plan, first to increase practice of the artisans and connecting the participants to the market to improve the economic income of the families; later, a program of planting in the areas affected by landslides and contaminated water associated with the houses of project’s participants. The results, in trying to harness community interests, are to improve its quality of life as well as the self-esteem of many peoples.

2.1 Vetiver Planting System

The trainees are motivated to be independent by obtaining the raw material for themselves, that is to guarantee through easy methods of planting and the preparation of the treated fiber for vetiver handicraft. Once, the project begins, the treated fiber is donated to the communities. Once the artisan production has started and VFEPP reduced the amount of fiber gradually. Parallely when the orders increased for artisan pieces, it would create more demand for raw material. At this time, the interest for planting of vetiver increased. An inspection is made to the sites where the people live, for identifying contaminated water and erosion problems. Also, VFEPP helps people in poor communities to use vetiver for land parcel demarcation, creation of “canteros” for production of family agriculture and orchards, and to teach how to protect houses in high risk areas, land parcels, irrigation channels and lagoons.

2.2 Formation of Staff for Project Vetiver of Polar Foundation Companies

From the beginning, the Project activities have been based on the program developed by the Pacific Rim Vetiver Network with the assistance of the Latin American Vetiver Network. The publications, *The Vetiver a barrier against the erosion* (1996) and *"Vetiver Handicraft in Thailand* (1999) were the precursors of VFEPP. Later, members were trained in design techniques and marketing of handicraft from course organized by the Technical Office for the Handicraft, from “Cooperación Española, and Fundación Empresas Polar-Cultural. The course of Negotiation of Harvard University, coordinated by the “Red Soc” (Social Network) Venezuela led to the systemization of VFEPP work methodology. The courses of Mental Maps of the “Organization Logros” gave excellent tools in the organizational schemes of VFEPP. A member of VFEPP staff assisted in the first artisan fair in Lausanne – Switzerland and presented a small sample of vetiver handicrafts made in Venezuela. This experience was very important for the training on how to make exposition. There was also a course for Design and Marketing of handicraft in “Cartagena de Indias”, Colombia organized by the Office of Spanish

Cooperation. In addition, the VFEPP training course in Thailand through the "Bureau of Cottage and Handicraft Industries Development" in vetiver handicrafts and dyeing of fibers was invaluable. All these experiences have been transferred immediately to the participants. In the PVFEP the concept of social audit is practiced to implement control and systematization of the available information, transparent information to the communities, especially in relation to the commercialization of handicraft, relation with the national government and the presence in the universities to support researches of vetiver on specific topics.

2.3 Commercialization and Marketing

The different groups sell vetiver handicraft at national level based on a quality control system, label design, distribution and prices. Local, regional and national exhibitions, direct sale to companies, promotion of corporative gifts in companies were carried out. Advertising in newspaper, magazines, tourists guides, radio and television programs, sales in hotel and touristy place (along the route to Yaracuy), catalogs, bulletins, photos and movies were carried out. Face to face handling of internal conflicts to improve the interpersonal relations was carried out. In looking for directions to improve the quality, a very important contribution was received from Ing. Leopoldo Rodriguez Crespo, who is the expert in management of Polar quality of Companies. In this phase the opinions from the owners of the stores and the consumers were taken into account through soundings and direct product survey.

The expo-sales also have been a great incentive to improve the quality of the products. Other factor of importance was the quality of the fiber, especial the method and frequency of cut and the vegetative state of the plant. In this stage, Gregoria Sanchez, Jorge Romero and Jesus Gonzalez, contributed ideas that improved the knowledge on the fiber production. Also the company Vetiver Antiosión especially designed a very simple dryer to dry fiber in rainy time and for areas with high relative humidity. The exhibitions combined with sales have promoted a series of products from vetiver that involve the design and innovation. There is a very high acceptance of VFEPP once someone explains that the project concentrated on the fight against poverty, protection of environmental value and social development.

The PVFEP market is oriented by the following general principles:

- ***Innovation:*** Increase the types and production lines, emphasis on the artisan design.
- ***Permanent research:*** Information of fashions and trends. Recovery and Restoration of pieces elaborated in other materials and application of vetiver fiber to add value.
- ***Continuous improvement and securing of the quality:*** correction of faults, use of materials and redesign.
- ***Diversification:*** To create, from models of other products, conserving the raw material and techniques.
- ***Respect of the cultural traditions:*** The PVFEP introduces vetiver as an alternative to substitute original artisan traditions, supporting them and combining the fiber similar to the traditional element with the advantages of raw material being readily available very quickly, little initial investment and without forcing the trainees to rely on many external materials to the artisan system.

3.0 RESULTS AND DISCUSSION

Experiences of the total indices of the PVFEP are summarized in the Table 1, which listed a total of 3.673 families directly involved. However, this does not take into account the multiple effects of the relatives and neighbors of the participants who had received the training, that means 11,019 persons altogether. The income to the communities of the Project recorded was US\$ 188,198 from 2002 to July 2006. Until now it has been based on 75 cooperating stores in the whole country. The exhibitions are very important totaling 204 in all. The plantlets used were 780,323 units, for a total of 79,107.7 linear meters of barriers planted which is equivalent to 7.89 ha. It is noted the increase of the fiber packages produced by the communities from 97 units in the 2002 to 11,924 packages for July 2006, and a total of 39.037

TABLE N° 1.

	2002	2003	2004	2005	2006	TOTAL
Families	381	1.023	643	528	1.098	3.673
Total people	1.143	3.069	1.929	1.584	3.294	11.019
Handicraft pieces	2.279	3.747	5.406	14.137	9.196	34.765
Income to communities US \$	4.-047	10.342	23.544	52.771	97.492	188.198
Direct employments	381	1.023	643	528	1.098	3.673
Indirect employments	38	103	65	51	110	367
Shops	2	6	16	31	20	75
Exhibition	7	19	32	54	92	204
Vetiver plantlets planting	13.000	27-950	138.295	266.140	334.938	780.323
Lineal meters planting	1.800	2.686	14.414,7	26.714	33.493	79.107,7
Planting hectares	0,18	0,26	1,44	2,67	3,34	7,89
Familiar Agricultural	0	3	31	26	25	85
Fiber packets produced	97	460	7.936	18.620	11.924	39.037
Conferences	10	14	27	24	21	96

3.1 HOGARES SANTA ANA: Old People Homes. (HSA)-Aguirre Carabobo State

In March 2001, PVFEP initiated activities in HSA, located to the west of the Carabobo state, with the support of the old residents, and the participation of communities of Aguirre, Canoabo, Canoabito, Santa Ana, Montalban, Miranda, Bejuma, the Savannah of Canoabo. The support of the priest Oscar Monzon, through of the song in masses, was fundamental. The Agronomy Department of Venezuela Central University, Romulo Gallegos University, Simon Rodriguez University, “nucleo Canoabo”, jointly with the “Alcaldia de Montalban”, were the institutions that support the initiation of forming an ideal vetiver project, for the humble families of the region. The first handicraft pieces were created with much love that marked the passages in securing the quality and the guidelines for the development of the market.

3.2 MIRALEJOS- La Guaira Vargas State

The incipient VFEP, by initiation of the Red Soc. (Network Soc) of Venezuela and the Priest Mario Lizarazo from “La Guaira”, Vargas state, started its activities in the 2002, as communities were very depressed by the tragedy, incalculable losses in La Guaira, that left a considerable number of destroyed houses and dead people. The sectors of Miralejos, La Vuelta in “Catia la Mar” were selected as pilots area to establish and planting vetiver interacting with young people and women. The zone was inhabited by 5,000 families, located in front of the International Airport of Maiquetia. With the

support of Priest Mario Lizarazo, people started a project to weave with the fiber and root of vetiver and protecting fragile soils of the zone. For 5 years a group of women have been weaving, hand bags, baskets, with vetiver, and have maintained its presence in small "stand" at the International airport of Maiquetia.

3.3 HATO VIEJO, Yaracuy State

A poor community of 600 families is located between Carabobo and Yaracuy states. Its main source of income is working in orange farms as laborers. Many settlers work in the clay factory in the school "Manos de Barro". And for two years a group of women has been dedicating to creating vetiver handicraft, developing a line of production of roosters and hens in different versions. Additionally, the artisan activities are motivated and supported by the Elmaisanco property, neighboring to the community.

3.4 CUICAS, Trujillo State

Cuicas together with two Andean towns "Hill of Bonilla and the Conception", with an average of 1200 families of average poverty, opened the doors to PVFEP four years ago. Their main sources of income are the coffee plantations, cattle raising and the maintenance of property. Many families have informal candy sales and fruits shops along the highway. The weaves of "cola de mula" (*Sporobolus indicus*), the Palmiche (*Roystonea regia B.H.K*) and the clay factory are the recognized crafts of these towns. They have been working with vetiver in the last four years, forming groups of women and men from neighboring communities in the schools; the children complement their basic education with the weave of vetiver. All are developing a line of production of traditional cloths in manual loom, making chairs, wrist bands and carpets in different designs. This project is a leader in school community relation, with its participation in five Bolivarianas Schools in the zone.

3.5 BIRONGO, Estado Miranda

It is a coastal town of 2600 families of average poverty. Their main income sources is the cocoa cropings and the preparation of the chocolate as well as other crops. Some families process the cocoa and are recognized by the artisan chocolate "Flor de Birongo". They use "la tapara" (*Crescentia cujete*) for vegetarian recipes, and "totumas" species to make soup ("sanchocho") along the river banks. For the last three years a group of women has been dedicated to the creation of pieces of vetiver handicrafts, developing several lines of production, where they emphasize on fruits, hats, animals, purses and carpets in different versions.

3.6 SANTA CRUZ DE ARAGUA, Estado Aragua.

Estado Aragua is a traditional town in the center of the country. It has around 5000 families of average poverty. The main industry is the use and the culture of banano (*Musa sapientum L.*). The more outstanding handicrafts are wood carvings, clay pottery, handicraft of woven banano and enea fibers, and some candies. Groups of women, men and children have been dedicated to vetiver handicraft since two years ago, developing several lines of production: fruits, portfolios and diverse figures of animals. This project attracts people from other parts of the country, among them are from "El Sombrero, Guarico State, Guigue, Carabobo state, Malpica the Toro, Aragua state. Also they have

transferred activities to government organisations, such as the Environmental and Resource Ministry, Mission Robinson, and Agricultural and Land Ministry.

3.7 SANTA ROSA DEL SUR, Estado Carabobo.

This area is formed by dispersed houses in the confluence of three states (Aragua, Carabobo and Guarico), characterized by the High River Basin of the Guarico River, a zone of about 200,000 square kilometers with serious ecological problems, mainly by the susceptibility of the land to water erosion. Its importance is highlighted as it is the water catchment basin of the Metropolitan Aqueduct of Caracas. Three years ago, the Romulo Gallegos University, Inparques in association with producers Asolasco and Asobena, were the institutions that motivated the introduction of the VFEPP to 40 families of extreme poverty, who farm by shifting cultivation on very high slopes. The VFEPP has been taking part in the recovery of 2 ha of land with vetiver barriers planting on contours to fortify and protect the soils, annual crops and roads against erosion and to filter runoff waters. Additionally, with the leaves, a group of women spends their free time making two lines of production of utilitarian pieces (place mat and baskets). It has been a great positive impact in the economic, ecological and social areas at this pilot zone.

3.8 MALPICA EL TORO, Aragua State Sub Project.

The population is in extreme poverty. The participants have protected their soils with vetiver barriers, and use the plant to border their cultivations, mainly bananos to improve the soil humidity and the protection against erosion. The principal handicraft they produce are made from corn leaf; and candies. The vetiver handicraft has been developed with the participation of students, men and women; they are developing an important line of production of furniture with wrought iron weaving with vetiver fibers.

3.9 LA MARROQUINA, Yaracuy State Sub Project.

This is a community of 300 families of average poverty, whose main activity is sugar cane cropping and other works on properties. The young people practice ecological activities by giving special attention to the slash and burn cultivations on the mountainous areas. The sale of vetiver handicrafts produced in the zone by a group of women would benefit the eco-tourism on the property. They manufacture figures of birds, mammals of different sizes and forms. The craftswomen receive support from near by property, La Marroquina, for the direction, the provision of raw material and some contacts for the marketing of the crafts produced. The Gúaquirá farm supports the commercialization of the pieces in shops and stores in Caracas.

3.10 PALMONAGAS, Monagas Sub Project.

Dra. Maria Bellorin, Ing Armando Hernandez from “Fundacion Empresas Polar” and Lic. Haidee Centeno from Palmonagas conducted an integral project where VFEPP is part of this community strategy. The project has selected vetiver in the communities of “La Hormiga”, “Vuelta Larga” and “El Zamuro”; they are members of family groups of average poverty. The growing and extraction of Oil Palm have been practiced for many years; and this work had become the main source of income for the inhabitants of these communities. Many families raise chickens in their house, but this economic activity is

disappearing. A group of women and men have been motivated with the idea of the VFEPP. They have created important pieces and obtained their first considerable income. The project is only three month old.

3.11 GÜIGUE, Carabobo State Sub Project

It is a traditional town of 300 families with middle level poverty. Their main employment sources are agriculture and handicraft production. They are supported by San Jose's Benedictine Abbey (Catholic Church). They maintain some traditional customs such as cock fighting. A group of women has been devoted to the vetiver handicraft, developing two production lines: handbags and special fabric in manual loom, which have a positive impact to the income of some families dedicated to this project since two years ago.

3.12 PAYARES, Yaracuy State Sub-Project.

This Sub-project, under the responsibility of Dra. Maria Bellorin from Polar Foundation and Dr. Carlos Acosta, includes a community of 1500 families of half poverty. Their activities are supported by Trainer Luzmila de Velarde as a PVFEP consultant. They have their basic revenues from various forms of agriculture and plantation of sugar cane. The communities used corn leaf to make handmade objects and sell within the group. A small group of women has been devoted to the making of vetiver place mat and hats since two years ago.

3.13 SAN PEDRO DE LOS ALTOS, Miranda State, Sub-proyect. Strategic Association (SA)

This community located in the High Cuenca of the River San Pedro, with an approximate population of 3000 families of half poverty. The community produces flowers and other agriculture produces. Among the typical handicrafts made in the area are basket and doll. With support of Pepsi Cola – Venezuela, Agua Minalba; a group of women has been devoted to the design and making of vetiver pieces for three years, developing several production lines such as animals, angels and handbags in different versions. This project underlines the concept of sustainable development, establishing forests that will consolidate the lands owned by the company over a 20 years period, in which vetiver is a fundamental precursor to tree planting, and integrating the neighboring communities with this sustainable development through the vetiver handicraft system.

3.14 POLAR BREWERY, BARCELONA, Anzoátegui State Sub-Project, SA

This group of participants develops the idea of transferring the methodology of vetiver work of the Project Vetiver from Polar Foundation to the social area of private companies. From the East of the country, 25 people from near by communities are sponsored to come to this organization each semester. The training focus on the economic, ecological and social aspects and two lines of Vetiver handicraft products have been developed such as animals and fruits, which has gained a very positive response from the local market.

3.15 POLAR BREWERY, San Joaquín, State Plants Carabobo, SA

An experiment was initiated by VFEPP for the Treatment of Residual Wastewater, with the idea of gaining appropriate knowledge to understand the physical, chemical and biological processes that occur in biological tertiary treatments of residual waters, and at the same time to obtain low cost technologies that can be transferred to poor communities affected by these problems, which are very common in Venezuela.

3.16 TOTAL & GAS Co.Venezuela, Jusepin Edo. Monagas, Sub-project, SA

It is a very dynamic community group that has been supported by oil companies. Their main income source is based on the oil industry activity, the “Oriente” University and plantation of passion fruits. They use the fiber of “enea” (*Typha latifolia*) and some families made hats and baskets. Leaders and people, mainly women of diverse communities take charge in the production of vetiver handicraft since one year. They are concentrating on three important production lines: handbags of braids, hats and fruits.

3. 17 C.V.G Bauxilum The Pijiguaos. Bolívar State, Methodological Transfer

The production of handmade goods is an integral part of the ethnic cultural roots and identity of the Venezuelan aboriginal tribes. The VFEPP started a methodology transfer program to several indigenous communities of this region. Each community makes containers, baskets, hats and other crafts with fibers coming from “moriche” (*Mauritia flexuosa*) and other common palms in the area, which have notably affected the ecosystem by over exploitation. Today, most of them work with vetiver fiber with an age group focus: the children learn as apprentices and the adults as artisans teaching their ancestral techniques to new generation. The vetiver fiber is an excellent solution because the plantation is easy to plant and near their houses, it is ready to be harvested when the leaves are at least three months old, and then every month.

4.0 ACTIVITIES OF RESEARCH AND DEVELOPMENT, TRANSFER OF EXPERIENCES AND STRATEGIC ASSOCIATION OF VFEPP.

This activity is important because it generates the knowledge, through research in cooperation with several national universities and public and private companies (Polar Cervercería C.A., Plantas San Joaquin y Oriente, Pepsi Cola Agua Minalba and Vetiver Antierosión C.A., CVG Bauxilum The Pijiguaos, Ministry of the Environmental Nirgua, State Yaracuy):

Central University of Venezuela

Initiating the following investigation projects:

Thesis: "Study of different systems of planting vetiver"

Master Thesis: "Treatment of residual waters with vetiver" Ing Mónica Scavo

Master Thesis: Study of the treatment of waters polluted with fluorine with vetiver. Ing Yazmín Ruiz.

Romulo Gallegos University

Participation in conferences, transfer of experiences gained from VFEPP to the inhabitants from the High Cuenca of the River Guárico

Simon Rodriguez University

Consolidation of nurseries on University lands and transfers the PVFEP to the community Santa Ana-Canoabo-state Carabobo.

Private companies:

Brewery Polar-plant San Joaquín.

Study of treatment of residual waters in drums, lagoons and humedales. Responsibility of Dr. Oswaldo Luque M, Technician Associated to the Investigation: Edgar Ceballos.

Pepsi Cola Venezuela-Agua Minalba.

Motivation of a sustainable project for the consolidation of a forest in the springs of Agua Minalba, then involved the neighboring communities to plant vetiver for the handicraft industry.

Project Vetiver Polar Foundation Companies and Vetiver Antierosión C.A.

Study of the behavior of the vetiver under flood conditions in property Carmen Teresa Farm. Aragua, State. Responsibility of Dr. Oswaldo Luque M, Tec. Rafael Luque, TAI Edgar Ceballos and TSU Grace Rivero.

Public Enterprises

CVG-Bauxilum The Pijiguaos. Consultant to Vetiver Antierosión C.A in the rehabilitation work in the Bauxite mines. Transfer to the Project Vetiver CVG Bauxilum The Pijiguaos, State Bolívar to indigenous communities

5.0 CONCLUSION

It is feasible for vetiver projects to contribute to an integral community development, and poverty alleviation through generating short term economic resources, which motivates to reach ecological and social objectives that are effective and easy to implement. The integral focus of the VFEP to benefit the quality of life of the participating communities is a common characteristics at all places where VFEP are involved. In other sense, the introduction of the vetiver handicraft to communities - specially in the indigenous area - is a solution that can supplement ancestral customs, and it contributes to supply of scarce fibers.

In respect, to wastewater management by using vetiver grass, it could solve the disposal problem and improve quality of discharges from communities. Vetiver could be integrated to erosion control systems, in infrastructures protection (roads and agricultural lands) and production of plants and fiber for handicrafts. Up to now, the sales of vetiver handicrafts have been carried out through exhibitions, cooperative stores, promotional gifts of companies and direct sales by the artisans.

Finally, we agreed with Chomchalow's conclusion (2004) when he visited the VFEP:

That by utilization of vetiver as a source of raw material for handicraft making, the poor people in the community not only earn extra income - most often the only income -, but are united in their mutual activity in the community. This has culminated in more and more vetiver is being planted for soil and water conservation in the farmlands and elsewhere. This is in contrast with the conventional approach in which the farmer are encouraged to grow vetiver to protect their soil, and to use vetiver as a

by-product- for handicraft-making and other utilization, which often ends up with little or no planting at all as the farmers earn no income from such planting. Judging from the look at the smiling faces with starry eyes of the poor villagers as they sang the vetiver song or while they made the handicrafts, and even the young children who were brought to involve in such activities. The author could say that they were quite happy with their involvement in the vetiver project”.

Finally, the handicraft processes with vetiver are carried out with very little investment from the community that could be summed up as: **MIND, HEART AND HANDS.**

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A Brief Introduction to the First Author

Dra. Graciela Pantin, has degrees in Sociology at the “Andres Bello” Catholic University, Caracas, Venezuela, and a Master of Arts, New York University, New York, USA. She has occupied a range of executive positions in public sector working with National Gallery of Art and Ministry of the Culture. In the private sector, she worked as General Director of the Caracas Athenaeum. For fourteen years, since 1992 she has been General Manager of “Fundacion Empresas Polar”.

She has participated in several executive meetings, at the University Institute of Superior Studies of Plastics Arts “Armando Reveron” (Caracas) and at the International Center of Tropical Agriculture (CIAT), Cali, “ Colombia.