



# Reaching for the Mountains at the End of a Rebelocracy: Changes in Land and Water Access in Colombia's Highlands During the Post-peace Agreement Phase

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The armed conflict shaped and determined land-uses, water access and social and environmental norms in highlands regions in Colombia for several decades. The withdrawal of the Revolutionary Armed Forces of Colombia (FARC) after the Peace Agreement with the government of Colombia in 2016, has brought new dynamics in access and uses of land leading to increasingly visible social-environmental impacts across the country. Social and environmental transformations are taking place in Colombia's highlands and páramo areas, which supply 70% of the country's freshwater. Yet, there is little understanding how these transformations occur. We conducted ethnographic fieldwork focusing on the experiences of local actors in natural resource access in Combia village, which was controlled by the FARC for over two decades until 2016. Combia is located in the Las Hermosas mountain region in the southwest of the country. Our interviews and revision of local and regional policy documents show how the transition from the social order under FARC control to a State-regulated phase led to an interplay of new actors and new authority figures which in turn reconfigure local land distribution and control over water. The shift of power as a direct result of the peace agreement and the retraction of the FARC reinforces unequal access to land and water, particularly for peasants without land ownership, which ironically has been the core issue in Colombia's protracted armed conflict.

**Keywords:** Colombia, peace agreement, armed conflict, water access, political ecology

## INTRODUCTION

*"With FARC, we already had a marriage with clear norms. With the environmental authority, we do not know how the arrangement is."*

-Peasant testimony, Andean highlands. February 2019.

The testimony above illustrates the local shifts brought by new authority configurations in the convoluted Colombian post- Peace Agreement phase in one small mountain settlement in the Las Hermosas region in the southwest of Colombia, where the state's environmental authorities returned after several decades of guerrilla's dominance. Restoring state management of natural

resources after armed conflicts requires the re-introduction of the state's authority and the formalization of natural resource management in areas previously controlled by armed groups (Bruch et al., 2016). However, the distribution and management of natural resources, for instance land and water, profoundly changes during conflict, making this a daunting task. In the same way, after the demobilization of armed groups, other dynamics that affect natural resource control take place, either due to the return of people displaced during the conflict, or due to the promotion of new economic activities with resulting changes in land uses and resources management (Brooke and Matthew, 2016).

In the aftermath of armed conflict, the State must also address people's needs, deliver basic services, such as water-related uses, and rebuild governance processes (Bruch et al., 2016). One of the most crucial natural resources for human well-being and local livelihoods is access to clean water for human consumption and agricultural production. Without water, social benefits are hard to come by, and further conflicts are likely (Weinthal et al., 2011). Hence, in post-conflict situations state control is seen as essential in order to restore local dispute resolution institution and assuming the role as the main manager of natural resource.

Nonetheless, the majority of post-conflict interventions have focused on building strong institutions after the signing of peace agreements, without taking into account previous institutions in conflict-affected areas, where the armed conflict shaped local social structures (Justino, 2013). However, ignoring these wartime institutions has a significant influence on the outcomes of the post-conflict transition (Arjona, 2014) and can also determine new patterns of land tenure and access to land after the peace agreement (Wood, 2003).

In 2016, after more than 50 years of armed and violent conflict, the Colombian government signed a peace accord with Colombia's largest guerrilla group, the Revolutionary Armed Forces of Colombia (FARC). However, as a result of the peace accord and the shift in local natural resources governance and territorial control, the rate of deforestation in Colombia has doubled (Ideam, 2018) and disputes over the control of other natural resources, for instance land and minerals, have increased (Ortega-Guerrero, 2018; Rojas-Robles, 2018; Clerici et al., 2020; Murillo Sandoval et al., 2020).

Although there is growing attention on the negative environmental consequences of the Post-peace Agreement phase in the Colombian Amazon (Sierra et al., 2017; Armenteras et al., 2019; Eufemia et al., 2019), there is not enough evidence on how social-ecological dynamics and governance challenges are currently changing for communities in the Colombian Andes. At the national level there is no consolidated evidence as to how Colombia's post-agreement phase is impacting these landscapes (Sierra et al., 2017), which supply 70% of the country's water including the capital Bogotá and 20 other mid-sized cities (Sarmiento et al., 2017). The highlands have been a central research interest in Colombia but relating mountain ecosystems to the armed conflict has not been a dominant research topic (Gallini et al., 2015; Buitrago, 2016). However, it is assumed that a reconfiguration of power dynamics will

affect the use, control, and appropriation of environmental resources in the highlands during the post-conflict phase (Sarmiento et al., 2017).

Considering the long-lasting influence of FARC members in mountainous regions and the knowledge gap on their post-conflict governance dynamics in the high Andes villages, this paper shows how highlands inhabitants experience changes in land access and control over water through a case-based ethnographic study in Combia, a rural settlement in the Las Hermosas region, where FARC units were the main ruling actor for over two decades.

This study adds to the literature on rebel institutions and presents evidence on water and land access dynamics in the Colombian highlands, home to important mountain ecosystems that provide water to a large population and industry. We contribute to the ongoing discussion about water governance in post-conflict settings by analyzing the transition process between the ruling of armed actors and the State's agencies attempts to re-introduce formal land governance mechanisms. A particular focus of this study is the implication of this shift from rebel institutions to state institutions for local people's access to water resources.

The paper proceeds as follows. We first present a brief context on our conceptual approach. Then, we shortly describe Colombia's armed conflict history and its connection with land access and then we introduce our methods and case study. Finally, we report the data collected during the fieldwork while connecting it to the existing literature in the "Results and Discussion" section.

## CONCEPTUAL APPROACH

Our research has a two-fold conceptual approach. To understand the social orders during FARC's regime, we applied the concept of *rebelocracy* developed by Arjona (2016). In order to analyse current socio-ecological transformations, we frame the process of state intervention in the context of political ecology by focusing on water control, particularly because the highlands and their ecosystems have been identified as strategic water sources.

Far from conventional views of chaotic scenes in armed disputes, Arjona (2014, 2016) presents war zones<sup>1</sup> as places with a definite order established through the interaction between civilians and non-state armed groups. It is a tacitly admitted set of rules of conduct during conflict that ranges from regulations of public and private behavior to solving dispute mechanisms and the provision of public goods. Arjona uses extensive field-based research in Colombia to define this normative system as wartime social order: "the particular set of institutions that underlie order in a war zone, giving place to distinct patterns of being and relating" (2016).

In this "social contract" between communities and rebel group Arjona (2016) distinguishes two types of rule systems.

<sup>1</sup>For the author, a "territory where at least one non-state armed actor has a continuous presence" Arjona (2016). *Rebelocracy: Social Order in the Colombian Civil War*. Cambridge: Cambridge University Press.

First, rebelocracy, in which the armed actor intervenes broadly in public and local private affairs with profound repercussions in the community's everyday way of life. Second, an alicocracy, where the rebel group has limited influence in the community and only intervenes in taxation and security issues.

For our case study in Colombia, we frame this process of state intervention in the context of political ecology and focus on water control because highland territories in Colombia are considered strategic water sources. Water control goes beyond the material access and possession of the liquid or the territory in which water is emanated, without denying the relevance of the material flow of water (Hoogesteger et al., 2016). We understand water control as both the mechanism and the outcome of the water order imposed in a given place in the territory. Those processes of spatial control of water also embody specific territorial arrangements.

State territorialization processes establish particular discursive and material ways of ordering and shaping territory and people (Vandergest and Peluso, 1995). These processes are materialized by strategies of allocating user's rights and reinforcing those designations (Vandergest and Peluso, 1995). Thus, state territorialization processes are embedded in power disputes and generate dynamics of inclusion, exclusion, appropriation, or displacement (Swyngedouw, 2004; Boelens et al., 2016; Perramond, 2016). For instance, the decision to implement water-control infrastructure (such as small dams or irrigation infrastructure) determine the uses and functions of water, who can access water, how and where. Thus, "to establish, demystify or transform frames of "water order" is at the heart of water control" (Boelens et al., 2016).

## MATERIALS AND METHODS

### Case Study

#### Armed Conflict in Colombia: A Protracted Land Dispute

Historically, land use and ownership has been a major reason of conflict in Colombia. Since Colombia's independence national elites have led the colonization and agricultural land appropriation by implementing a model of larger estates (latifundios). In response to this displacement, peasant communities started expanding the agricultural frontier converting forest areas in the highlands to agricultural use. Once established there, new tensions emerged when big landowners started to increase their land-acquisitions into more remote areas [Reyes Posada (2016) as cited by Sánchez León (2017)]. During the first half of the twentieth century, this land-dispute cycle became a pattern for inhabiting and transforming increasingly larger areas of the highlands (Gallini et al., 2015). The FARC was one of the first guerilla groups that was formed in response to the political failure of implementing agrarian reforms in 1930 and 1964 to re-distribute land.

The processes of exploitation and displacement intensified land struggles in Colombia's rural areas, based on four structural problems: unequal distribution of rural land ownership, undefined land tenure, conflicts over land use and tenure, and

armed land dispossession (Sánchez León, 2017). Today only 36.4% of rural households own their land, and in most cases, it is a land plot of half of the established Family Farming Unit (National Planning Department, 2015)<sup>2</sup>. In Colombia, around 15% of the land is under some environmental protection scheme and 34% is titled as indigenous and afro-descendent territories. On the other side, there is a highly unequal distribution of the remaining land in the country: 1% of the landholdings concentrate 81% of the land, and the remaining 19% is distributed among small farms (Oxfam, 2017).

Negotiations between the FARC and the Colombian government to end the armed conflict started in 2012 in Havana, Cuba. In May 2013, the parties agreed on the first and most contentious point of the agreement—the Integral Rural Reform (IRR). Broadly, the proposed reform sought to create: a "land fund" (3 million hectares) for people without property (subtractions of natural reserves are allowed), formalization of land ownership (7 million hectares), support for agricultural initiatives, promotion of participation regarding land-use decisions, modernization of the land registry, and other mechanisms (Office of the High Commissioner for Peace, 2016). The peace agreement's IRR should be implemented considering the promotion of water access and protection, closing of the agricultural frontier, and sustainable development (Office of the High Commissioner for Peace, 2016).

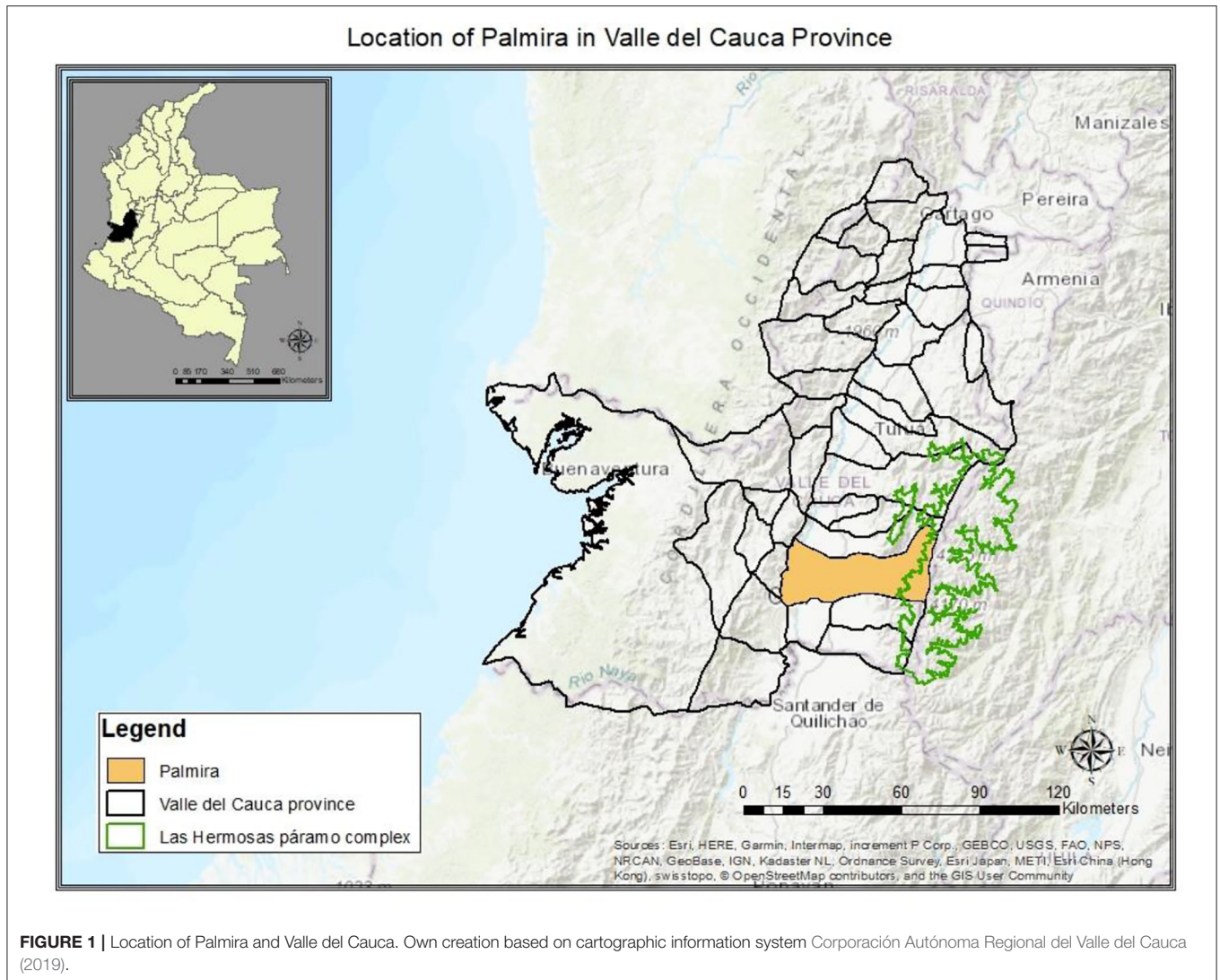
The signing of the peace agreement took place in late 2016. However, after almost 3 years since the agreement was signed, the implementation of the IRR is slow-paced and, in some cases, almost non-existent. In particular, progress related to land tenure and redistribution is minimal, and only a few legal instruments have so far been created and partially implemented (Cinep and Cerac, 2019; Kroc Institute for International Peace Studies, 2019). Moreover, the lack of specific targets in the current National Development Plan, as well as the non-allocation of financial resources for peace-related development projects, are relevant threats for the control, access and legal ownership of land in the country (Cinep and Cerac, 2019). Ironically, the unequal access to and ownership over land have been the core issue in Colombia's internal armed conflict over the last six decades (Uprimny-Yepes and Sánchez, 2010; FAO, 2017; Oxfam, 2017; Sánchez León, 2017; McKay, 2018).

#### Land-Use Dynamics in Mountain Regions During the Conflict

The dynamics of the armed conflict influenced the possession and occupation of land in these mountainous regions (Duarte-Abadia and Boelens, 2016), especially in the southern part of the country as well as in the eastern mountain range (Buitrago, 2016). The highlands provided the guerrillas and military with the opportunity for hideouts, leading to land occupation (Alexander von Humboldt Biological Resources Research Institute, 2016). These ecosystems have also been the scene of military fighting, the growing of poppy crops, threats and violence to social leaders,

<sup>2</sup>The size of the Family Farming Unit (Unidad Agrícola Familiar, UAF in Spanish) is a policy indicator of the minimum size of land required for a family to subsist. It varies according to the region. In the case study area the FFU is 3 hectares.





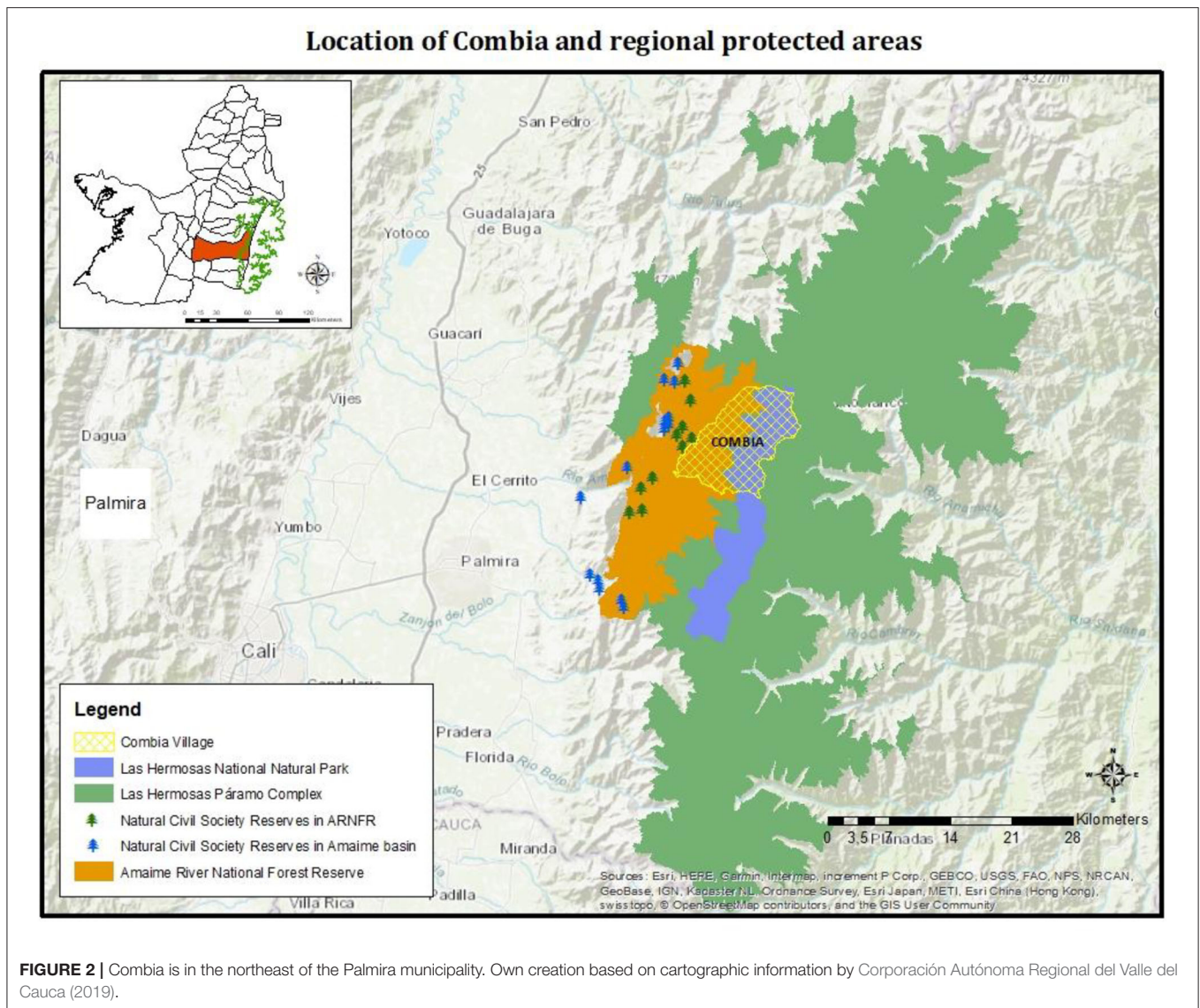
displacement of local populations and violent clashes between the guerilla and the military (Ospina, 2013; Buitrago, 2016). The strategic geographical location of the highlands was used to place ten battalions, so-called “Batallones de Alta Montaña,” from the National Army Forces to combat guerrilla structures that controlled remote mountainous areas (Ospina, 2013). For several decades, the disputes between the state and armed groups determined the status of conservation, land uses, property rights, natural resources governance and the political participation of communities in these territories (Ospina, 2013; Ungar and Osejo, 2015; Buitrago, 2016; Sarmiento et al., 2017).

For centuries, a deep-rooted social nature developed in the highlands (Duarte-Abadia and Boelens, 2016) that now constitute *zonas de vida* with particular cultural, economic and social practices (Ospina, 2017). Nonetheless, a conservation view on highlands is becoming a dominant discourse because of the increasing visibility of environmental impacts associated with mining, livestock production, leading to more regulations for the protection of water sources.

### The Case of Combia in Las Herosas Highlands

Combia is located in the eastern part of the municipality of Palmira in the Valle del Cauca department (Figure 1). The village territory lies within the Las Herosas National Park (LHNP) and the Amaime River National Forest Reserve (ARNFR) (Figure 2). The village territory covers an area of 10,365 ha, 52% of which lies within the ARNFR, and the remaining area is part of the LHNP (Universidad del Valle, 2015).

Combia lies in the Amaime river valley (Universidad del Valle, 2015). The Amaime basin provides water for the city of Palmira and its ~304,000 inhabitants (Corporación Autónoma Regional del Valle del Cauca and Universidad del Valle, 2013) and feeds the underground water reserves of the agro-sugar cane industry, the most relevant economic and water intensive sector in the region (Ideam, 2019). The landscape of Combia changes rapidly from low (2,300 masl) to high altitudes (3,600 masl). In the lower altitude areas, sub-xerophyte formations create an arid landscape (Figure 3). In the high-altitude zone cold humid forests and páramo ecosystems dominate the landscape.



During the armed conflict, Combia was a site of violent clashes during bipartisan confrontations and became a corridor of transportation of the illegal poppy traffic in the 1980's (Ospina, 2013); (I:18). According to local testimonies the FARC guerrilla established themselves in the region around 1993–1995, taxing local landowners and exercising control of the region. For the FARC Combia was of strategic importance due to its location in a corridor across the mountains connecting the departments Valle del Cauca and Tolima, which also leads to the municipalities of Rioblanco and Planadas, considered the foundational sites of the FARC (Fundación Ideas para la Paz, 2013).

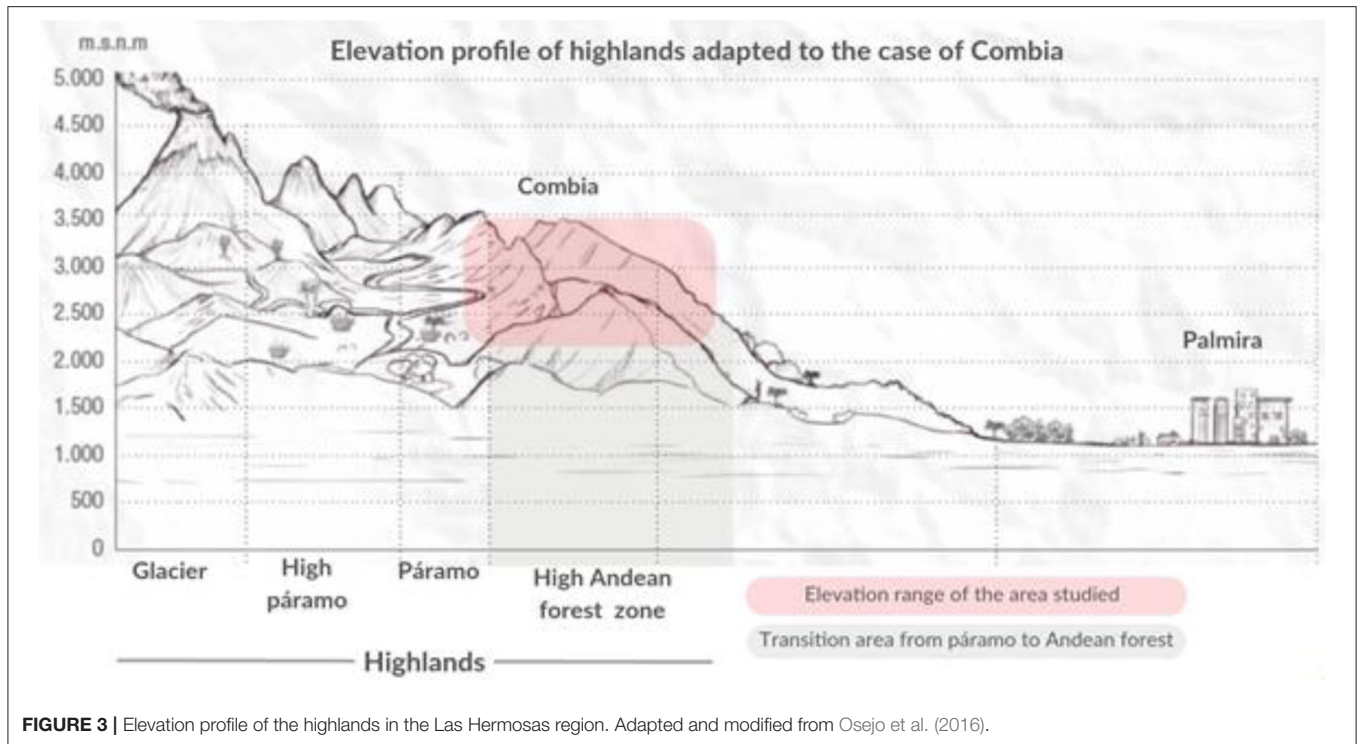
## Methods

We limited the scope of research to Las Herosas region, one of the 15- páramo systems within those municipalities identified as most impacted by the post-conflict agenda (Osejo et al., 2016). Moreover, the las Herosas páramo complex

(LHPC) is one of the 36 páramo systems classified in Colombia (Sarmiento et al., 2017), and it is the largest Alta Montaña region in the central Andean mountain chain. This region contributes to the hydrological regulation for the water supply of 1 229 315 people living in the southwest of Colombia (Universidad del Cauca, 2015).

The selection of our study area was done through informal conversations with local NGOs and officers of the Regional Autonomous Corporation of the Cauca Valley (CVC). We established three criteria for selecting one specific area within the las Herosas: location, previous relations with FARC and accessibility. First, the rural settlement needed to be located within or neighboring the highlands. Second, it should have been under prolonged occupation by FARC. Third, the security condition should allow us to stay in the area. Through this process we selected Combia village as the focus of this study.





We developed our research methods according to the guidelines for the study of highlands landscape in Colombia (Ungar, 2015). We created a semi-structured questionnaire (see **Supplementary Table 1**) based on insights related to ecosystem services and hydrological assessment of páramo ecosystems as put forward by Nieto et al. (2015) and the templates proposed by Palacio (2015) to identify actors and networks in the highlands. The questionnaire was divided into three main sections (i) current access to natural resources, (ii) uses and access to natural resources during the armed conflict, (iii) changes and transformations during the post-Peace Agreement (for more detail on the answers see **Supplementary Table 2**). We established two additional pre-fieldwork criteria based on the aforementioned methodological guidelines. First, we decided to analyse Combia as a unit within the watershed level to understand the water dynamics in a larger range of actors influencing the upper mountainous zones. Second, we focus on “primary level actors,” i.e., actors with direct use and land appropriation in the highlands (Palacio, 2015). Within this category, the target groups were inhabitants and property owners.

Fieldwork was carried out in the beginning of 2019 by the first author, during which she conducted 20 in-depth interviews with local community members (14), environmental officers (4) and local experts (2) (see **Supplementary Table 3**) by combining purposeful and snowball sampling. In order to improve the representativeness of the study we also included peasants without land titles (6), farmers with medium-size land properties (4), and large landowners (4). We complemented the interview information with narrative walks (Jerneck and Olsson, 2013)

only with local inhabitants. For this purpose, we undertook several milk collection rides<sup>3</sup> in the village in order to explore the area from the settlements in the lower zones to the farms higher up in the mountains.

In addition, we requested cartographic data about the biophysical characterization and area the Amaime River National Forest Reserve (ARNFR) to compare those with the Las Hermosas National Park boundaries. Our aim with studying the cartographic information was to understand the boundaries between the different protected areas in order to contrast local testimonies and fieldwork observations.

We analyzed this information together with three relevant policy documents to compile biophysical, economic and social information about water and land-use regulations. The documents are (i) The Amaime River Land-Use Development Plan (in Spanish: *Plan de Ordenamiento Territorial de la Cuenca del Río Amaime* (Corporación Autónoma Regional del Valle del Cauca and Universidad del Valle, 2013), (ii) Characterization of the Amaime River National Protecting Reserve (*Caracterización de la Reserva Nacional Protectora del Río Amaime*) (Universidad del Valle, 2015) and (iii) Characterization of social actors in Las Hermosas páramo (*Caracterización de los actores sociales del páramo de Las Hermosas*) (Universidad del Cauca, 2015). We reviewed the first two documents to understand the general land-use setting of the basin and the institutional narrative on the suggested land-use types for the upstream area of the basin.

<sup>3</sup>The milk collection rides are a typical activity in the area when a truck comes from Palmira to collect the milk stocks from one farm to another. The truck goes to the upper zones.

We associated the time when these two documents were done and published with the armed conflict phases as we show in the results. The third document served to understand local testimonies in regard to the broader social structure of Las Hermosas region. We reviewed these three documents because they present the latest and more complete social-environmental analysis of the basin and Las Hermosas region.

## RESULTS AND DISCUSSION

We first describe how the rebel institutions controlled access to natural resources, relating it to the concept of wartime social order (Arjona, 2014). We then present and analyse the contemporary transformations in Combia with the intervention of the regional environmental authorities and how these dynamics inform about the state control in the post-conflict phase. We highlight the implications for accessing to land and water in the case of Combia while relating them to cases in the literature.

### Rebel Institutions–The FARC Regime

*“Everything was under their control. If one had a problem, you only needed to search for Arbey”*

*Peasant testimony (I:3)*

According to our interviews, “Arbey” was the FARC leader with more civilian interaction in Combia for several years. He was the subordinate of Pablo Catatumbo, a former FARC high commander and since 2018 a Colombian congressman for new FARC (Common Alternative Revolutionary Force) political party. He stayed in Las Hermosas during part of his command.

During the armed conflict the FARC sought to permanently stay in the region, motivated by the strategic location, and for hiding purposes, such as the persistent dense cloudiness and the mountainous terrain. These conditions made it an ideal and strategic military zone for the FARC to maintain its presence and plan their activities (Garzón Roa, 2009; Redacción El País, 2009; Fundación Ideas para la Paz, 2013). Before the FARC established their presence, local institutions were relatively weak due to the marginal presence of state institutions and existing tensions between landowners and peasants in Colombia.

Combia as a “fariana”<sup>4</sup> zone was frequently the target of paramilitaries who attempted to dispute the area from the FARC. Interviewees repeatedly mentioned the period between 2001 and 2005 as the most violent in the region (Figure 5), when paramilitary groups entered Valle del Cauca and the National Army reinforced its military incursion with the implementation of the Plan Patriota in 2003 (Fundación Ideas para la Paz, 2013). Interviewees recalled the massive peasant displacement in 2001, in which more than 700 inhabitants of the Amaime river upper area had to flee to Palmira (Redacción El Tiempo Cali, 2001).

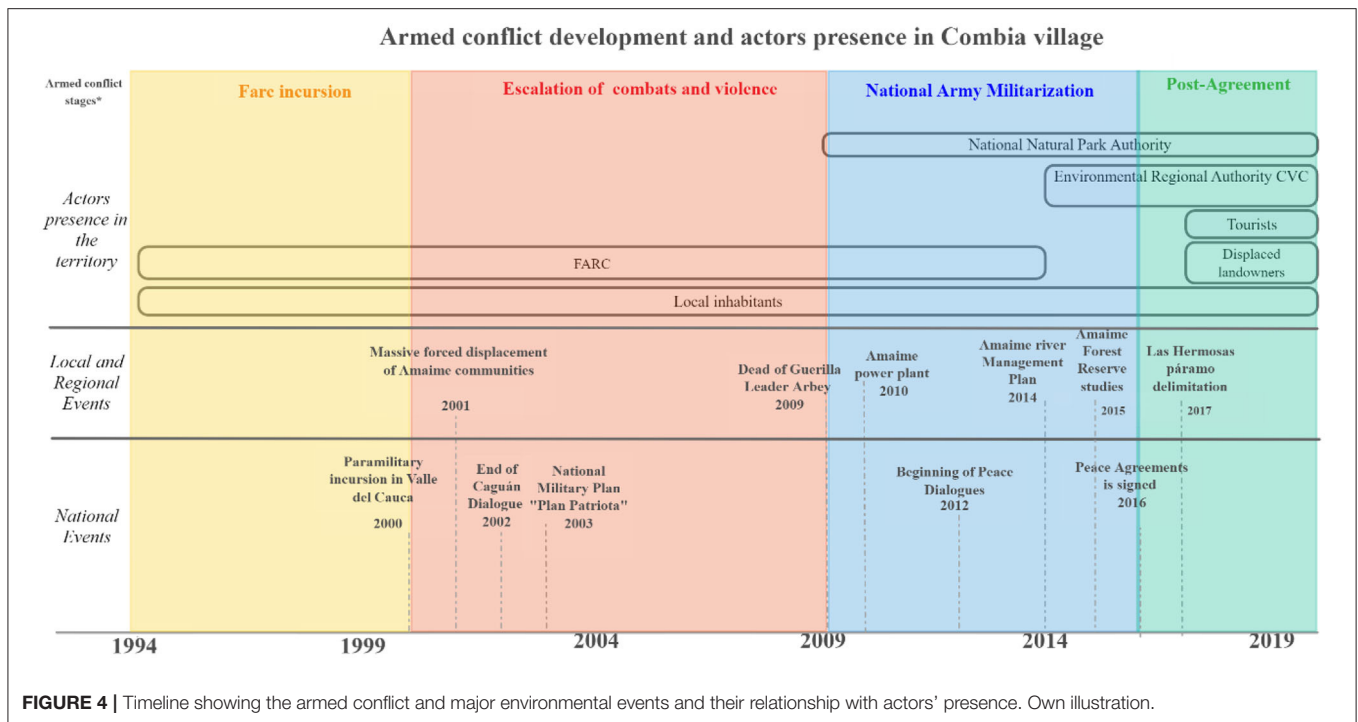
Arbey’s death in 2009 (Redacción El País, 2009) meant a significant change in the territory. Following his death, most

of the remaining FARC guerrilla fighters started to occupy the mountainous areas further away. This coincided with the beginning of the creation river and forest management plans in the area (Figure 4). The final and most significant transformation, however, took place with the complete retraction of the FARC in 2016, following the peace agreement with the Colombian state.

The interviewees mentioned how the rules introduced by FARC ranged from curfews to food sovereignty workshops in the village school. These rules were mediated through means of violence or the threat of it, and dialogue with the community. The interviews revealed four main sets of rules that affected people’s everyday access and use of natural resources:

- Restricted mobility:** Under the wartime order, the network of interaction in Combia involved only FARC leaders, peasant families, and private landowners. Access to Combia by people from outside the community was possible through a system of “guarantee.” Community members were “guarantors” of external visitors: “One was the guarantor of the person coming to the area; one was responsible for their actions or behaviors to the FARC.” (I:5-6). Going to Combia was also possible through accepting the FARC imposed order and following the taxation rules in particular. In these years, the CVC had an ambiguous and very limited presence in Combia. Only a single local officer worked in a control and surveillance function for more than 15 years, with the permission of the FARC. According to the local CVC officer, security reasons were a predominant factor. “CVC was not welcome; in fact, the FARC burned one of our cars. Neither the community nor them wanted us there. We did not have any access” (I:15). During the wartime, the National Natural Parks (PNN) authority was present in the area engaging in participatory initiatives with the local community, which required prior approval by the guerrilla (I:18). The territorial control of the national park Las Hermosas was around 4% before 2016 (I:18).
- Taxes to access the area:** The taxation led to the displacement of one large-landowner in the Teatino sector for almost two decades as well as short-term displacements of other landowners and peasants who opposed the FARC ruling. For outsiders, the possibility to move around in Combia and access higher areas in the mountains was almost impossible during the FARC regime. Most local testimonies confirm the tightly controlled access within areas occupied by the FARC. The only permitted pathways for local people to move around were the *caminos reales* (royal roads), which were used to travel to towns in Tolima. However, access to páramo areas such as Laguna Negra and other water bodies was forbidden. Moreover, local peasants were obstructed from using other paths due to the landmines planted there and threats of combat/violence. Regarding the larger landowners in Combia, they had almost no mobility and were not allowed to access the páramo area. They only visited their houses and properties sporadically, as a way to ascertain their “permanence and property” during the decades the FARC dominated the village.

<sup>4</sup>Local term in Colombia to refer to guerrilla groups.



- Guerrilla leaders as de facto court:** During the wartime order, the FARC imposed a land distribution that benefited local landless peasants, who were allowed to use particular plots without the permission of the private landowners. This was as a strategy to gain civilian cooperation and support. In Combia this FARC strategy displaced one larger landowner from the area and restricted other private landowners to access their lands. During the FARC presence about 35 peasant families from the sectors of Teatino and Combia<sup>5</sup> used this large plot for cattle ranching, housing and crops. "The people used to live very well, because the guerrilla did not say: do not pass your cows there. On the contrary: pass them there, this land is empty" (I:10). If a conflict between landowners and small farmers regarding land limits of different plots occurred, the FARC was often in favor of helping the peasants. While private owners often were victims of physical aggressions or death threats, the FARC promoted an ideological discourse by discussing political goals and appealing to grievances about land tenure. As one respondent recalls: "FARC's promise was that one day they would parcel up the large farm for the whole community" (I:13). The FARC ideology and practices about land tenure allowed a particular land distribution creating "winners and losers" during the wartime.
- Irregular control over water flows:** During the FARC wartime order, access to water was not regulated in terms of quantity, quality or uses. The control was tacit in order

<sup>5</sup>Locally, despite Combia is a *corregimiento* by administrative division, people recognize the area as divided into two small communities: Teatino and Combia. Considering that they belong to the same administrative division, Combia is the overall category referred to as the area of study.

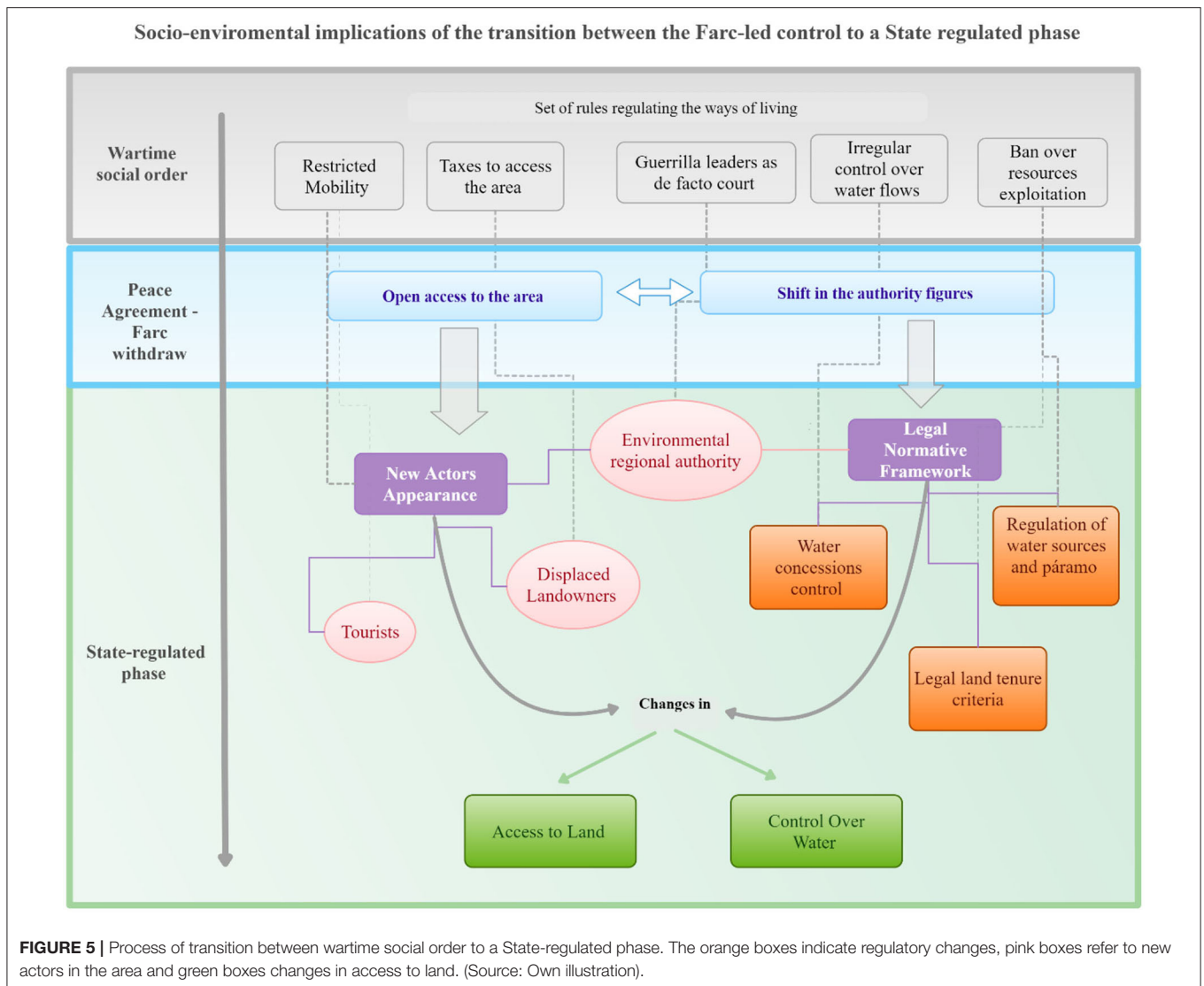
to avoid conflicts. As one farmer describes it: "Control over water was not an explicit rule. Rather, there was just fear, because you knew if anything went wrong, people demanded FARC's intervention" (I:3). The FARC as an authority intervened only when conflicts happened in cases of scarcity or disputes between farmers. We commonly found local testimonies ratifying how the FARC stressed that access to water was not a private benefit, but a common good that must be shared in the village. Hence, landowners were not allowed to fence in and appropriate water sources.

- Ban over resources exploitation:** Guerrilla leaders regulated fishing activities by banning this activity throughout the year, except some weeks before and after Easter. They also controlled fishing tools by forbidding the use of cast nets. The fishing ban is related to different ways of controlling the territory: in a way they kept the civilians away from their guerrilla base camps and they limited the access of external actors to the area.

In Combia the local institutions resulted in a social system that can be characterized as a "rebelocracy" (Arjona, 2016), in which the armed actor, i.e., the FARC, intervened broadly in public and local private affairs while having profound repercussions in the community's way of living. According to Arjona (2016), a rebelocracy emerges when a rebel group has long-term goals in the area, and weak institutions are present in the community, which was the case of Combia. This also confirms how the presence of high-level guerrilla commanders, such as Pablo Catatumbo in Las Hermosas, induces the creation of a *rebelocracy*.

The wartime social order (Arjona, 2014) in Combia lasted for more than two decades and shaped the area in social,





economic, and political terms. The FARC - under the lead of “Arbey” -established codes of behavior and institutions of control (Arjona, 2014, 2016). Our data closely relates to the armed groups’ intervention in different aspects of local life described by Arjona (2016). We associated four aspects that directly influence natural resources governance that were present in Combia’s case:

- **Mobility:** rebel group established rules about traveling patterns of inhabitants and block access to external actors.
- **Taxation:** rebel group demanded economic contributions from specific actors (mainly landowners).
- **Dispute Institutions:** rebels played a de facto court role by solving community issues such as the location of land borders, property rights or debts.
- **Economic Activities and Labor:** rebels controlled aspects of productive activities such as where and how people can fish, the trees that can be cut, but also the protection of certain endangered species of flora and fauna.

## Under a New Ruling Institution

On a Sunday morning, right in front of her house on the way to the entrance of Las Hermosas National Park, Amparo sees a group of hikers with fluorescent green t-shirts, stretching and jumping to get ready for a hike to the foggy and misty páramo. They warm up just in front of the house where the FARC used to have their “operational center.” Since 2017, this scene repeats itself every weekend. For Amparo, these new visitors are the evidence that “something” definitely changed: “None came to visit, neither a tourist nor a cyclist, now they go up and down every weekend” (I: 5-6).

Since the Peace Agreement, the composition of who are involved in different activities, for instance farming and, increasingly also tourism, and the management of the highlands is changing in Combia. Primarily, three new actors started to influence the area: the regional environmental authority CVC, tourists (from cities such as Palmira and Cali), and landowners forced to leave the region by the FARC (Figure 5).

The set of wartime institutions (presented in the previous chapter) are now changing with the intervention of the regional environmental authorities (in Colombia these are called regional autonomous corporations—*Corporaciones Autónomas Regionales* in Spanish), which try to restore the state's legal-normative system (Figure 5). This transition, from a rebelocracy to state-regulation, generates particular reconfigurations in the highlands, reinforcing historically unequal resource distribution, particularly for those actors without legal land titles. Furthermore, it generates tensions about water control and conservation purposes. We explain these aspects by describing the changes in terms of mobility, and the access to land and water.

### Mobility: Climbing Up to the Hills

*-So, the guerrilla members used to transit this path?*

*-Yes, they used to pass here while carrying a heavy load. They walked 4 or 5 days without stopping until reaching Tolima. They bleed on the way when carrying on their shoulders kidnapped people. They ran away from the National Army, and they slept under the rain.*

*Dialogue from fieldwork observations.*

The previous dialogue took place between Ramiro, a local peasant, and Gloria Stella, a tourist from a city nearby while they advance in the camino real (old footpaths that were important trade routes) which connects Valle del Cauca with Tolima through Las Hermosas region. The road is like a narrow ribbon wrapping the mountain. Ramiro is the local guide on the hike to the El Encanto waterfall, and Gloria is a curious participant asking about the former FARC presence's and how they moved through the territory.

According to the majority of testimonies collected in the area, mobility has changed in the last two years. People can now more freely explore the lagoons and rivers in the páramo, mainly for recreation or to scope for emergent tourism and fishing initiatives. They express that they can move around the region being calmer and feeling less restricted. Similarly, the larger landowners in Combia make more frequent visits and can access their properties in areas previously under FARC control.

Furthermore, the emerging tourism activities are increasingly attractive for landless peasants and landowners who are starting to participate in different rural tourism ventures. The emergence of tourism in Combia stands in close relationship with the more frequent presence of the CVC, which plays an active role in promoting tourism courses for farmer communities.

At the same time however, tourism also generates tensions between the community and the environmental authorities. By law tourism is prohibited in the territory of Combia that is located in the Las Hermosas National Park and it is therefore not possible to access points of touristic interest, such as lakes or waterfalls inside the páramo area. Nonetheless, the limited presence of the environmental authorities, the geography of the mountain terrain itself, and the extension of the area makes it notoriously difficult to regulate and control the entrance of tourists through the *caminos reales*, which are well-known by the community. For example, only one officer of the CVC is in charge of the control and surveillance of an area of more than 32.000 hectares.

Despite increased mobility for people in Combia there are other factors that directly restrict the accessibility and usability of the territory. These are disputes over private property and at the same time over conservation objectives that were established by the national park authority and the regional environmental authority.

### Access to Land and Water: The Return of Private Landowners

*"Do you see that fence behind my house? Two years ago, it was not there, but further up. In that space, I used to graze my cows. But when the guerrilla left and the landowners came back, they fenced the whole plot"*

*Peasant without land (I:2)*

In this quote one of the interviewees narrates why, after FARC left the area, one large landowner came back to Combia and built several fences to impose the boundaries of his plot, thereby restricting the farmer in continuing farming.

With the signing of the peace agreement in late 2016, changes in the FARC established land boundaries began. As the large landowner states: "In the 20 years we could not go to the area. In the last years, we practically rebuilt the whole farm from zero" (I: 9). The quote provides an example of how legal ownership of the land, which in this particular case extends along the valley, allowed the landowner to build new boundaries, reconstruct fences and delimit the areas that belong to him. The post-conflict reordering of land changed the access to land and water of around 35 families that used to farm private plots supported by FARC's ruling.

In the aftermath of the peace agreement and the FARC absence, the state-based principles of ensuring private property rights and legal land tenure now collide with the FARC previous' political agenda against concentration of land and expropriation of *latifundios* (Verdad and del Conflicto, 2018). In Combia, landowners with legal titles focus on extensive cattle ranching to produce milk and beef in areas ranging from 100 hectares to over 1.000 hectares, while peasant families combine agricultural and livestock activities on much smaller plots ranging from 3 to 12 hectares. The general trend in the Las Hermosas region, and in Combia in particular, reveals how land is distributed in relatively large plots ( $\geq 100$  hectares) owned by few landowners (Alexander von Humboldt Biological Resources Research Institute, 2017).

For instance, 83% of the total area of the Amaime river basin (104.225 hectares) is parceled into 17% of the overall land titles, meaning that around 430 owners hold most of the land (Corporación Autónoma Regional del Valle del Cauca and Universidad del Valle, 2013). In Combia (specifically in the forest reserve area outside the national park) ~268 people live on 103 plots of property (Universidad del Valle, 2015). However, data about plot size measurements and the process of land possession/occupation are missing or not registered in regional and municipality documents. In the lower zone of Combia (the Teatino sector), one large landowner owns 2.500 hectares divided into different titles.

The majority of peasants in Combia connected tubes from a stream to irrigate their crops. When the FARC left the landowners came back and dismantled these tubes, leading to a shift in water distribution and effectively cutting off many of the local peasants from water to irrigate their crops. The CVC is the responsible environmental authority that issues water permits. These permits symbolize a State-lead water ordering process that rationalizes water control by implementing policies, built on expert knowledge and water management guided by efficiency (Hoogesteger et al., 2016). However, this process also fosters territorial control, allows to CVC to exercise its authority role, and imposes taxation mechanisms on water.

In the rural areas of the Amaime river basin, 15% of the communities have direct water extractions through rudimentary tubes (individual systems), the remaining 75% have collective systems (Corporación Autónoma Regional del Valle del Cauca and Universidad del Valle, 2013). In Combia, the community of Teatino holds a communitarian aqueduct while in the upper zone each household has a tube system. These individual systems of water extraction (tubes or pipelines) are the most common infrastructure in place, and 90% of them do not have legal permits issued by the CVC. Currently only 32 water concessions are officially issued by CVC (**Supplementary Table 4**). In order to obtain a water permit, a farmer must possess land titles, which means that water permits are solely allocated to larger landowners in the village and not to landless peasants. In the post-agreement phase, this legal framework plays a key role in the redistribution of how peasants can now access and use land and how the formalization of water concessions inhibited their access to water.

A case in point was the return of the large landowner who subsequently demanded legal water permits from the CVC: “They [the peasants] are taking over all the water. We had to put the fences and ask the CVC to regulate water uses” (I:9). This particular tension led to verbal confrontations and other formal complaints with the CVC. Currently, some peasants keep using surface waters from the river, but tubes and pipelines—which go through the large landowner property— are no longer allowed. Thus, landless peasants are no longer able to carry out the same agricultural/livestock activities as under the FARC rule. This lack of legal access to land, means that many peasants now need to change their means of subsistence and tourism is regarded as a main income generating activity in the future.

## Peace in the Peaks? State Control Over Water Resources

The intervention by the CVC represent a *territorialization project* of Combia, and Las Hermosas at large. On the one hand, the intervention of the environmental authority is crucial in the conservation of the páramo and the water sources, especially now with easier access to the region for new actors. On the other hand, however, without the State’s compliance with the terms of the peace agreement around the formalization of land, the application of the state-mandated environmental norms (i.e., regularization of water or promotion of tourism) contribute to the further exclusion of landless peasants and benefit landowners who have legal land titles.

The result of the territorial governmentalization project that seeks to build a new view on water resources in the area is the promotion of tourism or conservation schemes (Hoogesteger et al., 2016). The páramo conservation discourse follows policies that promote less land intense activities, such as silvopastoral systems, regulating and limiting water extractions in the highlands. In other words, the emerging economic activities are promoted within a new social order where water users’ ways of belonging and behaving’ (Boelens et al., 2016) are defined and delimited by the discourses of rationalization of water and the conservation of the highland. Thus, in the wake of the peace agreement the highland territory is re-organized by means of formal mechanisms such as the construction of infrastructure, water allocation permits, legal normativity to water-related conservation programs or social interventions and technical assistance (Wester et al., 2009). In Combia, the State reclaims its territorial authority by issuing water and land regulations in the highlands, where the water sources are located.

Water concession procedures are tool for the State to control water consumption and are issued by the CVC. If water infrastructure, such as tubes or ditches, needs to go through neighboring properties, so called *servidumbres* permits (right-of-way utilization permit) are mandatory. In Colombia, a judge decides over these if the mediation between the parties is not successful.

As an outcome of these new set of rules about the control over water, new conflicts regarding who can legally own the land and use the water coming from the páramo emerge. Thus, applying the concept of wartime social order (Arjona, 2014) and the state territorialization approaches of water control, are both playing out in Combia in the post-conflict phase. Firstly, as Arjona (2016) states, under a rebelocracy guerrilla leaders take over the role of the mediator of conflicts while becoming the “de-facto court.” Consequently, they mediate and solve different conflicts, such as access to water. Nowadays the CVC—as the state agency responsible for environmental regulations—emerges as the authority in charge of regulating water access.

However, when the dispute institution changes, so does the local understanding of water. The rationalizing of the water control is key in the State project of controlling the territory. Through water concession permits, as a formal mechanism of control (Hoogesteger et al., 2016; Perramond, 2016), the government tries to re-establish its authority in Combia. In that sense, notions of rational and efficient use of water, based on expert knowledge or more technical measurements, are the cornerstone of this new understanding. As the local CVC officer explains: “When the FARC was there, there was no efficient resource management, I mean in a technical way. When I got to the area only 10% of the properties had a water concession” (I: 16).

In a transition toward post-war, traditional integrated water management frameworks have limitations. Technical functionalist models of water management, based on strategies of modernization, operational efficiency, and marketization, face different challenges in post-conflict situations and therefore do not contribute to enhancing peace efforts (Krampe, 2017). For instance, a study conducted in Kosovo shows how water management based on external and technical water control by



experts and bureaucrats prevents local participation Krampe (2017).

The rationalization of water control through formal state mechanisms (Hoogesteger et al., 2016; Perramond, 2016) fits these functionalist approaches, that are based on legal frameworks and often do not account for the complexity of post-conflict transitions. The regular mechanism for acquiring water permissions in Colombia clashes with the irregularity of land occupation and the fact that many peasants live and farm on land without possessing legal titles. This phenomenon was intensified by the armed conflict due to land abandonment, forced invasions, conflict-induced population displacement, land grabbing and other conflictive tensions.

State-specific instruments of water control are based on socio-political and normative notions, which in turn are also embedded in power relations. Perramond (2016, p. 173) for instance argues for the case of water rights adjudications using the example of New Mexico (USA), claiming that the state territorialization project of ordering water “is not about water itself, but about the water users.” In the case of Combia, peasants without regularized land tenure experience are unable to obtain legal permits.

Ignoring the complexities of land tenure, institutional processes of water management only takes into account technocratic approaches that might not consider power relations behind the norms of water control. Depoliticizing water by avoiding debates on redistribution of water uses and benefits are frequent in post-conflict situations when technocratic approaches are preferred and portrayed as rational problem solutions (Aggestam, 2018). However, neglecting the asymmetrical relations about water access and management carries the risk to endanger peace (Aggestam, 2018).

### Water Institutions for Peace

Considerations of how the Colombian peace agreement is taking place at the local level are crucial to understand people's struggle to access natural resources. While the land redistribution and formalization stipulated in the accords are far from being materialized<sup>6</sup>, other forms of State-control are already taking place, for instance, regulations on access to water in the village.

These local tensions in the village of Combia call attention to the question of how the post-conflict agenda has been deployed at the local level. Post-conflict policies have been framed as territory-based by the government. Yet, it may be considered a more liberal approach to designate the local perspective only in terms of sub-national considerations and lacking a more emancipatory approach to understanding the everyday realities (Leonardsson and Rudd, 2015), such as the clash between state institutions and the previous guerrilla natural resources management norms.

Evidence from El Salvador shows that state-building efforts during transitions periods requires flexibility to incorporate new rules and transform previous institutions, not only the formal ones but also social institutions established before and during

the armed conflict (Call, 2003). Rebel-*campesinos'* relationships formed during wartimes determine new patterns of land tenure and access to land after the peace agreement (Wood, 2003). In Sri Lanka, for instance, communities that received more services provided by the rebels showed weakened trustworthiness in post-war times. Neglecting these impact on social structures influences peacebuilding processes (Kubota, 2018).

Another issue is related to neglecting the value of local community water management systems. As shown by Burt and Keiru (2011), post-conflict peacebuilding can be strengthened by community water-resource management. Examples from the Democratic Republic of Congo, Afghanistan, and Liberia demonstrate that in the early post-conflict period, key community members can be essential to respond to immediate water conflicts or building water infrastructure. For our case, considering more participatory exercises about water allocation and mediation between existing peasant associations and private owners might reduce regional conflicts and contribute to a more lasting peaceful community life in Combia and beyond.

The transformations brought by the Peace Agreement with FARC add new tensions and opportunities to the debate about the meanings of sustainability in these territories. Ensuring the sustainable use of the “Alta montaña” as a socio-ecological system mainly relies on how to solve the trade-offs associated with the plural and contested views the different actors in the hydrosocial network hold and how these actors will respond to long-term challenges as impacts of climate change and water demands for urban settlements increases. The end of the Colombian armed conflict poses new tensions around land use, the role of environmental authorities and other actors in natural resource governance, and the larger issues of land inequality in the countryside. At the same time, access given by the new and improved security conditions serve as an alternative to explore, investigate and re-signify the highlands.

## CONCLUSION

We described and analyzed the experiences of people in Combia around the changes in natural resources access during the post-peace agreement phase in a settlement in Las Herosas highlands in the southwest of Colombia where the FARC was present and imposed its norms for many decades. We showed how a new legal order in the post-agreement period influences access to water and the distribution of land. The changes brought by the retreat of the FARC allowed the return of once-displaced large landowners and the regional environmental authority (CVC). Furthermore, mobility, access to land, control over water and productive activities have been gradually changing, generating winners and losers in the process.

Acknowledging the irregular forms of land tenure supported by the FARC is crucial for understanding these local changes. In Combia village, the return of landowners, the legal arrangements about ownership of the land, the procedures for obtaining legal water concessions and the governmental decisions on water resource conservation have generated tensions that reinforce the historically unequal resource and land distribution that characterize Colombia. In the same way, new frameworks and regulations have led to the emergence of productive activities

<sup>6</sup>The 60% of the dispositions in the peace agreement on water irrigation systems have not been initiated, the remaining 40% can solely report minimal progress, and the development of water supply and infrastructure is slow Kroc Institute for International Peace Studies (2019). “Tercer informe sobre el Estado de Implementación del Acuerdo de Paz de Colombia”. Universidad de Notre Dame).

such as tourism that clashes with conservation schemes and other traditional peasant livelihoods in the upper zones of the mountains. We showed how current State intervention in an area once controlled by the FARC impacts people that are most vulnerable in these communities, particularly since the dispositions of the peace agreement, for instance the rural integrated reform, are not being implemented along with the current enforcement of environmental norms. Our study calls for more attention on how at the end of a protracted “rebelocracy,” the State water control intervention seems to indirectly undermine the potential benefits of peacebuilding for peasants, who are left to wonder about the meaning of the new “breeze” of peace that blows over the highlands.

## DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## ETHICS STATEMENT

According to Colombian and Swedish law, ethical review and approval for this type of investigation that is interview-based and does not collect personal nor sensitive data is not required. We acted in accordance with the University requirements and thought oral consent before any interview we conducted and all respondents and interviewees have given their consent to be interviewed. None of the interviewees were under the age of 18, or otherwise legally or medically unable to provide oral informed consent.

## REFERENCES

- Aggestam, K. (2018). “Depoliticisation, water, and environmental peacebuilding,” in *Routledge Handbook of Environmental Conflict and Peacebuilding*, eds A. Swain, and J. Öjendal (London: Taylor & Francis), 97–107. doi: 10.4324/9781315473772-8
- Alexander von Humboldt Biological Resources Research Institute (2016). *No Será Fácil: Páramos Colombianos en el Posconflicto y Posacuerdo*. Instituto de Investigación de Recursos Biológicos Alexander von Humboldt.
- Alexander von Humboldt Biological Resources Research Institute (2017). *Recomendación Para la Delimitación, por Parte del Ministerio de Ambiente y Desarrollo Sostenible, del Complejo de Páramos Las Hermosas a escala 1:25.000*. Bogotá: Instituto de Investigación de Recursos Biológicos Alexander von Humboldt Fondo Adaptación.
- Arjona, A. (2014). Wartime institutions: a research agenda. *J. Confl. Resolut.* 58:1360. doi: 10.1177/0022002714547904
- Arjona, A. (2016). *Rebelocracy: Social Order in the Colombian Civil War*. Cambridge: Cambridge University Press. doi: 10.1017/9781316421925
- Armenteras, D., Schneider, L., and Dávalos, L. M. (2019). Fires in protected areas reveal unforeseen costs of Colombian peace. *Nat. Ecol. Evolut.* 3, 20–23. doi: 10.1038/s41559-018-0727-8
- Betancur Alarcón, L. (2019). *Peace in the peaks? Changes in water and land distribution in Colombia's southern highlands during the post-peace agreement phase* (Master Thesis). Series in Environmental Studies and Sustainability Science Lund University.
- Boelens, R., Hoogesteger, J., Swyngedouw, E., Vos, J., and Wester, P. (2016). Hydrosocial territories: a political ecology perspective. *J. Water Int.* 41, 1–14. doi: 10.1080/02508060.2016.1134898
- Brooke, R., and Matthew, R. (2016). “Environmental governance in post-conflict situations: lessons from Rwanda,” in *Governance, Natural Resources, and*

## AUTHOR CONTRIBUTIONS

All authors were involved in the design of the study, the development of the methods, data collection strategy, and contributed equally in the writing process. LB-A carried out the fieldwork in early 2019 and developed the conceptual approach.

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## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fenvs.2020.546821/full#supplementary-material>

- Post-Conflict Peacebuilding*, eds C. Bruch, C. Muffett, and S. S. Nichols (London: Earthscan), 407–428. doi: 10.4324/9780203109793-19
- Bruch, C., Muffett, C., and Nichols, S. S. (2016). “Natural resources and post-conflict governance: building a sustainable peace,” in *Governance, Natural Resources, and Post-Conflict Peacebuilding*, eds C. Bruch, C. Muffett, and S. S. Nichols (London: Earthscan), 1–32. doi: 10.4324/9780203109793
- Buitrago, E. A. (2016). “Limitaciones y delimitaciones de los páramos en una Colombia posacuerdo,” in *Extractivismos y Posconflicto en Colombia: Retos Para la paz Territorial*, eds A. Ulloa, and S. Coronado (Bogotá: Universidad Nacional de Colombia (Sede Bogotá)), 465.
- Burt, M., and Keiru, B. J. (2011). Strengthening post-conflict peacebuilding through community water-resource management: case studies from democratic republic of Congo, Afghanistan and Liberia. *Water Int.* 36, 232–241. doi: 10.1080/02508060.2011.558885
- Call, C. T. (2003). Democratisation, war and state-building: constructing the rule of law in El Salvador. *J. Lat. Am. Stud.* 35, 827–862. doi: 10.1017/S0022216X03007004
- Cinep, and Cerac (2019). *Quinto Informe de Verificación de la Implementación del Acuerdo Final de Paz para los Verificadores Internacionales Feliz González y José Mujica*. Bogotá: Centro de Investigación y Educación Popular Programa por la Paz Centro de Recursos para el Análisis de Conflictos.
- Clerici, N., Armenteras, D., Kareiva, P., Botero, R., Ramírez-Delgado, J. P., Forero-Medina, G., et al. (2020). Deforestation in Colombian protected areas increased during post-conflict periods. *Sci. Rep.* 10, 1–10. doi: 10.1038/s41598-020-61861-y
- Corporación Autónoma Regional del Valle del Cauca (2019). *Sistema de Información Geográfico*. [Dataset]. Cali: Corporación Autónoma Regional del Valle del Cauca.

- Corporación Autónoma Regional del Valle del Cauca and Universidad del Valle (2013). *Plan de Ordenación y Manejo de la Cuenca Hidrográfica del Río Amaime*. Cali: Corporación Autónoma Regional del Valle del Cauca.
- Duarte-Abadia, B., and Boelens, R. (2016). Disputes over territorial boundaries and diverging valuation languages: the Santurban hydrosocial highlands territory in Colombia. *Water Int.* 41, 15–36. doi: 10.1080/02508060.2016.1117271
- Eufemia, L., Bonatti, M., Castro-Nunez, A., Lana, M., Morales, H., and Sieber, S. (2019). Colombia's inadequate environmental goals. *Science* 364, 444–445. doi: 10.1126/science.aax3494
- FAO (2017). *América Latina y el Caribe es la Región con la Mayor Desigualdad en la Distribución de la Tierra*. FAO: Santiago de Chile. Available online at: <http://www.fao.org/americas/noticias/ver/es/c/879000/> (accessed April 28, 2019).
- Fundación Ideas para la Paz (2013). “Dinámicas del conflicto armado en el sur del valle y norte del Cauca y su impacto humanitario,” in *Área de Dinámicas del Conflicto y Negociaciones de Paz*, eds I. Marín Carvajal and I. Santos (Bogotá: Fundación Ideas para la Paz), 1–54.
- Gallini, S., de la Rosa, S., and Abello, R. (2015). *Historia Ambiental*. Bogotá: Investigación de Recursos Biológicos Alexander von Humboldt.
- Garzón Roa, O. L. (2009). *Duro golpe a seguridad de “Pablo Catatumbo”*. El Espectador.
- Hoogesteger, J., Boelens, R., and Baud, M. (2016). Territorial pluralism: water users' multi-scalar struggles against state ordering in Ecuador's highlands. *Water Int.* 41, 91–106. doi: 10.1080/02508060.2016.1130910
- Ideam (2018). *Alertas Tempranas de Deforestación*. Colombia: Ideam. Available online at: <http://smbyc.ideam.gov.co/MonitoreoBC-WEB/pub/alertasDeforestacion.jsp?0.2675508080912369> (accessed April, 2019).
- Ideam (2019). *Reporte de Avance del Estudio Nacional del Agua ENA 2018*. Instituto de Hidrología, Meteorología y Estudios Ambientales–IDEAM.
- Jerneck, A., and Olsson, L. (2013). More than trees! Understanding the agroforestry adoption gap in subsistence agriculture: insights from narrative walks in Kenya. *J. Rural Stud.* 32, 114–125. doi: 10.1016/j.jrurstud.2013.04.004
- Justino, P. A. (2013). *Research and Policy Implications from a Micro-Level Perspective on the Dynamics of Conflict, Violence, and Development*. Oxford: Oxford University Press. doi: 10.1093/acprof:oso/9780199664597.001.0001
- Krampe, F. (2017). Water for peace? Post-conflict water resource management in Kosovo. *Coop. Confl.* 52, 147–165. doi: 10.1177/0010836716652428
- Kroc Institute for International Peace Studies (2019). *Tercer Informe Sobre el Estado de Implementación del Acuerdo de Paz de Colombia*. Universidad de Notre Dame.
- Kubota, Y. (2018). Nonviolent interference in civic life during civil war: rebel service provision and postwar norms of interpersonal trustworthiness in Sri Lanka. *Secur. Stud.* 27, 511–530. doi: 10.1080/09636412.2018.1460962
- Leonardsson, H., and Rudd, G. (2015). The “local turn” in peacebuilding: a literature review of effective and emancipatory local peacebuilding. *Third World Q.* 36, 825–839. doi: 10.1080/01436597.2015.1029905
- McKay, B. M. (2018). Democratising land control: towards rights, reform and restitution in post-conflict Colombia. *Can. J. Dev. Stud.* 39:163. doi: 10.1080/02255189.2017.1364621
- Murillo Sandoval, P. J., Van Dexter, K., Van Den Hoek, J., Wrathall, D., and Kennedy, R. E. (2020). The end of gunpoint conservation: forest disturbance after the Colombian peace agreement. *Environ. Res. Lett.* 15:034033. doi: 10.1088/1748-9326/ab6ae3
- National Planning Department (2015). *El Campo Colombiano: un Camino Hacia el Bienestar y la Paz*. Bogotá: Departamento Nacional de Planeación.
- Nieto, M., Cardona, L. F., and Agudelo, C. (2015). *Análisis de Servicios Ecosistémicos. Provisión y Regulación Hídrica*. Bogotá: Instituto de Investigación de Recursos Biológicos Alexander von Humboldt.
- Office of the High Commissioner for Peace (2016). *Acuerdo Final Para la Terminación del Conflicto y la Construcción de una Paz Estable y Duradera*. Bogotá: Ibáñez.
- Ortega-Guerrero, G. A. (2018). El reto de los conflictos ambientales en el escenario del postconflicto en Colombia: reflexiones para la construcción y discusión sobre las perspectivas de paz y derechos ambientales. *Gestión Ambiente* 21(Suppl. 2), 162–182. doi: 10.15446/ga.v21n2supl.77959
- Osejo, A., Zapata, J., Sarmiento, C., and Ungar, P. (2016). *Retos Para la Gobernanza en Páramos en el Postconflicto*. Bogotá.
- Ospina, G. A. (2013). “Criterios para no limitar la conservación y la diversidad cultural de los páramos en Colombia,” in *Visión Socioecosistémica de los Páramos y la Alta Montaña Colombiana: Memorias del Proceso de Definición de Criterios para la Delimitación de Páramos*, eds J. Cortés-Duque, and C. Sarmiento (Bogotá: Instituto de Investigación de Recursos Biológicos Alexander von Humboldt), 187–210.
- Ospina, G. A. (2017). *Declaratorias del estado y regímenes de virtualidad en el páramo: cartografías para otra idea de ‘conservación’*. Doctorado en Antropología, Universidad del Cauca.
- Oxfam (2017). *Radiografía de la Desigualdad*. Bogotá: Oxfam International.
- Palacio, D. C. (2015). *Redes, Actores y Gobernanza Desde un Enfoque Relacional*. Bogotá: Instituto de Investigación de Recursos Biológicos Alexander von Humboldt.
- Perramond, E. P. (2016). Adjudicating hydrosocial territory in New Mexico. *Water Int.* 41, 173–188. doi: 10.1080/02508060.2016.1108442
- Redacción El País (2009). *Cae mano Derecha de Alias Pablo Catatumbo*. El País.
- Redacción El Tiempo Cali (2001). *Desplazamiento Campesino*. El Tiempo.
- Reyes Posada, A. (2016). *La Reforma Rural Para la paz*. Bogotá: Editorial Debate.
- Rojas-Robles, R. (2018). Ambiente y post-acuerdo en Colombia: la construcción de una paz integral y con la naturaleza no-humana. *Gestión Ambiente* 21(Suppl. 2), 183–192. doi: 10.15446/ga.v21n2supl.77961
- Sánchez León, N. C. (2017). *Tierra en Transición. Justicia Transicional, Restitución de Tierras y Política Agraria en Colombia*. Bogotá.
- Sarmiento, C., Osejo, A., Ungar, P., and Zapata, J. (2017). Páramos habitados: desafíos para la gobernanza de la alta montaña en Colombia. *Biodiversidad Práctica* 2, 122–145. Available online at: <http://revistas.humboldt.org.co/index.php/BEP/article/view/480>
- Sierra, C. A., Mahecha, M., Poveda, G., Álvarez-Dávila, E., Gutierrez-Velez, V. H., Reu, B., et al. (2017). Monitoring ecological change during rapid socio-economic and political transitions: Colombian ecosystems in the post-conflict era. *Environ. Sci. Policy* 76, 40–49. doi: 10.1016/j.envsci.2017.06.011
- Swyngedouw, E. (2004). Globalisation or “glocalisation”? Networks, territories and rescaling. *J. Camb. Rev. Int. Aff.* 17, 25–48. doi: 10.1080/0955757042000203632
- Ungar, P. (2015). *Hojas de Ruta. Guías Para el Estudio Socioecológico de la Alta Montaña en Colombia*. Bogotá: Instituto de Investigación de Recursos Biológicos Alexander von Humboldt.
- Ungar, P., and Osejo, A. (2015). *Tejiendo Historias. Introducción a la Colección*. Bogotá: Instituto de Investigación de Recursos Biológicos Alexander von Humboldt.
- Universidad del Cauca (2015). *Estudio socioeconómico y cultural del complejo de páramos Las Hermosas a escala 1:25.000*. Cali: Universidad del Cauca.
- Universidad del Valle (2015). *Componente diagnóstico Reserva Forestal Protectora Nacional Río Amaime*. Cali: Universidad del Valle.
- Uprimny-Yepes, R., and Sánchez, N. C. (2010). Los dilemas de la restitución de tierras en Colombia. *Estud. Soc. Jurídicos* 12:38. Available online at: <https://revistas.urosario.edu.co/index.php/sociojuridicos/article/view/1373>
- Vandergest, P., and Peluso, N. L. (1995). Territorialization and state power in Thailand. *Theory Soc.* 24:385. doi: 10.1007/BF00993352
- Verdad, A., and del Conflicto, R. (2018). *Tierra en Disputa*. Available online at: <http://tierraendisputa.com/> (accessed May 2019).
- Weinthal, E., Troell, J., and Nakayama, M. (2011). Water and post-conflict peacebuilding: introduction. *J. Water Int.* 36, 143–153. doi: 10.1080/02508060.2011.561772
- Wester, P., Rap, E., and Vargas-Velázquez, S. (2009). The hydraulic mission and the mexican hydrocracy: regulating and reforming the flows of water and power. *Water Altern.* 3, 395–415.
- Wood, E. J. (2003). *Insurgent Collective Action and Civil War in El Salvador*. Cambridge: Cambridge University Press. doi: 10.1017/CBO9780511808685

**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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