

Climate Change Funds Go to the Organized: A Least Likely Case from the Ecuadorian Amazon

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Who, in theory, would get the funds for mitigating climate change through carbon sequestration in growing forests?: Theoretical Expectations about equity and inequity in who gets paid

- Large landowners maintain more of their land in forests than do smallholders because they do not need to cultivate marginal lands to make a living.
- Landownership is quite skewed with the wealthy owning much more land than the poor.
- These two tendencies suggest in simulations of payments for environmental services (PES) that most of these payments for mitigation will go to the wealthy.
- At least one case, of a PES in Ecuador, suggests a different pattern.

Coast, Andes, and
Amazon



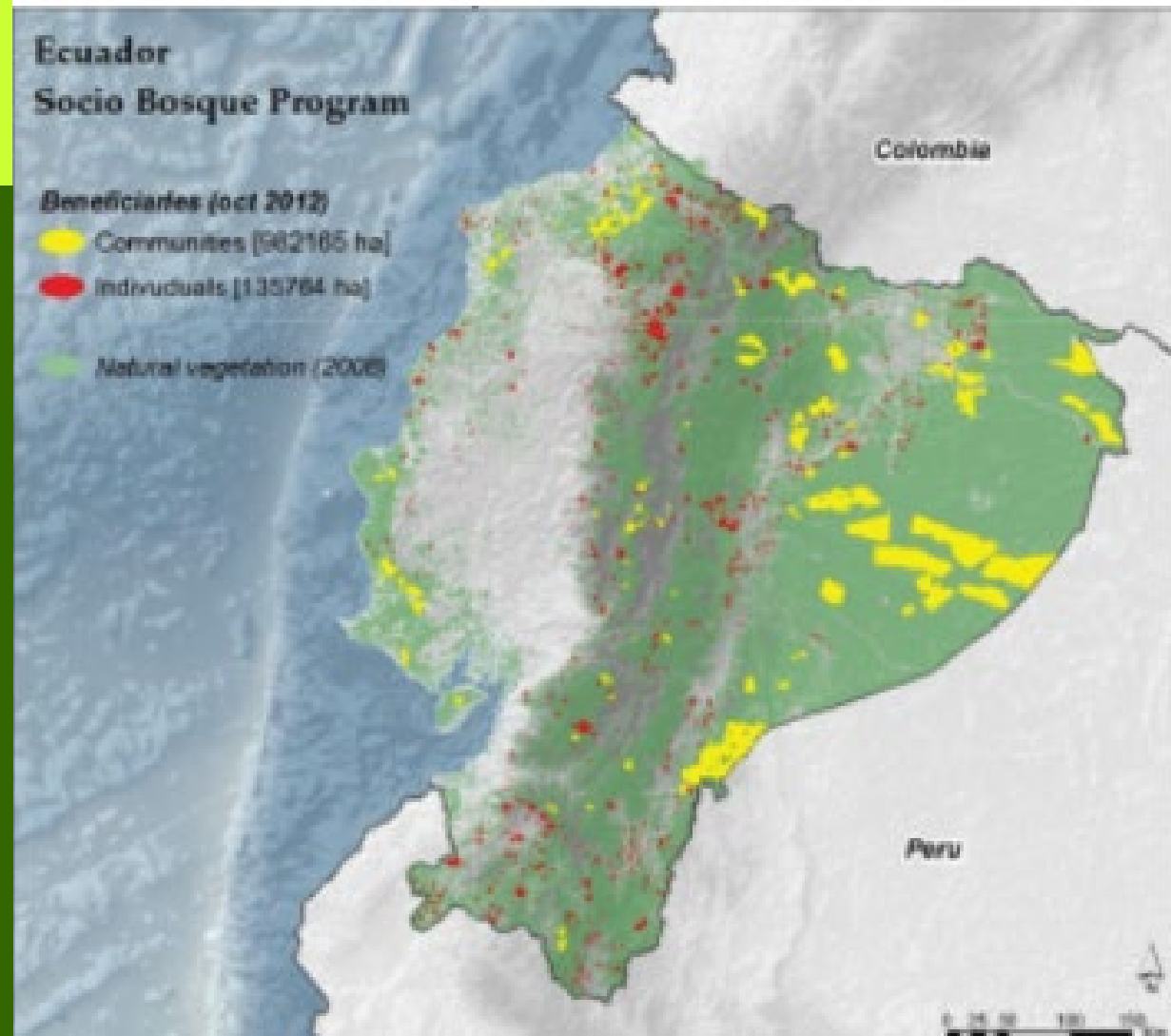
Ecuador: the Historical Context

- A Lower Middle Income Country - still one of the less affluent Latin American countries
- Comparatively large Amerindian population, self-identified - 7.0% of the population in 2010.
 - Poverty is concentrated in rural areas (42% of all rural households compared with 17% of urban households in 2013 have incomes below the poverty line - \$80/month). Amerindian households are the poorest segment of the population (87% below the poverty line in 2004).
- A Petro-state - headed since 2006 by Rafael Correa, a left leaning president who has presided over a rapid expansion of state expenditures.
- In 2008 the government began the Socio-Bosque program which pays landowners for sequestering carbon in forests on their lands. 13.06% of all lands in Ecuador are now enrolled in the program.
 - Who benefits from it?

Socio-Bosque Lands Enrolled for Carbon Sequestration Payments

Three Geographical patterns

1. No forests (no green), no payments.
2. Global Titles for Indigenous Groups - Pastaza
3. Individual titles clustered in two high amenity, rural places within 2.5 hours drive of Quito (Mindo - for bird watchers and Banos - for biking & baths).



Regional Patterns in Payments for Environmental Services: Socio Bosque Program, 2014

	Coast	Andes	Amazon
Land Area (% of National Area)	41	36	22
Population (% in 2010)	52.4	42.5	5
% of Households in Region below the Poverty Line, 2010	71.5	59.7	78.3
% of People in Region who auto-identify as Indigenous people, 2010	1.2	15.4	34.3
% of Lands enrolled in the Socio-bosque Program, 2014	9	11	80
% of Payments for Environmental Services, Socio-bosque Program, 2014	19.4	26.9	53.7

Predicting Payments for Environmental Services across the Provinces

$$\begin{aligned} \text{Payments (\$)} = & 211785 + 935165 \text{ self-identified indigenous (\% of population in 2010)}^* \\ & (407976) \\ & - 1185030 \text{ agriculture (\% of land area in 2010)}^* \\ & (542801) \end{aligned}$$

R² (adj.) = .461

N = 23

* = p < .05

Why has the poorest segment of the population, Amerindians, done so well, at least initially, in capturing mitigation monies?

- The answer only becomes apparent through a historical analysis of changing patterns of land tenure in the Amazon.
- We will be looking at the pattern among the Shuar, the first Amerindian group to get titles to land,

The pre-contact Shuar settlement pattern: Early 20th Century - Before the missionaries and the mestizo migrants



A Shuar Homestead in the Forest





Mestizo Colonists from the Highlands crossing the Zamora River in the upper reaches of the Ecuadorian Amazon, 1960s

Competitors for Land, late 1960s

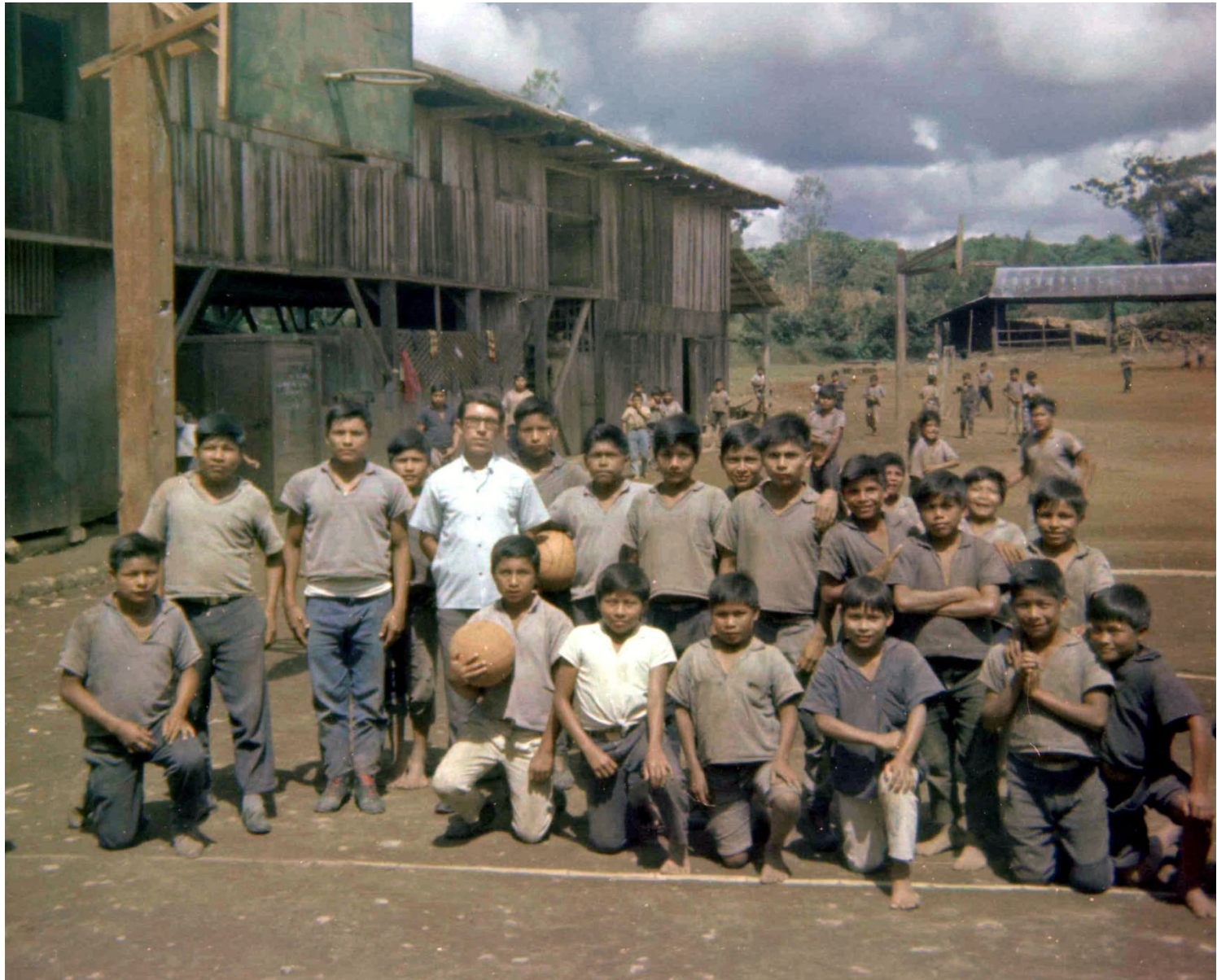
Shuar Mestizo Colonist



Salesian Priests – Mostly from Southern Europe – the Source of the Push for Global Titles for Amerindians during the 1960s and the 1970s



Shuar boarding schools in the Missions



Shuar settlement pattern: After the Missionaries - Communities with Global Titles to Land (~3000 - ~7000 ha.)



Land Titles , post 1970s

- Individual (mestizo) colonists have 'pre-titles'. Full titles are too expensive for them to acquire.
 - Amerindians have full, global titles to land
- From this difference stems the large differences in Socio-Bosque participation rates between mestizos and Amerindian poor.

The absence of mestizo poor from the list of Socio-Bosque's beneficiaries could be dismissed as a reflection of environmental mismanagement by mestizos.

This line of thinking ignores changes in mestizo land management and in particular the spontaneous emergence of silvo-pastoral landscapes in parts of the Ecuadorian Amazon.

Pastures, late 1960s, after clearing.
Note the absence of trees







Less Dense



More Dense



Lots of variation from farm to farm in the density of trees in pastures: How do we account for the variation? (our question)



Less Dense



More Dense

Research Findings & Policy Implications

The higher stem densities in some pastures but not others do not appear to be an accident. They result from decisions by younger farmers to allow the sprouting seedlings of commercially valuable species to continue to grow in pastures. If enough additional carbon is sequestered in these pastures with trees (about 1 ton per year per hectare), smallholder cattle ranchers could become an important class of recipients in REDD+ payment schemes for sequestering carbon.

How likely is this scenario?

- Not very because ...
 - Mestizo smallholders, unlike the Amerindians, do not have full titles to their land.
 - There are no community representatives to negotiate on their behalf, no economies of scale in transaction costs
 - The indigenous people, despite being poor, are relatively well organized and that level of organization, attributable in part to historical accident, has made it possible for them to take full advantage of the new PES program.

Two Concluding, Companion Points

- The distributive issues surrounding climate change are not wholly different from other distributive issues. Elites who have had difficulty reaching the rural poor on other issues are going to have problems mobilizing them and including them in climate change benefit and relief programs. Still it can be done.
- The wealthy are usually well organized, so we can expect them to be well represented in the lobbying for climate change funds. The experience in Ecuador admittedly has some special circumstances, but it certainly suggests that community development has a vital role to play in reducing inequities in the distribution of funds to facilitate both adaptation to and mitigation of climate change.

Thanks!

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