

## Translating Water Fund Payments for Ecosystem Services in the Ecuadorian Andes

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### ABSTRACT

As a form of environmental governance, Payments for Ecosystem Services (PES) is imbued with ideological values that can conflict with those of participating rural communities. The discursive frame surrounding PES may be contentious, even if the conservation activities promoted by these initiatives are not. Moving PES into practice therefore requires a process of translation from urban-based practitioners to rural communities. Drawing upon an empirical case study of FONAG, a water fund from Ecuador that is often promoted as the ideal type, this article employs data from participant observation, key informant interviews and textual materials to examine this process of translation. The article focuses particularly on the efforts to negotiate the discourse of PES that move the projects into on-the-ground practice. While Ecuador's political context has softened the emphasis on economically valuing ecosystem services, FONAG uses neoliberal conservation narratives that identify rural poverty as the main cause of environmental degradation and target the reform of local people through economic incentives. To enrol communities, however, intermediaries are needed to translate water fund PES to appeal to local perspectives, values and institutions. The author argues that contrasting narratives of PES can exist simultaneously between the entities that are implementing PES and the targets of that implementation.

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## INTRODUCTION

Recent research has examined the reworking of Payments for Ecosystem Services (PES) narratives by context-specific influences (McElwee, 2012; Shapiro-Garza, 2013b; Van Hecken, Bastiaensen and Huybrechs, 2015). Though scholars are beginning to explore the localized processes of disseminating PES, the discursive mechanisms involved in the enrolment of targeted communities remain under-investigated. This article addresses this gap while responding to the call of Van Hecken, Bastiaensen and Windey (2015: 118) for further research into the social and political processes of PES, particularly attending to power dynamics and the processes of how ‘purposefully designed policy interventions are adapted locally’. To do this, I examine the pioneer water fund arrangement of PES from the Ecuadorian Andes called Fondo para la Protección del Agua (FONAG) — Fund for the Protection of Water — and explore how its discursive framings and narratives adapt as PES is translated from an idea into practices connecting urban and rural spheres. I pay particular attention to the actors responsible for enrolling and negotiating with rural communities whose land management activities are the target for governance.

The Nature Conservancy (TNC) spearheaded FONAG through a partnership with the city of Quito’s municipal water company in 2000. FONAG aims to protect and improve the water supply for the city of Quito through attempts to influence rural land management via in-kind incentives offered to communities in exchange for collective agreements to pursue conservation activities. However, the origins of the water fund — and consequently the model — are rooted firmly in TNC’s efforts to conserve biodiversity and reinforce protected areas in Ecuador. Practitioners viewed the connection to water resources as a means to generate funds to conserve landscapes of concern (Joslin and Jepson, 2018). Thus, the water funds originated under the framework of ecosystem services conservation. Like many PES programmes, FONAG relies upon human mediators to connect targeted rural communities to the urban-based programme.

In the water fund arrangement, urban water-users pay into a non-declining trust that directs interest towards upstream land managers to maintain or improve the ecosystems responsible for the quality and quantity of water flowing downstream to a city (Calvache et

al., 2012; Goldman-Benner et al., 2012). A central feature of all currently active water funds is an incentive mechanism for influencing conservation-oriented land-use practices of rural landholders (Bremer et al., 2016). Water funds involve a voluntary transaction between buyers and sellers aimed at improving or maintaining the provision of a defined ecosystem service. Differing from Wunder's (2005) popular definition of PES, they often fall short of a strict level of conditionality (Wunder, 2012). Nevertheless, practitioners of water funds maintain that the arrangements are imbued with a central PES logic aimed at economically valuing ecosystem services to create financial incentives to direct land-use activities towards the conservation of critical ecosystems (Goldman-Benner et al., 2012; Martin-Ortega et al., 2013).

After the initial establishment of FONAG, TNC promoted the replication of the water fund model throughout Latin America (Kauffman, 2017). As a part of this effort, TNC facilitated the formation of the Latin American Water Funds Partnership (LAWFP) that includes the FEMSA Foundation, the Global Environment Facility and the Inter-American Development Bank.<sup>1</sup> TNC and its collaborators aim to establish at least 32 other water funds throughout the region (Veiga et al., 2015), and the water fund model thus far inspires at least 21 programmes across eight countries.<sup>2</sup> Recently, TNC has also moved to further extend the water fund model to develop programmes in sub-Saharan Africa (TNC, 2019). Thus, FONAG represents a highly influential case that merits examination.

This work is informed by an ongoing ethnographic case study of FONAG that began in 2010. The majority of the data on which this article is based were collected between 2012 and 2014. They include documents and materials from FONAG and its associated organizations, key actor interviews conducted with FONAG administrators and the FONAG intermediaries called *guarda páramo* (páramo guards) who work directly with rural communities, and participant observation of a FONAG páramo guard training workshop that

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<sup>1</sup> See section about the partnership on the LAWFP website: [www.fondosdeagua.org/en/what-is-the-partnership/about-us/](http://www.fondosdeagua.org/en/what-is-the-partnership/about-us/)

<sup>2</sup> See the water fund maps on the LAWFP website: [www.fondosdeagua.org/en/the-water-funds/water-fund-maps/](http://www.fondosdeagua.org/en/the-water-funds/water-fund-maps/)

occurred over two days in October 2013.<sup>3</sup> This research does not aim to be prescriptive, but rather to illuminate the processes and practices that enable water funds to operate.

I begin by discussing how neoliberal conservation discourses have portrayed local communities at the sites of important ecosystems and how this discourse extends to PES arrangements. Next, I examine the broader shifts in narratives about FONAG as they relate to a political framework that evolved post-establishment of the water fund. I then discuss how an emphasis on the actions of local people in water fund PES maintains and justifies the arrangement. The remainder of the article examines the translation process through FONAG's intermediaries, reflecting the management of tensions between interpretations of the fund through a process of institutional bricolage. Rather than a full 'hybridization' or reworking of PES arrangements, I assert that contrasting concepts of the practice of PES can exist simultaneously between the entities that are implementing PES and the targets of implementation.

## LOCAL PEOPLE WITHIN DISCOURSES OF PES

Critical literature considers market-oriented environmental governance, including PES, as part of a larger shift towards directing human interactions with nature and natural resources according to a neoliberal ideology (Bakker, 2010; Büscher, 2012; Igoe and Brockington, 2007; McAfee and Shapiro, 2010). This ideology, based on neoclassical economic theory, maintains that ecosystem degradation is caused by a failure to appropriately value the services that nature provides in ways that allow them to be properly integrated into markets. Thus, to correct degradation, policy makers can design mechanisms to integrate ecosystems and the benefits they provide into markets. As markets are assumed to be naturally efficient

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<sup>3</sup> Translations of documents and interviews into English are by the author.

and impartial, the logic follows that they will eventually self-regulate to maximize benefit to the buyers, the sellers and the ecosystems themselves (Muradian, 2013).

An ideology and its concepts, categorizations, logics and rationalities contribute to particular discourse, defined as a knowledge regime imbuing phenomena with shared meaning (Adger et al., 2001; Hajer, 1993). Discourses are often communicated through narratives that are ‘a story with a chronological order’ assigning structure to groups of actors (Adger et al., 2001: 685). Discourses play a crucial role in interventionist projects — such as those with conservation or development objectives — because they direct the definitions of problems as well as the solutions to address them (Li, 2007; Mosse, 2004).

Constructed and informed by neoliberal logic, PES serves as a solution to the problem of environmental degradation by including the previously overlooked value of ecosystems into broader systems of exchange (Engel et al., 2008; Gomez-Baggethun et al., 2010; Vatn, 2010). While, in practice, many PES arrangements may not perfectly execute market mechanisms, they continue to be driven by a neoliberal ideology that frames assumptions of the causes of and solutions to environmental degradation (Fletcher and Büscher, 2017). As such, PES arrangements utilize and promote neoliberal language and practices reflecting market-oriented values and logics (Gomez-Baggethun and Muradian, 2015). PES schemes are therefore both a product of and a mechanism for transferring neoliberal conservation discourse (Fletcher and Büscher, 2017).

Epistemic communities consist of networks of professionals and experts sharing similar perspectives, values and beliefs in cause-and-effect relationships, and are influential in creating new policies (Haas, 1989, 1992). The actors within these communities are key in repeating and circulating narratives that promote the adoption of PES arrangements (Büscher, 2014; Rodríguez-de-Francisco and Boelens, 2015). Knowledge sharing and the circulation of narratives about PES theory and practice take place in multiple arenas, including conferences, fundraising events, in scholarly articles and popular media pieces. As PES is adopted into policy models, the projects derived from those models tend to reinforce positive interpretations of outcomes that, in turn, promote their replication and attract donations (Rodríguez-de-Francisco and Boelens, 2015).

The narratives about PES and the people whose actions it targets for reform connect closely to those in broader conservation. Historically, narratives justifying conservation interventions have tended to label local land managers as destructive, backward and the primary threat to conservation arrangements (Adams, 2004). Within neoliberal conservation, this idea is amended so that local people have a ‘fundamentally flawed relationship with both nature and the market’, yet can be reformed (Igoe and Brockington, 2007: 442). Discourses of neoliberal conservation argue that local land users, disciplined in the values and logics of the market, can be remade into responsible ‘green custodians’ adept at caring for and repairing nature (Fairhead et al., 2012; Leach et al., 2012). PES arrangements follow this trend, aiming to influence land managers (i.e. ecosystem services providers) through appealing to economically rational logics and offering financial incentives as the primary mechanism to conserve important ecosystems. PES thus reframes local land users as economically empowered rescuers of nature that are positively included as both service providers and co-beneficiaries of natural resource management (Boelens et al., 2014).

Recent literature illuminates how neoliberal discursive framings of PES, circulated by conservation-oriented epistemic communities, have obscured the historical and political context of PES programmes (Boelens et al., 2014; Büscher, 2012; Shapiro-Garza et al., this issue). The assumptions embedded within neoliberal conservation schemes can create narratives about land use that misalign with on-the-ground practices and ontologies. In some cases, the ecosystem service providers whose actions are targeted for governance — the upstream people and communities residing in and around critical ecosystems — challenge the market-based logics informing PES and PES-like programmes. In response, scholars are increasingly examining the influence of rural realities and alternative conceptualizations on the practice and discursive formation of PES programmes (McElwee, 2012; Shapiro-Garza, 2013a, 2013b; Van Hecken, Bastiaensen and Huybrechs, 2015). States that would ideologically be opposed to neoliberal conceptual foundations of PES have also reworked narratives to adapt PES arrangements to fit within their ideological frameworks (McElwee, 2012; Van Hecken, Bastiaensen and Huybrechs, 2015). Narratives, therefore, change and shift when meeting the political, social and cultural realities and are remoulded to fit within pre-existing institutional frameworks (Shapiro-Garza, 2013b). Neoliberal narratives can be

challenged, hybridized and reshaped in context-specific processes (Duffy and Moore, 2010; McAfee and Shapiro, 2010; Shapiro-Garza, 2013a).

This body of critical scholarship has furthermore begun to examine processes of how culture, agency and power relations influence the outcomes of PES institutions on a localized level (Van Hecken, Bastiaensen and Windey, 2015). The case of Pimampiro, Ecuador, has served as a site for some of this work. In particular, scholars have examined how power asymmetries between various interests have shaped programme design, implementation and outcomes, as well as shifted socio-ecological relationships, territorial control and collective institutions within communities (Rodríguez-de-Francisco and Boelens, 2014, 2016; Rodríguez-de-Francisco et al., 2013). The water fund form of PES differs from the Pimampiro case, however, in that payments are in-kind, collectively targeted, and employ local mediators to negotiate and implement agreements within their own communities.

Despite active on-the-ground challenges to PES narratives, epistemic communities may maintain the circulation of broader PES discourses. Discussing development programmes in India, Mosse (2004) asserts that this occurrence is typical to policy models. Policy models that are labelled ‘successful’ are generally those that unify a diversity of interests, including the donors, consultants, researchers, government agencies and organizations needed to implement a project. These policy models, however, also need to enrol the local communities and people at the sites of intervention. To do so requires the translation of brokers ‘who read the meaning of a project into different institutional languages of its stakeholder supporters’ (Mosse, 2004: 647). Policy models necessarily require translation to facilitate local enrolment. To make a project work, narratives circulated on the ground may differ significantly from those circulated within the epistemic community. The rest of this article, then, presents a closer examination of the translation process that enables FONAG to operate.

## DISCURSIVE CONSTRUCTION OF QUITO'S WATER FUND

FONAG has successfully attracted members and investment since its initiation nearly 20 years ago. It now includes four additional constituents that pay into its fund and has attracted millions of dollars in donations from other entities. While FONAG supports various conservation-oriented activities, a highly promoted focus of its work is the support of development projects targeting rural communities and landowners located in and around areas of *páramo*, a high-altitude humid grassland ecosystem of hydrological importance for the city of Quito. The development projects — called productive projects — serve as an in-kind incentive for rural communities to adopt conservation activities that require the input of labour and the rearrangement of land uses. Productive projects have included, for example, materials for establishing household gardens or raising guinea pigs, materials for improving pastures at lower elevations, and materials for building basic infrastructure for an ecotourism project. In return, communities often promise to reduce the number of cattle grazing in the *páramo* and to pursue other conservation practices, such as prohibiting grassland burning. Agreements take the form of written contracts that specify expectations for both FONAG and the communities.

The publicity surrounding FONAG is consistently positive in the international arena and stresses the arrangement as an incentive system for conservation activities. Academic literature celebrates FONAG's financial successes and potential for ecological and social benefits as a system of PES (e.g. Benitez et al., 2010; Echavarría, 2002; Tallis et al., 2008). Likewise, influential international entities, such as the United Nations Environment Programme (e.g. UNEP, 2010), the United States Agency for International Development (USAID) (e.g. Baillie, 2013), and popular media outlets such as *Ecosystem Marketplace* (e.g. Kenny, 2012) positively endorse the programme. Discursive framings of FONAG and the water funds modelled after it emphasize the economic valuation of ecosystem services in watersheds and a transfer of resources through an incentive mechanism.



PES programmes emphasize the instrumental value of nature as the driving factor in human–environment relationships (Kolinjivadi et al., 2019). Water funds are not an exception to this trend. The LAWFP frames watersheds as green infrastructure for urban areas requiring financial investment to ensure their services to downstream users, particularly urban areas (Calvache et al., 2012). It describes water ‘as a high-value good that is produced, sold and consumed’ (ibid.: 5). Water funds therefore address the problem of urban water insecurity that stems from consumers in the lower basin failing to compensate the land managers (e.g. public agencies running protected areas, communities and private land owners) that ensure water supply (Calvache et al., 2012).

This narrative of water funds circulates regularly at conferences. In addressing potential supporters for the LAWFP at the Clinton Foundation Global Initiative Annual Meeting in 2010, for example, a representative of TNC described motivating local, on-the-ground conservation action for water and biodiversity through economic incentives as a focal point and key advantage of water funds:

It is an amazing model to get people who use the water to essentially pay for it. But not just pay it to a central coffer, but actually pay it to the people who are in the front lines actually protecting that water supply. ... [T]hat’s the kind of model, I think, that is going to turn conservation on its head. Asking, ‘what do people want, and how do we give them a real incentive in protecting nature’. Because I could go on and tell [communities] great stories about saving [the páramo] for the Condors or the Andean bear, and it might resonate with a few of [the audience] in this room here, but for the communities that I deal with in those upper watersheds, that’s really not going to motivate them to act.<sup>4</sup>

This quote emphasizes that rural communities cannot be inspired to pursue conservation activities without economically valuable resources. It ultimately reduces decision-making

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<sup>4</sup> Clinton Foundation Global Initiative Annual Meeting, 2010. Recording available from: [http://original.livestream.com/cgi\\_plenary/video?clipId=pla\\_ba7a86cf-6342-46e8-be6323210cb4262c](http://original.livestream.com/cgi_plenary/video?clipId=pla_ba7a86cf-6342-46e8-be6323210cb4262c)

logics about land use to instrumental values and minimizes other possible cultural or social values surrounding the páramo landscapes or targeted species within them.

Rural communities within Ecuador, however, have previously criticized FONAG for its basis as a financial mechanism (Diehn, 2005). The criticisms fit into a broader history of resistance to neoliberal natural resource management in Ecuador. Rural communities have contested the term PES because it implies privatization and the usurpation of traditional, non-monetary values and relationships with economic values (Boelens, 2006; Rodriguez-de-Francisco and Boelens, 2016). These concerns particularly stemmed from World Bank initiatives in the 1990s to privatize water resources (Kauffman, 2017). Protests, mostly organized by indigenous groups and rural farmers, countered these efforts at reform, arguing that privatization obscured water's social value as a necessity for life (Isch and Gentes, 2006). Public defiance escalated in 2002 in response to a proposal to privatize Quito's water supply. The intense political pressure rendered the proposed reforms unsuccessful and eventually fostered the inclusion of water as a guaranteed human right in Ecuador's 2008 constitution (Harris and Roa-Garcia, 2013). Extending beyond water, however, popular movements in Ecuador also resisted the commodification of broadly defined nature, natural resources and ecosystem services (Kauffman, 2017). One Ecuadorian organization on the forefront of the movement against ecosystem services markets, Acción Ecológica, expressed concerns in their 'Declaration against Ecosystem Services' that the reduction of nature into ecosystem services provided a means for further exploitation of indigenous and *campesino* (peasant farmer) lands (Acción Ecológica, 2006).

Although rarely discussed in the literature, at least some of FONAG's attempts to enrol communities in conservation agreements failed within that context. As one example, the indigenous community of El Hato — an early target of FONAG intervention — rejected FONAG's proposal because it failed to recognize their work in caring for and managing lands through their own volition without external incentives (Diehn, 2005). Acknowledging the growing resistance to the concept of PES in Ecuador, and Latin America in general, prominent economist Sven Wunder co-authored an editorial with Maria Teresa Vargas, a former president of a local NGO supported by TNC involved in the early design process of FONAG. Rather than changing the fundamental concepts informing these arrangements, the

authors suggested that PES be called by different terminology to improve local acceptance of such arrangements (Wunder and Vargas, 2005).

Following the trend of water policy, Ecuador's national political framework regarding ecosystem services was adapted in response to popular concerns over commodification and privatization. Ecuador adopted a new constitution eight years after TNC and Quito's municipal water company formed their partnership to start FONAG. Article 74 of Ecuador's constitution states: 'Environmental services will not be susceptible to appropriation; their production, benefits, usage and exploitation will be regulated by the State'. In other words, Ecuador's constitution explicitly prohibits any entity other than the state from regulating the production, delivery or use of ecosystem services. The constitution therefore implies that privately driven PES arrangements are unlawful (Herrera, 2011).

The national government of Ecuador has taken a management role in ecosystem services and fostered its own widely recognized PES scheme of SocioBosque. It has also facilitated the operation of public-private partnerships based on ecosystem service management like FONAG and the 'daughter' water fund arrangements modelled directly after it in Ecuador (USAID, 2014). Although Ecuador's orientation towards state-managed ecosystem services may appear to resist neoliberal policy that often implies decentralization, it is notable that the state may still orient itself towards valuation schemes that engage in trading (Fletcher and Büscher, 2017; Vatn, 2015). The act of de-emphasizing market-based language without fundamentally changing the ideology that informs the arrangement arguably masks the neoliberal elements of PES rather than removes them (Kolinjivadi et al., 2019). Despite post-neoliberal political discourse suggesting a new governance orientation in Ecuador, the extent of the country's shift away from neoliberalism is questioned by scholars who point towards many contemporary policies that continue to support elements of broader neoliberal agendas (Andolina, 2012; Harris and Roa-Garcia, 2013; Valladares and Boelens, 2019).

In the years following the constitutional change, the water fund programme in Quito predictably underwent a shift in terminology. FONAG links itself explicitly to the PES concept through its 2009 Strategic Plan that defines FONAG as 'a mechanism of payments

for ecosystem services directed towards protecting and regenerating water sources’ (FONAG, 2009: 1). Reflecting this self-distancing from the PES label, FONAG’s 2016 Strategic Plan omits any mention of PES (FONAG, 2016). Because of the controversies surrounding ecosystem services management, Ecuadorian practitioners of FONAG currently refrain from referring to FONAG as a PES arrangement, claiming that it is merely a sustainable fund for conservation.<sup>5</sup> Academic literature has even identified the use of the term ‘Payments for Ecosystem Services’ as toxic among Andean indigenous communities (Kauffman, 2014).

Aside from avoiding the term PES, FONAG has adjusted other aspects of its language in response to the rejection of market-based terminology by targeted communities. A mechanism of exchange and remuneration is a key component of a PES arrangement, even though various terms can be employed (Wunder, 2005). Evading market language in practice, FONAG avoids using the term ‘incentive’ to describe the role of the productive projects. An example of this shift comes from *Agua-a-Fondo*, FONAG’s quarterly publication targeting the general public. Describing productive projects, an article states: ‘These productive alternatives are not “incentives”, [rather] they are proposals based on the social, economic, cultural and environmental reality that will bring a better quality of life to the communities involved’ (FONAG, 2007: 7).

More recently, FONAG has drawn upon the word ‘reciprocity’ to frame its exchanges with rural communities and has taken to describing the agreements of productive projects for conservation activities as ‘co-mechanisms of reciprocity for the protection and conservation of the zones of hydrologic interest’ (Dominguez, 2014: 10). Despite the different terminology applied to these arrangements, the mechanism of exchange and remuneration — a key aspect of PES (Wunder, 2005) — remains intact. Indeed, Wunder (2015) has advocated a revision of the terminology within his widely used definition of PES to cleanse it of normative connotations while maintaining the original operational aspects. Kolinjivadi et al. (2019) have critiqued this approach, pointing out that PES remains predicated on instrumental values

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<sup>5</sup> Various interviews, FONAG practitioners, 2010–14.

and reliant upon a narrowly defined conceptualization of the relationship between people and their environment.

It is evident that the narratives surrounding FONAG have shifted to accommodate the political context of Ecuador, moving from describing water fund interventions as market-based PES to instead characterizing them in the language of ‘reciprocity’. While both terms imply systems of exchange, PES is rooted in market systems that emphasize economic valuation of ecosystems and landscapes, while the term reciprocity refocuses emphasis towards valuation through social relationships. Yet, at the level of the state, rhetoric of PES continues to be discursively dominant. As states may engage in trading practices, neoliberal policies do not necessarily require the retreat of the state, but rather require a shift in the form of action that moves away from command-and-control governance structures to trading mechanisms justified and promoted by market values (Fletcher and Büscher, 2017). While the discursive formation of FONAG has shifted slightly to respond to resistance, its neoliberal essence remains intact. In the next section, I examine how neoliberal conservation discursively positions buyers and providers of ecosystem services in an unequal power dynamic.

## NATURE’S CURATORS IN QUITO’S WATERSHED

As a natural resource management model, water fund PES schemes are arrangements for environmental governance intended to direct human interactions with the environment. Because they operate within a political and social arena, all PES schemes are influenced by power relationships (Fletcher and Büscher, 2017; Kolinjivadi et al., 2017; Rodríguez-de-Francisco and Boelens, 2014; Van Hecken, Bastiaensen and Windey, 2015). Part of this power includes the ability to construct and circulate narratives that describe the causes of and solutions to environmental problems.

Critical conservation literatures have examined discursive framings of local peoples in relationship to areas targeted for protection. Local people are typically identified by conservation proponents as the most proximate and immediate threat to species and ecosystems (Brockington et al., 2008). PES relies on a security narrative that extends threats to biodiversity and hydrological processes to the consumers of ecosystem services (Pasgaard et al., 2017). The water fund PES arrangement likewise follows this trend, as the protection of upstream ecosystems becomes synonymous with security for downstream urban areas (Joslin and Jepson, 2018). In other words, rural communities are now charged as both the threats to and caretakers of the ecosystems that provide water services to urban residents.

Neoliberal narratives of conservation focus on transforming rural peoples from threats into environmental stewards via a resource transfer, where material incentives and market integration compel local people to steward nature (Boelens et al., 2014; Fairhead et al., 2012). PES arrangements build upon this conceptualization by aiming to influence land-use decisions of those living in and around important ecosystems via an incentive mechanism. The use of this discursive frame for the role of people receiving payments — in-kind or cash — is the main source of contention and the main point of divergence in discourses about the practice of FONAG. Examination of this discursive framing gives insight into the power dynamics negotiated within the water fund between the urban and rural spheres and underscores a split in narratives between the practitioners of the water fund and those targeted for the agreements.

The introductory statement on FONAG's 'About Us' section of its official website particularly highlights the arrangement's urban focus, stating that FONAG's aim is 'to secure water in quality and quantity to the more than 2.5 million inhabitants of in the Metropolitan District of Quito, and its future generations, without neglecting its right to development'.<sup>6</sup> This quote emphasizes the beneficiaries of the arrangement as being the urban residents and does not discuss the rural communities until it arrives at the formation of the problem.

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<sup>6</sup> See 'El Fondo' on FONAG website: [www.fonag.org.ec/web/?page\\_id=77](http://www.fonag.org.ec/web/?page_id=77).

FONAG's introductory webpage sums up the source of the problem with an emphasis on distinctly rural livelihoods: 'Quito, the capital of the country, has water sources that originate in the [páramo] of the western and eastern Andean mountain range; most of them are part of the natural reserves of Ecuador. Nevertheless ... water is threatened by inadequate agriculture practices, livestock and forestry practices'.<sup>7</sup> Rural livelihood activities are thus identified as the primary source of the degradation of valuable ecosystems while threats emanating from the urban realm are not identified.

However, this particular urban/rural dynamic has not always been portrayed this way. In a 2007 report on water funds, TNC identified two main sources of threats to the integrity of the páramo ecosystem: rural residents pushing the limits of the agricultural frontier with inappropriate land-use practices, and companies and municipalities that initiate infrastructure projects ignoring the full environmental impacts of 'roads, dams, water distribution systems, oil and gas pipelines and other infrastructure projects' (Krchnak, 2007: 6). TNC recognized these projects as promoting soil erosion and compaction, and consequently reducing flows from the páramo (Krchnak, 2007). In successive years, however, TNC and partners discursively reframed the watershed of Quito as 'green' infrastructure existing to serve urban interests (Calvache et al., 2012). Materials produced by FONAG have subsequently minimized the role of the city and of companies in contributing to the degradation of the páramo through construction projects. Often, city infrastructure projects are not mentioned at all. In essence, the city's role in land-cover change is downplayed while the role of rural communities is emphasized. In so doing, narratives form and reinforce particular cause-and-effect relationships.

With its focus upon the countryside, FONAG identifies poverty and the lack of economic alternatives in rural communities as the primary causes of páramo ecosystem degradation. The narrative of poverty in rural communities appears in several publications, pamphlets and other printed materials from FONAG and its supporting organizations. An article reviewing the importance of the ecosystem in *Agua-a-Fondo* describes the páramo as 'the home of historically poor and marginalized rural communities. Human intervention, for

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<sup>7</sup> See FONAG website: [www.fonag.org.ec/web/?page\\_id=1580](http://www.fonag.org.ec/web/?page_id=1580).

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lack of alternatives or for the advancement of industry, impacted the ecosystem. Practices like burning or the introduction of animals affect its environmental services' (Mena Vásquez, 2008: 3). Interviews with FONAG practitioners also reflected this narrative. As a FONAG practitioner explained:

Many of the communities [located] where the water comes from for Quito are communities with scarce resources. Most local communities see the water pass through, but do not have water for themselves, not even potable water. So the realities in those communities means that you can't simply say 'no more' or 'stop' or 'take down your cattle' or 'stop burning'.<sup>8</sup>

Although it portrays rural Andean communities as the primary threat to the páramo ecosystem, FONAG aligns with the pervasive discourses of PES, discussed above, to assert that rural people can be transformed from threats to guardians of the páramo. After describing the hardships of the local communities, for example, another article from the same issue of *Agua-a-Fondo* declares 'it is in these communities that we are basing the hope of the care and management of the páramo' (Lloret, 2008: 2). The identification of rural communities as caretakers and managers of the ecosystem also frames them as labourers for the city. Narratives represent rural people as being thrust into a contradiction of destroyers and stewards, depending on economic incentives.

In this way, FONAG relies on a narrative of local people as having a flawed relationship that can be corrected through valuation of ecosystem services. This discourse provides a powerful justification for intervention in rural areas, as it carries positive connotations of assistance. However, it is also important to note that the broader discourses of promoting improvement within 'backward' local populations was circulating long before market-based conservation programmes (Li, 2007). There is a long history in Latin America of attempts to remake the land and labour institutions of indigenous populations that

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<sup>8</sup> Interview, FONAG practitioner, June 2012.



European colonizers perceived as inferior, unproductive and uncivilized. Europeans found justification for their appropriation of land and natural resources in the notion that native people failed to ‘efficiently and productively mix their labor with their territory’ via collective arrangements (Boelens et al., 2014: 87). Thus, the construction of private property was viewed as an improvement and as necessary to production and efficiency. This sentiment is currently echoed via PES discourses in the Andes which also claim that rural populations will be co-beneficiaries in the process of institutional redesign as local people are rewarded for proper behaviour and remade into ‘service providers’ (ibid.: 89). Ultimately, PES narratives depict the process of intervention and integration into market-based conservation schemes as helping impoverished populations (Rodriguez-de-Francisco and Boelens, 2016).

The narrative that blames poverty for environmental degradation and identifies rural communities as potential labourers for conservation informs FONAG’s intervention strategy. FONAG therefore offers productive projects as a point of exchange to direct community activities towards ecosystem conservation and restoration. Productive projects are a form of economic development intended to be ecologically compatible with the ecosystem: the projects themselves should contribute to the overall conservation of the páramo by reducing poverty and thus reducing the pressure on the ecosystem through generating alternative sources of income. At the same time, they require the exchange of community labour directly towards conservation work. Therefore, the productive projects function as an in-kind economic incentive to mobilize and transform the labour of communities to directly contribute to specific conservation goals.

Yet, a disjuncture appears when examining the FONAG narrative in comparison to the narrative circulated among communities that accept the projects. Through a closer look at this, the next section examines the processes by which FONAG is redirected within a particular social context in order to gain acceptance in rural communities. It highlights the tension and misalignment underscoring divergent understandings of how FONAG is supposed to interact with the activities of people within a targeted ecosystem.

## TRANSLATION

Urban-based FONAG administrators are seldom the ones to convince rural communities to sign agreements with FONAG. Rather, FONAG gains access to communities through hiring local members of the community called *guarda páramos* — páramo guards. Described by a FONAG practitioner as its ‘visible face’, the páramo guard is a local person hired by FONAG to broker relationships with rural communities whose land-use practices FONAG is trying to influence.<sup>9</sup> Páramo guards are the representatives of FONAG who are in closest contact with communities and who serve as the most proximate link between urban-based FONAG administrators and rural land managers. Specifically, they facilitate and monitor agreements made between communities and FONAG and report upon activities both within communities and in the páramo. The páramo guards enable FONAG to negotiate contracts in which it agrees to finance productive projects if the community agrees to collectively put their labour towards conservation practices directed at maintaining or restoring ecosystem services. This exchange between urban ecosystem service ‘consumers’ and rural ‘providers’ is ultimately what enables capital to circulate and FONAG to exist.

The work of the páramo guards involves the conveyance and integration of communities into the water fund PES arrangement of environmental governance. As such, they act as ‘street-level bureaucrats’ negotiating between interests with skill and situational knowledge in a policy-diffusion process (Lipsky, 1980). More than simply transferring FONAG’s expectations to rural community members, páramo guards are required to mediate between different realities. In order to examine this process, I primarily draw upon Frances Cleaver’s (2002, 2012) concept of institutional bricolage to analyse how new institutions are formed regarding land-use practices within the water fund PES arrangement. Bricolage refers to the ‘adaptive processes by which people imbue configurations of rules, traditions, norms and relationships with meaning and authority’ (Cleaver, 2012: 34). As old institutional

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<sup>9</sup> Interview, FONAG practitioner, June 2012.

arrangements regarding land and resources are modified, new arrangements are connected to previous institutions and culturally acceptable norms.

As intermediaries, páramo guards occupy a position of tension in which they must reconcile — for themselves and for their communities — FONAG’s aims to direct local practices and environmental relationships. They do this through drawing upon local perspectives in a process of institutional bricolage, ‘in which people consciously and non-consciously draw on existing social formulae (styles of thinking, models of cause and effect, social norms and sanctioned social roles and relationships) to patch or piece together institutions in response to changing situations’ (ibid.: 45). This process, however, is not seamless. It results in multiple articulations and understandings of FONAG’s role in shaping institutions.

Páramo guards are envisioned by FONAG as being respected, taking a leadership role in the community, and disseminating their environmental knowledge to other community members.<sup>10</sup> The páramo guard is in a unique position as simultaneously an employee of FONAG and a member of the local community. Because of their influential role, FONAG does not appoint páramo guards without the agreement of the community, established during a general assembly meeting. In the rural Ecuadorian Andes near Quito, communities traditionally hold regular meetings led by an elected council. They are open to all community members and occasionally require mandatory representation from each household. General assemblies serve as a platform for discussion and coordination of community activities and governance matters. To hire a páramo guard, a FONAG practitioner attends a general assembly meeting to describe the criteria of the páramo guard position and the opportunity for productive projects that the position brings to the community. The community will then hold an election at a later meeting, voting between three or four people who put themselves forward for the position.<sup>11</sup> Although FONAG officially defines the páramo guards’ work,

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<sup>10</sup> Interview, FONAG practitioner, June 2012.

<sup>11</sup> Interview, páramo guard, November 2012.

pays them and holds them accountable, the process of hiring a páramo guard depends upon the local community.

FONAG considers the páramo guard to be a link that allows them to influence the community, but the community elects a páramo guard with the expectation that the person in that position will leverage benefits for the community.<sup>12</sup> FONAG recognizes and utilizes this positionality of the páramo guard. As a FONAG publication describes, páramo guards were motivated because their ‘reputation was at stake, in case of not obtaining financing for the [productive] projects’ (Escandón and Rojas, 2008: 18). In other words, páramo guards felt pressure to facilitate the acquisition of resources from FONAG for their communities. Rather than looking only to FONAG for accountability and the motivation of their salary, the páramo guards were also accountable to the community, consisting of their neighbours, friends and relatives, and entailing extra-monetary motivations.

As a liaison position, the páramo guards are required to enrol local communities in FONAG’s agreements, which means they are tasked with translating and transferring institutions regarding páramo use. A FONAG practitioner working with the páramo guard programme described the role and expectation of the páramo guard: ‘Basically, the guard has to convey the norms and rules of behaviour regarding environment: no hunting, no burning, no cutting trees, and no letting cattle out [to graze the páramo]’.<sup>13</sup>

While FONAG clearly discourages certain practices within the páramo, the reasons and purpose behind the rules diverge between the narratives produced by FONAG practitioners and the páramo guards. This was highlighted during exchanges in a páramo guard training workshop. FONAG practitioners, for example, emphasized the aspect of service to the city of Quito and the role of the programme as a mechanism to provide for the water needs of urban residents:

The idea of [the founders of FONAG] is to protect the water so that it comes with quality and sufficient quantity for the population of the Metropolitan District of Quito

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<sup>12</sup> Various conversations with practitioners and rural community members, 2012.

<sup>13</sup> Interview, FONAG practitioner, June 2012.

and its areas of influence. It is a team effort. [Páramo guards] have [their] function, the administrators have their function, the communications coordinator has her function, everyone has their function. Everyone comes together so that a good quality product comes from this, right?<sup>14</sup>

The practitioner describes FONAG's function as a part of a team effort to accomplish the goal of providing a 'good quality product' — water — to the citizens of Quito. Describing the work of the páramo guard specifically, another FONAG practitioner stated: 'The principal objective is to maintain the quality and quantity of water for the city of Quito. This is our work for which we have been hired. If we are not capable of improving the quality and quantity of water, we are not doing anything here'.<sup>15</sup> The narrative of supplying a product to the residents of Quito fits FONAG's overall narrative in its promotional materials, reports and other documents. The position of the páramo guard is framed as one step in the process of cultivating a product to be delivered to and consumed by the city.

Yet, urban-based FONAG practitioners are not the ones charged with influencing rural communities and convincing them to adopt particular land-use practices. As an urban FONAG practitioner described the advantage of the páramo guard programme: 'They are people from the community that know the social, mental and economic reality, which allows us to enter these realities and influence in a certain way their practices; their values regarding the environment; their attitudes'.<sup>16</sup> Because páramo guards are members of the same communities they are trying to influence, they understand the rationalities and values that may differ from those of FONAG. As such, transferring FONAG's desired conservation practices to their communities involves reconciling and leveraging their community practices, institutions and values.

Páramo guards stress the impact on their communities and describe drawing upon local benefits of the programme. Discussing how he approached people that were fishing or hunting, one páramo guard emphasized community connections: 'I tell them that it is not for

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<sup>14</sup> Páramo guard workshop, FONAG practitioner, October 2013.

<sup>15</sup> Páramo guard workshop, FONAG practitioner, October 2013.

<sup>16</sup> Interview, FONAG practitioner, March 2012.

[FONAG], is not for me, but instead is for the future of the grandchildren, of the children. The resources are [for us] to consume, but in an equitable form so that hopefully they will never run out'.<sup>17</sup> Similarly, another páramo guard described his ties to his community and his ideas about reviving and connecting to local institutions to promote biodiversity conservation and FONAG's objectives of watershed protection in the páramo:

In community we have strength, right? We can rescue our cultural heritage of asking permission to the páramo to give thanks for the life and the water it provides to everyone, for our families. When we did a survey about starting a [productive] project, an older person told me that before, a long time ago, they asked permission. It went very well and the páramo would deliver water to the lower zones because, well, they gave thanks to have it.<sup>18</sup>

These two quotes demonstrate how páramo guards discursively draw upon pre-existing norms and values. As Cleaver (2002: 15) explains, 'the use and adaptation of pre-existing customs and practices confer new arrangements with legitimacy of tradition'.

These ideas and representations, however, extend further to the páramo guards' own narratives about why their communities are engaged with FONAG. In one interview, a páramo guard explained his perspective of why FONAG targeted his community for conservation agreements:

One of the reasons that FONAG chose to work in [our community] is because [our community] has always conserved its páramo. When there have been fires, for example, the people collaborate to put them out. When [FONAG] came to look, they saw that [the community] almost never burns [the páramo]. In this site we do not burn, it would be bad luck, right? That's the first thing FONAG does, is to see if [the community] is in agreement with what FONAG suggests: to

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<sup>17</sup> Páramo guard workshop, páramo guard, October 2013.

<sup>18</sup> Páramo guard workshop, páramo guard, October 2013.

conserve, to care for, and to make good use of natural resources. These are the conditions that FONAG has always set out.<sup>19</sup>

Páramo guards tended to represent local people as stewards and emphasized how their position served their community. As demonstrated in this quote, páramo guards may not communicate to community members that FONAG is an incentive mechanism at all. Instead, they may interpret it as a reward for previous stewardship activities. Alternatively, FONAG's projects may be communicated as just one more of many development projects funded by a non-governmental organization.

Other incongruences in narrative between urban-based FONAG practitioners and the páramo guards appeared in observed interactions and in interviews. The narratives of FONAG stress goals of efficiently organizing the landscape and using economic rational in accounting. In contrast, páramo guards routinely verbalize the importance of the páramo lands for serving the needs of their own communities and values that go beyond utilitarianism and instead emphasize social relations.

For example, páramo guards were frequently reprimanded for not keeping records on activities that would be valuable to FONAG, for working intermittent hours, working overtime hours beyond FONAG's ability to compensate, and for interacting with people and observing lands that may have been adjacent to FONAG target areas, but not directly within them. When asked why they did such things, some of the páramo guards spoke of adapting to local practices. As one páramo guard explained:

I know the times when hunters will be out, so I go out then, and come back [home] in between those times. Also, the hours of leaving [for the páramo] have to be varied every day because we won't see hunters or people cutting wood... If we leave after exactly eight hours [each day], then I would likely to pass hunters on the road as we are leaving [the páramo].<sup>20</sup>

Another similarly stated: 'I stay a little longer, but this does not cause a problem for me because while I stay longer, for me it is just a little bit longer because I know that I am caring

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<sup>19</sup> Interview, páramo guard, November 2012.

<sup>20</sup> Páramo guard workshop, páramo guard, October 2013.

for the land'.<sup>21</sup> Others spoke about the values of the biodiversity and water resources to their community, leading them to work longer hours and intervene in lands that they perceived as valuable to the community, as opposed to only those that were directly within the FONAG watershed areas.

Holding important roles as translators between FONAG and their communities, páramo guards operate with significant discretion and little oversight. In the position of a street-level bureaucrat, this arguably lets them adapt to contextual circumstances and accomplish their work (Lipsky 1980). Their position is crucial to promote norms and practices that FONAG wishes to instil in targeted conservation areas, and FONAG employs páramo guards as an extension of urban influence. Yet, these intermediaries must draw upon local values and rationalities and mediate between the objectives of FONAG and the communities. To do so, páramo guards engage in institutional bricolage that discursively aligns values and institutions to achieve desired actions. The discursive practices of this intermediary position also allow communities to access and leverage the resources of FONAG. According to the páramo guards' discussions, however, this effort to leverage resources may also result in communities reviving institutions and/or constructing new ones. Thus, the rationalities extended via FONAG have an effect on communities, albeit one that is mediated.

## CONCLUSION

A water fund is a conservation mechanism informed by the neoliberal logics of PES. Ultimately, water fund arrangements attempt to direct the conduct of people residing in and around critical ecosystems through the use of economic incentives. In this article, I have examined how narratives about FONAG — the internationally influential water fund PES

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<sup>21</sup> Páramo guard workshop, páramo guard, October 2013.



arrangement — shift between sites of articulation as they move from idea into practice. While examining the larger-scale processes and the political context that has shaped narratives surrounding water fund PES in Ecuador, this article has shone a light on the intermediaries that link the urban and rural spheres and facilitate the operation of the water fund on the ground. As such, this study illuminates the process of connectivity and diffusion of a PES policy model into communities targeted for intervention.

In doing so, it has demonstrated how the narratives which circulate about water fund PES may simultaneously differ between the broader epistemic communities, among urban-based practitioners, and within the sites of programme implementation. Notably, this case shows that the discursive frame driving the implementation of a PES imbues potentially problematic neoliberal ideology with local perspectives, values and institutions — even though the promoted conservation activities and practices themselves are not overtly controversial. Using Cleaver's analytic of institutional bricolage, I discuss how employment of local mediators capable of adapting narratives to appeal to local values becomes critical for the implementation and continuation of the water fund programme within the rural communities that are targets for intervention. I find that narratives about a PES arrangement may not be simultaneously changed or reworked on all scales; rather, they may misalign at various sites.

Popular pressure against neoliberal management of natural resources has influenced the political framework in which PES operates in Ecuador. Although conservation practitioners have responded by shifting terminology about PES away from market exchange, PES narratives about environmental degradation remain intact to frame local land managers as threats ripe for reform into service providers for the urban areas via incentive mechanisms (Boelens et al., 2014). The narratives positioning rural land managers as labour available for the benefit of urbanites, however, typically fails to appeal to targeted communities. FONAG therefore hires local mediators who ultimately employ a translation process to reconcile the interests of their communities with those of their employers. Rather than coercing communities into enrolling on programmes, this case demonstrates the importance of persuasion. Acceptance and enrolment in water fund PES may be particularly

dependent upon the abilities of intermediaries to meld PES practices with local institutions. The outcomes in various rural communities, however, may vary considerably. Recent research on FONAG has highlighted how interpretations of conservation outcomes may misalign between multiple actors and communities (Joslin, 2019).

Finally, this study also highlights issues regarding environmentalities and the subjectivities involved in enrolling rural communities in PES as an avenue for further exploration. Fletcher (2010, 2017) has suggested that the concept of neoliberal environmentality may be useful in a framework that interrogates conservation arrangements and the practices that bring them into being. This article certainly indicates that PES discourses draw upon neoliberal forms of environmentality, but páramo guards may reject or only partially accept these narratives in practice. I urge further scholarship on how discursive formations in relation to the practice of PES may vary at multiple scales. As an arrangement for environmental governance, narratives about PES are a powerful element in directing the beliefs and consequently the conduct of people in relationship to their environment. The practice and re-articulation of discourses on the ground are therefore important for understanding outcomes on landscapes and communities.

## REFERENCES

- Acción Ecológica (2006) 'Declaracion Ante los Servicios Ambientales' ['Declaration against Ecosystem Services']. Quito: Acción Ecológica. [www.accioneologica.org/servicios-ambientales/documentos-de-organizaciones-sociales/1414-declaracion-ante-los-servicios-ambientales](http://www.accioneologica.org/servicios-ambientales/documentos-de-organizaciones-sociales/1414-declaracion-ante-los-servicios-ambientales) (accessed 8 February 2019).
- Adams, W.M. (2004) *Against Extinction: The Story of Conservation*. London: Earthscan.
- Adger, W.N., T.A. Benjaminsen, K. Brown and H. Svarstad (2001) 'Advancing a Political Ecology of Global Environmental Discourses', *Development and Change* 32(4): 681–715.
- Andolina, R. (2012) 'The Values of Water: Development Cultures and Indigenous Cultures in Highland Ecuador', *Latin American Research Review* 47(2): 3–26.
- Baillie, K.U. (2013) 'On the Waterfront: Striking a Balance in Latin America and the Caribbean'. Washington, DC: USAID. [www.usaid.gov/global-waters/january-2012/striking-balance-lac](http://www.usaid.gov/global-waters/january-2012/striking-balance-lac)
- Bakker, K. (2010) 'The Limits of "Neoliberal Natures": Debating Green Neoliberalism', *Progress in Human Geography* 34(6): 715–35.
- Benitez, S.P., A. Blanco, J. Cole, M. Iabanez, J.J. Rodriguez and S. Halloy (2010) 'Using Water Funds to Finance Watershed Conservation in the Andes and Costa Rica', *Mountain Forum Bulletin* 10(1): 71–73.
- Boelens, R. (2006) 'Las múltiples dimensiones de valorización del agua en la región Andina' ['The Multiple Dimensions of Water Valuation in the Andean Region'], in L.E. Isch and I. Gentes (eds) *Agua y Servicios Ambientales [Water and Environmental Services]*, pp. 27–61. Quito: Abya-Yala.

- Boelens, R., J. Hoogesteger and J.C. Rodriguez-de-Francisco (2014) 'Commoditizing Water Territories: The Clash between Andean Water Rights Cultures and Payment for Environmental Services Policies', *Capitalism Nature Socialism* 25(3): 84–102.
- Bremer, L.L. et al. (2016) 'One Size does not Fit All: Natural Infrastructure Investments within the Latin American Water Funds Partnership', *Ecosystem Services* 17: 217–36.
- Brockington, D., R. Duffy and J. Igoe (2008) *Nature Unbound: Conservation, Capitalism and the Future of Protected Areas*. Sterling, VA: Earthscan.
- Büscher, B. (2012) 'Payments for Ecosystem Services as Neoliberal Conservation: (Reinterpreting) Evidence from the Maloti-Drakensberg, South Africa', *Conservation and Society* 10(1): 29–41.
- Büscher, B. (2014) 'Selling Success: Constructing Value in Conservation and Development', *World Development* 57: 79–90.
- Calvache, A., S.P. Benitez and A. Ramos (2012) 'Fondos de Agua: Conservando la Infraestructura Verde. Guía de Diseño, Creación y Operación' ['Water Funds: Conserving Green Infrastructure. Guide for Design, Creation and Operation']. Bogotá: Alianza Latinoamericana de Fondos de Agua, The Nature Conservancy, Fundación FEMSA and Banco Interamericano de Desarrollo.
- Cleaver, F. (2002) 'Reinventing Institutions: Bricolage and the Social Embeddedness of Natural Resource Management', *European Journal of Development Research* 14(2): 11–30.
- Cleaver, F. (2012) *Development through Bricolage: Rethinking Institutions for Natural Resource Management*. New York: Routledge.
- Diehn, S.A. (2005) 'Rival Models for Land Management in Ecuador', *Cultural Survival Quarterly* 29(1). [www.culturalsurvival.org/publications/cultural-survival-quarterly/rival-models-land-management-ecuador](http://www.culturalsurvival.org/publications/cultural-survival-quarterly/rival-models-land-management-ecuador)

- Dominguez, D. (2014) 'El Agua Viene de los Páramos, Protegerles es Nuestra Responsabilidad' ['The Water Comes from the Paramo, Protecting it is our Responsibility'], *Agua-a-Fondo* 30. Quito: FONAG.
- Duffy, R. and L. Moore (2010) 'Neoliberalising Nature? Elephant-back Tourism in Thailand and Botswana', *Antipode* 42(3): 742–66.
- Echavarria, M. (2002) 'Financing Watershed Conservation: The FONAG Water Fund in Quito, Ecuador', in S. Pagiola, J. Bishop and N. Landell-Mills (eds) *Selling Forest Environmental Services: Market-based Mechanisms for Conservation and Development*, pp. 91–102. London: Earthscan Publications.
- Engel, S., S. Pagiola and S. Wunder (2008) 'Designing Payments for Environmental Services in Theory and Practice: An Overview of the Issues', *Ecological Economics* 65(4): 663–74.
- Escandón, S. and O. Rojas (2008) 'Guardaparques, gestores de la protección del agua' ['Paramo Guards, Managers of Water Protection']. Quito: FONAG and USAID. [www.fonag.org.ec/upload/doc\\_proyectos/GUARDAPARQUES.pdf](http://www.fonag.org.ec/upload/doc_proyectos/GUARDAPARQUES.pdf)
- Fairhead, J., M. Leach and I. Scoones (2012) 'Green Grabbing: A New Appropriation of Nature?', *The Journal of Peasant Studies* 39(2): 237–61.
- Fletcher, R. (2010) 'Neoliberal Environmentalism: Towards a Poststructuralist Political Ecology of the Conservation Debate', *Conservation and Society* 8(3): 171–81.
- Fletcher, R. (2017) 'Environmentalism Unbound: Multiple Governmentalities in Environmental Politics', *Geoforum* 85: 311–15.
- Fletcher, R. and B. Büscher (2017) 'The PES Conceit: Revisiting the Relationship between Payments for Environmental Services and Neoliberal Conservation', *Ecological Economics* 132: 224–31.

- FONAG (2007) 'Comunidades Ejecutan Proyectos Ecologicos-productivos: Consolidan Lazos en Favor de la Proteccion del Agua' ['Communities Execute Ecological-productive Projects: Strengthening Ties in Favour of Water Protection'], *Agua-a-Fondo 1*. Quito: FONAG.
- FONAG (2009) 'Plan Estratégico 2009–2013' ['Strategic Plan 2009–2013']. Quito: FONAG.
- FONAG (2016) 'Plan Estratégico 2016' ['Strategic Plan 2016']. Quito: FONAG
- Goldman-Benner, R.L. et al. (2012) 'Water Funds and Payments for Ecosystem Services: Practice Learns from Theory and Theory can Learn from Practice', *Oryx* 46(1): 55–63.
- Gomez-Baggethun, E. and R. Muradian (2015) 'In Markets We Trust? Setting the Boundaries of Market-based Instruments in Ecosystem Services Governance', *Ecological Economics* 117: 217–24.
- Gomez-Baggethun, E., R.S. de Groot, P.L. Lomas, and C. Montes (2010) 'The History of Ecosystem Services in Economic Theory and Practice: From Early Notions to Markets and Payment Schemes', *Ecological Economics* 69(6): 1209–18.
- Haas, P.M. (1989) 'Do Regimes Matter? Epistemic Communities and Mediterranean Pollution Control', *International Organization* 43(3): 376–403.
- Haas, P.M. (1992) 'Introduction, Epistemic Communities and International Policy Coordination', *International Organization* 46(1): 1–35.
- Hajer, M.A. (1993) 'Discourse Coalitions and the Institutionalization of Practice: The Case of Acid Rain in Great Britain', in F. Fischer and J. Forester (eds) *The Argumentative Turn in Policy Analysis and Planning*, pp. 43–76. London: UCL Press.
- Harris, L.M. and M.C. Roa-Garcia (2013) 'Recent Waves of Water Governance: Constitutional Reform and Resistance to Neoliberalization in Latin America (1990–2012)', *Geoforum* 50: 20–30.

- Herrera, P. (2011) ‘Servicios Ambientales: Patrimonio y Derechos en Juego’ [‘Environmental Services: Patrimony and Rights at Play’], *Revista Nuestro Patrimonio*. Quito: Revista del Ministerio Coordinador del Patrimonio.
- Igoe, J. and D. Brockington (2007) ‘Neoliberal Conservation: A Brief Introduction’, *Conservation and Society* 5(4): 432–49.
- Isch, E.L. and I. Gentes (eds) (2006) *Agua y Servicios Ambientales: Visiones Criticas desde los Andes* [Water and Environmental Services: Critical Visions from the Andes]. Quito: Abya-Yala.
- Joslin, A.J. (2019) ‘Unpacking “Success”: Applying Local Perceptions to Interpret Influences of Water Fund Payments for Ecosystem Services in the Ecuadorian Andes’, *Society & Natural Resources* 32(6): 617–37.
- Joslin, A.J. and W.E. Jepson (2018) ‘Territory and Authority of Water Fund Payments for Ecosystem Services in Ecuador’s Andes’, *Geoforum* 91: 10–20.
- Kauffman, C.M. (2014) ‘Financing Watershed Conservation: Lessons from Ecuador’s Evolving Water Trust Funds’, *Agricultural Water Management* 145: 39–49.
- Kauffman, C.M. (2017) *Grassroots Global Governance: Local Watershed Management Experiments and the Evolution of Sustainable Development*. New York: Oxford University Press.
- Kenny, A. (2012) ‘Decade Old Ecuadorian Water Fund Providing Template for Entire Region’, *Ecosystem Marketplace* 7 June.  
[www.ecosystemmarketplace.com/articles/decade-old-ecuadorian-water-fund-br-providing-template-for-entire-region-2/](http://www.ecosystemmarketplace.com/articles/decade-old-ecuadorian-water-fund-br-providing-template-for-entire-region-2/)
- Kolinjivadi, V., G. Van Hecken, D. Vela Almeida and N. Kosoy (2019) ‘Neoliberal Performatives and the “Making” of Payments for Ecosystem Services’, *Progress in Human Geography* 43(1): 3–25.

- Kolinjivadi, V., G. Van Hecken, J.C. Rodríguez de Francisco, J. Pelenc and N. Kosoy (2017) 'As a Lock to a Key? Why Science is More than just an Instrument to Pay for Nature's Services', *Current Opinion in Environmental Sustainability* 26–27: 1–6.
- Krchnak, K.M. (2007) 'Watershed Valuation as a Tool for Biodiversity Conservation'. Arlington, VA: The Nature Conservancy.
- Leach, M., J. Fairhead and J. Fraser (2012) 'Green Grabs and Biochar: Revaluing African Soils and Farming in the New Carbon Economy', *The Journal of Peasant Studies* 39(2): 285–307.
- Li, T.M. (2007) *The Will to Improve*. Durham, NC: Duke University Press.
- Lipsky, M. (1980) *Street-level Bureaucracy*. New York: Russell Sage Foundation.
- Lloret, P. (2008) 'Paramo, Equivalente de Vida' ['Paramo, Equivalent to Life'], *Agua-a-Fondo* 2. Quito: FONAG.
- Martin-Ortega, J., E. Ojea and C. Roux (2013) 'Payments for Water Ecosystem Services in Latin America: A Literature Review and Conceptual Model', *Ecosystem Services* 6: 122–32.
- McAfee, K. and E.N. Shapiro (2010) 'Payments for Ecosystem Services in Mexico: Nature, Neoliberalism, Social Movements, and the State', *Annals of the Association of American Geographers* 100(3): 579–99.
- McElwee, P. (2012) 'Payments for Environmental Services as Neoliberal Market-based Forest Conservation in Vietnam: Panacea or Problem?', *Geoforum* 43: 412–26.
- Mena Vásquez, P. (2008) 'Los Páramos son Ecosistemas Tropicales, Todos a Favor de Páramos' ['The Paramos are Tropical Ecosystems, All in Favor of the Paramos'], *Agua-a-Fondo* 2. Quito: FONAG.
- Mosse, D. (2004) 'Is Good Policy Unimplementable? Reflections on the Ethnography of Aid Policy and Practice', *Development and Change* 35(4): 639–71.



- Muradian, R. (2013) 'Payments for Ecosystem Services as Incentives for Collective Action', *Society & Natural Resources* 26(10): 1155–69.
- Pasgaard, M., G. Van Hecken, A. Ehammer and N. Strange (2017) 'Unfolding Scientific Expertise and Security in the Changing Governance of Ecosystem Services', *Geoforum* 84: 354–67.
- Rodríguez-de-Francisco, J.C. and R. Boelens (2014) 'Payment for Environmental Services and Power in the Chamachán Watershed in Ecuador', *Human Organization* 73(4): 351–62.
- Rodríguez-de-Francisco, J.C. and R. Boelens (2015) 'Payment for Environmental Services: Mobilising an Epistemic Community to Construct Dominant Policy', *Environmental Politics* 24(3): 481–500.
- Rodríguez-de-Francisco, J.C. and R. Boelens (2016) 'PES Hydrosocial Territories: De-territorialization and Re-patterning of Water Control Arenas in the Andean Highlands', *Water International* 41(1): 140–56.
- Rodríguez-de-Francisco, J.C., J. Budds and R. Boelens (2013) 'Payments for Environmental Services and Unequal Resource Control in Pimampiro, Ecuador', *Society & Natural Resources* 26(10): 1217–33.
- Shapiro-Garza, E. (2013a) 'Contesting Market-based Conservation: Payments for Ecosystem Services as a Surface of Engagement for Rural Social Movements in Mexico', *Human Geography* 6(1): 134–50.
- Shapiro-Garza, E. (2013b) 'Contesting the Market-based Nature of Mexico's National Payments for Ecosystem Services Programs: Four Sites of Articulation and Hybridization', *Geoforum* 46: 5–15.
- Tallis, H., P. Kareiva, M. Marvier and A. Chang (2008) 'An Ecosystem Services Framework to Support both Practical Conservation and Economic Development', *Proceedings of the National Academy of Sciences* 105(28): 9457–64.

- TNC (2019) 'Water Funds in Africa'. The Nature Conservancy. [www.nature.org/en-us/about-us/where-we-work/africa/stories-in-africa/water-funds-in-africa/](http://www.nature.org/en-us/about-us/where-we-work/africa/stories-in-africa/water-funds-in-africa/) (accessed 16 May 2019).
- UNEP (2010) 'Green Economy Success Stories: Ecosystem Services in Ecuador'. United Nations Environmental Programme. [www.minambiente.it/sites/default/files/archivio/allegati/rio\\_20/unep\\_developing\\_countries\\_success\\_stories\\_eng.pdf](http://www.minambiente.it/sites/default/files/archivio/allegati/rio_20/unep_developing_countries_success_stories_eng.pdf)
- USAID (2014) 'Protecting Water Sources for Biodiversity Conservation: Financial Mechanisms for the Protection of Watersheds in Ecuador. Final Report Cooperative Agreement No. 518-A-00-07-00056-00 — USAID'. Quito: FONAG.
- Valladares, C. and R. Boelens (2019) 'Mining for Mother Earth. Governmentalities, Sacred Waters and Nature's Rights in Ecuador', *Geoforum* 100: 68–79.
- Van Hecken, G., J. Bastiaensen and F. Huybrechs (2015) 'What's in a Name? Epistemic Perspectives and Payments for Ecosystem Services Policies in Nicaragua', *Geoforum* 63: 55–66.
- Van Hecken, G., J. Bastiaensen and C. Windey (2015) 'Towards a Power-sensitive and Socially Informed Analysis of Payments for Ecosystem Services (PES): Addressing the Gaps in the Current Debate', *Ecological Economics* 120: 117–25.
- Vatn, A. (2010) 'An Institutional Analysis of Payments for Environmental Services', *Ecological Economics* 69(6): 1245–52.
- Vatn, A. (2015) 'Markets in Environmental Governance: From Theory to Practice', *Ecological Economics* 105: 97–105.
- Veiga, F., A. Calvache, S.P. Benitez, J. León and A. Ramos (2015) 'Water Funds as a Tool for Urban Water Provision and Watershed Conservation in Latin America', in I. Aguilar- Barajas et al. (eds) *Water and Cities in Latin America: Challenges for Sustainable Development*, pp. 235–55. London and New York: Earthscan.

Wunder, S. (2005) 'Payments for Environmental Services: Some Nuts and Bolts'. CIFOR Occasional Paper No. 42. Bogor: CIFOR.

Wunder, S. (2012) 'Of PES and Other Animals', *Oryx* 46(1): 1–2.

Wunder, S. (2015) 'Revisiting the Concept of Payment for Environmental Services', *Ecological Economics* 117: 234–43.

Wunder, S. and M.T. Vargas (2005) 'Beyond Markets: Why Terminology Matters', *Ecosystem Marketplace* 2 March.

[https://vtechworks.lib.vt.edu/bitstream/handle/10919/66872/2381\\_](https://vtechworks.lib.vt.edu/bitstream/handle/10919/66872/2381_)

[Wunder2005\\_Beyond\\_Markets\\_terminology\\_ma.pdf?sequence=1&isAllowed=y](https://vtechworks.lib.vt.edu/bitstream/handle/10919/66872/2381_Wunder2005_Beyond_Markets_terminology_ma.pdf?sequence=1&isAllowed=y)

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