ELSEVIER

Contents lists available at ScienceDirect

Energy Research & Social Science

journal homepage: www.elsevier.com/locate/erss





The micropolitical life of energy projects: A collaborative exploration of injustice and resistance to small hydropower projects in the Wallmapu, Southern Chile

Maite Hernando-Arrese a,b,*, Elisabet Dueholm Rasch a,*

- ^a Sociology of Development and Change Group (SDC), Wageningen University and Research Centre, The Netherlands
- ^b Centro Transdisciplinario de Estudios Ambientales y Desarrollo Humano Sostenible (CEAM), Universidad Austral de Chile, Chile

ARTICLE INFO

Keywords:
(3–6): Renewable energy
Small hydropower
Ethnography
Indigenous people
Micropolitical ecology

ABSTRACT

This article contributes to an emerging body of literature about the micropolitics of the transition to renewable energy by examining how community leaders, in order to protect their territories, contest the energy transition. We present findings from two ethnographic case studies of small hydropower plants (SHPs) in indigenous Mapuche territory. As SHPs up to 20 MW are considered renewable projects by law, Chilean national authorities consider them as a non-invasive eco-friendly solution and, consequently, most of these projects are approved without carrying out an indigenous consultation and, thus, ignoring community leaders' demands for territorial autonomy. Following a micropolitical ecology approach, this paper analyses community leaders' resistance towards SHPs in Mapuche territories by discussing three key aspects: 1) access to information, 2) participation in decision-making processes, and 3) changes in community politics. These are different dimensions of the 'micropolitical life of SHPs', a heuristic tool, defined in collaboration with community leaders to explore the contentious political dynamics that community leaders experience in their resistance against SHPs on the one hand, and to describe how community leaders' political practices shape and are shaped by contingent encounters and alliances in specific historical and territorial settings on the other. We conclude that despite the anguish that SHPs cause, community leaders bring about hope that may create possibilities to transform their territories.

1. Introduction

Since the early 1990s, hydropower developments have become the center of socio-environmental conflicts in Latin America, particularly because such developments have often implied the involuntary resettlement of local communities, like in the case of the Uruguay dam in Brazil, the Chixoy dam in Guatemala, the Peñol-Guatapé dam in Colombia, and the Ralco dam in Chile [1,2]. Whereas hydropower has been heralded as clean, renewable energy, local communities have mobilized around issues of environmental justice and degradation, as well as around issues of participation related to the construction of hydropower dams. Communities claim that the state does not safeguard indigenous peoples' right to participate in decision-making processes regarding the transition towards renewable energy [2,3,4]. In conflicts over hydropower, hence, it is not only about what is considered as renewable energy and its possible environmental impacts, but also about

power, participation, and decision-making. This raises questions about what a just transition towards renewable energy entails. In this article, we focus on the key role that community leaders often play in these conflicts, which have the power of provoking, on the one hand, cathartic processes within communities that resist development projects, and to bring about hope for social change and a just energy transition on the other [5].

Research about social and environmental effects of large hydropower dams for indigenous communities in Latin America has generated a rich literature that explores the connections between hydropower developments and environmental justice [6,7,8,9], water justice [10,11], social movement strategies [12,13] and environmental politics [14,15]. It is not until recently, however, that scholars have started to study the socio-ecological impacts related to the Small Hydropower Projects (SHPs) boom, focusing on environmental issues such as deforestation, habitat fragmentation, post-construction alteration to flow regimes, and

E-mail addresses: maite.hernandoarrese@wur.nl (M. Hernando-Arrese), elisabet.rasch@wur.nl (E.D. Rasch).

^{*} Corresponding authors at: Sociology of Development and Change Group (SDC), Wageningen University and Research Centre, Leeuwenborgh Building, Hollandseweg 1, 6706 KN Wageningen, The Netherlands.

the flooding of terrestrial habitats [16,17,18]. A relatively small number of studies investigates the social, economic, and political issues related to hydropower developments, such as the erosion of community cohesion, lack of information, limited access to natural resources, and lack of recognition of indigenous knowledge and practices [19,20]. These studies often focus on energy transition scenarios and unravel issues of power and politics at the macro level, leaving questions about how community leaders navigate the boom of SHPs in their territories and, on a broader level, the consequences of energy transition policies, untouched. The aim of this article is to understand how community leaders navigate social unrest, resistance, and ideas about energy developments related to SHPs. In so doing, we seek to contribute to an emerging body of literature about the micropolitics of renewable energy contestations [21,22,23] that seeks to understand how community leaders engage in resistance to energy developments in order to protect their territories.

We explore the role of community leaders in local energy transition processes by way of two case studies in Chile. Here, hydropower became part of the country's energy transition scenario in 2015, whereafter hydropower projects started to multiply rapidly. The SHPs that are featured in this article are located in two municipalities in the Wallmapu, the ancestral territory of the indigenous Mapuche people. One in the municipality of Panguipulli (Tranquil project, 2.9 MW) and the other in Curarrehue (Añihuarraqui project, 9 MW) (see Fig. 1).

The article proceeds as follows. First, we discuss the transition to renewable energy in indigenous Mapuche territories and provide a background discussion about SHPs. Next, we discuss our theoretical framework on micropolitical ecology and hope. After the methods section, we then go on to present our findings. In so doing, we first focus on the process of knowing and communicating about SHPs as experienced by community leaders, and second, we explore how communities negotiate with hydropower companies, and what happens when community leaders either resist or participate in decision-making processes.

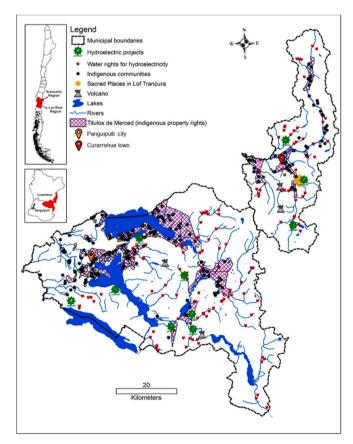


Fig. 1. Map of study areas.

Finally, we explore changes in community politics and how community leaders experience and reflect on the broader social transformations associated with the development of SHPs. The article closes with a discussion and conclusion.

2. The transition to renewable energy and hydropower conflicts in indigenous territories

Since the 1980s several judicial reforms have deregulated and privatized the energy sector in most Latin American countries, after decades of control by State-owned monopolies [24,25]. Gradually, the role of the state transformed from being an investor and operator into being a subsidiary of transnational corporations. As part of this process, the nonconsumptive water rights to hydropower development were massively allocated to private companies after the enactment of the Water Code in 1981. In line with this trend, the Chilean state and the multinational energy corporation Endesa² built two hydroelectric dams in the early 2000s, Pangue and Ralco, in the indigenous territories of Alto Bío Bio, in the Bío Bio Region. The approval of the Ralco dam (690 Mw) was marked by irregularities [30] and involved the displacement of approximately one hundred Pewenche³ families when the project flooded more than 3000 ha. By 2009, Alto Bío Bio was declared the poorest county in Chile with 44.5 percent of the population living below the poverty line [31,32].

The irregularities around the Ralco dam were a turning point in the way that hydropower development initiatives were managed in Chile. In addition, it sparked massive demonstrations, environmental campaigns, and legal activism against Endesa's hydropower dams such as *Central Neltume* (490 Mw) in the Wallmapu⁴ and *HidroAysén* (2,750 Mw) in Patagonia. These protests were successful, because they succeeded not only in stopping the construction of both projects, but also in influencing a paradigm shift in Chilean energy policy, stepping away from building large dams (>400 MW) and moving towards the construction of small hydropower dams.

During President Michelle Bachelet's second term (2014–2018), the government presented a long-term energy policy in which private investment in renewable energy initiatives was strongly encouraged. The proposal was supported by multilateral development banks. In 2014 the Ministry of Energy presented the 100 Small Hydro Plan. This plan featured a list of projects, mainly located in Mapuche territory between the Bío Bio and Los Lagos Regions, meant to be prioritized by public institutions with environmental competencies. The government and the private sector promoted these projects as the best sustainable alternative to large hydropower dams [20,33]. The idea that SHPs are 'small' and therefore do not generate significant socio-ecological impacts, dominates this discourse. 79 percent of the SHPs are concentrated between the Bío Bio and Los Lagos Regions. Mapuche communities claim that some of these projects are located on sites of cultural and spiritual significance [20] and scholars and activists argue that most of these projects have been approved without free, prior, and informed consent of Mapuche communities [20,33].

Policymakers often pay little attention to the impacts of SHPs because of the assumption that these projects are environmentally friendly and cause no harm to local communities [20]. For the same reason they are frequently regarded as 'green', and thus as supporting

¹ For a comprehensive account of the Water Code and its consequences see Bauer [26,27], and Budds [28]. To understand the specific impacts of the water code for indigenous peoples see Budds [29].

² Endesa was a state-owned electric company that started to be privatized during the last years of the Pinochet dictatorship.

³ The Pewenche are a subgroup of the Mapuche.

⁴ Wallmapu is the mapudungun (mapuche language) name given to the territory of the Mapuche people that span southern Chile and Argentina between the Atlantic and Pacific oceans.

the transition towards renewable energy. It has been stressed that these projects are the best alternative to large hydropower projects [20,34], because they 'only' divert water temporarily from the river. However, as Couto and Olden [17] have shown, the operation mode of SHPs can include water reservoirs or diversion structures that cause significant alteration to the natural flows of rivers. Kelly et al. [33] also convincingly argue that there is a lack of knowledge of the cumulative social and environmental impacts of SHPs.

Another assumption underpinning the turn towards SHPs is that they do not cause the same level of environmental conflict as large hydropower dams. However, as documented by Lakhanpal [35], the development of the Kukke (24 MW) small hydropower dam in the Western Ghats of Karnataka and Maharashtra, was resisted by local people who argued that the project would flood their lands, jeopardize their livelihoods, and cause conflicts within communities. Yaka [36] on her turn, shows how women activists in the Eastern Black Sea region of Turkey resist the development of both large and SHPs because they consider the river as part of their social, cultural, and biological existence. Latin American indigenous peoples also stress the social and cultural meaning that they attach to rivers in their resistance towards SHP's [19,20].

Notwithstanding the above issues and the distrust that civil society holds towards public institutions leading the energy transition [37], Chilean authorities continue to promote SHPs as less invasive than large hydropower dams and as an eco-friendly solution to enhance people's livelihoods [13,34]. Consequently, SHPs are approved either with or without a process of proper consultation, ignoring community leaders' demands for power, autonomy, and self-determination. As pointed out by the former Ministry of Energy, Máximo Pacheco, during the inauguration act of the Pulelfu SHP in 2015: "The formula of having SHPs is more harmonious, eco-friendly and easier for companies to implement (...) more harmonious with the surrounding communities."

3. Hope and/in micropolitics

In this article, we analyze how community leaders navigate the social impacts and conflicts produced by SHPs by using a micropolitical ecology approach. Such an approach allows for analyzing social fragmentation processes provoked by the different expectations and positions of community members towards development projects [38] and, consequently, how ideas about what a just energy transition entails are contested and negotiated at a local level.

Micropolitical ecology is an approach that developed when political ecology scholars started to apply an actor-oriented ethnographic methodology to study the micropolitics of environmental conflicts, namely, the intra-community disagreements about development projects imposed either by the state or by private companies [39,40]. Inspired by this approach, we explore the multiple dimensions of the conflicts provoked by the development of SHPs within Mapuche communities, between Mapuche communities and the state, and between Mapuche communities and private companies. Such an approach allows for considering environmental conflicts in all their complexities, going beyond a simple dichotomy between communities and companies. In this regard, we highlight how injustices and asymmetric power relations involved in the construction of SHPs may jeopardize a just energy transition that aims to achieve a low carbon society and contribute to equity and fairness for people whose livelihoods may be affected at the same time [41,42].

We specifically address how community leaders bring about hope as well as avenues for social change and a just transition towards renewable energy within their communities and beyond. That is, we seek to take seriously into account 'the sparks of hope' amid the sorrow and anguish caused by socio-ecological conflicts [5,43]. Though we acknowledge that micropolitics is not synonymous with resistance [43], we do believe that socio-ecological conflicts have the power to provoke cathartic processes within communities that resist development projects, motivating them to create or engage with virtuous actions to

defend their place. We propose to add 'hope' as a central ingredient to the micropolitical analysis of resistance to capture how community leaders navigate and make plans for the future. Hope is rooted in a desire for social change and as such is what holds dreams and practices together, and motivates community leaders to work on development alternatives amidst conflict and despair.

Such an approach also opens avenues for looking into, in the words of Escobar [44]: "The creation of a novel sense of belonging linked to the political construction of a collective life project," (pp. 68). In this vein, we embrace community leaders' endeavors to defend their territories through the creation or strengthening of alternative development paths based on local knowledge and practices. Following Guattari [45], we understand these paths as "molecular domains of sensibility, intelligence and desire" in which community leaders mobilize affective relations of care and solidarity to demonstrate the incompatibility of their ways of life with energy projects imposed on them from the outside. In doing so, community leaders act on a territorial scale, organizing different activities that contribute to generating social cohesion and encourage social inclusion. We understand social cohesion as the unity and harmony of communal existence [46] that emerges alongside differences, controversies, and fractures that develop while navigating local differences concerning energy issues.

To sum up, we add two intimately related elements to the analysis of socio-environmental conflicts: the role of community leaders in these conflicts and how they ignite sparks of hope to develop new ways into a just energy future. This is particularly relevant in Latin America, where during the past decade human rights defenders and community leaders have been massively under threat, at risk, or killed for defending their territories and promoting human rights [47].

4. Methods

This paper is based on ethnographic fieldwork in the municipalities Curarrehue and Panguipulli (September 2016 - March 2017 and November 2018 - February 2019) by the first author and a research assistant. The first author is a Chilean researcher who has worked with Mapuche communities for over ten years. She lived in a Mapuche community in Panguipulli during these periods, and she constantly traveled to meet community leaders and participate in meetings and demonstrations. The two case studies were chosen because: 1) they were relatively close to one another; 2) they were well-known for community leaders' opposition to SHPs projects; 3) key informants in both communities were willing to participate in the research; and 4) community leaders of both cases know and trust each another. The substantive reason for selecting these cases was the different participatory experiences of community leaders with SHPs. While in Curarrehue the community participated in the first Indigenous Consultation in the Araucanía region, the project in Panguipulli was quickly approved without proper consultation processes.

The research is rooted in a constructivist research paradigm [48], meaning that there is a close collaboration between the researcher and the research participants while enabling the latter to tell their stories [49]. As such, we have invited research participants to describe their views on their own reality, enabling us to better understand their actions [50]. Such an approach does not allow for generalizations in terms of numbers, but it does allow for a better understanding of, in our case, the dynamics of micropolitics and hope for a just energy future. Such an approach also allowed for a participatory and collaborative research design. This means that we aimed to include local communities as collaborators in the research with the purpose of bridging theory and practice to advance a more activist anthropology [48,49]. Following Kirsch [51] we consider doing collaborative engaged research as the only way of doing ethically sound research on issues that involve unequal power relations. In addition, it is also the only way of gaining trust in, and getting access to, such research settings.

In violent social contexts, ethnographers might be mistaken for spies,

which puts at risk the development of their research [52]. The same goes for doing research in the Wallmapu. Doubts and suspicions concerning the purpose of research were based on previous experiences of what community leaders call 'academic extractivism', a practice through which outsider scholars 'extract' the knowledge of local people for their own benefit [53]. To prevent such academic extractivism, Mapuche leaders of Panguipulli handed over a document entitled: 'Protocols of Research in the Territories' to the first author during her fieldwork. This document proposed five ethical principles: 1) Mapuche communities and the inhabitants of the territories are not 'objects' but 'subjects' of research; 2) Research projects are co-investigations from the moment that they start; 3) Research projects should overcome academic extractivism; 4) Collaboration and networking replace competitiveness and academic capitalism; and 5) Knowledge of the 21st century is democratic, decentralized, and territorial. In addition, the document defined a set of requirements such as informing the community about the study by organizing meetings, rather than individually; permanent communication with community members during the research process; transparency about the funding sources; delivery of the data, findings, and results in a format accessible and understandable by everyone.⁵ Along these lines, some ethical concerns such as anonymity and informed consent of research participants were constantly discussed, rather than 'check boxed' at one moment in time. All community leaders preferred not to be anonymized, but to be acknowledged for their participation and actions in publications about the research.

The 11 spokespersons of Mapuche communities and environmental organizations (six men and five women) that participated in this study all mobilized against hydropower developments. Conversing with people in favor of these projects, could have caused mistrust and reduced chances of building rapport with key informants from the affected communities. As we aim to better understand why community leaders might resist renewable energy projects and the role they play in mediating between communities and companies, we took the methodological decision to only work with community leaders opposing SHPs projects. The claims that we make, therefore, are not about the communities, but exclusively about community leaders. Such a focus might be considered as limited, as community leaders do not represent all voices of the communities involved in the research. At the same time, a focus on community leaders produces new insights, we hope, about the possible role of community leaders in realizing a just energy transition. These community leaders might tend to romanticize the time before the projects; however, we think that a collaborative project should (also) give importance to storytelling and peoples' self-representation.

Our research methods included participant observation, unstructured and semi-structured interviews, informal conversations, audiovisual interviews recordings, and a one-day workshop. In addition, we gathered legal documents, institutional and media reports, and literature about both cases. In the case of Tránguil (in Panguipulli), the first author participated in several meetings and demonstrations to demand justice for Macarena Valdés, a Mapuche woman who died in the context of the resistance against the SHP Tranquil. During the second fieldwork in 2019, we organized a workshop to discuss the social impacts of SHPs in La Araucanía and Los Ríos Regions together with some Mapuche and environmental leaders of the Parlamento Mapuche de Koz Koz and the Red por la Defensa de los Territorios (RDT). The topics discussed during this activity were collectively proposed and agreed upon in a meeting realized two weeks before the workshop took place. The workshop was audio recorded with the permission of participants and transcribed afterwards.

It was not possible to interview hydropower company staff. In the

case of the Añihuarraqui project, it was not clear which company administrated the project because it was sold, and it was impossible to find information about the transactions. The company owner of the Tranquil project did not answer our calls and e-mails. We assume that this was because of the ongoing conflict with the *Comunidad Newén de Tránguil*.

Data from field notes, interviews, video recordings and secondary sources were managed by the first author and collectively discussed and analyzed in an iterative dialogue with the second author during the writing process. The data were collected without prior coding. This allowed for our analytical framework to be rooted in the fieldwork findings, the ideas of community leaders, and to conduct a thematic analysis. All data were reviewed, and on this basis the main themes were established. As such, there has been an on-going analysis to refine the themes and the story the analysis tells [54].

5. The political life of SHPs in the Wallmapu

In this section we examine the three dimensions of the political life of SHPs that were established during the workshops with community leaders: 1) access to information, 2) participation in decision-making processes, and 3) changes in community politics and lived experiences of community leaders. In each of these dimensions, along with identifying micropolitical tensions that affect community leaders, we explore how they ignite sparks of hope in their communities amidst cathartic processes.

5.1. Access to information

"When the company came with its project, it caught us by surprise, we did not even know what a hydroelectric power plant was." Ely, a Mapuche social worker from Curarrehue, and spokeswoman of the Environmental and Cultural Council Lof Trankura (hereafter: Lof Trankura) recalls when and how she first heard about the SHP Añihuarraqui and the company GDT Negocios. Some people of the Mapuche community Camilo Coñoequir-Lloftonekul, one of the three communities that would probably be directly affected by the project, had requested her support. They considered her as one of the few people they could trust and who would understand the information about the project. Ely grew up in Pocolpén, an area close to the community, so everyone knew her and her family. Back then she was working in the municipality of Curarrehue, which involved a lot of fieldwork activities in the community.

The lack of information about the hydropower project voiced by Ely is typical for hydropower developments in Curarrehue. People opposing the project here perceived the lack of information as a strategy that was intentionally used to disempower the community. In informal conversations, community leaders would often mention that the company's presence in the community had triggered feelings of distrust. For instance, the worst thing for Anita, a Mapuche defender, "[...] is that we have to go out and look for information by ourselves, and people find out about the project belatedly, when everything is already negotiated."

At the same time, people that supported the project were invited to attend an information meeting where they reached an agreement with the company to exchange their lands and receive a small amount of money (US 600). According to Ely, these negotiations caused tensions among community members who used to make such decisions collectively: "Half of the community agreed with the project, and then the community was divided when the rest, who did not negotiate with the company, decided to cut off those who did so from the community for some years." Slowly, the company started to become present within the community and cause frictions at the local level, complicating a simple dichotomy between 'the community' and 'the company'.

People in Curarrehue mainly opposed the hydropower plant because of the foreseen lack of water and the threat to their *guillatuwe*, a sacred place for ceremonies. Curarrehue had suffered droughts for years – it is

⁵ Most of the information of one of our case studies, Añihuarraqui, was collaboratively collected for a short documentary entitled "I armed myself! Seeds and women companionship in the Wallmapu", available on YouTube: https://www.youtube.com/watch?v=om6SNr9cCag

debated for how long.⁶ In summertime, inhabitants of the community could only obtain water by way of a tank truck. The once-mighty Trankura and Maichín rivers have not flooded in 10 years, reducing the stream of other rivers such as the Pichi-Trankura. According to Ely, "it is on this river, and 200 m from a site of cultural significance, where the company wants to place the hydroelectric power project Añihuarraqui." It is "not only the *eltiin* (cemetery) or the *guillatuwe* that are sites of cultural significance," Simón the *werkén* (spokesperson) of the Lof Trankura explained, "[...] but the land, the forest, the waterfalls, the mountains, the river, and everything alive around us."

In Panguipulli, the process evolved in another way. Here, community leaders were completely unaware of the expansion of small hydropower initiatives in their territory. According to Pedro, a former guerrilla and member of a local environmental organization, they were still celebrating that they had successfully stopped the Central Neltume project, a hydroelectric power dam of 490 MW that would have flooded a ceremonial and sacred site, when they heard that the Tranquil project was under construction. Julia, the lonko (chief) of the Comunidad Newén de Tránguil, was the first to denounce the company RP Global in October 2015 for invading 8 ha of her land. By then, the construction of the power plant had already started. When she observed the trucks passing by to the construction site, she recalled that a few years before —when she was opposing the Central Neltume project —some people had told her that if that dam would not be built, several SHPs would be put up instead. "I knew about these projects, and although my sisters told me I was crazy, I kept my position without signing any papers," she stated during the workshop. Signing documents is a very delicate issue in the Wallmapu. Many Mapuche people lost their lands because of signing fraudulent documents. Not signing papers, thus, can be considered an act of resistance towards the company.

After being violently threatened by her brother and brother-in-law, who both worked for the company, Julia and her female family members decided to ask Rubén, an environmental engineer who had recently settled in Tránguil, to help them to sue the company. They accused the company of taking over their land, causing environmental damage to the river, and of having omitted the existence of an indigenous community in their *carta de pertinencia*—a formal letter in which the company must describe the project and ask regional authorities whether it should undergo an environmental assessment. These were the main reasons for people in Tránguil to oppose the hydropower plant.

When the authorities did not respond to their letters and emails, the opponents to the project decided to actively organize themselves in the Comunidad Newén de Tránguil (hereafter: Comunidad). Rubén was appointed as its spokesman because, as an environmental engineer, he was experienced in dealing with legal and technical reports. It should be noted, however, that some members of the community did not agree with the appointment of Rubén, as they considered him an outsider with somewhat radical ideas. The Comunidad organized a peaceful roadblock, demanding the immediate presence of the local authorities. A few days later, as Ruben recalls, the "regional public officers of different ministries went up to the mountain to listen to us, and the company was inspected for the first time." However, and despite having been fined for diverting about sixteen watercourses and cutting down ancient native forests, the generator company, RP Global, continued the construction of the hydropower plant generator and the engine room. The electric transmission company, SAESA, started the replacement of single-phase cables for three-phase cables in the pylons that had already been installed decades ago along the road to Tranguil only a few meters away from Rubén's house.

After the roadblock, violence intensified. Community members were threatened and intimidated by company workers and proponents of the project. As Rubén's landlady explained in an interview with the local media:

"A few days after the roadblock, two men and neighbors that work for the company RP Global came to my house to demand that I kick Rubén off of my property because he was revolutionizing the people a lot, and, as they told me, there were many people who wanted to harm him and his family" [55].

The day after this threat, Rubén's wife, Macarena Valdés, was found dead. Her 11-year-old son found her hanging from a beam of her house, supposedly after having committed suicide. However, her family declared that she had been killed. Their suspicions were confirmed the day after, when workers of SAESA, backed by the semi-military Chilean police, attempted to replace the power cable in Tranquil. This first attempt was prevented by Rubén's friends and family – Rubén was not at home that day. Macarena's death intimidated several members of the communities that supported the family, who wanted to dissociate themselves from Rubén because they feared reprisals. Consequently, a few weeks later the company came back and achieved its goal, and the project began to operate in November 2016.

Both case studies show that it is difficult to obtain information about energy projects. Combined with a lack of trust in the Chilean government and private companies, and growing tensions within communities, this exacerbates inhabitants' suspicions of foul play by companies and authorities. In both cases, community leaders challenged the lack of participatory mechanisms by way of creating new community organizations, the Lof Trankura and the Comunidad, and engaging with a wide range of actors that supported them in achieving their goals. Both organizations not only resist the development model imposed by the Chilean state, but also show alternative paths for restoring hope and social cohesion in the communities.

5.2. Participation, non-participation, and negotiation

The second dimension in which micropolitical relations became reconfigured in the two communities is participation in decision-making processes. Experiences of participation are very dissimilar in both cases because the law establishes that only the projects larger than 3 MW –like the Añihuarraqui project– are subject to environmental evaluation and citizen participation processes because it is assumed that this installed capacity has greater impacts.

In Curarrehue, people of the Camilo Coñoequir Lloftonekul community, and members of the Lof Trankura —created by Mapuche and non-Mapuche opponents to the hydropower project— were summoned to participate in an indigenous consultation (IC) process organized by national authorities and the company. The company, GTD Negocios S.A, organized a first meeting in Curarrehue due to the high levels of conflict in this community. They invited the sitting mayor of the town who, as Ely recalls, communicated to the people that it was better not to oppose the project since both the country and the municipality would benefit from it.

However, conflicts between opponents of the project from the community and the company continued. The Environmental Assessment Service of the La Araucanía Region offered support to the company to carry out an IC to resolve the existing tensions. This is a mechanism based on ILO Convention 169 —ratified by the Chilean state in 2008—that must be carried out when a company submits an Environmental Impact Study of a project that could affect indigenous communities. There was a high level of expectation among community leaders that this would become a turning point in the history of indigenous communities in the country. However, they were also skeptical because the Chilean state has always been reluctant to grant constitutional recognition to indigenous peoples and consequently has determined that ILO

⁶ While experts have pointed out that water shortages started around 2010 as a consequence of climate change, some Mapuche communities stated that it started during the 1990s because of the replacement of the native forest by exotic forest plantation monocultures. 2016 and 2017, when ethnographic fieldwork was carried out, were particularly dry years.

169 and the IC are non-binding [56,57]. Therefore, it is not possible to ban an investment project in indigenous territories based on the outcome of such a consultation. As Ely pointed out:

"The indigenous consultation and the citizen participation process was a strategy to force us to say that the company complied with everything the law says. The indigenous consultation is consultative in nature, which means that it is non-binding, therefore, it does not consider whether you reject a project. We unanimously rejected the project, but the company went ahead with it anyway (...) if we say no, it does not matter."

During the consultation process, the company proposed a series of measures related to mitigation, repair, or financial compensation. In so doing, the company followed a paternalistic logic of dependence. Because of the intervention of the company, the communities would be lifted out of poverty [58], was the reasoning. According to Simón, the representative of GTD Negocios approached the community by offering money, ping-pong tables, televisions, and the improvement of the social headquarters. Such paternalistic rationality reflects the assumption that indigenous people must be educated to ensure the country's progress and development. Community leaders point out that there is a radical difference between the way indigenous people relate to nature and the way the company does, what some authors have called ontological conflicts [59]. According to Ely, there was a long discussion to decide whether to participate or not in the consultation process and finally:

"We thought that participating would allow us to defend the territory, so we decided to do it. We had to review long evaluation reports and look at each of the mitigation measures. But the company tried to trick us into a bad deal. For example, since they planned to cut down ancient trees, the reforestation proposal was to replace them with a green painted wall of chipboard."

For Mapuche community leaders, this mitigation measure illustrates a radically different worldview, implying the encroachment on forest reserves, as well as on their right to self-determination. As Simón pointed out in a public speech: "We are aware that everything around us, rivers, forest, mountains, has life, has a *ngen* (protective spirit) and a *newen* (force)." This ontological position was widely embraced by ecologists who were opposing the development of other hydropower projects such as the SHP Puesco-Momolluco in Curarrehue.

The Añihuarraqui project was finally approved. However, it has not been built yet, thanks to —according to community members — the strong resistance that the project faces. During fieldwork, there were rumors that the company decided to sell the project to a national company, Cristalería Chile, which was developing a recycling project with the support of the Municipality, but hitherto there has been no official communication about it.

In Panguipulli the process went more smoothly for the company. In 2012 it quickly obtained the approval of its project through a *carta de pertinencia*, and consequently, citizen participation was not encouraged by the government. Rubén sarcastically explains that through this procedure the company must present a:

"4 or 5 page report, declaring that they will generate no impact and, therefore, ask the director of the environmental assessment service (SEA) if it is really necessary for this eco-friendly, transparent, and plenty of angel's company to submit their project to the Environmental Impact Assesment System (SEIA)."

The director of the SEA decided to approve the *carta de pertinencia* of the project in less than a week, deeming it unnecessary for the company to submit its project to the SEIA. However, the company only showed up two years after it had received the approval. "At that time", Rubén recalls, "We knew that by law there is a two-year term to object to the project," referring to the legally established time to reject a project.

In 2016 the project was almost ready. The Comunidad requested help

from an experienced organization: the Parlamento Mapuche de Koz Koz (hereafter Parlamento). As Jorge, the *werkén* of the Parlamento, explained during several informal conversations, the purpose of creating the organization was to support different Mapuche communities that defend their territories against hydroelectric projects such as Central Neltume and Central Trayenko. In doing so, they sought support from national and international environmental and human rights NGOs, and established alliances with a wide network of indigenous organizations. This social movement led by the Parlamento reached its goal and the companies finally withdrew their projects. This was also related to changes in the energy market and energy policies, as we will discuss in the next section.

In alliance with the Parlamento, the Comunidad organized a roadblock, demanding to meet with regional authorities in Tránguil. RP Global was also invited to attend these meetings but never reacted to the invitation. It was in this context of incipient organizing that Macarena was murdered. Rubén, however, continued participating in meetings where community members requested to clarify two aspects of the hydropower project. First, why the company did not submit an Environmental Impact Assessment (EIA, for its Spanish acronym) considering that the project was not only located on indigenous lands but also in a conservation area of tourist interest protected by state law; and second, why the road to Tránguil-where the power line passes- that was for neighborhood use only, stepped into the hands of the state. The communication with authorities was abruptly ended when the semimilitary Chilean police shielded company workers as they replaced the cables of the power line, ignoring the agreement between regional authorities and the community not to continue these constructions as long as the dialogue would last.

In sum, formal procedures for participation in decision-making processes about SHPs depend on the installed capacity in megawatts of a project and are of consultative nature only. Community leaders play a central role in contesting decision-making processes. They demand to be taken seriously by government officials. In doing so, they create new organizations, as well as alliances with (inter)national indigenous and environmental organizations. Although they achieved their goals, the lack of constitutional recognition and possibilities for self-determination have prevented Mapuche peoples from exercising political power. Nonetheless, the current political context of Chile, where a new constitution is being drafted by a popularly elected body that includes reserved seats for indigenous peoples, sparks some hope for a plurinational state.

5.3. Changes in community politics and lived experiences of community leaders

Both in Curarrehue and Panguipulli, SHPs have produced local processes of social fragmentation and violence. Community leaders cope with these impacts in their personal lives, but also face the challenge of restoring social cohesion within their communities. Although community leaders perceive this as an exhausting mission, they also highlight the support they have received from different people and networks that showed them 'sparks of hope' in the form of alternative paths of development that diverge from neoliberalism.

Conflicts in Curarrehue started when half of the community members agreed to negotiate with the company in exchange for land and money, and the other half did not. Tensions increased after residents in a community had decided that people who accepted to give their land within that community to the company in exchange for another piece of land of the same size outside the community, would be cut off, or 'suspended' from the community. Most of the people in Curarrehue depend economically on state subsidies and loans. By suspending their official status as a member of the community, those who negotiated with the company would not be allowed to receive this aid from the state. This marked a 'before' and an 'after' in the community for Ely:

"Before 2012 community life in the Lof was very nice. There was a lot of collaboration between neighbors because we are almost all from the same family. However, due to the intervention of this project in our territory and its economic offers, this relation changed radically. We have become enemies; we have lost closeness and trust in each other and that has been terrible. The change has been enormous."

In an informal conversation with Ely's sister, she told that nowadays the bus trip to the city is silent and that people avoid looking at each other. Although we did not conduct fieldwork in the time before the project, community leaders usually remembered that time with nostalgia for the close-knit community they perceived they were. Even though the hydropower dam has not been constructed, social relations have been broken. This reduces the chances of successfully confronting power structures that reinforce and maintain global injustice, oppression, and violence [60].

Paradoxically, this conflict has also contributed to expanding and strengthening collaborative networks at a local and national level. For instance, the opponents of SHPs organized a yearly kayak race and musical festival in Curarrehue. For about six years, 2,000–3,000 people gathered in Puesco, a sacred place located at the foothills of the Villarrica (*Rucapillán*) Volcano, to participate in a massive music event. However, in 2019 the Lof Trankura proposed to discontinue the festival because it started to divide the people that were all against the hydropower developments; while some of them supported the event, others considered that it transforms a site of great spiritual value, including its non-human inhabitants, into a tourist attraction.

Facing a divided community, Anita, Ely, and other women from Curarrehue that are part of the political organizations Guardianas del Territorio and Feria Wualüng have worked hard to repair the social fabric by encouraging and guiding the creation of territorial organizations, such as the Council of Chiefs of Curarrehue and the Mapuche Territorial Parliament of Curarrehue. Imagining other forms of development was an important step in doing so. As Anita explained:

"Our main aim has been to encourage different development initiatives based on local knowledge that allow people to stay in the territory and live and work with their families. I think that as long as people know and understand the land they live on, we can be autonomous in decision making."

All the above-mentioned organizations foster new ways of conceiving development and hope for another future through the recovery of Mapuche ancestral knowledge and practices. These organizations have organized themselves in the defense of life, representing a moral plea to defend the commons against enclosure and destruction by private interests, as well as a strong mechanism for social cohesion at the local level. By rising for the defense of life, opponents to the hydropower project have brought together new alliances involving members of indigenous communities and activists who confront hegemonic forms of democracy and stand, among other things, for human and non-human rights and territorial autonomy. This has created tensions within, but also alliances across, communities.

In Panguipulli the process of social fragmentation was more dramatic. Conflicts within the community arose when a small group of women found out that some men were negotiating with the company and had fraudulently made some women from the community sign in favor of the project. Julia recalls that some men of the community had told their mothers, wives, and sisters to sign a document for getting wooden looms and food supplies. This document authorized the company to operate on their property. When Julia and her sisters confronted these men, including one of their brothers who worked for the company, they responded violently. As Julia recalled: "They told us that they were going to come to burn down our houses, that they were going to burn us like rats, and even my own brother threatened me with a chainsaw."

The death of Macarena changed the course of the struggle in the community. The resistance against the company and the hydropower

project continued but lost its strength when the project started to operate. At the same time, Rubén started a national and international campaign for justice for Macarena. While some community members doubted the supposed suicide and argued that Macarena had been killed, others said that Macarena had been depressed. Some people even blamed Rubén, deepening the conflicts within the community. As Bea, a werkén of the Parlamento pointed out during a workshop:

"When conflicts reach that level of intensity, there is very little we can do to cohere that community again, it was damaged forever, and we have not enough strength nor time to heal these tremendous wounds that remain in the community."

The company started its operations in November 2016, while the Comunidad filed a legal complaint against it for taking over 8 ha of their land. At the time of writing this article, this judicial process remains unsolved. Simultaneously, Rubén and the members of the *Red de Justicia para Macarena Valdés* organized several events to raise money to hire a trusted forensic expert to conduct a second autopsy. After a year and a half, the results confirmed that Macarena was already dead when her body was hung, and therefore the participation of third parties could not be ruled out. To date, the people responsible for her death have not been found.

While some conflicts are deepened, in other spaces new collaborations emerge. In Panguipulli for instance, the Comunidad expanded and strengthened its networks. At the local level, the community allied with other Mapuche communities that have organized an annual cultural kayak tour in Liquiñe and Neltume since 2013, with the purpose of showing the cultural relevance of rivers for Mapuche people. Led by a wampo —a one-piece hand-carved boat from a tree trunk— kayakers paddle down the Cua Cua River towards Tránguil and the Neltume Lake. Once there, they can participate in Mapuche ceremonies and dialogues about the history of resistance of the Mapuche communities against hydropower projects. Gradually, this activity has become part of the cultural tourism agenda, gaining popularity and local sponsors.

Both in Curarrehue and Panguipulli, community leaders participate in networks for territorial autonomy, self-government, and food sovereignty that have promoted and consolidated a community-based economy based on short value chains, allowing community members to sell their products (food, woodcraft, wool clothing, etc.) locally and at a fair price. These initiatives, particularly summer local fairs led by women, are popular among young people because here they can meet and share with people from other places and participate in cultural and sport activities. These are all examples of proposals developed by, as Bea aptly put it, "ourselves, both Mapuche and non Mapuche living in this territory." Community leaders' struggles are not only about resisting hydropower projects, but also about opening avenues for imagining the future and development in alternative ways. In so doing, they construct networks that cross the boundaries of communities, from the local level to national organizations and back again, and at the same time navigate tensions between opponents and proponents of SHPs within the communities.

6. Discussion and conclusion

In this paper, we examined why Mapuche communities continue to resist small-scale hydropower initiatives that are presented as eco-friendly solutions to generate hydropower in the context of the energy transition towards renewable energy. Going beyond grand narratives of neoliberal dispossession and imposed energy security policies in indigenous territories, this article focused on the role that community leaders might play in the realization of a just energy transition. By way of unraveling the micropolitics of the conflicts provoked by small hydropower initiatives, we showed that such micropolitical processes also produce 'sparks of hope' [43]. We demonstrated that realizing an energy transition that is also 'just' in terms of participation and recognition of

indigenous peoples is complex and multilayered. Through a collaborative ethnography, we investigated these micropolitical tensions in three different dimensions of the political life of SHPs, which we will briefly discuss below.

First, we examined community leaders' limited access to information about small hydropower initiatives. Though both cases show that the arrival of energy companies in Mapuche territories creates and exacerbates the process of dispossession, social fragmentation, and rural violence, they also point at the important role community leaders play when a cathartic process occurs. Second, we discussed the processes of participation and negotiation that are organized to reach agreements between the companies and the communities on the mitigation measures of the projects. In this regard, both the state and the companies reproduce a paternalistic logic that dismisses local knowledge and communities' right to self-determination. Nevertheless, community leaders persist in resisting hydropower projects, arguing that they restrict their access to water and impose a modern logic of water that understand it exclusively as a commodity. Finally, we discussed how SHPs have sharpened and deepened the process of social fragmentation within Mapuche communities. A crucial issue here is that instead of safeguarding the rights of indigenous peoples, the state protects law and order and private investment [61], disregarding community leaders' allegations of usurpation and violence. This has, however, not withheld community leaders from becoming involved in territorial organizing and engaging in different networks. Community leaders, thus, are not powerless victims in the face of unjust energy transition scenarios; they find ways to make their struggle visible and to construct new political and collective life projects, based on their practices and knowledge.

As communities are not monolithic wholes, different perspectives about hydropower projects persist, often resulting in loss of trust or violent conflicts. While for some community leaders renewable energy projects represented a new wave of capitalist expansion in their territories, others argued that it was not the renewable projects themselves, but rather the asymmetric power relations inherent to them that were the problem. Such issues of power and vulnerability that affect both local communities and employees of energy companies are often neglected in the energy transition literature [41,62] whereas as they do shape ideas about what a just energy transition could look like. Our two cases contribute to this literature by demonstrating how the construction of SHPs in indigenous territories is driven by a top-down paternalistic logic that fails to ameliorate environmental concerns and enable greater social justice [62], and has instead led to social fragmentation, mistrust, and violence. This hampers an inclusive just transition towards renewable energy and feeds opposition towards projects that are framed as 'green' and 'sustainable'. It can, thus, not be assumed that energy projects will have no or fewer adverse impacts just for being small scale

The current climate crisis intensifies conflicts over water and particularly affects the rural poor and indigenous peoples, among other marginalized groups. In this sense, collaborative ethnographic research with these groups opens avenues for understanding specific viewpoints about socio-ecological issues related to hydropower and other types of water infrastructure and can as such contribute to a just energy transition. Community leaders' struggle, as shown in this article, is not only a struggle over land and water control, but also an endeavor to empower others to create alternative development paths based on their own placebased conceptions of wellbeing. Amidst the anguish caused by the imposition of top-down energy development policies, the hope that community leaders mobilize generates new social relations and practices that, despite their capacity to enhance people's wellbeing, often remain overlooked.

Funding

This work has been funded by ANID Chile through the Program Becas Chile and Wageningen University through a Junior Research Grant.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgments

This research would not have been possible without the support of community leaders of the Parlamento Mapuche de Koz Koz, the Comunidad Newén de Tránguil and the Lof Trankura. I am also grateful for the collaboration of Pedro Cardyn and Javiera Naranjo, who provided invaluable support during fieldwork. Christopher Schulz provided important comments on drafts. This work received funding from CONICYT and the Junior Research Grant of the Wageningen University.

References

- P.S, Gutman, Involuntary resettlement in hydropower projects, Annual Review of Energy and the Environment. 19 (1) (1994) 189-210. https://doi.org/10.1146/ annurev.eg.19.110194.00120110.
- [2] M.A. Orellana, Indigenous Peoples, Energy and Environmental Justice: the Pangue/Ralco Hydroelectric Project in Chile's Alto Bío Bio, J. Energy Nat. Res. Law. 23 (4) (2005) 511–528.
- [3] E. Zárate-Toledo, R. Patiño, J. Fraga, Justice, social exclusion and indigenous opposition: A case study of wind energy development on the Isthmus of Tehuantepec, Mexico, Energy Research & Social Science. 54, (2019) 1-11. https:// doi.org/10.1016/j.erss.2019.03.004.
- [4] N. Martinez, Resisting renewables: The energy epistemics of social opposition in Mexico, Energy Res. Social Sci. 70 (2020) 101632, https://doi.org/10.1016/j. erss.2020.101632.
- [5] M. Duffy, M. Gallagher, G. Waitt, Emotional and affective geographies of sustainable community leadership: A visceral approach, Geoforum 106 (2019) 378, 384
- [6] D. Carruthers, P. Rodriguez, Mapuche protest, environmental conflict and social movement linkage in Chile, Third World Quart. 30 (4) (2009) 743–760, https://doi.org/10.1080/01436590902867193.
- [7] A. Latta, Citizenship and the politics of nature: the case of Chile's Alto Bio Bio, Citizsh. Stud. 11 (3) (2007) 229–246, https://doi.org/10.1080/ 1745010070138195
- [8] A. Latta A, H. Wittman, Environment and Citizenship in Latin America: A New Paradigm for Theory and Practice, European Review of Latin American and Caribbean Studies. 89 2010 107 116 http://doi.org/10.18352/erlacs.9460.
- [9] David Schlosberg, David Carruthers, D, Carruthers, Indigenous struggles, environmental justice, and community capabilities, Global Environ. Polit. 10 (4) (2010) 12–35.
- [10] R. Boelens, M.B. de Mesquita, A. Gaybor, F. Peña, Threats to a sustainable future: water accumulation and conflict in Latin America, Sustainable Dev. L. & Policy. 1 (12) (2011) 41–45.
- [11] R. Boelens, The politics of disciplining water rights, Dev. Change. 40 (2) (2009) 307–331, https://doi.org/10.1111/j.1467-7660.2009.01516.x.
- [12] C. Schaeffer, Democratizing the flows of democracy: Patagonia Sin Represas in the awakening of Chile's civil society, in: S. Donoso, M. von Bülow (Eds.), Social Movements in Chile, Palgrave Macmillan, New York, 2017, pp.131-159.
- [13] G.M. Gutierrez, S. Kelly, J.J. Cousins, C. Sneddon, What Makes a Megaproject?: A Review of Global Hydropower Assemblages, Environ. Soc. 10 (1) (2019) 101–121.
- [14] P. Fearnside, Social impacts of Brazil's Tucuruí dam, Environ. Manage. 24 (4) (1999) 483–495, https://doi.org/10.1007/s002679900248.
- [15] P. Fearnside, Environmental impacts of Brazil's Tucuruí Dam: Unlearned lessons for hydroelectric development in Amazonia, Environ. Manage. 27 (3) (2001) 377–396, https://doi.org/10.1007/s002670010156.
- [16] Elizabeth P. Anderson, Mary C. Freeman, Catherine M. Pringle, Ecological consequences of hydropower development in Central America: impacts of small dams and water diversion on neotropical stream fish assemblages, River Res. Appl. 22 (4) (2006) 397–411, https://doi.org/10.1002/(ISSN)1535-146710.1002/rra. v22:410.1002/rra.899.
- [17] Thiago BA Couto, Julian D Olden, Global proliferation of small hydropower plants-science and policy, Front. Ecol. Environ. 16 (2) (2018) 91–100, https://doi. org/10.1002/fee.2018.16.issue-210.1002/fee.1746.
- [18] K. Lange, P. Meier, C. Trautwein, M. Schmid, C. Robinson, C. Weber, J. Brodersen, Basin-scale effects of small hydropower on biodiversity dynamics, Front. Ecol. Environ. 16 (7) (2018) 397–404, https://doi.org/10.1002/fee.1823.
- [19] J. De Almeida, Between distinct voracities: The hydro-energetic machine and the Iyakaliti's response, Tipití: Journal of the Society for the Anthropology of Lowland South, America. 12 (2) (2014) 93–98.
- [20] S. Kelly, Megawatts mask impacts: Small hydropower and knowledge politics in the Puelwillimapu, Southern Chile, Energy Research & Social Science. 54 (2019) 224-235. https://doi.org/10.1016/j.erss.2019.04.014.
- [21] A. Dunlap, Insurrection for land, sea and dignity: resistance and autonomy against wind energy in Álvaro Obregón, Mexico, Journal of Political Ecology. 25(1) (2018) 120-143. https://doi.org/10.2458/v25i1.22863.

- [22] S. Lakhanpal, Contesting renewable energy in the global south: A case-study of local opposition to a wind power project in the Western Ghats of India, Environ. Dev. 30 (2019) 51–60, https://doi.org/10.1016/j.envdev.2019.02.002.
- [23] A. Lord, Citizens of a hydropower nation: Territory and agency at the frontiers of hydropower development in Nepal, Econom. Anthropol. 3 (1) (2016) 145–160, https://doi.org/10.1002/sea2.12051.
- [24] R. Fischer, P. Serra, Regulating the electricity sector in Latin America [with comments], Economía. 1 (1) (2000) 155–218, https://doi.org/10.1353/ eco. 2000.0003
- [25] J.A. Ocampo, J. Martin, Globalization and development: a Latin American and Caribbean perspective, Latin American Development Forum. Palo Alto, CA: Stanford University Press. https://doi.org/10.1596/0-8213-5501-5.
- [26] C. J, Bauer, Against the current? Privatization, markets, and the state in water rights: Chile, 1979-1993, Doctoral Dissertation, University of California at Berkeley. (1995).
- [27] C.J. Bauer, Results of Chilean water markets: Empirical research since 1990, Water Resour. Res. 40 (9) (2004), https://doi.org/10.1029/2003WR002838.
- [28] J. Budds, Water, power, and the production of neoliberalism in Chile, 1973–2005, Environment and Planning D: Society and Space. 31(2) (2013) 301-318. https://doi.org/10.1068/d9511.
- [29] J. Budds, The 1981 water code: The impacts of private tradable water rights on peasant and indigenous communities in Northern Chile, In: A. William (Ed.), Lost in the long transition: Struggles for social justice in neoliberal Chile. Lexington Books, Lanham, 2009, pp. 41-62.
- [30] C.A. Agostini, C. Silva, S. Nasirov, Failure of energy mega-projects in Chile: A critical review from sustainability perspectives, Sustainability. 9 (6) (2017) 1073, https://doi.org/10.3390/su9061073.
- [31] M. Palomino-Schalscha, Descolonización, fronteras y lugar: desafiando la exclusión a través de la relacionalidad en la experiencia de Trekaleyin, Alto Bío Bio, Revista Geográfica del Sur. 3 (1) (2012) 91–112.
- [32] L. Susskind, T. Kausel, J. Aylwin, E. Fierman, The future of hydropower in Chile, J. Energy Nat. Res. Law. 32 (4) (2014) 425–481, https://doi.org/10.1080/ 02646811.2014.11435370.
- [33] S. Kelly-Richards, N. Silber-Coats, A. Crootof, D. Tecklin, C. Bauer, Governing the transition to renewable energy: A review of impacts and policy issues in the small hydropower boom, Energy Policy. 101 (2017) 251–264, https://doi.org/10.1016/ i.enpol.2016.11.035.
- [34] M. Premalatha, T. Abbasi, S.A. Abbasi, A critical view on the eco-friendliness of small hydroelectric installations, Sci. Total Environ. 481 (2014) 638–643, https://doi.org/10.1016/j.scitotenv.2013.11.047.
- [35] S. Lakhanpal Unruly landscapes: politics of biodiversity, energy and livelihoods in India Doctoral dissertation http://hdl.handle.net/2142/95583 2016 University of Illinois at Urbana-Champaign.
- [36] Ö, Yaka. A feminist-phenomenology of women's activism against hydropower plants in Turkey's Eastern Black Sea region, Gender, Place & Culture. 24(6) (2017) 869-889. https://doi.org/10.1080/0966369X.2017.1340873.
- [37] A. Vallejos-Romero, M. Cordoves-Sánchez, P. Jacobi, A. Aledo, In transitions we trust? Understanding citizen, business, and public sector opposition to wind energy and hydropower in Chile, Energy Res. Social Sci. 67 (2020), 101508, https://doi. org/10.1016/j.erss.2020.101508
- [38] E.D. Rasch, M. Köhne, Practices and imaginations of energy justice in transition. A case study of the Noordoostpolder, the Netherlands, Energy Policy. 107 (2017) 607–614, https://doi.org/10.1016/j.enpol.2017.03.037.
- [39] L.S. Horowitz, "It's up to the clan to protect": Cultural heritage and the micropolitical ecology of conservation in New Caledonia, The Social Science Journal. 45 (2) (2008) 258–278, https://doi.org/10.1016/j.soscij.2008.03.005.
- [40] L.S. Horowitz, L. S., Interpreting industry's impacts: micropolitical ecologies of divergent community responses, Development and Change. 42(6) (2011) 1379-1391. DOI: 10.1111/j.1467-7660.2011.01740.x.
- [41] B.K. Sovacool, Who are the victims of low-carbon transitions? Towards a political ecology of climate change mitigation, Energy Res. Social Sci. 73 (2021), 101916, https://doi.org/10.1016/j.erss.2021.101916.
- [42] D. McCauley, V. Ramasar, R. Heffron, B.K. Sovacool, D. Mebratu, L. Mundaca, Energy justice in the transition to low carbon energy systems: Exploring key themes in interdisciplinary research, Appl. Energy 233–234 (2019) 916–921.

- [43] B. Anderson, Hope and micropolitics, Environ. Plan D Soc. Space. 35 (4) (2017) 593–595, https://doi.org/10.1177/026377581771008.
- [44] A. Escobar, Territories of difference: place, movements, life, redes. Duke University Press, Durham, 2008.
- [45] F. Guattari, The Three Ecologies. Continuum, London, 2008.
- [46] Venturini T., B., Latour, The social fabric: Digital traces and quali-quantitative methods, in: Proceedings of Futur en Seine 2009. Paris: Editions Futur en Seine, 2010, Paris, pp.87–101. Available at: www.tommasoventurini. it/web/uploads/ tommaso_venturini/TheSocialFabric.pdf (accessed 5 July 2021).
- [47] Global Witness, Defender el mañana. Crisis climática y amenazas contra las personas defensoras de la tierra y del medio ambiente. https://www.globalwitness. org/es/defending-tomorrow-es/, 2020 (accessed 12 November 2020).
- [48] M.D., LeCompte, J.J., Schensul, Designing and Conducting Ethnographic Research. An Introduction. Altamira, New York, 2013.
- [49] B. Crabtree, W. Miller, Doing Qualitative Research. Sage Publications, London, 1999.
- [50] S. Kvale, Doing Interviews. Sage Publications, London, 2007.
- [51] S. Kirsch, Experiments in engaged anthropology. Collaborative anthropologies. 3 (1) (2010) 69-80. https://doi.org/10.1353/cla.2010.0001.
- [52] J. Sluka, Participant observation in violent social contexts, Human Organization. 49 (2) (1990) 114–126.
- [53] R. Icaza Social struggles and the coloniality of gender R. Shilliam O. Rutazibwa Routledge Handbook of Postcolonial Politics 2018 Routledge, New York 58 71 10.4324/9781315671192.
- [54] V. Braun, V. Clarke, Using thematic analysis in psychology, Qual. Res. Psychol. 3 (2) (2006) 77–101.
- [55] Puelche Comunicaciones, Entrevista a Mónica Painemilla. https://www.ivoox. com/monica-painemilla-vecina-tranguil-no-hemos-autorizado-audios-mp3_rf_ 12642308 1.html, 2016 (accessed 18 February 2021).
- [56] K. Bauer, Not-so-neoliberal governance: Chile's response to Mapuche territorial demands, Latin American and Caribbean Ethnic Studies. 13(3) (2018) 214-236. https://doi-org.ezproxy.library.wur.nl/10.1080/17442222.2018.1457007.
- [57] D. Carter, Chile's other history: Allende, Pinochet, and redemocratisation in Mapuche perspective, Studies in Ethnicity and Nationalism. 10(1) (2010) 59-75. https://doi.org/10.1111/j.1754-9469.2010.01070.x.
- [58] C. Peralta La Asimetría del Poder. Conflicto Etno-ambiental en el Marco de la Consulta Indígena: Caso Central Hidroeléctrica Añihuerraqui, Curarrehue, Unpublished Bachelor Dissertation, Universidad Diego Portales Facultad de Ciencias Sociales e Historia, Escuela De Sociología 2015 Santiago, Chile.
- [59] M. de la Cadena, M. Blaser, A world of many worlds, Duke University Press, Durham and London, 2018.
- [60] M. Wieviorka, Violence: A new approach, Sage, London, 2009.
- [61] P. Richards, Racismo: El modelo chileno y el multiculturalismo neoliberal bajo la Concertación 1990–2001, Pehuen, Santiago, 2016.
- [62] I. Szeman, How to know about oil: Energy epistemologies and political futures, J. Canad. Studies/Revue d'études Canadiennes. 47 (3) (2013) 145–168, https://doi.org/10.1353/jcs.2013.0020.

Maite Hernando-Arrese is a PhD candidate in Sociology of Development and Change and Rural Sociology at Wageningen University. She is an associated researcher at the Centro Transdisciplinario de Estudios Ambientales y Desarrollo Humano Sostenible of the Universidad Austral de Chile, and a collaborator teacher at the Universidad de Aysén. She is interested in the various aspects and dimensions of energy conflicts in southern Chile. Her research focuses on the non-anthropocentric conceptions of nature, and how environmental and indigenous organizations mobilize ethics and politics of care to rethink human and nonhuman relationships. Address: Sociology of Development and Change group (Bode 18), P.O. Box 8130, 6700 EW Wageningen, The Netherlands Email: maite.hernandoarre-se@wur.nl

Elisabet Dueholm Rasch is an associate professor at Wageningen University. Her research topics include (indigenous) mobilization toward neo-liberal policies and extractive projects, and energy production in Latin America (Guatemala) and the Netherlands. Her contemporary fieldwork in Guatemala focuses on how territory defenders experience violence and criminalization. Address: Sociology of Development and Change group (Bode 18), P.O. Box 8130, 6700 EW Wageningen, The Netherlands Email: elisabet.rasch@wur.nl