

CASE STUDY ON NON-CARBON BENEFITS AND INDIGENOUS- AND LOCAL COMMUNITY PRACTICES

TITLING OF INDIGENOUS TERRITORIES PROTECTS AND INCREASES TROPICAL FOREST COVER IN THE PERUVIAN AMAZON

NCBs are crucial for the mere existence of the forests we want to protect, and thus for REDD+.

The study illustrates the importance of NCBs to REDD+, and particularly the effects of land demarcation and titling of indigenous communities, its impact on governance and democracy, on social structures and livelihoods, and on environment and forest cover. The case shows that NCBs are both land tenure rights as well as subsistence and coffee production, illustrating the synergy between rights, carbon and economic benefits for the indigenous population.

This case presents evidence from a study measuring land use over a 50-year period in the Peruvian Amazon and shows how demarcation and titling of indigenous community territories has led to increased forest cover, due to the sustainability of the indigenous production system.¹ This is compared with non-indigenous cattle raisers' production in the same location over the same time span, which has led to high deforestation rates and a self-destructive and stagnating economy.

The area

The area called Gran Pajonal is a high lying interfluvial plateau² of approximately 380,000 hectares (3,800 km²) situated in the eastern part of the central Peruvian Amazon. The area is covered with lush forest vegetation³ combining primary forest with secondary forest growth, most predominant around the community settlements. However, the most distinctive feature in this landscape is the *pajonales* - the hill savannahs - open, grass-covered areas that are scattered all over the inner zone of the Gran Pajonal and numbering hundreds of patches of grasslands of varying size, ranging from small glades to large savannahs covering hundreds of hectares.

The population

Two different populations inhabit the Gran Pajonal: the Ashéninka Indians and a group of mestizo settlers - *colonos* - with mixed backgrounds in the Andean peasant society.

The Gran Pajonal Ashéninka number around 8,000 persons today (2013); distributed across some 40 Native Communities (Comunidades Nativas). The community territories are all demarcated and collectively titled in the name of each community, all with their own elected authorities and with relative autonomy, guaranteed in Peruvian legislation and the national constitution. Most of the communities have their own bilingual primary school, a small health post and several have their own multichannel shortwave radio for communication with neigh-

bouring indigenous communities and organizations. All the communities together make up the Ashéninka Organization of Gran Pajonal, the OAGP, a well-functioning indigenous organization with a strong and consistent leadership. The communities are all located adjacent to each other, forming one large continuous territory.

The *colono* population is concentrated in the center of the area in and around the old mission and settler colony of *Oventeni*. Today, there are around 650 settlers representing some 120 families. Most of these settlers migrated to the area in the 1960s, and a second generation of settlers born in Oventeni is gradually taking over. These *colonos* are mostly of Andean descent, with their roots in the Quechua-speaking peasant culture of the Central Andes. They self-identify as mestizo highlanders, and colonist pioneers. They are not organized in any common association. The colonist community includes many poor peasants and a few dominating and relatively wealthy cattle ranchers.

Economy and production

The core of the Ashéninka production system is a traditional Amazonian shifting horticulture, sometimes characterized as "native agroforestry". The system is based on small swidden plots averaging 1-2 hectares, with a variety of edible, commercial and utilitarian plant species in an advanced intercropping

system. The structure and composition of such a garden plot varies over time as the plot gradually regenerates as forest. Every season thus has its specific composition of harvestable crops, ending with perennial tree crops such as avocado trees, peach palms and nuts. An average fallow period spans some 25 years, but the fallow cycle varies depending on the soil, location and use, before the plot can be cut and used again for a new garden plot. A relatively new tendency in market-oriented production is the cultivation of high-quality coffee for export. The Ashéninka have adopted coffee as a favourite cash crop and have succeeded in adapting it to their integrated rotational cultivation system. As an integral part of their subsistence cultivation system, their coffee production costs are quite low compared to those of neighbouring mestizo coffee producers, making the Ashéninka quite competitive and far less vulnerable to market fluctuations. The income from coffee production is growing, and organic certification is in process. The key to the coffee success of the Ashéninka is the diverse and healthy subsistence production, which keeps the cost of social reproduction low. The indigenous economy is geared towards self-sufficiency, with several “institutionalized” buffer mechanisms in times of crisis. The study shows that the key parameter for success is demarcation and collective titling of indigenous territories. The indigenous population did not have any lands or territories demarcated and titled until they succeeded, though massive pressure and organizational effort, in starting the demarcation and titling process of their community territories with support from a World Bank-financed regional development scheme in the late 1980s. The land titling restrained the aggressively expanding cattle economy at the time, and gave room for the development of sustainable high-quality coffee production, another important NCB in combination with the land titling.

The fact that their land and territory is demarcated and communally-titled is an indispensable prerequisite, as it otherwise would have been appropriated by colonist cattle ranchers.

The settler economy of Oventeni is primarily based on cattle-raising. Tropical forest is cleared and pasture suited to cattle grazing is instead planted. Most of the heavy work of clearing forest, planting pasture and maintaining it to avoid re-growth into shrub savannah forest has been done by cheap Ashéninka labour. The indigenous labour was up to the 1990s secured through feudal exploitation systems, in patron-peon relationships. The productivity of the cattle-rearing is very low. The settler economy is vulnerable to market fluctuations and access to cheap external labour. With the growth of the combined indigenous coffee export and subsistence economy, it has been increasingly difficult for the cattle raisers to secure indigenous labour, and cattle production is gradually proving unviable and unsustainable.

The impacts on the forest habitat

A study of land-use patterns and changes in forest growth over a 50-year period documents the impact of these two different production systems,⁴ and shows that the indigenous population has maintained almost the same ratio of forested land to land in production, albeit with a falling tendency in extension of grassland.⁵

The effectiveness of the indigenous production system in maintaining more than 91% forest cover is conspicuous. Moreover, the indigenous production system not merely permitted the maintenance and extension of forest. It has also allowed a sharp rise in population in the indigenous communities, where the population has tripled since the 1950s. The colonist population, on the other hand, has barely maintained the same population size as in the 1980s, but while they have increased deforestation of their production and living areas by almost 50% over the same period of time (48% with forest cover), there has been no noticeable changes in poverty level or income generation for the majority of settlers.

Land use 1950s		
	Indigenous areas	Settler area
Forest	87%	87%
Grassland/pasture	7%	7%
Gardens and fallow	6%	6%
Settlements	-	<1%

Land use 1980s		
	Indigenous areas	Settler area
Forest	92%	72%
Grassland/pasture	6%	20%
Gardens and fallow	2%	7%
Settlements	<1%	<1%

Land use 1996		
	Indigenous areas	Settler area
Forest	91%	48%
Grassland/pasture	5%	28%
Gardens and fallow	4%	23%
Settlements	<1%	1%

Conclusion

The traditional indigenous production system and livelihood has shown remarkable resilience and adaptability to modern market conditions, entering into organic coffee production for the export market. Not only has the indigenous production system resulted in 5% more forest in 1996 compared to the 1950s, it has also supported a population increase of some 200-300% between the 1950s and 1996, generated income for extremely poor indigenous families, and made a more democratic governance system possible with active participation in national and civil society.

Contrary to this stands the settler production system based on small-scale cattle production. The *colono* population has barely been able to maintain its population size in Gran Pajonal, despite new road infrastructure and technical support. Moreover deforestation and degradation increased by 39% (from 13% in combined grass and gardens to 52% combined) between the 1950s and 1996, without notably increasing their relative living standards.

The conspicuous difference between the two production systems explains why NCBs are crucial and a prerequisite to gen-

erating long-term carbon benefits, and why indigenous knowledge and adaptability could also have a positive impact by restraining production systems that drive deforestation, such as the settler production of Gran Pajonal, if supported by the implementation of robust safeguards and the prioritization of NCBs.

The case of the coffee-producing Ashéninka in the Peruvian Amazon shows how social, cultural, environmental and governance aspects are interlinked and why it makes sense to give high priority to NCBs in REDD. Although this study has been done on a regional level and could be suspected of being an exception, the general tendency towards forest protection by indigenous territorial usage and management systems is well documented by other large-scale studies in Peru.

The high impact that indigenous areas have on reducing deforestation points to the fact that indigenous land rights, demarcation, titling and establishment of indigenous territories is a viable strategy for REDD+, in combination with multi-use areas of other forest-dependent communities, and substantiates why NCBs should be given high priority in all stages of REDD+ implementation.

Notes

- This case is based on a research project conducted by the Danish anthropologist Søren Hvalkof, supported by the Danish Council for Development Research and carried out at the University of Massachusetts, Amherst, USA, 1994-1997. (10, 11 and 12)
- It rises like a rocky block to an elevation that varies between 3,000 to 5,000 feet but, inside, one finds a much more friendly tableland characterized by a combination of rolling hills and steep slopes, criss-crossed by numerous streams cutting deep ravines.
- Classified according to ecoclimatic parameters as Humid and Very Humid Montane subtropical forest (ONERN 1968:72-73).
- See note 7 above.
- To be able to compare, relatively similar areas of intervention and of similar size were chosen: the *colono* zone around the Oventeni colony, and the Native Community of Shumahuani. Three situational time "transects" for land-use patterns were applied: The 1950s (1954 -1958), the 1980s (1983-1984) and the late 1990s (1996). The land use patterns were mapped, digitized and analyzed on the basis of aerial photo surveys from 1954 and 1958 in 1:10.000 and 1:15.000; and aerial photo surveys from 1983 and 1984 in 1:50.000. For the 1996 survey, the research project ordered a special take by the French SPOT satellite of the Gran Pajonal during the months of July-August 1996. (11)

