

# Planning sustainable futures in the Brazilian Amazon: opportunities for social learning among farmers and institutions in Proambiente

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**Abstract:** *Proambiente is a Brazilian program that rewards rural producers for providing environmental services. The program focuses on a participatory approach to land-use planning in the Amazon. The purpose of this study is to describe how social learning emerges when actors are brought together to collaboratively plan sustainable land use. Social learning is understood as a process of exchanging of perspectives, creating common visions, and establishing working relationships. A qualitative case study in the State of Acre was conducted through qualitative interviews with 69 respondents, including farmers, government agency representatives, and social movement leaders. Findings indicate that social learning emerges slowly and is susceptible to structural barriers that constrain participation and dialog. The tenuous nature of Proambiente's government- NGO-farmer partnerships demands that actors pay more attention to nurturing and maintaining these newly-formed networks.*

**Keywords:** *social learning, participatory land-use planning, environmental services, multi-stakeholder process*

## Introduction to Markets for Ecosystem Services

Markets for ecosystem services have garnered considerable attention over the last decade, promising to reduce the costs of conservation and to improve rural incomes. (Jenkins *et al.* 2004; Powell *et al.* 2002). The underlying assumption of these instruments is that when resource owners and producers make decisions about land use, they tend to consider only the direct benefits they receive from the environment. Farmers stand to benefit greatly from markets for ecosystem services because they are the “*largest group of natural resource managers on earth* (FAO 2007).” Their choices and decisions can either ensure or degrade healthy ecosystems.

Supporters of PES believe that by recognizing and economically valuing the benefits derived from natural ecosystem functions, these programs will motivate environmental protection (Pagiola *et al.* 2005). They point to increased efficiency and effectiveness of conservation, as well as more equitably distributed costs and benefits (Pagiola *et al.* 2002). In addition, PES schemes promise to strengthen human and social capital through associated training, education and local institutional development. Negotiation platforms may encourage the utilization of local knowledge and promote broader community participation (Jenkins *et al.* 2004), possibly contributing to conflict resolutions processes (FAO 2004).

## The “Proambiente” Program and Social Learning

Although it remains to be seen whether market-based initiatives will meet these diverse and ambitious expectations, several experimental PES approaches are being implemented worldwide. The Brazilian government’s national program, “Proambiente,” is one such example. Despite being framed as a PES program, Proambiente’s primary objective is not purely conservation or better management of natural resources. Rather, it is a holistic approach to rural development that intends to motivate resource stewardship and diversify rural livelihoods. To this end, the program promises a package of economic and social services, including agricultural extension support.

Interestingly, Proambiente presents venues at local and state levels for actors to plan and negotiate over resource use. It focuses on a participatory approach to land-use planning that ranges from individual property level to collaboration at the regional level. Local agricultural extension agents work

with rural families to develop long-term individualized management plans. Groups of these participating families then establish community-based land management agreements. At the regional level, a Governing Council develops a regional planning tool that aims to connect participating families across scales with supporting organizations and institutions. This represents a change in the way rural landscapes are managed and communities are organized in the Amazon.

It also presents an opportunity to explore social learning among participants as they come together to collaboratively plan sustainable land use. Within a social learning process, stakeholders develop overlapping - or at least complementary - goals, insights, interests and starting-points that may lead to a collective cognition and a sense of perceived interdependence (Roling 2002). The role of language is critical to this process because the way people frame problems and solutions reveals how they position themselves in relation to one another and the issue. Through an active process of framing and reframing, identities are negotiated over time (Bouwen and Taillieu 2004).

## **Research Goals and Methodology**

In this study, social learning is understood as a process of exchanging of perspectives, creating common visions, and establishing working relationships. The purpose of this study is to describe how social learning emerges when actors are brought together for land-use planning and management in Proambiente. The study focuses on the creation and implementation of Proambiente's planning tools as platforms for social learning at the level of the family, community and region. I examine how the different actors frame the goals and concepts of Proambiente, as well as how they perceive their role in program implementation. I describe the extent to which they understand and use their land-use plans for sustainable management. I map the emerging networks to determine central and bridging actors, describing the extent to which community members are working interdependently.

Interviews were conducted in the state of Acre. Two communities of participating Proambiente families ( $N=47$ ) were visited over a period of nine months during 2006. During this time, each member of the governing council also was interviewed ( $N=22$ ). Semi-structured interviews are used, including participatory methods, like ranking activities. Text is transcribed and analyzed using context framing analysis to identify emergent themes.

## **Findings and Conclusions**

Findings reveal diverse understandings (framings) and expectations of program concepts and goals. It appears that the language associated with "environmental services" holds little currency among farmers at this time. Despite their unfamiliarity with this highly technical concept, they readily refer to the more practical aspects of the program, such as Proambiente's management practice goals. They most commonly cite the reduction of uncontrolled fire and reforestation of riparian areas. It appears, however, that farmers fail to link these practices to the provision of particular environmental services.

Members of the guiding council consistently prioritize 'participatory planning' above all other program benefits. In contrast, farmers rank this program aspect as least important to them. In fact, the management plan itself appears to be of little utility at the farm level, without the presence of the technical extension agent to interpret. Farmers are unable to explain their management plan when asked to reference current and future property maps. These findings challenge program implementers to ground these documents more firmly at the farm level, making them more relevant and useful to families. However, irregular funding cycles and unrealistic deadlines from head office cause a flurry among extension agents to produce management plans. These structural barriers severely limit family participation and constrain understanding and social learning.

Through this complex process of establishing land-use plans and developing community agreements, participants form new networks. However, at this stage, it does not appear that actors perceive a sense of interdependence within these networks, nor across scale. The tenuous nature of newly formed NGO-Government-Farmer partnerships demands that actors pay more attention to nurturing and maintaining these delicate webs. This study reminds us that social learning is an evolving process that emerges over time. Since the program is still in its initial stages, one expects that it will undergo growing pains and adaptation. It may be necessary, however, for Proambiente participants to prioritize more time for reflection and facilitated dialog.

## References

- Bouwen, R., and T. Taillieu. 2004. Multi-party collaboration as social learning for interdependence: developing relational knowing for sustainable natural resource management. *Journal of Community & Applied Social Psychology* 14:137-153.
- FAO. 2004. Electronic forum on payment schemes for environmental services in watersheds: Final Report from REDLACH (Latin American Network for Technical Cooperation in Watershed Management).
- FAO. 2007. The State of Food and Agriculture: Paying Farmers for Environmental Services. In *Report*. Rome: Food and Agriculture Organization of the United Nations.
- Jenkins, M., S.J. Scherr, and M. Inbar. 2004. Markets for biodiversity services: Potential roles and challenges. *Environment* 46 (6):32-42.
- Pagiola, S., A. Arcenas, and G. Platais. 2005. Can payments for environmental services help reduce poverty? An exploration of the issues and the evidence to date from Latin America. *World Development* 33 (2):237 - 253.
- Pagiola, S., N. Landell-Mills, and J. Bishop. 2002. Market-based mechanisms for forest conservation and development. *Selling Environmental Services* Chapter 1.
- Powell, I., A. White, and N. Landell-Mills. 2002. Developing markets for the ecosystem services of forests. Report by Forest Trends.
- Roling, N. 2002. Beyond the aggregation of individual preferences. In *Wheelbarrows full of Frogs: Social Learning in Natural Resource Management*, edited by C. a. P. Leeuwis, R. The Netherlands: Koninklijke van Gorcum.