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Fluid Struggles Over Climate and Water Justice in the Peruvian Andes

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ABSTRACT: Deepening climate change is rendering water injustices ever more visible and deepening disputes in Latin America's socio-ecologically delicate rural landscapes. This article analyses the fluid and multi-scalar ways in which water injustices are articulated and contested in the Peruvian Andes, increasingly threatened by climate change. The analysis draws on ethnographic-oriented research, focusing on the Yanacocha reservoir conflict in the Cunas watershed. By combining ideas from the political ecology of water and scalar politics, the study pays particular attention to how diverse justice claims by residents, private sector actors, politicians, and state authorities become intertwined and reshaped through shifting power relations across multiple scales. The study shows that water injustices are enmeshed within broader struggles over climate justice and fair agrarian futures in climate-sensitive rural regions such as the remote Peruvian Andes. In the Cunas watershed, the residents, who increasingly experience climatic threats in their daily lives, participate in cross-scaled power struggles in order to advocate for their own plural views of water justice. The study demonstrates a need to build stronger analytical linkages between intertwining claims about agrarian, climate, and water justices on multiple scales. This helps to better illuminate the many factors driving uneven water access in rural regions affected by climate change across the Global South.

KEYWORDS: Political ecology, water justice, climate justice, scalar politics, Andes, Peru

INTRODUCTION

Water injustices are an increasingly debated concern in Latin America. Recently, scholars focusing on water have addressed injustices related to diverse extractive activities (Leifsen, 2017; Perreault, 2018; Damonte and Boelens, 2019; Ulloa, 2020; Torres et al., 2022) and uneven water governance under climate change (Lynch, 2012; Heikkinen, 2021; Stensrud, 2021). Those suffering the consequences of these activities mostly belong to marginalised Indigenous and smallholder communities. Many studies have provided careful analyses of such communities' organised mobilisations (Roca-Servat and Palacio, 2019; Romero-Toledo et al., 2019; Godfrid and Damonte, 2020) and the less vocal forms of everyday resistance related to uneven water access (Duarte-Abadía and Boelens, 2016; Li, 2016; Nygren and Lounela, 2023). However, few works have approached water justice struggles as multi-scalar contestations, where claims for climate and water justice are inherently intertwined (Boelens et al., 2022; Mills-Novoa et al., 2022a). This article analyses the fluid and multi-scalar ways in which water-related injustices are articulated and disputed in rural regions threatened by climate change, focusing on the Cunas watershed in the Central Peruvian Andes.

Climate change is projected to accelerate the global water cycle, causing more variety between seasons and more instances of extreme drought and rain events (IPCC, 2023). The Andean region in Peru is particularly affected by such hydrological transformations, as rising temperatures have provoked glacier melt and exacerbated droughts and rains, posing threats to local people's water access (Anderson et al., 2011; Mark et al., 2017). In the early 2000s, the Peruvian government initiated the Yanacocha reservoir project in the Cunas watershed to improve water access in the area. However, the reservoir was never built, as it escalated into a long-term dispute between upper and lower Cunas residents. The

conflict has taken diverse directions, with state officials, politicians, private sector actors, and residents forming shifting alliances to voice their views of just water distribution amidst shifting climatic and political landscapes.

This article analyses the Yanacocha conflict through the lenses of the political ecology of water and politics of scale. While political ecologists often focus on the place-based nuances shaping injustices, their analytical starting point for studying power relations in justice struggles is inherently multi-scalar (Swyngedouw, 2009). Recent work in the field has emphasised that understanding water justice struggles requires disentangling the multiple perceptions of socio-environmental justice and claims shaped by dynamic power relations across multiple scales (Boelens et al., 2022; Nygren, 2021). This is to better understand the diverse ways in which water is valued, used, given meaning, and contested across diverse scalar dimensions (Roth et al., 2018). Hoogesteger et al. (2016) show how water governance in Ecuador has been reshaped through interlinked scales and processes in which marginalised Indigenous and peasant water users, state authorities, and other actors defend their views on water control.

This article highlights similar scalar procedures – particularly how residents participate in remaking the power dynamics and scales to claim their own framings of justice (Hoogesteger and Verzijl, 2015; Rocha Lopez et al., 2019). In Peru, feelings of injustice have led to ever more confrontations in recent years, wherein local communities defend their water rights against agribusinesses (Muñoz, 2015), the extractive industry (Gamu and Dauvergne, 2018), and hydroelectric projects (French, 2016). However, as Li (2016) shows, water-related grievances also drive people to seek multi-scalar alliances to strengthen their political agency and justice claims. Such dynamics transform water disputes into shifting negotiations beyond the conventional community versus industry/state positionalities. Drawing on such multi-scalar approaches, I analyse water justice struggles through the lens of 'fluidity', referring to the shifting political alliances and relations between physical, political, and symbolic aspects of water (Li, 2016; Boelens et al., 2022). This way, the analysis aims to better understand people's use of diverse and overlapping strategies when dealing with differentiated injustices shaped by a given institutional panorama, political power relations, cultural understandings, and environmental conditions (Nygren, 2016).

Moreover, this analysis is inspired by recent political-ecological work focused on the interconnectivity between climate and water justice claims in water struggles (Mills-Novoa et al., 2022a). As Boelens et al. (2022: 24) argue, the disputes over water injustices interlink experiences and claims on multiple conceptions of justice, where 'water', 'agrarian', and 'climate' justices closely intertwine. This is particularly the case in the rural Peruvian highlands, where local livelihoods and ways of living are intimately connected to agriculture, water, and local climate characteristics (Gagné et al., 2014). In Peru, water policies undermining the cultural and socio-economic importance of the water-livelihood nexus in the Andean communities have entrenched water injustices, producing increased climate vulnerabilities (Heikkinen, 2021; Stensrud, 2021). Various scholars in the political ecology of water have recently emphasised the importance of considering such interconnections between climate impacts and water injustices (Zwarteween and Boelens, 2014; Boelens et al., 2018; Middleton, 2022). However, as Mills-Novoa et al. (2022a) note, few studies have built analytical linkages between climate and water justice struggles in order to examine the complexity of drivers affecting uneven access to water.

Through a detailed analysis of the Yanacocha case, this article seeks to provide insights into how multiple views of water injustice are articulated and accommodated in the Andean highlands. The study explores the fluidity of the Yanacocha conflict, interweaving the Cunas residents' deepening climate vulnerabilities, concerns for agricultural livelihoods, and diminishing access to water. To capture the plurality of justice claims and contestations, I draw upon a document analysis of the Yanacocha project, a review of associated newspaper articles, and ethnographic-oriented fieldwork in the Cunas watershed in 2019 and 2022. In the following sections, I will discuss theorisations of political ecology of water and climate justice and the politics of scale, followed by a description of the study site and methods. The fourth section explores the building of fluid alliances across multiple scales in the Yanacocha struggle, the

fifth expands on how the residents participate in reshaping these scales and claims of justice, while the sixth evaluates how incorporating intertwined climate and water justice claims have recently shaped the conflict. The last section concludes with a discussion of how shifting power relations and politics, entangled with increasing climate threats, mediate the fluid struggles over water injustices in the Andean highlands.

THE POLITICAL ECOLOGY OF WATER: PLURAL JUSTICE STRUGGLES ACROSS SCALES

Water justice has gained growing interest in the field of political ecology, especially as climate change intensifies water-related concerns (Sultana, 2018). Recently, political ecology scholars have analysed injustices and struggles related to access to, control and representation of, and rights over water (Budds and Hinojosa, 2012; Perreault, 2014; Swyngedouw, 2015; Roth et al., 2018). Power and politics essentially mediate how the distribution of water, along with the recognition and representation of various water uses, meanings, and knowledge, are redefined and contested (Perreault et al., 2018). Previous studies in political ecology have documented such power imbalances in water allocation (Hommes et al., 2020), water-related decision making (Stensrud, 2019), and debates over cultural perspectives on water (Ulloa, 2020). This body of literature has also advanced the understanding of the multiple layers of water justice struggles, intertwining hydro-ecological, societal, economic, political, and technological aspects (Zwarteveen and Boelens, 2014; Boelens et al., 2018). Political ecologists have recently increasingly highlighted the need to study water injustices as plural – entangling diverse and multi-scalar socio-environmental justice experiences and claims (Shi et al., 2021; Boelens et al., 2022).

Works on the political ecology of water justice largely draw on environmental justice debates concerning the distribution, participation, and recognition of rights (Young, 1990; Fraser, 2000; Schlosberg, 2007, 2013; Holifield, 2015). These studies critique the universal notions of justice that rely solely on distributive models and fails to capture the social, cultural, and institutional preconditions of the places where environmental injustice occurs (Escobar, 2008). Similarly, Schlosberg (2004: 534) highlights the importance of paying analytical attention to "the localised, particular places where power and injustice are experienced, known, and resisted". The political ecology perspective thus emphasises the context-specific complexities of environmental justice (Perreault et al., 2015; Boelens et al., 2018; Shah et al., 2021), with close attention to the often-unnoticed multi-scalar processes shaping justice struggles (Whaley, 2022). As Boelens et al. (2022) show in their study on diverse riverine societies, perceptions and definitions of justice are often produced through local governance realities, and injustices are experienced within versatile river settings across multiple scales. The political-ecological understanding of environmental justice, particularly its plural conceptualisation, inspires this article. The analysis of water and climate justices draws on Schlosberg's definition of justice, where "claims for justice can and must be integrated into a thorough, comprehensive, and pluralist political understanding of the term" (2007: 40). The framing emphasises the need to rethink the specific context and struggle for justice as plural and multi-scalar (Schlosberg, 2007; Roth et al., 2018).

An analysis of scalar politics helps illuminate how diverse justice perspectives are contested and negotiated across scales (Zwarteween and Boelens, 2014). In this study, scale is understood as "scalar practices of social actors" (Moore, 2008: 212), meaning that scale is not a fixed category of analysis but rather constitutes fluid and contingent social practices. Particularly, I draw on Neumann's (2009) conceptualisation of 'political ecology of scales', focusing on the nexus of power, agency, scale, and the socio-ecological processes in rebuilding the scales. This approach emphasises the continuous reconfiguration of scales through socio-ecological interactions. Swyngedouw and Heynen (2003) use conflicts over water system arrangements as an example of such scalar reorganisation; the struggles over the proper scale at which to manage water (between the local, river basin, national, or transnational levels) reconstitute these scales through shifts in power balances and socio-ecological conditions. In a

study on rescaling irrigation in the Andes, Zimmerer (2000) also discusses the importance of environmental changes in analysing such scalar shifts.

Marginalised water users are not just onlookers in such rescaling processes (Boelens et al., 2016) but often challenge the dominant scales to claim alternative power hierarchies and resource control through the 'up-scaling' of their struggles (Hoogesteger and Verzijl, 2015). Engaging with diverse, multi-scalar networks through both bottom-up and top-down negotiations, local communities have succeeded in advancing their claims in high-level water governance procedures (Hoogesteger et al., 2017). Rocha Lopez et al. (2019) demonstrate how local communities in Bolivia strategically formed diverse multi-scalar alliances to claim their water rights before a large-scale irrigation project promoted by the state and international funders. And although not expressed explicitly as scalar politics, Broad and Cavanagh's (2021) study on mining-related water conflict in El Salvador shows how local claims for water justice were up-scaled through fluid negotiations and contestations. This occurred through residents, high-level politicians, religious leaders, and transnational business representatives shaping the justice struggle through differing worldviews, values, and political orientations. Eventually, the residents' justice movement against a mining company expanded beyond local levels and stopped the mining at the national level.

This analysis further considers how multi-scalar water justice struggles are becoming increasingly entangled with struggles for climate justice (Mills-Novoa et al., 2022a). The climate justice movement initially focused on a global scale, criticising Global North-Global South inequalities in distributing historical greenhouse gas emissions (Schlosberg and Lisette 2014). Concerning water justice struggles, the emphasis has conventionally been on local scales, particularly on communities' contestations over uneven water access vis-à-vis extractive industries, agri-businesses, and hydropower, among others (Boelens et al., 2018). However, climate and water justice struggles have recently overlapped and become interwoven in demands and scale. Like water justice resistance, the emphasis of the climate movement has shifted to claim an uneven distribution of climate impacts and equity in formulating solutions. Simultaneously, local water struggles have incorporated global aspects, fighting over accountability for climate impacts and their just reparation. Indigenous populations in Latin America have recently embedded climate justice in their demands for environmental justice, including recognition of their own ways of climate adaptation (Ulloa, 2016).

As a phenomenon, climate change is inherently concerned with hydrological shifts (Vicuña et al., 2013), and the structural factors that create water injustices are often the same as those that render people vulnerable to climate change (Ribot, 2022). Therefore, as Mills-Novoa et al. (2022a) suggest, building analytical unity between climate and water justice struggles helps illuminate structural procedures that create water inequities across multiple scales. This study contributes to the recent call to build a deeper understanding of the intertwined and multi-scalar connections of climate and water justice struggles (Boelens et al., 2022; Mills-Novoa et al., 2022a). The analysis also considers how agrarian injustices are closely enmeshed with climate and water justice demands (Borras and Franco, 2018; Borras et al., 2022), as the agrarian aspect is crucial in disentangling multiple injustices in rural landscapes. This is particularly the case in the Peruvian Andes, where residents' lives and livelihoods are closely connected to agriculture, climatic shifts, and access to water (Rasmussen, 2015). Through this multi-scalar justice approach, my paper analyses the case of the Yanacocha reservoir conflict with careful attention to how plural injustices are claimed and contested through fluid power struggles within and beyond the Cunas watershed.

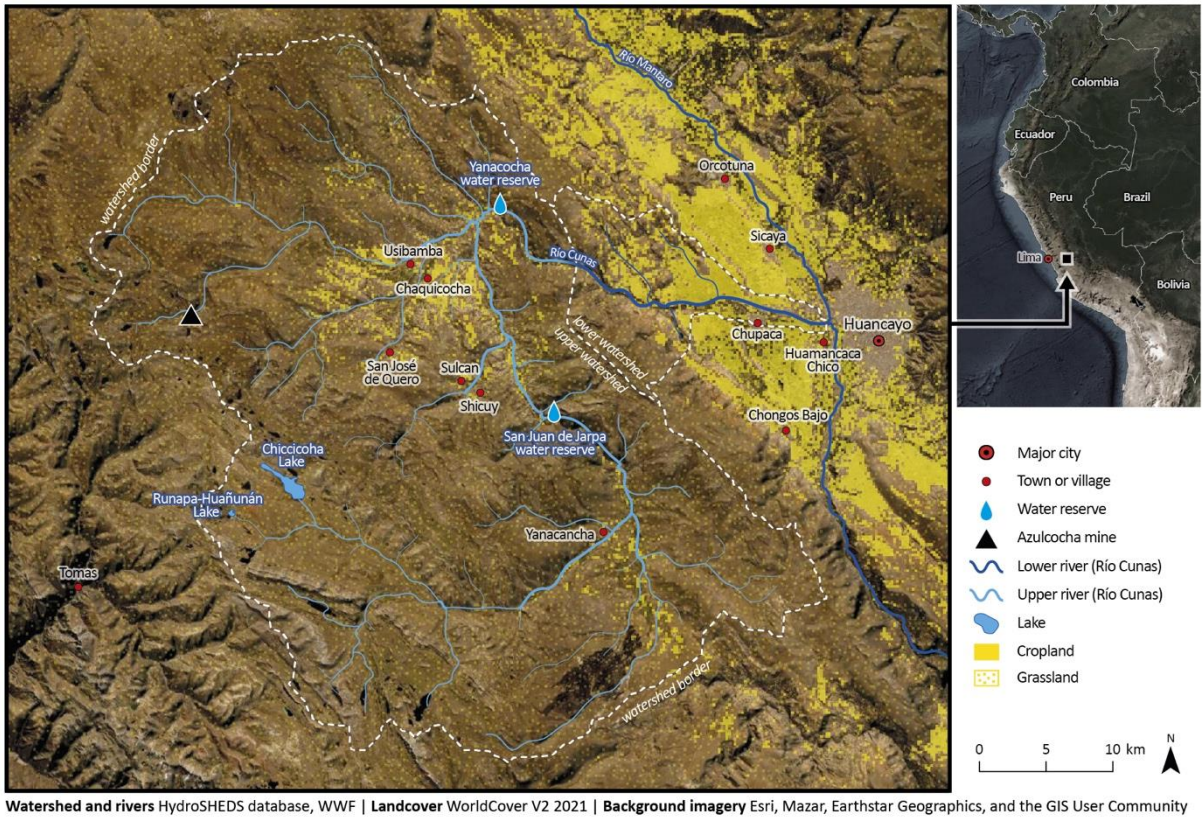
CONTEXT AND METHODS

High ecological and climatic sensitivity characterises the Cunas watershed (Figure 1). The Cunas River flows 91 km from its origins – the highland Lake Runapa-Huañunán at an altitude of 4535 m – and is fed by numerous small lakes and rivers along the way before draining into the Mantaro River in the lowlands

at 3200 m (IGP, 2012a; INGEMMET, 2014). Due to its high topographic variation, the Cunas landscape consists of diverse microwatersheds and small Andean plateaus, hillsides, and canyons, which are highly vulnerable to hydrological disturbances. The altitude and different ecological conditions determine the watershed's versatile climatic characteristics; annual temperatures vary between 19 °C and − 5 °C, with generally colder conditions in the upper highlands. It usually rains between January and March, while rain is absent during the dry period between June and August. Frosts are also common, especially in the upper region (INGEMMET, 2014).

Cunas residents' livelihoods vary according to the watershed's climatic and ecological characteristics. Agricultural activities are more extensive in the milder lowlands, while residents in the colder highlands focus mostly on raising cattle, alpacas, and llamas (IGP, 2012b). Lowland smallholders irrigate their fields via a canal system that deviates water from the Cunas River, while upper Cunas residents mostly rely on rain-fed agriculture. In recent years, climate change has caused increasing seasonal variations and led to extreme weather, imposing new vulnerabilities on local water-dependent livelihoods (CIIFEN, 2018; Wongchuig et al., 2018). At the end of 2022, the worst drought in five decades hit the Southern and Central Andes. Many farmers consequently lost their harvests and saw their cattle and alpacas die from a lack of fodder and water (*La República*, 12 June 2022). In the Cunas watershed, upland smallholders who practise rain-fed agriculture were particularly affected (*Másdata*, 22 November 2022). The government responded to the losses by distributing S/800 (Peruvian soles; USD202) per hectare through the *Recupérate ya!* (Recuperate now!) campaign (Gobierno del Perú, 2023). However, such measures have been critiqued for focusing on compensating for climate losses rather than preventing them (*El País*, 18 March 2023).

Figure 1. The Cunas watershed, indicating the lower and upper watershed limits and land uses. Elaborated by Hanna-Maija Toivanen.



Watershed and rivers HydroSHEDS database, WWF | **Landcover** WorldCover V2 2021 | **Background imagery** Esri, Mazar, Earthstar Geographics, and the GIS User Community

Recently, the government has attempted to alleviate the lack of irrigation water in the Cunas lowlands through the Yanacocha reservoir project. In 1975 and 1981, the hydroelectric company Electro Perú conducted studies to evaluate Yanacocha Lake's potential to produce hydroenergy (ANA, 2010). The plans did not advance then, as they coincided with Peru's armed conflict between the Maoist guerilla movement Sendero Luminoso and the government's armed forces in 1980-2000 (Allpa, 2009). In the early 2000s, Electro Perú continued with its geological and technical studies on Yanacocha for energy production. However, it failed to follow through, and the project was adapted by Peru's Ministry of Agriculture and Development (MIDAGRI) to improve lower Cunas farmers' irrigation alternatives. Since then, the project has faced opposition from upper Cunas communities, who claim it is deteriorating their lands and causing unfair water access between the Cunas communities. In recent years, authorities from various levels of government, politicians from the left to the right wings, representatives of a municipal water company, and private consultant companies have participated in the conflict, with shifting claims intended to halt or promote the reservoir.

This analysis draws upon Yanacocha project documents from 2006 to 2022, a review of relevant newspaper articles, and 12 months of ethnographic-oriented fieldwork conducted in the Cunas watershed in 2019 and 2022 to examine the multi-scalar justice claims of the conflict. The term 'ethnographic-oriented' refers to the data collection, which included key ethnographic practices such as participant observation, fieldnote writing, and interviews, with the researcher being inherently part of the research process (Harrison, 2018). However, the scale and focus of the study is broader than in-depth ethnography, which often involves a long-term intensive engagement with a more limited group of people (Hammersley and Atkinson, 2019).

During the fieldwork, I conducted 44 interviews with Cunas residents from the lowlands to the upper highlands, participated in their daily activities, and organised workshops in two of the communities. By 'residents', I refer to the villagers in the area, most of them being members of the peasant communities associated with their villages. Moreover, I interviewed 19 informants from state institutions at the central, regional, and departmental levels, NGOs, and academia. I also participated in numerous meetings related to Yanacocha and regional water management. In my interviews with the Cunas residents, we discussed the meanings, desires, and threats posed by water and climatic changes to their livelihoods and everyday lives. Meanwhile, the interviews with state officials, NGO representatives, and academics helped in understanding how the water and climate justice nexus is articulated and negotiated across multiple scales. Drawing on this empirical material, I will analyse in the following sections the fluidity of the Yanacocha struggle over multifaceted injustices.

BUILDING FLUID ALLIANCES

In the early 2000s, the Peruvian government reinitiated plans to construct the Yanacocha reservoir. Like irrigation projects elsewhere in Latin America, Yanacocha soon became contested and recreated across interlinked scales, with diverse actors claiming their views on water control (Hoogesteger et al., 2016; Ullberg, 2023). At first, the struggle around Yanacocha was mostly driven by the articulations and practices of powerful water authorities, but these gradually became enmeshed with the Cunas residents' views of water management. In the Andes, scalar remaking practices in water governance are often closely connected to certain cultural and political traditions (Boelens, 2014). Here, I discuss how the building of fluid scalar alliances around Yanacocha and their diverse claims over water control have been shaped by the specific historical and socio-political characteristics of the Cunas watershed.

In 2007, MIDAGRI, together with the National Water Authority (ANA) and the Regional Government of Junín (GRJ), published a new profile study of the Yanacocha reservoir. According to the study, Yanacocha had the potential to provide irrigation for 15,000 ha of cultivated land in lower Cunas. Of these, 10,185 ha were classified as irrigated "under precarious and insufficient conditions" and 4815 ha were irrigated under "worse conditions", as they were rain-fed. Nevertheless, the project's primary

purpose was not to address a lack of water per se but to strengthen agricultural productivity in lower Cunas, as the study states:

> The area has enough water resources…therefore, this does not constitute the problem. Instead, the major problem is the low productivity due to a lack of adequate [irrigation] infrastructure. This results in the incapacity to use the water sources to their full potential, causing socio-economic backwardness *(atraso*) in the project area.[1]

"The project area" included 13 lowland Cunas communities and the irrigation committees and commissions that manage irrigation at the community level. The study states that they all agreed with the need to improve the "inadequate infrastructure and the low technological level of irrigation" hindering efficient water use.[2] As most of the residents in lower Cunas dedicate themselves to agriculture, they resonate with the promises of improving their livelihoods through Yanacocha.

Parallel to Yanacocha, another reservoir project was planned to be built in upper Cunas in the San Juan de Jarpa district. The Jarpa project's leading advocate was an engineer, Marcelo Quispe,[3] who at the time worked in a high position in the municipal sanitation company EPS Sedam Huancayo. At the early stage of Jarpa, GRJ was assigned as project executor in cooperation with its Department of Energy and Mining, EPS Sedam, and ANA.[4] However, after a few years, most of these institutions decided to withdraw to focus on Yanacocha. Quispe was the only one who kept insisting; he conducted studies on the Jarpa reservoir, lectured on his results, and invited upper Cunas residents to attend field visits to the potential project area. Quispe's main argument was that the Jarpa reservoir was a better investment because it would provide wider benefits to the entire Cunas watershed. According to him, Jarpa would benefit 114,228 residents with improved irrigation and hydropower production at a cost of S/350 million.[5] Meanwhile, Yanacocha was estimated to provide irrigation water for only 78,291 residents,[6] with an approximate investment of S/280 million (Interview PSI, 27 June 2022).

By the end of 2010, Yanacocha had advanced to the point that MIDAGRI decided to approve its Environmental Impact Assessment (EIA).[7] This approval marked the moment where the tensions between the two irrigation projects escalated. In 2011, Quispe wrote a complaint to MIDAGRI, demanding annulment of the EIA. He argued that the EIA had neither considered the environmental impact of the old mining tailings from the Azulcocha mine, located in upper Cunas, nor the relocation of the Cunas valley's main road, which would be required for the reservoir's construction.[8] This road was essential for upper Cunas residents, as it was their only access to the lowland towns where they sold their dairy products and purchased vegetables unavailable in the highlands. Moreover, part of the lands where Yanacocha was supposed to be built belonged to the upper Cunas peasant community of Usibamba, and the final approval for the project EIA required their consent.

Convinced by Quispe's claims, the upper Cunas residents refused to grant consent, as they had not been consulted on the project's environmental impacts nor informed of the compensations available for potential harm caused to their lands. In most Cunas communities, land is owned collectively by peasant communities (*comunidades campesina*s). This term refers to local cooperatives that grant collective land usage rights to their members, but which do not allow renting or selling the land (Robles Mendoza, 2004).

[1] 2007-RE-MINAG-PERFIL-IRRIGACIÓN-CUNAS

[2] 2008-FACTIBILIDAD-YANACOCHA-ANA-GORE

[3] All names in this study are pseudonymised to protect the actors' identities, except in cases of public political figures.

[4] 2007-PROYECTO-JARPA-FINAL

[5] 2009-EXP-RIEGO-CUNAS-JARPA

[6] 2016-PROYECTO-RIEGO-CUNAS

[7] 2010-RD-66-EIA-YANACOCHA-MIDAGRI

[8] 2014-OF-1888-EIA-YANACOCHA-MIDAGRI

This form of land management was generally introduced to the area during the Peruvian Agrarian reform in 1969-1971 through 'peasantisation' (*campesinización*) of the Indigenous communities (Puente, 2020: 11). But in the case of Usibamba, the peasant community had been formed much earlier, in 1937, to resist the *haciendas* – elite landowners – taking over their lands.

However, since the early 20th century, Usibamba has been an arena for conflicts over land rights between its 'native' population and landless people that have migrated there from the outside. And between 1980 and 1995, the entire upper Cunas region was severely affected by political violence caused by the conflict between the Shining Path guerrilla group and the Peruvian Army. As the state's presence had disappeared from the region almost a decade previously due to economic crisis, the Shining Path's rebels met little resistance, and some residents joined their forces (Parregaard, 2002). However, their violent rule ended up dismantling most peasant organisations and land-reform changes achieved in earlier decades, leaving many residents in deprivation. One of the most severe forms of the conflict was the terror imposed by Shining Path rebels on transportation along the road passing through the Cunas valley (Paerregaard, 2002). The upper Cunas residents' decision to oppose Yanacocha must be viewed through these historical events: the land struggle, the political violence, and the shifting relations with the state. Likewise, the division created between upper and lower Cunas residents during the conflict was still fresh in the memories of many, as lower Cunas resident Jacinta described:

> Everything began up there, in the community of Shicuy. A teacher from Ayacucho arrived there, and that is how *Sendero Luminoso* [Shining Path] appeared. During that period, I was so scared to return from the *chacra* [field] at nights. My legs were shaking. Cause you know, they [Shining Path rebels and their allies] killed a lot of people here (3 March 2022).

Drawing on the historical context of the Cunas region, the early development of the Yanacocha conflict shows how new scales for claiming and contesting water emerged. On both sides of the struggle, powerful actors sought to 'down-scale' their claims to the residents in order to advance specific reservoir projects; the state institutions at multiple levels of government (GRJ, ANA, MIDAGRI) advocated improved economic productivity through Yanacocha, while high-positioned engineer Marcelo Quispe claimed Jarpa to have a better cost-benefit ratio. Both views were articulated to the residents as improving their socio-economic conditions through irrigation and, in Quispe's case, Yanacocha was presented as causing injustices through the risk of environmental deterioration.

Gelles (2000) discusses how the state's bureaucratic views over local cultural understandings of water management have long shaped Andean water struggles. The Andean traditional canal irrigation system has its origins in the Incan Empire's water infrastructure and technology, and the cultural imaginaries drawing on this legacy shape the contemporary negotiations and contestations over water in the Andes (Paerregaard, 2017). In the Yanacocha case, residents accommodated their traditional forms of 'inefficient' irrigation to the state's and other powerful actors' pursuit of modern irrigation. This adjustment must be viewed through the historical marginalisation of the highlands in terms of water access vis-á-vis the high investments in irrigation along the country's wealthier coast (Hendriks and Boelens, 2016). However, the upper Cunas residents' resistance to Yanacocha and their alliance-building with Quispe were also related to defending their right to self-determination and control of their own water. For instance, the Usibamba community built its own irrigation canal on some parts of its land back in 1970 (Paerregaard, 2002), which Yanacocha now threatens to disturb. This self-determination over water control was also altered by long-term, ambiguous mining and water management practices in upper Cunas and by the mining companies' disregard for residents' concerns concerning pollution (Heikkinen et al., 2023).

Such scalar configurations, intertwining multiple views of just water distribution, took further shape as both sides of the conflict aimed to make politically and economically powerful alliances. In 2014, Marcelo Quispe and upper Cunas residents petitioned the Subsecretary of the Central Government, claiming violation of their rights by the Yanacocha project and basing their arguments on the Peruvian

Constitution, the ILO 169 Convention on Indigenous and Tribal people's right to be consulted, and Peru's water law.[9] While Cunas residents do not identify themselves as Indigenous people, the definition of 'Indigenous' is not straightforward in the Peruvian Andes. As Barrio de Mendoza and Damonte (2013) note, while almost all the highland population of Peru is of Indigenous origin, their identity is a dynamic matter; in colonial times, 'Indigenous' was used as a homogenising label for the subordinated population to separate them from the Spanish. After Independence, it was applied as a racialising category for the Andean region and its inhabitants (Orlove, 1993). Later, during the agrarian reform, the military government of Juan Alvarado Velasco replaced the ethnic definition of 'Indigenous' with 'peasant' (*campesino*) to refer to the new beneficiaries of the land reform (Mayer, 2002). In recent decades, the state has applied the term 'Indigenous' as a label of backwardness (Méndez, 2011) but also in positive light as an object of public policies in land right questions (Barrio de Mendoza and Damonte, 2013).

In late 2014, the rhetoric related to Indigenous rights led MIDAGRI to cancel the EIA, and the GRJ was assigned to elaborate a new EIA where residents' concerns and the possibility of compensation would be addressed.[10] However, as the plans to build Yanacocha continued, Quispe and upper Cunas residents kept resisting. In 2016, they wrote a letter to President Ollanta Humala asking him to stop Yanacocha due to its destructive environmental impacts, stating, "We urge you, Mr. President, to consider these concerns. It is *justice*".[11] At this point, Quispe also started using global warming and CO_2 emissions as arguments in support of Jarpa, presenting the reservoir as a means of adapting to climate change.[12] This was the first time climate change was mentioned in the Yanacocha struggle, laying the groundwork for how climate justice claims became interwoven into the conflict.

Meanwhile, the institutions behind Yanacocha, together with lower Cunas residents, applied their own scalar strategies for advancing their goals. In August 2016, a consulting company, Consorcio Consultor Río Cunas, signed a contract with the government's national irrigation programme (PSI) to carry out a technical evaluation of Yanacocha.[13] PSI was created in 2006 under MIDAGRI with a loan through the World Bank (WB). The programme aims to improve and technify irrigation and develop farmers' irrigation capacities in line with international standards.[14] In practice, PSI has provided farmers with the capabilities and financial support to shift from traditional irrigation practices like canals to modern drip and sprinkler systems.

The involvement of a private consulting company, PSI, MIDAGRI, and WB in advancing Yanacocha demonstrates how specific discourses and practices are applied to manipulate the scales while making them seem 'normal' and 'legitimate' (Hoogesteger et al., 2017: 302). For instance, the new irrigation technologies that PSI promotes draw on WB-advocated premises of modernity, rationality, and efficiency in water management (Stensrud, 2016). These notions were used to legitimise claims by diverse actors involved in promoting Yanacocha. In an interview, a high-level PSI official highlighted that irrigation technification will eventually "improve the life of our farmers" (27 June 2022). She stated that Yanacocha was one such project. Similarly, a MIDAGRI official explained that water conflicts in Peru should be resolved by quantifying and modernising water use:

> So the solution is to change the irrigation system because pressure irrigation [through canals] requires more water. We should shift to technified irrigation nationwide. That way, you can maximise the available water (9 May 2019).

[9] 2014-PETICIÓN-EIA-YANACOCHA

[10] 2014-CARTA-008-EIA-MIDAGRI

[11] 2016-CARTA-HUMALA-YANACOCHA NO VA

[12] 2015-EXP-RIEGO-ALTERNATIVO CUNAS

[13] 2016-RD-348-MIDAGRI-PSI

[14] 2006-RDI-PSI-MIDAGRI

Such claims, valuing water and its just allocation through 'modernity', have also appeared in regional and local officials' statements. In 2017, the General Director of the GRJ argued that they stand for Yanacocha because "modern megaprojects that provide more water will always be our priority" (Gobierno Regional Junín, 2017). Using modernised water use as a 'normalising' discursive tactic over Yanacocha resulted in new scalar configurations (Swyngedouw, 2004), as down-scaling of the discourses helped gain support from lower Cunas residents, while up-scaling yielded financial aid from powerful political actors. For instance, Congressman Guía Pianto (of the center-right party Peruanos Por el Kambio) agreed to channel USD6 million in public resources through MIDAGRI for executing Yanacocha (*Diario Correo*, 4 August 2016a).

In November 2016, Marcelo and upper Cunas residents organised a protest in the region's main city, Huancayo, to express their rejection of the project's advancement. The GRJ responded by stating that upper Cunas residents needed more "sensibilizing" to understand the project's wider water benefits (*Diario Correo*, 16 November 2016b). When I met Marcelo Quispe in Huancayo in 2019, he told me that he considered such statements to reflect the PSI's and Congress members' 'own interests' rather than the water benefits for lower Cunas residents. He had expressed this view even to the President of the audit commission of the Congress via a petition, in which he argued that Yanacocha must be stopped for causing "economic, moral and social prejudices".[15] Meanwhile, Quispe explained that the opposition to Yanacocha was defending environmental causes and the alternative project, which would not only improve irrigation but generate huge economic benefits for the region by providing hydropower profits of S/1 million per year (Interview, 25 May 2019).

The decade-long development of the Yanacocha struggle illustrates how diverse social actors have participated in the scalar practices (Neumann, 2009), reconstructing fluid alliances and configuring new scales through diverse claims and actions over just water use. These multi-scalar processes have enmeshed with the historical, cultural, political, and socio-economic settings of the Cunas watershed, together with diverse articulations over the meaning and values of and authority over water (Boelens et al., 2016). The plural views about water justice were reproduced on multiple scales by state-led claims of productivity and modernity as just water distribution and by the residents' perceptions of just water governance, drawing on the historical setting of the Cunas. While the struggle began with 'down-scaling' practices, in which powerful actors sought allies among the residents to advocate for their views of water management, at later stages the residents increasingly challenged such scalar fixes. I will discuss these later stages in the following section.

RESIDENTS RESHAPING THE MULTI-SCALAR CLAIMS OF JUSTICE

Local residents' engagement in diverse social power relations across scales can help them voice and materialise their demands in the necessary political spaces (McCarthy, 2005). Cunas residents from both the upper and lower watershed have applied multiple tactics to fortify their justice claims and have formed various networks with actors across multiple scales to shape the political decisions over Yanacocha – a common form of grassroots scalar politics (Hoogesteger and Verzijl, 2015). In the case of Cunas, Paerregaard (2002) notes that its residents have already found pragmatic ways in the past to exploit the available political space and fluidly shifted their relationship to the state according to the prevailing circumstances. Similar scalar strategies were present in the struggle over Yanacocha.

In January 2017, upper Cunas residents invited several members of Congress, Peru's ombudsman, and other peasant communities from the region to participate in a meeting to discuss "the conflictive project of Yanacocha". Their invitation stated that the GRJ and PSI were 'forcefully' pushing for the project,

[15] 2016-PETICIÓN-YANACOCHA-FISCAL-CONGRESO

despite the EIA still not being accepted.[16] Simultaneously, they invited lower Cunas residents and their allies for an 'in-situ visit' to the highlands, so they could observe the alternative places for the reservoir and the contaminating impacts of Azulcocha mine on the highland rivers.[17] As these attempts did not yield results, upper Cunas residents kept consolidating their scalar allies. One such strategic alliance was Cecilia Gutiérrez, a private individual who owned part of the land where Yanacocha was supposed to be built. She joined the Yanacocha opposition and marched alongside upper Cunas residents in a protest in Huancayo in February 2017, calling for a stop to Yanacocha. Sra. Gutiérrez strengthened these claims by stating to the local media that she would not negotiate for her land to be used under any circumstances; the only reservoir project she would accept would be in the upper highlands (*Diario Correo*, 2 February 2017a).

Struggles over land control have a long history between and within the communities across Cunas. Winder (1978) provides a detailed account of the complex negotiations and struggles over land between the authorities and both wealthier and poorer farmers in lower Cunas throughout the 20th century. Introducing the land question to the struggle and searching for key landowners as allies draws on the long-term legacy of the land conflicts in the area. In this case, it was also a strategic act, as the state cannot forcefully build anything on community or privately-owned lands. The only exception to this is an urgent public necessity, which could be a lack of potable water (PSI interview, 27 June 2022). In May 2017, the GRJ presented a public order declaring the Yanacocha project as a public necessity of regional interest. This order drew on the argument that the lack of irrigation in low and middle Cunas threatened national food security. The order gave the GRJ legal justification for implementing Yanacocha,[18] but the GRJ still did not proceed due to strong opposition from the landowners, e.g. some upper Cunas communities and Cecilia Gutiérrez.

Upper Cunas residents' re-scaled allies and the land argument gave them space in key political forums related to Yanacocha. The GRJ organised a round-table dialogue between Junin's ombudsman and lower Cunas residents and their allies shortly after the protest (*Diario Correo*, 14 February 2017b). However, the discussion failed, as the upper Cunas leaders accused the ombudsman of siding with the lower Cunas communities and their allies. According to upper Cunas residents, the ombudsman had permitted provocation and verbal aggression from the opposition and had failed in fulfilling his task "of pursuing social justice".[19] This statement shows how the residents introduced new discursive claims drawing on the notion of justice. This notion was also applied in the residents' letter to MIDAGRI, accusing a PSI representative of professional incompetence when creating dialogue during the round table: "In the name of social peace and justice, the project cannot proceed without the consent of upper Cunas residents. This is also against the principle of the integrated management of the Cunas River's water resources".[20]

Through this statement, the residents combined the notion of 'social justice' with the principles of Integrated Water Resource Management (IWRM) – a concept that has been established some decades ago in international water forums in the frames of sustainable development. IWRM application in water policies seeks the equal participation of diverse water users in decision making in order to achieve equitable water access and distribution. In Peru, IWRM is the guiding principle of the current water

[16] 2017-CARTA-052-PIANTO

[17] 2017-CARTA-075-INVITACIÓN-GORE

[18] El Peruano-Ordenanza regional-N°258-GRJ/CR-2017

[19] 2017-CARTA-072-QUEJA-DDP-JUNÍN

[20] 2017-073-QUEJA-PSI; 2017-CARTA-ALTO-CUNAS-PSI

resource legislation.[21] Adapting IWRM as their claim, the residents sought to tactically strengthen their statements through the universal notion of distributive water justice used by Peruvian high-level water authorities. Likewise, the premise of 'social justice' was adopted from Marcelo Quispe's earlier articulations to powerful politicians. Later, this notion frequently appeared in the upper Cunas residents' petitions to numerous high-level institutions, such as MIDAGRI and the local water authority (ALA), that had political power concerning the decisions over Yanacocha.[22] These discursive configurations unveil how upper Cunas residents have used fluid tactics to reshape the scale of the water struggle by intertwining local justice views with global norms and articulations over water management and justice (Roth et al., 2018).

Meanwhile, lower Cunas residents applied their own strategies to reinforce their multi-scalar alliances. In March 2019, I participated in a meeting organised by the Yanacocha opposition allies in the municipality of Sicaya. The aim of the meeting was to discuss how to bring the Yanacocha issue up for debate in the Congress, and the main invitee to the meeting was Frederico Gallindo (of the extreme right party, Fuerza Popular), a congressman representing the Department of Junín. During the meeting, the leaders of several lower Cunas peasant communities and irrigation committees gave speeches presenting their arguments for Yanacocha. Many of these claims drew on framings that Yanacocha would lead to equitable water distribution between lower and upper Cunas, as the following statement by one of the leaders shows:

> The water arrives in Sicaya every 15 days, but in the upper part they have water 24 hours per day. That is why Yanacocha *si va* [goes forward] – and this day is historical for us. Water is such an essential resource in the pampas of Sicaya – this project is necessary for us (30 March 2019).

Joy et al. (2014) discuss how the spatial asymmetries between upstream and downstream communities, and what is understood as fair water distribution between them, constitute a key question in many water justice struggles. In the case of lower Cunas communities, people have argued that their role as major agricultural producers, with irrigation canals in the valley, justifies their access to highland water supplies through Yanacocha. Roth et al. (2018) show how downstream communities in the Bolivian highlands, with irrigated agriculture, have used this position as a strategic claim in a conflict over an irrigation project against upstream communities. Congressman Gallindo was convinced by the lower Cunas residents' arguments, stating in his final speech: "I fully support the project. Without water we cannot develop our agriculture. I will personally keep advocating for [Yanacocha] with everyone who thinks differently" (30 March 2019).

Despite the success of lower Cunas residents in gaining powerful strategic alliances, the dynamics of the Yanacocha struggle shifted just a few months later. During the previous years, upper Cunas residents had continuously campaigned to invite powerful actors, such as Congress representatives, the ANA director, mayors from nearby towns, and the regional ombudsman to visit the highland lakes to "solve the socio-environmental conflict and discuss possible investments to study alternative reservoir projects".[23] As these invitations were rejected, they wrote a letter to President Martín Vizcarra in March 2019, stating they were bullied by "the club of public functionaries who are only fomenting a social conflict but not working to resolve the water issues".[24]

[21] IWRM has also been critiqued for being rather a discursive declaration in the state's pursuit of modernising water governance, while uneven water access, asymmetric representation, and conflicts have continued. For a more detailed discussion, see Guevara-Gil and Cisneros, 2018.

[22] 2017-OFICIO-ALTO CUNAS-MIDAGRI; 2017-OF-102-ALA

[23] 2017-OF-103-VISITA-ALTO CUNAS

[24] 2019-CARTA-073-QUEJA-VIZCARRA

Some months later, the regional governor of the Department of Junín (and the head of the extreme left party, Perú Libre), Vladimir Cerrón, who had vocally pushed for Yanacocha before, wrote to the lower Cunas pro-Yanacocha movement: "Referring to the Yanacocha reservoir project, I inform you that no such work that causes risk of a social problem will be implemented".[25] Shortly after, I interviewed a high-positioned director from the GRJ. When I asked for his view on Yanacocha, he replied:

> The social conflicts in Peru are a delicate issue, and we manage them very carefully. In the case of Yanacocha, we have tried to organise [round] tables of dialogue with both upper and lower Cunas residents, with all the sectors and actors, but the residents have rejected these intents. So, we don't want to [take] any position in this conflict anymore (12 June 2019).

The Yanacocha case shows that local people, in this case Cunas residents, are not just onlookers in the political struggles over water (Broad and Cavanagh, 2021). In the Yanacocha conflict, they have exercised their agency in reshaping the power dynamics and the "pluralist political understandings" of justice (Schlosberg, 2007). Through diverse forms of grassroots politics, the residents have re-shifted the scales of the struggle by using fluid discursive claims over water justice and strategies to form powerful cross-scale allies. As Li (2016) shows, water justice claims in Andean communities, drawing on appealing values such as protecting Indigenous cosmovision, are sometimes used to strengthen multi-scalar alliances in water-related conflicts. However, water justice is not a simple discursive device; it draws on people's real water-related grievances. Similarly, the residents across Cunas have applied discursive justice claims by drawing on IWRM, productivity, and social justice, when appealing to their scalar alliances in order to claim their increasingly precarious access to water. In the following, I discuss how the deepening impacts of climate change have become key aspects in experiencing and claiming such concerns throughout the Cunas watershed.

INTERWOVEN CLAIMS FOR CLIMATE AND WATER INJUSTICES

In early March 2022, a group of upper Cunas residents gathered at a modest plaza in the Sulcán community. They had just finished a community meeting and agreed to tell me about their livelihoods and irrigation system. "Or actually, at the moment, there is no system. We just wait for the rain", community leader Eduardo explained. According to Eduardo, with increasingly irregular rains, the community, which relies on livestock herding and cheese production, urgently needed irrigation for their pastures, which was their reason for opposing Yanacocha:

> The authorities only care about the lower part because they produce more potatoes, carrots, and such. But unfortunately, they have forgotten about us – that we also need irrigation. So that is the reason for our protest. That is why we say Yanacocha *no va*. We require that the government also attend to us because here, we don't have anything. In the summer, everything [turns] yellow and dusty. You cannot see any[thing] green, so that is [the reason for] our anger – the peasant brothers of the upper Cunas (8 March 2022).

One month later, I returned to Sulcán with Marco, an environmental engineer and director of a local NGO, to hold a workshop on water. We aimed to identify the residents' problems and needs related to water, to better understand their claims in the Yanacocha conflict. We asked the residents to work in small groups and to draw two pictures: 'Sulcán Now' and 'Future Sulcán'. Most of the 'Sulcán Now' pictures represented a village in front of mountains with scant cultivation, few cows, limited water supplies, and clouds without raindrops hanging above. Meanwhile, in 'Future Sulcán', the residents imagined abundant rain feeding the highland lakes and rivers, small water reservoirs in the mountains with a canal connection to leafy cultivations, and cows pasturing on the green mountain slopes. The residents' views of their community showed how interwoven climate and water concerns are in their

[25] 2019-OF-124-CERRON-GORE

daily lives and how they imagine their future. While we did not explicitly discuss Yanacocha in the workshop, it became clear that they found it unjust that the state authorities were not taking these concerns seriously.

Roth et al. (2018) argue that diverse realities of the upstream and downstream communities essentially shape plural water justice experiences and related struggles across the watersheds. As in Sulcán, residents in many upper Cunas communities described how the shifting climate has affected their water-dependent livestock livelihoods. For example, Elena, an upper Cunas livestock herder, described:

> Now when it rains, it rains so much that the flooding enters our houses. And also, the frosts are so strong, when the ice falls it burns all the pastures and they dry out. The only thing that would save the cows in this case is irrigation (2 April 2019).

Elena argued that she opposed Yanacocha because "in the dry season when the frosts fall, the lower Cunas residents take away all the water". In the highest part of Cunas, alpaca herders who have suffered from climate extremes that have altered the *puna* (highland pastures) were also against Yanacocha, although they did not actively participate in the conflict. Their feelings of injustice drew on the earlier attempts of ANA engineers to build artificial gates in the Chicchicocha highland lake to deviate more irrigation water to lower Cunas. However, this resulted in flooding of the puna, further deteriorating the alpaca pastures, as alpaca herder Raúl explained:

> Here, we are not interested in irrigation. We are dedicated to conservating our pastures. Now even more with this climate, we must be prepared for difficult times. And they [lower Cunas residents] must understand that we don't want water. We want the well-being of our pastures (3 April 2019).

Some upper Cunas residents also discussed their water-related concerns through glacier melting, as livestock herder María Eugenia described: "We have less water, as there is no longer snow in the mountains; I think in ten years it will be completely gone, and I'm afraid our river will also dry out" (5 April 2019). Several studies have explored the meaning of the glaciers for highland Andean identities and sense of belonging (Rasmussen, 2018; Motschmann et al., 2020; Paerregaard, 2023). Altamirano (2014) shows how the melting of the largest glacier in the Mantaro River Valley, *Huaytapallana*, in Peru, and its impact on local water supply, is related to the experience of cultural loss in the nearby communities. While glacier melt was not expressed as an explicit claim in the Yanacocha struggle, the diminishing glaciers play an important role for upper Cunas residents in their sense of decreasing access to water.

Meanwhile, the lowland residents were concerned for their insufficient access to irrigation water to mitigate harvest loss related to deepening droughts and frosts. In 2019, the residents stated, in one of Peru's leading newspapers, that they suffered from "the attacks of climate change", which had deteriorated 15 hectares of cultivation that year. Residents blamed the governmental authorities for the situation, as they had failed to achieve consent for the Yanacocha reservoir from the upper Cunas residents (*La República*, 28 July 2019). Similar claims were also stated during my interviews with lower Cunas residents. A smallholder, Pedro, explained to me that the frequent climate extremes had increased the need for irrigation to sustain the cultivations: "The sun is so strong now that even though you irrigate at night, the soil dries out by noon, withering the plants". Therefore, Pedro stood for the Yanacocha with the rest of the lower Cunas communities:

> We need to crystallise the Yanacocha reservoir. Here, we only get five days of irrigation water [per month]. Soon, we won't be able to maintain ourselves or save our products. So what all the [lower Cunas] farmers are waiting for is that our authorities, including our president, would take our need for water and Yanacocha seriously (1 April 2019).

The testimonies of upper and lower Cunas residents reflect the distinct ways they experience water injustices in their socio-economic and environmental contexts (Zwarteween and Boelens, 2014). Their perceptions of and claims for justice draw on their lives in varied highland environments, from alpaca

herding in the puna to lowland agriculture. While what constitutes water justice differs in various settings, common to these residents is the ways in which their experiences of water-related grievances are deeply connected to shifting climatic conditions and the concerns for their agrarian livelihoods. This illuminates how the water struggles of rural highland communities amidst the impacts of climate change connect to the broader justice struggles for the right to determine the development of their own agrarian futures (Mills-Novoa et al., 2022b).

The residents' claims regarding the agrarian-climate-water nexus were recently also reflected in how the authorities and politicians began replacing or complementing their previous discourses concerning agricultural productivity with climate change. In an interview, a high-level PSI official explained how Yanacocha would provide the residents more security amidst the increasing climate extremes and conserve their "ways of living" (Interview PSI, 27 June 2022). Also, politicians involved in the conflict have begun using concepts like water scarcity and climate threats vis-á-vis agricultural productivity. In June 2019, a member of Fuerza Popular, Congressman Israel Lazo, who had previously advocated for Yanacocha, changed his opinion after visiting highland lakes in the upper Cunas, stating that they should instead be used to fight the water scarcity across Cunas (*Diario Correo*, 29 June 2019b). That same month, in an event concerning the "public hearing on the reservoir projects in the Cunas watershed", powerful national-level politicians from the right and left sides of the political spectrum gave speeches regarding the threats of climate change and water stress to all Cunas residents.

Despite the authorities' and politicians' discursive framings on the need to address climate and water injustices in the Cunas watershed, the Yanacocha conflict escalated in 2021. In October 2021, lower Cunas residents blocked the road leading from upper to lower Cunas for ten days to pressure upper Cunas residents into accepting the project. Lower Cunas residents announced that the Yanacocha reservoir was needed more urgently than ever, as fertiliser costs had increased and "the climate was playing against them harder than ever, making the lack of water a fatal issue" (*Diario Correo*, 21 October 2021). Such claims illustrate the deepening feelings of interrelated agrarian-climate-water injustices across Cunas and how these experiences were felt in various parts of the watershed, as livestock herder Juliana described:

> For almost two weeks, lower Cunas residents left us with nothing – without bread, without anything. We could not go down with our cheese, milk, or meat, and we didn't get any vegetables. But they just said, let them live eating *ichu*. That is what they said – that ichu doesn't die even due to droughts; when there is no rain, *ichu* survives (8 March 2022).

Ichu refers to a resilient grass species that dominates the Andean highland landscapes. In Juliana's comment, ichu illustrates a symbolic claim; lower Cunas residents suffered from deepening droughts, and if the upper communities did not want to cooperate in alleviating lower Cunas residents' water scarcities, they deserved the same fate: losing their livelihoods and being forced to 'live eating ichu'. Water distribution between the Peruvian highland communities has long been characterised by conflict and cooperation due to Andean water practice logics (Guevara-Gil, 2013). Irrigation in the highlands is characterised by local cultural characteristics and political tactics, in which highland communities sometimes cooperate with each other in irrigation canal construction, but access to water is also strongly contested, and water can also be used as a weapon to devastate the cultivations of other communities (Gelles, 2000). The recent discourses and actions of Cunas residents can be understood through such Andean water control arenas, where the material use of water, its symbolic orientations, and its cultural meanings are intimately related (Boelens, 2015).

The roadblock was not removed until the minister of agriculture, Víctor Mayta, arrived to meet with upper and lower Cunas residents. The meeting resulted in Mayta's promise to evaluate possibilities for complementary reservoirs to meet the water needs of the entire Cunas region (DRA Junín, 2021). Six months later, in June 2022, I travelled to upper Cunas to meet Alfredo, a cattle herder and one of the Yanacocha opposition leaders. As the *colectivo* climbed up to the highlands, I saw how the water in the Cunas River had lowered to the point that it barely covered the rocks at the bottom. The landscape had

become yellow and dusty, just as Eduardo from Sulcán had described some months earlier. But Alfredo now had some hope: ANA engineers had promised to present an evaluation of the highland lake reservoir in November 2022. However, something still concerned him:

> What worries me is that now they are studying the highland lakes without us. The geographers and other experts visit the highlands, but no one talks to us. I wish they would at least keep us updated. Now, we don't know anything (28 June 2022).

By January 2024, the reservoir issue had not yet been resolved. According to Peru's ombudsman, the Yanococha conflict status remains, as "there is no dialogue" (*Defensoría del Pueblo*, 2024). Yanacocha has been planned, articulated, and contested now for several decades – a process closely related to the 'time-scaling' of megaprojects in Peru, characterised by diverse discursive and material scalar practices over the years, while still waiting to be materialised (Ullberg, 2023). In the past years, such scalar configurations of Yanacocha have been shaped by new uncertainties and threats presented by climatic changes, affecting residents' water access in differentiated ways depending on their living environments. These multiple concerns have shaped the residents' plural claims over water justices, interwoven into demands for climate justice, just agrarian futures, and how these have been articulated for and against Yanacocha – yet with uncertain outcomes.

CONCLUSION

This article has analysed the multi-scalar ways in which water injustices are articulated and contested in the Cunas watershed in Peru's Central highlands amidst a shifting climate. Focusing on the Yanacocha reservoir conflict, the analysis has approached water justice struggles as 1) scalar shifts shaped by fluid power relations, 2) residents' forms of cross-scaled resistances, and 3) plural struggles intertwining demands for climate justice and fair agrarian futures. By drawing on the approaches of political ecology of water and politics of scale, the study shows how, in the environmentally diverse Andean highlands, the contestations for water justice are moulded by fluid strategies and negotiations between residents, state officials, politicians, and private-sector actors within and beyond a watershed. These struggles involve intertwined claims over agrarian, climate, and water justices, which are being reshaped by climatic impacts, shifting political alliances and cultural meaning-making.

This study's results contribute to the field of political ecology of water by enhancing our understanding of how water justice struggles are influenced by plural experiences and claims shaped by specific political-ecological, social, and cultural settings and wider institutional landscapes (Boelens et al., 2022; Mills-Novoa et al., 2022b). By focusing on the connections between water and climate injustices, this article shows that uneven water governance practices across multiple scales, entrenched by climatic threats, contribute to deepening Cunas residents' experiences of injustice. The historical events related to resource control and conflicts in the area lay grounds for the divisions and tensions between upper and lower Cunas residents. The residents have claimed diverse views of injustice in fluid and multi-scalar ways over two decades of the Yanacocha conflict. Their strategies have included siding with and forming powerful allies by using tactics of conflict and cooperation, moulding justice claims, drawing on universal water justice notions, and their everyday socio-environmental conditions.

The study demonstrates a need for stronger analytical engagement in plural water injustices, entangling multi-scalar justice articulations and demands within and beyond a particular watershed. This need is critical in contexts such as the Andean highlands, where local livelihoods and ways of living are intimately related to agriculture, water, and climate characteristics (Gelles, 2000; Gagné et al., 2014). Furthermore, the results encourage building tighter analytical links between climate and water justice struggles and their connections to agrarian justice. As the Yanacocha conflict in the Cunas watershed shows, global climate justice demands over the accountability of unevenly distributed climatic impacts are increasingly incorporated into residents' strategies for fighting against locally experienced water

injustices. These tactics further enmesh their struggle to determine a just development of their living environments, characterised by diverse agrarian livelihoods. Incorporating the plural approach to justice helps to more thoroughly illuminate the concerns of the Andean highlands and of other socio-ecologically fragile rural environments.

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