

# Motivation crowding-out potential and community resource conflicts in payments for biodiversity conservation: evidence from Chiapas, Mexico

## Summary

Payments for Ecosystem Services (PES) programs have emerged as contract-based conservation instruments. The introduction of these incentives can undermine collective action, eventually creating or exacerbating conflicts regarding common resources management. We investigate how household-based land management practices and internal forest governance processes have been re-crafted in two communities participating in a program of payments for biodiversity conservation in Mexico. We rely on interviews with participants in both communities, who develop conservation activities in both family-owned and collective land plots. We also rely on focus groups with non-participants to visualize the effectiveness and legitimacy of PES benefit-sharing. Our data suggests that community-based forest governance changes are associated with new forms of collective organization that further increase the dependence to external support. Changes in this regard are explained by the political and economic divisions characterizing relations between and within PES eligible and non-eligible households.

## Extended abstract

Payments for Ecosystem or Environmental Services (PES) programs aim to contribute to forest and ecosystems conservation using monetary incentives (Engel, Pagiola, and Wunder 2008; Jack, Kousky, and Sims 2008; Muradian et al. 2010). PES draw on the premise that intrinsic and extrinsic motivations are separable and additive (Bowles 2008) and that direct economic incentives can increase pro-social behavior of participants: if the price paid for delivering conservation outcomes increases, agents are more likely to increase their supply (Frey and Jegen 2001). However, increasing evidence suggests that payments can induce a crowding-out effect when they interact with already existing social norms, especially in contexts of previous and simultaneous collective actions (Vatn 2010; Narloch, Pascual, and Drucker 2012).

At present, most government-funded PES programs in the global South have paid beneficiaries during a relatively short period of time (Wunder, Engel, and Pagiola 2008; Muñoz-Piña et al. 2011). Contract renewal depends on compliance requirements and funding availability. In countries like Ecuador, Mexico, Costa Rica or Vietnam, beneficiaries can include individual landowners, as well as rural or indigenous communities with shared norms regarding natural resource management (Sunderlin et al. 2014; Mahanty, Suich, and Tacconi 2013). In these contexts, it can result politically difficult and almost legally impossible to enforce the permanence of conservation activities if the PES contract ends and is not renewed. It is uncertain if the latter may lead to a possible “rebound effect” (Maestre Andrés et al. 2012) and it is therefore critical to understand beneficiaries' behavioral responses to environmental conservation once payments cease.

In this article, we analyze the implementation of Mexico's government-funded PES biodiversity program in two rural communities in the state of Chiapas, paying attention to participants' behavior and program effects on the collective institutions for natural resource management. The environmental effectiveness of biodiversity payments (Costedoat et al. under review) and their behavioral and governance implications have been overlooked in comparison to the country's

program of payments for watershed services (Muñoz-Piña et al. 2008; Alix-Garcia, Shapiro, and Sims 2012; Shapiro-Garza 2013).

We rely on semi-structured interviews and surveys involving all PES participants in both communities, who develop PES conservation activities in both family-owned and collective land plots (N=30 and N=60, respectively). We explore beneficiaries' motivations, compliance with scheduled activities, and the likelihood to change land-use activities when the 5-year payment period ends. Given the uneven distribution of land and decision-making power within the communities, focus groups involving women and non right-holders also contribute to visualize the effectiveness and legitimacy of PES benefit-sharing involving non-participants (Corbera, Soberanis, and Brown 2009). Relating the perceptions and discourses about the program and its effects on both individual and collective behavior sheds light on the likelihood of maintaining conservation activities in the future.

Overall, we provide additional insights to emerging debates on the behavioral consequences of using monetary incentives to reach conservation goals in rural commons, and to illuminate the potential opportunities as well as conflicts arising from the intersection of participants' goals, commitment to permanence and non-participants' claims on the future of PES lands. The discussion focuses on the ability and likelihood of Mexico's and other government-funded PES programs to promote or undermine pre-existing conservation motivations and the programs' interplay with existing institutions and conflicts in the management of agricultural and forest resources.

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