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Effectiveness and synergies of policy instruments for land use governance in tropical regions

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ABSTRACT

Land use is regulated through various mixes of command-and-control interventions that directly affect land use via land use restrictions, and other public interventions that indirectly affect land use via agricultural, forestry, trade or macro-economic policies. More recently, coalitions of public and private actors have designed market-based and/or demand-led policy instruments to influence land use—e.g., eco-certification, geographical indications, commodity roundtables, moratoria, and payments for environmental services. These innovative instruments fall along a continuum of state involvement and interact with traditional public forms of land use regulation, leading to "hybrid" interventions. This article reviews emerging evidence on the effectiveness of the main instruments used to promote sustainable land use, and explores interactions between the new demand-led interventions and formal regulatory public policies. Although there are still insufficient rigorous studies evaluating the effectiveness of hybrid instruments, available evidence suggests some positive direct and indirect benefits. Hybrid instruments combine elements from both private and public regulatory systems, in innovative and effective ways. We propose a typology to characterize potential interactions between instruments that regulate land use. It links various types of interactions—i.e., complementarity, substitution, and antagonism—to the various stages of regulatory processes—i.e., agenda setting, implementation, and monitoring and enforcement. We give examples of governments endorsing certifications or using certification to support their own policies; governments creating enabling conditions for hybrid instruments to mature, allowing for wider adoption; and private instruments reinforcing public regulations or substituting for missing or weak governance. In some cases, governments, NGOs and corporations compete and may hinder each other's actions. With favourable institutional and governance contexts, well-designed hybrid public-private instruments can be effective. More systematic evaluation could boost the effectiveness of instruments and enhance synergistic interaction with traditional public land-use policy instruments to achieve incremental benefits as well as longer-term transformative outcomes in land-use protection.

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1. Introduction

Enhancing food, fibre, and fuel production to satisfy the growing global demand, while at the same time preserving the integrity of natural ecosystems and their capacity to deliver key services, requires the widespread adoption of more sustainable land use practices. A large and growing fraction of the recent conversion of natural ecosystems is associated with commodities produced for global markets, with expanding demand and high income elasticities (e.g., soybean, palm oil, coffee, beef) (Lambin and Meyfroidt, 2011). Land use decisions related to these commodities are increasingly driven by factors in distant markets. The final consumers of these commodities, the corporations involved in their trade, transformation and retailing, and civil society show a growing concern for sustainability. Involvement of private actors led to the emergence of various initiatives aimed at influencing land use, including eco-certification, geographical indications, commodity roundtables, moratoria, and payments for environmental services. These interventions fall along a continuum of state involvement and interact with traditional public forms of land use regulation. The dynamics and outcomes of interactions between regulatory mechanisms along the public-private continuum are not well understood.

This article reviews the current evidence base on the effectiveness of the main interventions to promote sustainable land use and explores interactions among them. The objective is to better understand which combinations of actions by citizens, consumers, NGOs, corporations, and governments are best suited to promote sustainable land use. Effectiveness is defined in terms of the ability to generate on-the-ground impact, be it directly, if the instrument contributes to resolving the specific problem it was created to address, or indirectly, if it induces non-targeted favourable changes. We focus, in particular, on the preservation of terrestrial ecosystems and improvements in ecosystem service provision vis-à-vis an established baseline. Evaluation of policy instruments generally rests on effectiveness, efficiency (cost-effectiveness), and equity (including legitimacy) criteria (Russell and Powell, 1996; Jack et al., 2008). We focus here on effectiveness, mostly in developing economies where most conversion of natural ecosystems currently takes place, and where governance regimes tend to be weak. We first synthesize empirical evidence on the land use impact of single instruments. We then explore the main interactions between these new demand-led interventions and formal regulatory public policies.

Traditionally, public sector governance of land use has relied on mixes of: (i) command-and-control instruments that directly affect land use (e.g., protected areas and other land use restrictions); (ii) policies relating to land-based activities (e.g., agricultural and forestry policies); and (iii) policies that indirectly influence land use (e.g., macro-economic, trade and fiscal policies, property law) (Mather, 2006). The focus of this review is on policies that directly affect land use. Command-and-control instruments face limitations. First, they involve uncompensated opportunity costs for landholders, which may be politically unsustainable for governments. Secondly, they rely on governments' capability of enforcement, which is often lacking. Thirdly, with international trade and the growing market concentration of transnational corporations, the relative power of governments to manage resource production decisions decreases. And finally, command-and-control instruments can have unintended spill-over effects outside the regulator's jurisdiction.

Recognizing these limitations, private actors, such as non-government organizations (NGOs) and private companies, are increasingly engaging in land use governance either independently or in the form of mixed public-private (or hybrid) initiatives (Lemos and Agrawal, 2006; Dauvergne and Lister, 2013). Demand-led policy instruments, which function primarily through price signals and other economic incentives to modify behaviour, have emerged. While land use has always been regulated by policy mixes, the character of the mixes is changing: voluntary, incentive-based instruments designed by private actors to directly influence land use gain a growing importance in hybrid policies. Although private actors do not have authority to enforce regulations through legal mechanisms, they are exerting coercive influence through other means. Large consumer awareness campaigns have enabled international environmental NGOs to exert considerable pressure on manufacturers and retailers who concentrate power along their value chains (Conroy, 2007). Some international retailers and commodity producers have responded by imposing minimum sustainability standards (Agrawal et al., 2011).

As developing countries increase their efforts to enhance compliance with existing regulations, the interactions between various mechanisms to steer land use become more salient. For example, in the context of REDD+ (a planned international mechanism to reduce emissions from deforestation, degradation, and enhance forest carbon stocks), NGOs are supporting Brazil's government-led environmental land registers (CAR) as a basis for effective land-cover change monitoring and law enforcement (Duchelle et al., 2013). Private regulatory mechanisms, such as third-party certification, have been developed independently of state delegation and require new forms of policy coordination (Cashore et al., 2004). The articulation between public and private governance, including governmental, intergovernmental, private sector, and civil society initiatives, is an emerging area of policy research (Auld et al., 2008; Lister, 2011; Gulbrandsen, 2013). Voluntary instruments may often not suffice to achieve ultimate policy goals; and a better understanding of how multiple interventions along the public-private continuum can interact effectively can boost their performance. The "new governance" literature calls for combined soft and hard law approaches as well as multi-actor engagement from industry and NGOs in the policy process (Gunningham and Young, 1997; Eliadis et al., 2005).

Despite the interest in multi-partner governance, the policy literature remains largely focused on the political authority of governments. Governments have historically provided or delegated to industry to self-regulate the coordination of these "hybrid" or "multi-partner" environmental governance arrangements (Lemos and Agrawal, 2006). Such coordination comes with a high cost and institutional complexity that can lead to suboptimal outcomes. Few studies have systematically collected evidence on overall land use impacts associated with private or demand-led instruments regulating land use. There is even less empirical evidence on how various interventions work together in different implementation mixes.

2. Effectiveness of individual policy instruments

Overall, the evidence for effectiveness of demand-led and private land use governance is thin (Miteva et al., 2012); results are mixed; and environmental impacts are much less discussed than social ones, partially because evaluating land use impacts requires more sophisticated spatial evaluation techniques. The causal link between initial triggers and outcomes is difficult to prove given multiple confounding factors. Most evaluations of the effectiveness of a land use policy rely on reduced-form empirical estimates. These evaluate whether and where policy instruments spur or maintain sustainable land use practices, but do not address the question of why and how the intervention worked (Miteva et al., 2012). Ideally, evaluation methods should address outcomes and processes stemming from implementation: uncovering underlying causes and mechanisms is as important as detecting aggregated impacts (White, 2009). Thus, one should combine reduced-form