

Making Social Forestry Work: A comparative study of smallholder reforestation projects in Paraguay

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Introduction: Social Forestry

- “forestry which aims at producing flow of protection and recreation benefits for the community” (Westoby 1968)
- “a programme of activities to encourage those who depended on fuelwood and other forest products to produce their own supplies - in order to lighten the burden on production forestry” (GOI 1976 in: FAO 1991)
- “the science and art of growing trees and/or other vegetation on all available land, in and outside forest areas and managing the existing forest with intimate involvement of the people and integrated into other operations, resulting in balanced and complementary land use with a view to provide a wide range of goods & services to the individuals as well as to the society” (Tiwari 1983)
- “refers to the promotion and self-help management and use of trees and perennials to sustainably improve the livelihoods of local people, especially the poor, generally using participatory methodologies” (FAO 1994 in: Lacuna-Richman 2012)
- „In the 1970s, 1980s, and 1990s, almost all countries that were or remain in the developing world experienced the introduction of one kind of social forestry or another, either by their government or by non-government organizations, at varying scales of implementation and incorporating a mix of practices” (Lacuna-Richman 2012: 5)

Social Forestry: General Goals

meeting the needs of local people for fuelwood, fodder, timber, NTFPs	raising income, creating new employment and products	reclaiming degraded land for productive use	improving the environment	enhancing local participation & site-specific solutions
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Forest Plantations in Paraguay

Paraguay has one of the smallest forest plantation areas in Latin America currently estimated at 66 000 hectares (INFONA 2011). Additionally in the second half of the 20th century the dramatic deforestation rate assessed by the World Resources Institute reached 2,65% (Quintana and Morse 2005: 67). Those are just some of the reasons explaining the particular importance of promoting plantation activities within the country. One such initiative has been the **PMRN project** of the German Development Agency (GIZ) involving assistance for smallholders in the establishment of forest plantation plots (PMRN 2009; 2011).



PMRN - Proyecto Manejo Sostenible de Recursos Naturales
The PMRN project of the German Development Agency (GTZ) started in the year 2003 under the motto for the sustainable management of natural resources. One of the interventions has been reforestation with both exotic and native species. It is estimated that under the project work with small producers, about 3500 ha of land has been reforested (*Eucalyptus spp.* and *Melia azedarach*). The beneficiaries of the project received plants and trainings. The plantations have been established mainly for timber production and fuelwood, and some additional own use by the producers (construction etc.). It has been estimated that the production potential of fast-growing plantations in the project is about 20m³ha⁻¹year⁻¹.

Research Question and Hypothesis

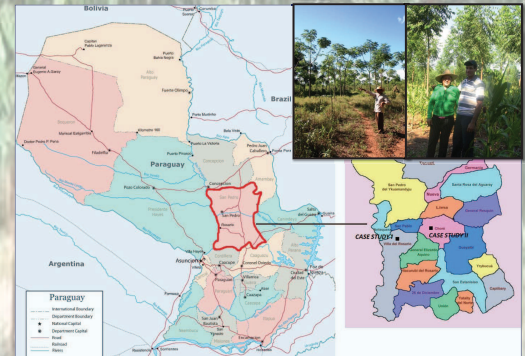
RQ: Why in the same region and operating under the auspices of the same external project are the results of small-scale social plantations in Cuatro Vientos and Chore communities so different?

We hypothesize that it is **because of the different institutional context in which the project was implemented**. And so, the general observation is that for social forestry (reforestation) to provide long term socio-economic and environmental benefits, a functioning institutional setup and a wider developmental approach is necessary.

Research Design

- The research was conducted as **two case-studies: Cuatro Vientos and Chore communities** – representing the area with well developed local institutions (cooperative) and an area with limited social organization and very similar background conditions.
- In each case study 13 farmers with PMRN forest plantations were selected (purposive sampling) for HH survey, questionnaire on socio-economic and environmental plantation impacts, involving visits with the owners on the plantation sites and discussion on the project and its effects.
- Additionally local experts were selected for semi-structured interviews.

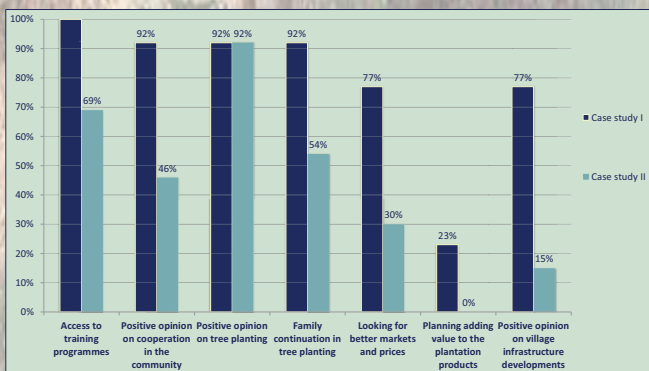
Research Area: Department San Pedro, Paraguay



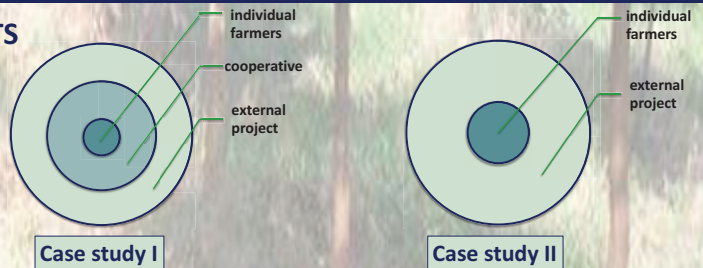
Location	Case study I District: Villa del Rosario Community: Cuatro Vientos	Case study II District: Chore, Communities: 15 de Agosto, Santa Librada
Plantations studied	13 (20% of smallholders)	13 (control group)
Sampling	Stratified, purposive	Stratified, purposive
Area expert interview	yes	yes
Similar background conditions:	Geographical proximity, climate, land size, crops cultivated, market access, education level, poverty thresholds, income, family model, political context	

Variation in project outcomes, local perceptions and future continuation: selected results in comparison

Attitude to continuation of project efforts	“Now we learn to value our resources (...) Before people used to think only in a short term. We are trying to change it, teaching children to reforest is a good start” (respondent I-13)	“we don't have conditions, it all depends on training and projects” (respondent II-7)
Target market	85% respondents list local market, 30% also national, 15% don't know where to sell	69% respondents list local market, 8% also national, 30% don't know where to sell



RESULTS



- Visibly positive socio-economic and environmental results of the project
- Enthusiasm and capacity for continuing reforestation
- Good integration of reforestation into the producers' "portfolio"
- Options of further development (scale-up, carpentry and other industries in the community)
- Forest plantations playing the micro-finance role of "saving accounts"

- Mostly positive, but short-term results of the project
- Positive attitude towards forest plantations, but without capacity for replication
- Very poor economic outcomes of reforestation (prices of wood)
- Plantations playing the role of yet another "cultivation", but not very profitable and not long-term

Key observations:

- Project outcomes vary because of the different institutional context in which the project was implemented
- For social forestry (reforestation) to provide long term socio-economic and environmental benefits, a functioning institutional "nesting" and a broader developmental approach is necessary
- In the first case, the reforestation project provided an additional boost for the smallholder livelihoods, and can be further replicated; in the second case the duration of the project was too short to create long-term benefits
- Local institutions "store" the knowledge and innovations acquired through the project; otherwise – these can be lost
- Organized farmers benefited on an individual (household) as well as community level (cooperative development)
- The Cuatro Vientos cooperative is a voluntary and bottom-up organization; top-down administratively built institutions might not have similarly positive impact because of lower levels of participation and cooperation

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