Part 6

Vetiver System and Private Sector

Reviewer

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Abstract: The introduction of the Vetiver System (VS) in most countries arrived either through multi-donor organizations (FAO, World Bank), government Ministries or non-governmental organizations (NGOs). Success of these public and non-for profit sectors' approach, measured by effectiveness of dissemination, penetration and acceptance rates, ranged from "low" to "moderate," and usually spanned a period of 6-10 years before reaching an acceptable level of sustainability. (China, Thailand, Australia). "Non-sustainability" might be defined as an activity that shrinks or disappears once public or outside support is withdrawn.

To accelerate dissemination and address the sustainability issue of VS, we tested an inverted approach West Africa's Senegal. We introduced the Vetiver System for soil and water conservation in Senegal while working in a donor-supported business development project. VS was introduced in mid-2000 with the first importation of *Vetiveria zizanioides* from South Africa, and subsequently disseminated solely through for-profit private sector channels. The strategy was based on three assumptions:

1) Vetiver has commercial value, thus entrepreneurs might be well placed to rapidly market the product and its application;
2) Sufficient information on the vetiver system is available, based on experience and research conducted in other countries, to provide a cogent case for entrepreneurs to become proponents of the technology; and
3) Private nurseries can adjust plant supplies to shifting market signals more rapidly than public agencies.

After three years from the time VS was introduced in Senegal, its use and application reached an acceptable level of sustainability. There are autonomous suppliers and providers of VS in all of Senegal's main ecological zones, and a sufficient flow of information about various applications of VS that research and new users are expanding on a broad scale. Within three years, government agencies were approaching the private sector to explore ways they could participate in VS usage and to engage in disseminating campaigns. Public agencies showed interest in vetiver when they witnessed a rapid acceptance rate and the spread of VS technology; however, they remain minor "consumers" of the technology.

The dissemination strategy, which consisted of a "facilitator" that targeted private suppliers, buyers and service providers, proved to be a rapid, low cost and a low labor model. Major strides were made in innovative uses of vetiver in large part because they were entrepreneurial driven. Today, a self-sustaining loop is solidifying links between the business sector, and NGOs and public agencies, which includes the National Education system, research institutions, extension agencies, Water and Forestry departments, the Environment Ministry, and local governments.

Key words: Senegal, private sector, sustainability, market signals, vetiver system, nurseries, public agencies, commercial sector, NGOs

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1 INTRODUCTION

1.1 Traditional Dissemination

One of the most pivotal documents on Vetiver, prepared by the US Academy of Science, states that in order for vetiver to assume its maximum value, 'governments must initiate or facilitate soil-conservation programs.' It quotes from an FAO report, published in 1990, that recommends four tasks to disseminate vetiver:

- Establish advisory commissions,
- Encourage the work of NGOs,
- Create a proper legal framework for action,
- Assess training and manpower needs,
- Identify research priorities, and
- Develop long-term programs for erosion control.

The concept of putting the onus on governments and NGOs to promote vetiver is fine and may have worked in the past, but how many of us today think that *government*s must initiate and facilitate soil conservation programs and set up advisory commissions in order to creat the demand and the supply for VS?

We know that in China, vetiver programs developed slowly for the first ten years after the technology was introduced, as stated Xia Hanping's excellent essay. Dr. Xia adds that it was only in 1999 when Mr. Hong Hao, President of the Hongri Grass Industry Group, a private firm, got involved with vetiver that the technology finally took off in this region.

The success of Mr Hong should be of no surprise to most of us. If you found reliable information that you as an entrepreneur could make honest money developing and promoting VS, you would be probably be very interested, and if you decided VS was for you, you expand the market for the plant and its application.

1.2 Entrepreneurial initiative:

Not long ago (less than a year), I spoke with a Senegalese colleague who was an algae specialist. We talked of water quality, algae, vetiver, and the traditional practice in Senegal of putting vetiver roots (like these) in household canaries or water vessels. I mentioned to him that the institution I work does not fund or provide finance, but that if he were interested in finding a commercial application to vetiver, we would provide information and technical support.

Within 5 months, the colleague, Abdou Rahman Tamba, (who should be with us at this conference) had produced test bottles of "vetiver drinking water." He had worked passionately in a laboratory, distilled essential oil from a batch of vetiver roots, found a way to dissolve the oil in water, patented the process, hired a marketing firm and now produces vetiver bottled water for a national and regional market. He took his own idea, combined it with an existing Senegalese practice and innovated a process to produce clean potable water.

We now have bottles of water that contains a patented processed to purify water and to give it a pleasant aroma and taste. Do you think it was developed through a "government initiative" or an "advisory commission?"

2 SENEGAL EXPERIENCE

The rest of my presentation will be on an experience of a different nature. It will be about one country's experience - Senegal is in West Africa - that went from zero use of vetiver in soil and water conservation in 2001 to a level today, end of 2003, where vetiver is a relatively well-known plant, system, technology and bio-remedial approach.

2.1 Project plan

2.1.1 Objective

To establish rapid and low-cost dissemination and application of Vetiver Technology.

2.1.2 Strategy

To use the private sector as the primary vector for dissemination rather than governments or public agencies.

2.1.3 Mechanism

To use a business development project as "facilitator." As facilitator, most all of the work and matching financing would come from businesses and service providers who saw economic benefits by investing in vetiver technology.

2.2 Implementation

2.2.1 Initial Phase

The process began in early 2000 with a project called "DynaEntreprises" whose focus is to assist in the development of the business sector in rural areas of Senegal. The project provided assistance, through whatever means except financing, to expand demand-based commercial activities. Soil erosion, soil fertility and limited income-generating activities are persistent constraints facing most rural areas in Senegal, yet few sustainable solutions have been offered.

Early on, the project made presentations on vetiver as one way to resolve these constraints to businesses and women groups. It became evident that there was a strong demand for a vetiver-type solution. From this, DynaEntreprises formulated a dissemination strategy that included:

1) **Developing the demand** for the plant and the system; and
2) **Developing the supply** of the plant and specialists who could install and apply the VS correctly. The strategy was based on three basic assumptions:
   - Vetiver has significant commercial value. If it has commercial value, then it should be marketed like any other product or service;
   - To sell something, go to the specialists. This is a simple management principle; if one wants to market a new technology, then one must involve marketing specialists.
   - Private nurseries can adjust plant supplies to shifting market signals more rapidly than public agencies.

Under the first assumption, we concluded that if vetiver had commercial value, it should be marketed as any other product or service. This should be a task assigned to entrepreneurs rather than bureaucracies.

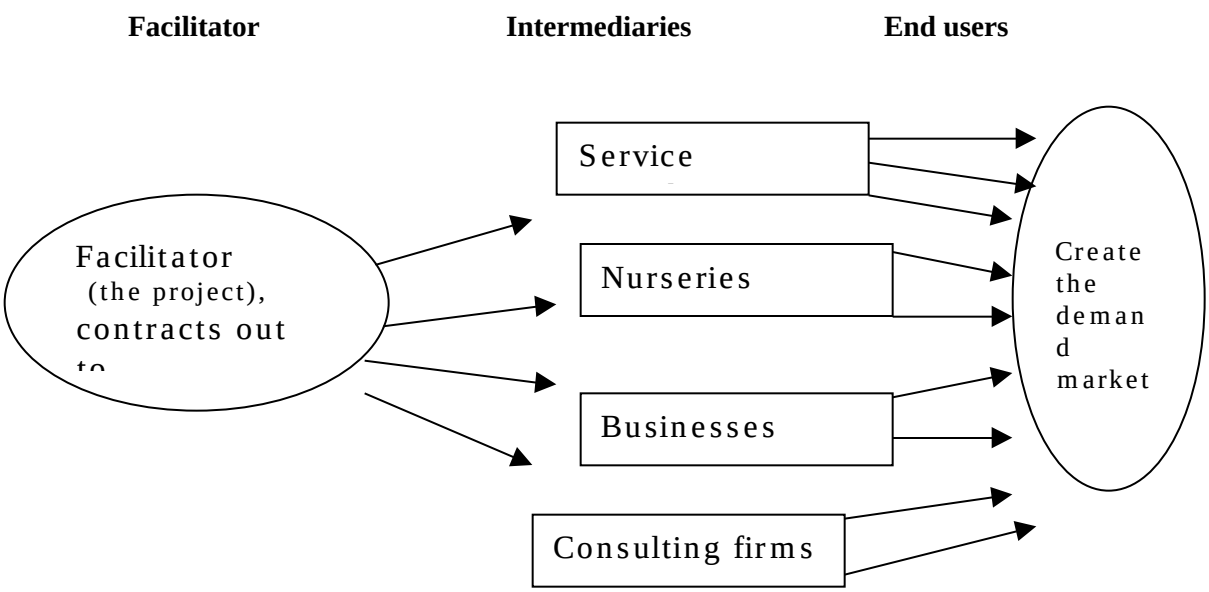
Under the second assumption, the project also sought entrepreneurs; people who were willing to pay for training and information, since business people usually see "value" in such services. By helping to organize "for-fee" vetiver training and information sessions, the project was able to separate the more highly motivated entrepreneur from the casual onlooker, and thus focus on the former.

Under the third assumption, the project encouraged private nurseries around the country to experiment growing and multiplying vetiver plant stock. The first basic source of plant material (*Vetiveria zizanioides*) was a shipment of 10,000 slips purchased and imported from South Africa. These slips were either sold at cost or "loaned" to whoever signed a contract to reimburse the project, within four months, "double" the number of plant slips loaned. Through this system, the project was able to maintained a constant supply of plants on hand for demonstration sites and research.

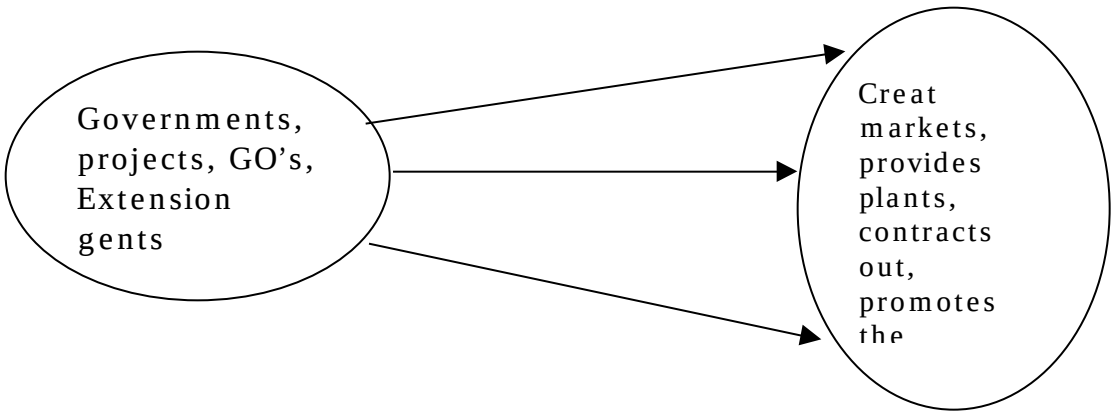
The initial phase in the "inverted" dissemination strategy to develop a **supply** of plant material was $2,400, the cost of importing certified plant stock, however, more than half of that was recouped through the sales to private nurseries and individuals.

2.2.2 Subsequent phases

The next phase was to "develop" a **demand** market for the plant and the technology. The project resorted to a process in which the project became "facilitator" rather than the promoter. It helped the intermediaries become better promoters and disseminators, servicing end-user, and helped develop the promotional and marketing skills of the disseminators. To do this, the project issued public tenders (also known as Requests for Proposals) intended for local firms to implement tasks that developed and tested different dissemination approaches. The process is in the following format:



While a traditional model looks like this:



DyanEntreprises, as facilitator, wrote Terms of References, negotiated contracts and followed-through with the winning firms to implement tasks that included: establishing demonstration sites, prepare PowerPoint presentations, provide training, test various awareness campaigns, participate in fairs, develop graphic technical sheets, provide technical oversight of vetiver installation, conduct research, create CDs, and assist in placing young horticulture graduates in enterprises that requested support in applying vetiver technology.

For two years, the project facilitated the dissemination of information related to progress being made in vetiver application in Senegal and in other countries. More than 50 different PowerPoint were prepared in response to an ever increased demand for information and experience in sectors such; reforestation, wind erosion, horticulture, soil regeneration, waste water treatment, essential oil, water purification, engineering, salt-water tolerance, beach erosion, wind-break, handicraft, infrastructure protection, plant multiplication, business planning.

2.2.3 Results

As a result, a broad array of networks developed that began to attract the attention of NGOs, research institutions, universities and government agencies, both local, regional as well as national. Service providers, consulting firms and highly motivated individuals became the repository of information about the vetiver systems and its application. They, instead of the DynaEntreprises project, became the focal and source points for assistance to vetiver end-end users. DynaEntreprises as facilitator has been withdrawing in the past six months from promoting and disseminating vetiver technology.

3 DISCUSSION AND CONCLUSION

One reason why the “inverted” dissemination strategy has worked so far is that people are not waiting for a government agency or an NGO to take action, finance or promote the technology. The entrepreneurs that benefit commercially from the technology have become its most persuasive and successful promoters. Additionally, these businesses do not have to compete with governmental organizations that dispense plants or the technology at subsidized prices. Most of these businesses and NGOs continue to focus on cost-recovery for the promotional the technology. One can say that a “sustainability loop” has been attained in which both the supply and demand for VC is expanding within a relatively open market.

Total cost of outsourcing vetiver dissemination, demonstration sites, marketing, junior experts over a two and a half year period has been about $US112,000. It is more difficult to estimate investments made by private firms in Senegal to install vetiver systems, purchase plants, obtain technical assistance, buy CD ROMS and information booklets, but it has been calculated at $125,000, slightly more than the amount invested by DynaEntreprises.

We have not been able to calculate total public investment in vetiver system to date, but it is negligible. We cannot say what local, regional and national governments will do in the near term. However, proposals have been submitted for vetiver usage for wastewater treatment, quarry rehabilitation and infrastructure protection, but to date, nothing has been firmed. Government agencies such as the National Education system, research institutions, extension agencies, Water and Forestry departments, the Environment Ministry, and village level governments have approached service providers for assistance in expanding awareness and the demand market through public agencies.

The next challenge of the “inverted” strategy is to satisfy this second source of demand (which should be greater than private sector demand) but which we suspect will be successful since there exists now a cadre of trained people and institutions, as well as a network of plant source, that can respond rapidly to expanding demand market. Perhaps at our next Vetiver conference, we will be able to make a