



Understanding linkages between ecosystem service payments, forest plantations, and export agriculture



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ARTICLE INFO

Article history:

Received 23 October 2012

Received in revised form 19 March 2013

Available online 28 April 2013

Keywords:

PES

Costa Rica

Neoliberalism

Forestry

Plantation agriculture

ABSTRACT

In this paper, I consider how and why payments for ecosystem services (PES) become embedded within a country's wider land use practices and economic sectors. To do so, I examine the linkages between Costa Rica's reforestation payments and the country's agricultural and forestry sectors. I first situate the rise of PES in Costa Rica within a changing political economy of land use by showing how PES emerged during a period of drastic state policy changes toward forestry and agricultural sectors. This was an era that opened political space for PES, but largely left the economic organization of the country's forestry sector intact. Second, I examine the types of trees that have been planted due to the reforestation modality of Costa Rica's PES program, and how such trees are used across the wider economy. I find that most trees planted under this program are for the fast growing Melina (*Gmelina arborea*) tree, a species that is almost exclusively used for the production of wooden pallets for agricultural export. Such an outcome renders Costa Rica's payments for reforestation an indirect state subsidy for large agribusiness. I situate these findings within geographic and policy debates about PES and neoliberal environmental policy more broadly. I argue that the empirical results presented here have little to do with the policy's purportedly neoliberal features, but instead, derive from the policy's insertion within long standing patterns of agricultural production and land use.

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1. Introduction

In 2008, Costa Rican president Oscar Arias declared that the country would become carbon neutral by 2021, making it the first developing nation to do so (Burnett, 2008). This plan relies heavily on the country's system of payments for ecosystem services, in which forest stands linked to this policy will be leveraged to offset many of the country's greenhouse gas emissions from cars, trucks, and airplanes (Lovgren, 2008). While some have expressed skepticism as to how far this carbon neutrality campaign can extend (Fletcher, 2013), the government commission on standards is currently developing offset neutrality procedures for everything from cement plants to weddings (interview 2010). Whether or not such a campaign creates a space of carbon neutrality, it is clear that PES in Costa Rica is becoming integrated with other environmental policies and economic practices across the country in new ways.

Such a development points to key questions about PES that have only begun to be addressed by scholars: in what ways is PES embedded within wider, country-level policy and economic trends, why, and with what effects? In this paper, I address this

set of questions by tracking the different economic and policy shifts that accompanied the rise of PES in the mid-1990s, and examine the ways in which one part of Costa Rica's PES program—payments for reforestation—has become integrated with the country's forestry and agricultural sectors. Specifically, I make three empirical claims in this paper. First, PES in Costa Rica arose out of a sustained period of structural adjustment policies heavily influenced by the World Bank and USAID. This was a process of neoliberalization that left the basic economic relationship between the forestry and agricultural sectors intact. Second, environmental service payments for reforestation have mostly gone to support the fast-growing Melina tree (*Gmelina arborea*), a species largely used to produce wooden pallets for use by agricultural exporters. This is a pattern that has rendered the reforestation modality of PES an indirect subsidy for large agribusiness. Third, this result is a consequence of PES becoming embedded within a forestry sector that is poorly articulated with the non-agricultural sectors of the economy.

While PES in Costa Rica is currently being mobilized for carbon neutrality, its relation to the country's forestry and agricultural sectors has produced results that run counter to the very philosophy that PES is supposed to embody. When the state makes a payment to a farmer for either leaving their land in forest (conservation), or for planting new trees on their land (reforesta-

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tion), it is purchasing the rights to the environmental services (such as carbon sequestration) that such trees provide (Pagiola, 2006). The state can then sell the rights to these services to “downstream” users. In the case of the country’s carbon neutrality campaign, the rights to land users’ carbon sequestration are currently being sold as carbon offsets to bus companies that carry around tourists, with hopes that eventually such offsets will expand to every sector of the economy that emits greenhouse gases (Dobles, 2008). Close to twenty percent of such payments, however, go toward reforestation, and as I will show in this paper, such payments result in trees that become an input for highly industrialized, and carbon intensive, agribusiness.

Such an outcome of PES would appear to confirm some of the worst fears of PES critics, who have argued that the policy’s grounding in a neoliberal policy discourse of commodification and markets will result in a number of undesirable and perverse outcomes (Corbera and Brown, 2010; Kosoy and Corbera, 2010; Lansing, 2011; Bumpus, 2011; McAfee, 2012). This is an argument that has been applied not only to PES but also to a diverse number of cases of environmental policy grounded in neoliberal principles of free markets, resource privatization, and commodification of nature (e.g. Castree, 2008). Recent assessments of PES, however, call into question the extent to which these neoliberal principles shape PES policy. Some have argued that, in some cases, PES-in-practice exhibits many qualities of a forestry subsidy and its implementation is not necessarily guided by the free market ideals of privatizing and commodifying the commons (McAfee and Shapiro, 2010; Fletcher and Breitling, 2012). Similarly, in their review of policy debates concerning PES, Dempsey and Robertson (2012) have shown how the discourse around PES is actually quite diverse, with some of its staunchest proponents advancing a policy vision that is an anathema to neoclassical concepts of fully marketized environmental services.

The presence of the state, of course, does not preclude the policy from having neoliberal features. Indeed, a key theme of scholarship on this topic is the often necessary presence of the state to render neoliberal policy prescriptions into practice. Further, heavy state direction in the present does not preclude a further neoliberalization of the policy in the future. As Matulis (2013) recently discussed in the Costa Rican case, the policy’s market rhetoric has come to infuse recent efforts to link providers of watershed services to their literal downstream beneficiaries that reside within the same watershed. The result is a water “user fee” model where revenues from the fee must go to the upstream landowners within the same watershed from where the fee was paid. This is a process with the potential to produce a geographically constrained payment system that tends to favor landowners in wealthy watersheds, and thereby reproduce patterns of uneven development.

Given the heterogeneity in both discourse and practice of PES, and given the incongruous mix of neoliberal and non-neoliberal features the policy exhibits, this paper analyzes PES’ relation to other sectors of Costa Rica’s economy as a way to further clarify the extent to which the neoliberal features of the policy produce specific results. To do so, I consider two aspects of neoliberalization that are frequently linked to PES by scholars—commodification and privatization—and assess the extent to which they can be attributed to the policy’s indirect support of export agriculture. I argue that, even if the rise of PES in Costa Rica can be read as a case of neoliberal policy transfer, the empirical consequences of the program’s reforestation payments have little to do with these processes. Instead, the impacts of PES described in this paper are driven by how the payments, and the landowners that receive them, are embedded within long standing patterns and practices of forestry and agricultural production. These are practices that, in a number of key respects, remain largely unchanged despite the country’s 10-year experience with structural adjustment poli-

cies in the 1980s and 1990s. This case points to the analytic limits of invoking commodification and privatization as tools for explaining policy outcomes. I argue that the linkages between PES, Melina planting, and pallet construction described in this paper were well entrenched prior to the arrival of PES, and processes of ecosystem commodification and privatization have little to do with their continued durability. In short, payments for reforestation have done little to transform patterns of land use and economic practice that are discussed in this paper. Instead, it is the opposite. Parts of PES itself have become transformed through its insertion into a long-standing relationship between the country’s agricultural and forestry sectors.

To make this argument, the paper proceeds as follows. In the next section, I discuss scholarship on PES and neoliberal policy development. Next, I outline the paper’s methodology and study site. Following this, I provide a brief history of Costa Rica’s agricultural and forestry sectors since the 1980s, along with an explanation of how the country’s PES program emerged in the 1990s. Then, I examine the results of the country’s reforestation PES modality, and contextualize these results within the structure of the country’s forestry sector. I end the paper with a discussion of why these results have occurred and offer a conclusion that draws out lessons for the Costa Rican case for understanding the development of PES more broadly.

2. PES and land use transformation

Scholarship on PES is voluminous, however, most writings can be thought of as one of two types of analyses. First, there are largely technocratic studies concerning the efficiency of payments, in which the potential leakage, displacement, and additionality of PES in various contexts are evaluated (e.g. Alix-Garcia et al., 2012; Wunder, 2006; Daniels et al., 2010; Ferraro, 2009). Such scholarship, for example, may use econometric tools to demonstrate whether a particular PES program is subsidizing existing reforestation trends or not (cf. Pfaff et al., 2008; Arriagada et al., 2012). Such work is primarily concerned with the impact of the policy as it relates to its immediate conservation and social goals. To date, few such approaches have addressed how land use trends that PES might (or might not) produce ultimately become embedded within other parts of the country’s economy (but see Koellner et al., 2010).

A second strain of scholarship calls into question the ethical, political, and environmental appropriateness PES itself (e.g. Kosoy and Corbera, 2010; Büscher, 2012; McAfee, 2012). This more recent scholarship inverts the longstanding technocratic concerns of many economists, and argues that an efficient PES program is not necessarily desirable. Instead, such policies can produce negative long run social and environmental consequences such as increased rural inequality and land dispossession (e.g. To et al., 2012; Wittman and Caron, 2009), or produce environmentally problematic, single species tree plantations (Bäckstrand and Löwbrand, 2006). Critical scholars, however, have only begun to examine how such patterns found at the level of the project come to interact with other forms of environmental and economic actors across the nation–state (but see McAfee and Shapiro, 2010). PES type schemes are expanding rapidly worldwide, and thus becoming integrated with a number of diverse forms of economic and land use practice. Thus, an analysis of how and why such payments become embedded within wider economic sectors remains a critical, yet relatively under investigated, area of inquiry.

While grounded in concerns specific to PES, my analysis is also meant to address an issue that has occupied critical scholars of neoliberal environmental policy. That is: to what extent can we ascribe the consequences of this policy to its neoliberal features, and

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