

Governing the Ephemeral: Secondary Forest in Peru

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Key messages

- Secondary forest is an increasingly prevalent component of forest cover across the globe providing wildlife habitat, ecosystem services and valuable goods.
- Secondary forest in Peru mainly occurs on farming landscapes, much of it occurring as agricultural fallows, and comprises up to 45% of total forest cover in some landscapes.
- The absence of information on the extent of secondary forests, their locations, ownership, types, and persistence hampers creating relevant policy, supporting local forest governance, and ultimately improving forest condition and rural livelihoods.
- Draft normative guidelines on secondary forest management are expected to be released for public comment in early 2022, and we encourage active and informed public comment.
- Strengthening local forest governance by smallholders and communities as part of a bundle of rights for their productive mosaic landscapes can be coupled with incentives to increase and maintain forest cover on their landholdings.
- We recommend the recognition of resource rights and implementation of mechanisms that strengthen the legality and legitimacy of forest management on farms.

Introduction

Secondary forest is an increasingly prevalent component of forest cover across the globe. Regional estimates of its area range from 63 percent of all forest cover in SE Asia (Mukul et al. 2016) to 34 percent in the lowland Neotropics. Estimates of secondary forest cover in Peru range from 3.7 percent of total forest cover (Smith et al. 2021) to 13.3 percent (Chazdon et al. 2016), but these figures depend on the scale, location, and method of analysis. Near Pucallpa (Peruvian Amazon), in 2013 almost half of the forest cover (44 percent) was second growth (Schwartz et al. 2017). The Peruvian state does not provide figures for secondary forest cover. Independent studies show that Peru has considerably more intact old-growth forest than other Latin American countries (Figure 1) and a correspondingly low area of secondary forest overall (13.3 percent).

Individuals, communities and investors living and working in forested environments make decisions daily about the fate of trees and forest stands. Decisions are governed

by both formal and informal rules, customary practices, and institutions, all of which frame stakeholders' rights, responsibilities, and ownership claims over forests and trees (Cronkleton and Larson 2015, Reid et al. 2017).

This brief evaluates the context for secondary forest governance in Peru, identifies challenges to effective governance, and identifies opportunities to strengthen particularly local forest governance. We describe where they are located, which stakeholders claim and control them, and how they are used. We evaluate how current policies apply to secondary forest management and what happens at the interface of policy and practice.

What is secondary forest?

Secondary forest refers to natural forest regrowth after a clearance event and, in the case of anthropogenic origins, cessation of subsequent post-clearance land use. For the purpose of this brief, we use the definition in the 2011 Forest and Wildlife Law: "successional forest originating from the natural recuperation of areas where the primary forest was cleared as a consequence of human activities or natural causes. Pioneer forests dominated by only a few rapid growing woody species are also considered secondary forest" (Article 5 of the Regulations for Forest Plantations and Agroforestry Systems, SERFOR 2015).

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Much of the secondary forest in Peru is a result of widespread forest clearing for pastureland, commodity crops and subsistence agriculture in the 1970's with the support of agrarian bank loans (Coomes 1996). With the end of the loan program large swaths of these areas were left to fallow, generating what are today mature secondary forest.

Today, active formation of secondary forest occurs where small-scale farmers practice shifting cultivation. There, forest regrowth is an ephemeral resting stage in the agricultural cycle, where crop fields are fallowed to recuperate soil fertility and control weeds and pests. These fallow forests, called "purma" or "barbecho" in Peru, are an important component of the socio-ecological landscapes in mid- to low elevation farming communities.

Why are secondary forests important, and for whom?

Secondary forest plays a critical role in meeting current planetary needs, locally providing habitat for flora and fauna, goods such as timber and medicines, and ecological services such as carbon sequestration and hydrologic regulation. Secondary forest contributes significantly to rural livelihoods and food security through production of fast-growing timber, provision of game animal, and nutrient cycling in crop fields. In its younger stages of stand development, secondary forest captures carbon dioxide in the growth process, storing carbon in the wood, thus serving a critical function in climate change mitigation (Cook-Patton et al. 2020). Their sequestration potential can translate to economic benefits to forest owners in the carbon market, motivating the expansion of forest regrowth and the sustainable management of existing stands.

More than just a forest type, secondary forest is a product of cultural, social, environmental, economic and political factors. As such, increasing recognition of the contribution to local economies, conservation and climate change mitigation requires adaptive governance structures and processes that consider the multi-faceted contexts of its origin, management, and persistence.

What are the challenges to governance?

Due to the transitory nature of secondary forest, its effective governance—which supports the promotion, sustainable use, and protection of regrowth—is notoriously fraught with contradictions and barriers (Vieira et al. 2014, Henao et al. 2015, Toledo-Aceves et al. 2021). In Peru, two key barriers complicate the sound governance of secondary forest, first related to its legibility and second to conflicting governance structures.

The first key aspect to secondary forest governance is legibility. Given its local importance, rural people are well aware of the locations, sizes and composition of secondary forest across the landscape. They utilize a typology in the local vernacular, which provides a legibility within and among communities. The state, however, has no typology nor map of the types, locations, and sizes of secondary forest. This absence of such information related to their origin, degree of persistence and stand structure and composition renders them essentially invisible and illegible to state entities, which contributes to the current paralysis in the development of relevant regulations and feasible regulatory mechanisms for secondary forest management (Sears et al. 2021).

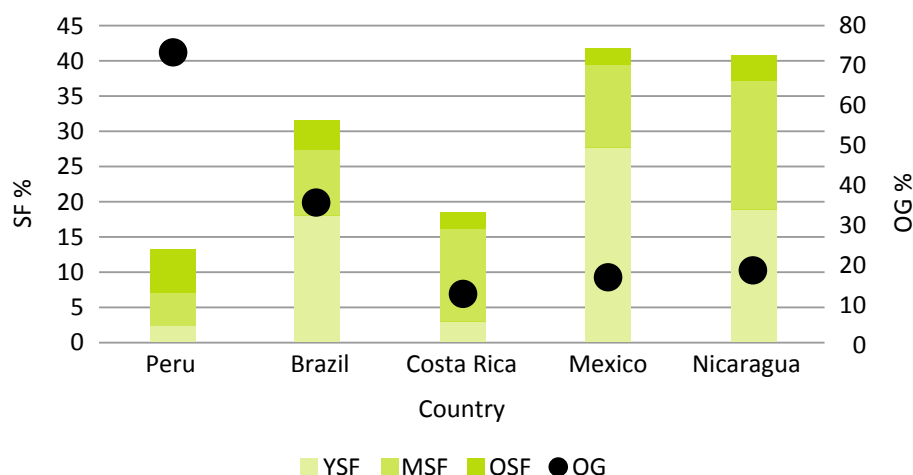


Figure 1. Secondary forest stages (stacked column) and old-growth forest (dot) as a percentage in 2008. YSF, young secondary forest (≤ 20 years); MSF, mid (20–60 years); OSF, old (60–100 years); OG, old-growth (> 100 years) forest. Original data are from (Baccini et al. 2012) based on a chrono-sequence in a network of ground plots across Latin America and the Caribbean forests.

Second, secondary forest lies at the often conflicted junctions of agriculture and forestry, and forest use and forest conservation. Similarly, overlapping administrative jurisdictions and unrealistic regulatory frameworks provide incongruent coverage for policy guidance. Forest conservation issues related to carbon sequestration are the purview of the Ministry of Environment (MINAM). The Ministry of Agricultural Development and Irrigation (MIDAGRI) regulates land use change and land titling and governs forest use, and the Forest and Wildlife Service (SERFOR) under MIDAGRI governs forest management. The Ministry of Economy and Finance encourages economic development in the forest sector, promoting higher targets for timber production and export, which may conflict with MINAM's forest conservation goals. Importantly, the agency responsible for forest monitoring and law enforcement, OSINFOR, is autonomous and independent from political influence. Developing a coherent governance approach, therefore, requires coordination across these multiple agencies and administrative levels (Ravikumar et al. 2018).

Understanding forest governance starts by examining what property rights apply to land and forest resources (Box 1), which stakeholders are classified as legitimate rights-holders, and what those rights allow them to do with the resource. Those who control tenure and access rights to secondary forest areas determine who benefits from their stewardship, including receiving technical and economic support for forest restoration (in this case, through passive management of natural regrowth), selling carbon credits on the market, and receiving payment for ecosystem services. In Peru, the principal stakeholders concerned with forest governance and outcomes of secondary forest management are rural farmers.

Property rights of secondary forest are inherently tied to rights over farmland but are also linked to access rights to forest resources. Individuals can have clear rights to land – either customary rights or formal *de jure* title or concession – but the Peruvian constitution defines “natural” or “native” forest as national patrimony, meaning

Box 1. Property rights

Property rights, commonly referred to as ‘ownership’, can be understood as a bundle of rights that grant the ability to access the property, use resources from that property, make management decisions, exclude others from the resource, and alienate or sell/transfer rights over resources (Schlager and Ostrom 1992). Property rights provide a foundational framework for examining resource governance since they define a finite boundary on the resource in question as well as the legitimacy of stakeholder claims to it (Oviedo 2005, Larson et al. 2008).

ownership of natural forest and trees is vested in the state (Monterroso et al. 2017), even if it is of anthropogenic origin. Thus, landholders must seek state authorization to manage trees located on property to which they have formal access. This partial devolution of forest rights to citizens – through *titulo habilitante* – creates a co-management regime in which stakeholders, including the government, share rights and responsibilities for forest stewardship (Berkes 2009).

The Peruvian state has made a concerted effort to improve forest management guidelines, structures, and practices through the 2011 Forest and Wildlife Law (LFFS, No. 29763) and its regulating norms (issued in 2015) (Box 2). These mandate the development of implementing norms on secondary forest management, but these have yet to emerge. This is problematic because none of the existing regulations for forest management – management declaration, plantation registry, management plan – are feasible for secondary forest originating as agricultural fallows in the swidden systems of rural Amazonian farmers in Peru (Sears et al. 2018).

Aside from the absence of appropriate regulatory instruments, the Peruvian state lacks infrastructure, personnel, and allocated budgets to effectively exert control over much of Peru's rural land base, especially in remote farming communities. This is problematic for two reasons: the state lacks control and therefore influence on land use decisions, and secondary forest stewards lack legal access to formal markets, leaving them vulnerable to sanctions and exploitation (Sears et al. 2018). Therefore, since national governments fail to govern secondary forests well, strengthening local forest governance can help to improve forest management and conservation.

Box 2. Forest Regulations: Management of secondary forests³

“Forest management in secondary forests is a dynamic component of productive mosaic landscapes and represents an ideal niche for the production of timber in short cycle systems and for the harvest of non-timber forest products. Through the management of natural regeneration and enrichment planting, the growth of fast-growing timber species is promoted in secondary forests. SERFOR, with the participation of the ARFFS [Autoridad Regional Forestal y de Fauna Silvestre], research institutes, and other related actors, establish and approve guidelines for harvest in secondary forests.”

3 Peru Law No. 29763 Regulation for Forest Management, Article 62; Regulation for the Management of Forest Plantations and Agroforestry Systems, Article 42; Regulation for the Management of Forests and Wildlife in Native and Campesino Communities, Article 52.)

How to strengthen secondary forest governance?

We propose a series of interventions outlined in Table 1 that could be undertaken by communities, NGOs, and state and national government agencies to help strengthen local governance of secondary forest.

In this mosaic of proposed interventions, forest property rights constitute a central element. Communities and rural landholders should be enabled to formalize their property rights and to include secondary forest under their titles. Local governments and civil society advocacy groups could thus collaborate on the creation of mechanisms that strengthen the legality and legitimacy of forest management on farms. Existing mechanisms such as the national plantation registry, agroforestry concessions, and conservation concessions provide models for recognizing and rewarding landowners for retaining and managing forest cover on their land, including secondary forest.

Once rights are secured, both private and public incentives could encourage farmer associations or cooperatives to aggregate, and monitor and manage secondary forest areas. These cooperatives could serve as a viable governance structure for administering support programs but also provide an economy of scale for producers and

investors. The development and empowerment of local institutions representing the interests of rural forest stewards can help to bridge the needs of the residents with the state development and conservation priorities and targets.

Eventually, a national-scale dynamic map of second growth forest in Peru could be created, with overlays of land tenure and property type, legal forest classification, locations of supply chain hubs, and an accounting of environmental services. This socio-geographical information on secondary forest can provide a baseline against which to measure their persistence over time, a way to identify the forest stewards and other stakeholders and tailor incentives to maintain forest cover, and a framework for strategic planning for the integration of second growth in forest landscape restoration and rural development (Chazdon and Guariguata 2016, Crouzeilles et al. 2020).

At the foundation of effective co-management of natural resources is effective relational capacity of the stakeholders, and especially of government agencies and functionaries (Miranda Beas 2020). Therefore, an inclusive and participatory approach would help to ensure that governance is constructed to accommodate local socio-economic conditions and different ecologies (Box 3).

Proposed interventions

1. Secure land and forest rights to include secondary forest in farming landscapes.
2. Support the development and sustainability of farmer and forest steward associations through organizational capacity building
3. Create a national-scale dynamic map of second growth forest, include socio-ecological and land use layers
4. Recognize the role of secondary forest in family farming programs to promote their management, emphasizing both commercial and ecological values
5. Privilege incentives for managing natural forest regrowth over tree planting in forest restoration initiatives
6. Stimulate “local forest” movements that will promote forest education about their ecological, cultural, social, and economic contributions.
7. Allow absentee landowners to retain land and tree ownership of secondary forest and provide incentives for them to conserve rather than convert forest cover.

Box 3. Principles of inclusive and participatory forest governance reform

Engage a diversity of stakeholders across scales and sectors early through meaningful participation and throughout any reform process to allow for ownership and control.

Conduct a people-centered reform process, listening to the forest stewards, to their needs, goals, and knowledge, providing deliberate space for marginalized groups (women, elderly, youth, indigenous, poor).

Provide latitude in the governance framework to promote adaptive, localized governance with rules adaptable to the local context (ecological, social) and needs.

Allow for traditional and culturally relevant practices, especially in food systems, providing the flexibility to incorporate local practices and ideas

Conclusion

More than just a forest type, secondary forest is a product of both social and environmental factors. As such, it requires adaptive governance structures and processes that consider the cultural, economic, and political contexts of its origin, management, and persistence. Any policy geared toward promoting the sustainable management of secondary forest should combine a realistic legal framework, accessible economic incentives, and support for sustainable behavior that motivates the expansion of secondary forest, increases their persistence, and promotes the sustainable management and use for forest products. Attempts to shift or support local forest governance structures should be participatory and inclusive. The policy must recognize secondary forest as a dynamic component of the broader landscape as well as the local knowledge and rules behind their management. Strengthening secondary forest governance must also attend to issues related to agriculture and other rural development objectives, such as rural income and food security, as well as forest restoration and conservation.

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