

"Nobody comes onto my land to remove one single pipe!" Conflicts over water and hydro business in the region of Recôncavo Baiano

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Abstract

This article analyzes the conflicts over water resulting from a process of de-reterritorialization of riverside families affected by the construction of the Pedra do Cavalo dam, in the 1980s, in the region of Recôncavo Baiano. The investigation is based on a qualitative methodology, focusing on a case study in which we conducted semi-structured interviews with resettled families in Agrovila do Sobrado, in the Municipality of Cabaceiras do Paraguaçu. Through interpretations based on the literature and perspectives of political ecology, environmental justice and critical geography, the results have demonstrated that the impacts of "hydro business" on these families has led to three types of water conflicts, resulting from: (1) forced displacement caused by the construction of the dam; (2) a lack of access to water, both in quality and quantity, on the new territory; and, (3) the loss of free access to community water sources essential for maintaining reproductive activities. Thus, the lives of the families affected by the dam are characterized by an incessant struggle against various forms of dispossession and by defending the right to water commons.

Keywords: Right to water. Environmental Conflicts. (De-re)territorialization. Water commons. Hydroelectric project.

"Na minha terra, ninguém entra para retirar cano algum!" Conflitos pela água e o hidronegócio no Recôncavo Baiano

Resumo

Este artigo analisa os conflitos pela água decorrentes de um processo de des-reterritorialização de famílias ribeirinhas atingidas pela construção, na década de 1980, da barragem Pedra do Cavalo, no Recôncavo Baiano. A pesquisa baseou-se numa metodologia qualitativa, a partir de um estudo de caso, usando entrevistas semiestruturadas com as famílias reassentadas na Agrovila do Sobrado, no município de Cabaceiras do Paraguaçu. Interpretados com base na literatura e em perspectivas da ecologia política, justiça ambiental e geografia crítica, os resultados mostram que o impacto do hidronegócio nessas famílias se manifesta em três tipos de conflito pela água, decorrentes: (1) do processo de deslocamento compulsório provocado pela construção da barragem, (2) da falta de acesso à água em qualidade e quantidade no novo território e (3) da perda do acesso gratuito a fontes de água comunitária essenciais para a manutenção das atividades reprodutivas das famílias. Assim, a vida dos atingidos pela barragem é caracterizada por uma luta incessante contra diversas formas de despossessão e pela defesa das águas comuns.

Palavras-chave: Direito à água. Conflitos ambientais. Águas comuns. (Des-re) territorialização. Projeto hidrelétrico.

"Sur ma terra, personne n'entre pour enlever un tuyau!" Conflits autour de l'eau et l'hydrobusiness dans le Recôncavo Baiano

Résumé

Cet article analyse les conflits autour de l'eau résultant d'un processus de dé-reterritorialisation des familles riveraines affectées par la construction, dans les années 1980, du barrage de Pedra do Cavalo, dans le Recôncavo Baiano. La recherche s'est appuyée sur une étude de cas utilisant des entretiens semi-structurés menés avec des familles réinstallées à Agrovila do Sobrado, dans la municipalité de Cabaceiras do Paraguaçu. Les résultats de cette démarche qualitative, basée sur la littérature et perspectives d'écologie politique, justice environnementale et géographie critique, montrent que les impacts de l'hydrobusiness sur ces familles se manifestent à travers trois types de conflits résultant: (1) du processus de déplacement forcé causé par la construction du barrage; (2) du manque d'accès à l'eau en quantité et en qualité sur le nouveau territoire; et, (3) de la perte d'accès gratuit aux eaux de source essentielles à la manutention des activités reproductives. Ainsi, la vie des familles affectées par le barrage est caractérisée par une lutte incessante contre diverses formes de dépossession et pour la défense d'eaux communes.

Mots-clés: Droit à l'eau. Conflits environnementaux. (De-re)territorialisation. Eaux communes. Projets hydroélectriques.

Introduction

Over recent decades, with the advance of neoliberalism and the accentuation of social inequalities and of the environmental crisis, conflicts over water have multiplied worldwide (Pacific Institute, [n.d.]). These conflicts may be triggered by situations in which there is either a scarcity of water, understood not merely as a physical condition but also as a problem of a political nature (Porto-Gonçalves, 2006), or an abundance, when there is an economic appropriation of this resource, thereby creating an unequal distribution among users (Ribeiro; Santos; Silva, L., 2019). Hydroelectric projects are an emblematic example of this type of capitalist appropriation of water, taken in its context of abundance.

In Brazil, the number of water conflicts has increased significantly. The annual reports of the Comissão Pastoral da Terra [Pastoral Land Commission] (known as the CPT) have demonstrated that, between 2015 and 2021, this number more than doubled, jumping from 135 conflicts (affecting 42,337 families) in 2015 to 304 conflicts (affecting 56,135 families) in 2021. In the Northeastern state of Bahia, this number tripled, from 27 conflicts (affecting 2,687 families) in 2015 to 80 conflicts (affecting 6,568 families) in 2021 (CPT, [2015], [2021]). For the CPT, water conflicts are:

[...] acts of resistance, generally collective, so as to guarantee the use and preservation of water and also of struggle against the construction of dams and reservoirs, against the private appropriation of water resources and against charging for the use of water in the countryside, when they involve riverside people, people affected by dams, fishermen, etc. (Gonçalves, A., 2013, p. 92).¹

Most of these conflicts are provoked by the so-called "hydro business" (Vainer, 2008), a form of territorialization of capital in local productive complexes, in connection with the circuits of globalized capital. Hydro business is based on the exploration and use of water for energy generation, human consumption or large-scale agricultural production (Oliveira, J. C., 2019). This type of territorialization:

[...] guarantees the private appropriation of common wealth, in addition to measuring high rates of profit due to a *status* of *commodity* that both water and hydraulic energy or even food production - with the contribution to irrigation – hold within the world economic scenario (Oliveira, J. C., 2019, p. 11).

Studies on water conflicts in Brazil have illustrated the socio-environmental implications of hydro business or "agro-hydro business" (Mendonça, 2010; Thomaz Jr., 2017)² in the search for new spaces and arrangements for capital accumulation. In the semi-arid Northeastern region,

¹ This and all non-English citations hereafter have been translated by the authors.

² Mendonça (2010, p. 191) defines the concept of agro-hydro business as "the expansion of monocultures for the production of energy (sugarcane, soy, palm etc.) combined with the damming of rivers (dam projects) to guarantee clean energy, a water supply to the large agro-industrial complexes and the production chains that feed the expansion and reproduction of capital".

where this study was developed, the implementation of irrigated perimeters in humid valleys, especially with fruit production for export (Pereira; Cuellar, 2015), dams for hydropower, mining, shrimp farming, intensive livestock and eucalyptus forestry are forms of uneven development, in which the appropriation of water and its multiple uses and the struggle for its reappropriation play a preponderant role (Pires; Ferreira, 2012; Silveira; Silva, M., 2019; Peixoto; Soares; Ribeiro, 2022).

In this article, we analyze the environmental conflicts triggered by the processes of deterritorialization and re-territorialization of riverside families affected by the construction of the Pedra do Cavalo hydroelectric dam, in the 1980s, which restricted the waters of the Paraguaçu River in order to generate energy and supply the municipalities in the Metropolitan Region of Salvador and the Region of Feira de Santana, Bahia. We analyze the different types of hydro business involved in these processes of "accumulation by dispossession" (Harvey, 2003) and the resulting conflicts that have occurred over the years. We understand the conflict over water as a type of environmental conflict, which, according to Acselrad (2004, p. 31), involves:

[...] social groups with different modes of appropriation, use and meaning of the territory, which originate when in at least one of the groups, the continuity of the social forms of appropriating the environment that it develops is threatened by undesirable impacts - transmitted either by soil, water, air or living systems – that result from practices exercised by other groups.

The first water conflict to be analyzed occurred during the de-territorialization process of riverside families brought about by the construction of the dam, forming a huge reservoir and causing the eviction of hundreds of families who had previously lived along the riverbanks. This type of hydro business, which we call "dam hydro business", falls into the category of large investment projects: large developmental infrastructure works that involve the movement of vast amounts of money, labor and natural resources (Cruz; Silva, v., 2010).

The second conflict emerges from within the process of re-territorialization through having no access to water, both in quantity and quality, caused by what we term the "hydro business of scarcity". This precarious condition is configured not only by the less favorable environmental conditions of the new territory, but also by the lack of commitment by the public authorities to ensure that resettled families have access to water. Thus, this conflict is expressed through the violation of the right to water, basic sanitation and decent housing and in the State's failure to fulfill its responsibility in guaranteeing these rights to those who have been displaced. Here, hydro business is manifested in either an indirect or veiled manner, through the regional scale of its activities, which have impacts on localities that are often distant from the extractive sites. The absence of the State in providing access to water for these communities also acts as a producer of scarcity. This absence is paradigmatic in settlements which are not sufficiently attractive for market opportunities that would justify this kind of state investment.

The third conflict stems from a process involving the commodification of water, following the implementation, in 2008, of new supply networks by the Empresa Baiana de Águas e

Saneamento (Embasa)³ in the region, which implied charging for water use. This enclosure process of water has been accentuated more recently by blockading access to groundwater that has supplied the resettled community for more than 30 years for their reproductive activities, mainly subsistence food production. This conflict has arisen from another type of hydro business, more directly linked to the water supply and basic sanitation service, which we call "hydro business through charging". This sector has undergone a privatization process in Brazil, especially in view of the new legal framework for basic sanitation (Brasil, 2020), established in July 2020 by President Jair Bolsonaro with no participation of Brazilian society.

In this article, we understand territory as a disputed space, which is constituted through unequal power relations between the communities that inhabit it and the agents of the State and of the capital that control and dominate it. The territoriality of these different agents is manifested both materially (in the productive and reproductive practices of those who live in it, in government development projects, in the productive activities of the private sector, etc.) and immaterially (in the imagery, memories, representations, discourses, affections, etc.) (Saquet, 2007; Godoi, 2014). The territory is also (re)produced by particular relations between society and nature, based on value processes and systems that vary between groups, cultures and places. There is, therefore, within the same territory, a multi-territoriality (Haesbaert, 2003; Fernandes, 2009). Water is one of the outstanding components of these socio-environmental relations that makes the territory a valued and disputed space.

In this perspective, Torres (2007) used the concept of *hydro territory* to emphasize the preponderant role of water in the organization of space. This concept helps to recognize water as a constitutive and inseparable part of the territory, whereby the defense of having access to water and the defense of the territory are seen as part of the same struggle for the communities and social movements that resist appropriation, privatization and commodification of nature (Oliveira, J. S., 2011).

Conflicts over water often involve struggles for reappropriating control over the use of and having access to water and for the defense of water as a commons. According to Rowe (2002, [s.p.], the common may be understood as:

[...] the vast realm that lies outside of both the economic market and the institutional state, and that all of us typically use without toll or price. The atmosphere and oceans, languages and cultures, the stores of human knowledge and wisdom, the informal support systems of community, the peace and quiet we crave, the genetic building blocks of life—these are all aspects of the commons.

Therefore, the common lies beyond the notion of property and the public and private spheres. From this perspective, the common "is no longer an object or thing under the domain of some, so as to be understood as a collective action of production, appropriation and reappropriation of what exists and what is done" (Gutiérrez, 2017, p. 75). Hence, it is about "considering the

³ The Bahia Water and Sanitation Company - Embasa - "is a mixed economy company with authorized capital, a legal entity governed by private law, with the State Government of Bahia as its majority shareholder" (Embasa, [n.d.]).

common as an expression of an antagonistic process that denies capital and, at the same time, as capable of producing and reproducing social life under other foundations" ⁴ (Navarro, 2013, p. 165).

We use the concepts of *de-territorialization* and *re-territorialization* to account for the processes of eviction, and the compulsory displacement and resettlement of families affected by the dam, understood as processes of dispossession and socio-environmental precariousness produced by the hydro business. We understand de-territorialization as the loss of territories suffered by subalternized, historically marginalized groups, such as traditional indigenous communities, quilombolas, with a background of pasture, fishing, and extractivism, as well as small farmers, squatters and landless workers.

This type of violent, permanent de-territorialization causes profound changes that imply the loss of territory built through lasting relationships of affection and of belonging. Families affected by de-territorialization processes are thrown into an unknown world, often without dialogue or participation in the decision-making processes, resulting in irreparable symbolic and material losses. According to Haesbaert (2003, p. 18):

[...] although we favor a notion of territory that inseparably links [...] political and cultural dynamics, the processes of deterritorialization are always linked, to a greater or lesser extent, to the economic dynamics that tear spaces apart, subordinate powers and conditions (when it does not direct) the re-formulation of many identity strategies.

We decided to use the concept of de-territorialization in order to contemplate expropriation processes in an attempt to emphasize power relations and the socio-spatial, socio-environmental and the more-than-economic relations of these processes. The territorial dimension makes it possible to apprehend these events not only as simple displacements, or to see the loss not only in material or quantitative terms – by area, size or economic value of the land – but also in qualitative, relational and temporal terms. Thinking in territorial terms, therefore, signifies considering the multiple dimensions and overlaps between the material and symbolic, and the biophysical and social elements that constitute the territory.

We adopted the term re-territorialization, rather than resettlement or relocation, within the same perspective as de-territorialization, since this process is neither ended nor resolved with the acquisition of a house and a piece of land. Re-territorialization takes effect in social, cultural, environmental and economic relations that progressively take shape over time, often in a conflicting manner. Therefore, the concept accounts for the breadth and spatiotemporal and ethico-political complexity of this process, which is always permeated by power dynamics between the various subjects involved.

Furthermore, herein, the concept of re-territorialization refers not only to the actions and inactions of the State in the resettlement process of a de-territorialized group, but also to the ongoing struggle of the resettlers in the production of a new territory of existence. As

⁴ Based on these definitions, we use the term "common" instead of "common good", so as not to refer to an idea of the common as an object or property.

Haesbaert (2003) reminds us, de-territorialization necessarily implies re-territorialization, the double face of the same process. "Thus, hydroelectric power plants are territorialized, and, at the same time, populations are de-re-territorialized" (Bortone; Ludwig; Xavier, 2016, p. 7).

The qualitative methodology involved a literature review and a field research, which took place in December 2021, at Agrovila do Sobrado, in the municipality of Cabaceiras do Paraguaçu. Semi-structured interviews were conducted with the 21 residents of the community who had endured the complete process of de-territorialization and re-territorialization. The interviews mainly consisted of questions regarding their experiences throughout the eviction and resettlement process, the main problems, conflicts, achievements, losses and expectations. Each interview was recorded and lasted up to one hour. An interview was also held with a coordinator from the State of Bahia Federation of Rural Workers, who had fought with the municipal unions during the 1980s defending the rights of rural workers affected by the dam.

Figure I presents the location of the Pedra do Cavalo dam and the reservoir formed by the dammed waters, the District of Geolândia in the municipality of Cabaceiras do Paraguaçu, from where the riverside families were removed, and Agrovila do Sobrado, where 22 were resettled. This resettlement center was implemented at the Lagoa Comprida Farm, in an area of 127 ha, approximately 3 km from the District of Geolândia and 5 km from the families' original territory.

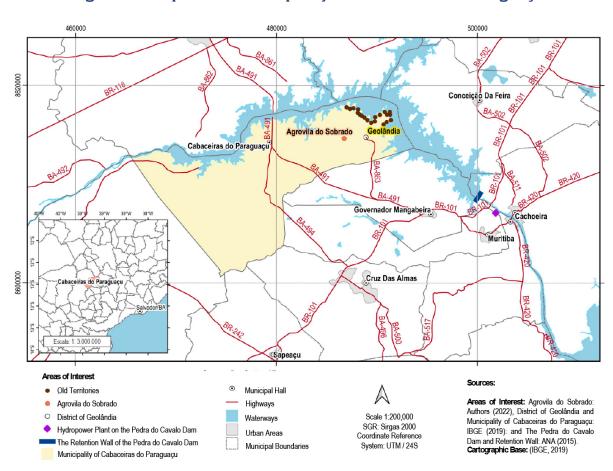


Figure 1 - Map of the municipality of Cabaceiras do Paraguaçu

Source: Produced by Racquel Magalhães Costa, 2022.

The article is structured into three main sections. The first deals with the conflict arising from hydro business linked to energy production, which has led to the de-territorialization of riverside squatter families who lived on land owned by farmers in the District of Geolândia. In the second section, we analyze the conflict generated by the failure of the public authorities to guarantee the resettled population's right to water and the resistance strategies encountered during the community's negotiations with the public authorities, to reduce the problems related to having access to water. In the third section, we present the most recent conflict that has arisen through the enclosure of the community's water resources, after the resettled community was connected to the Embasa supply network, and the subsequent blockade against access to groundwater from the aquifer, an essential source for maintaining their reproductive activities. In the final considerations, we reflect on possible ways in which to reduce the environmental inequalities and injustices that continue to cause the precarious conditions of the lives of countless families and traditional communities in Bahia and across Brazil.

Conflict 1: the "Dam hydro business" and the de-territorialization process

Brazil is the second country worldwide that generates the most hydroelectric power, after China, and is also one of the world's largest builders of dams (Oliveira, N., 2018). Hydropower is renewable and considered more sustainable than other fossil energy sources. However, like other large infrastructure projects, the construction of dams and the production of hydroelectric energy have tremendous socio-environmental impacts, which historically have disproportionately affected marginalized social groups. Their losses and suffering are either hushed up, naturalized or belittled in the face of the benefits that these ventures yield for the commodities market (Giongo; Mendes; Werlang, 2016).

We understand hydropower development as a particular type of hydro business – what we call "dam hydro business" or "energy hydro business". Dam hydro business refers to large enterprises that are based on "the privatization of water resources, transformed into inputs in the production of hydropower" (Winckler; Renk, 2019, p. 211). In Brazil, dam hydro business largely serves for the production of commodities, particularly in the current reprimarization context of the national economy, with emphasis on the neo-extractivist sectors of mining and agriculture. Therefore, hydro business is closely related to the concept of *virtual water* (Allan, 1998), which corresponds to the volume of water consumed or polluted for the production of commodities. This water, embedded into exported agricultural and industrial products, becomes unavailable for alternative uses, such as those of communities living in the territories where it is extracted (Vos; Hinojosa, 2016).

The construction of these major works implies the massive destruction of territories that are ultimately submerged, and the consequent de-territorialization of hundreds, sometimes thousands, of riverside families. These large-scale profitable ventures are marked by the disrespect for local populations, violence and some even by militarization (Gonçalves, A., 2013).

Faced with the violation of rights by the hydro-energy business during the processes of de-re-territorialization, the first Movements of People Affected by Dams (MAB) emerged at the end of the 1970s. At that time, the context was the world oil crisis, when large investment

projects in Brazil turned to the construction of hydropower dams so as to produce an alternative form of energy (Alves; Teixeira, 2021). The MAB (2004) has estimated that the more than two thousand dams built in Brazil have led to the eviction of more than one million people and that, of every 100 affected families, around 70 have received no compensation. Nevertheless, in Brazil, while there is currently no legal framework to ensure the rights of populations affected by dams, some achievements have been made, which have evolved from the struggle of affected movements, families, workers and communities. However, human rights violations multiplied within the context of neoliberalization and the privatization of various sectors of the Brazilian economy during the 1990s, intensifying in the current context of an extreme right-wing political economy marked by major social and environmental setbacks.

The proposal to build the Pedra de Cavalo dam came about during the military dictatorship, when Brazil was seeking modernization at any cost. The fundamental focus of the use of water resources at that time, still within the legal framework of the Water Code (Law No. 24.643/1934), was the production of electricity to foster industrial development (Calgaro; Maggioni; Gardelin, 2021). According to the 1974 Plan for the Valorization of Water Resources in the Paraguaçu River Basin, commissioned by the then State of Bahia Governor Antônio Carlos Magalhães, the Pedra do Cavalo complex would have the following uses: "electricity generation; water supply to greater Salvador; flood control; siltation control; marginal irrigation (Cruz das Almas and Santo Estevão); recovery of navigation downstream of the dam and improvement of the sanitary conditions of the river" (Palma, 2007, p. 59). However, no passage in this plan mentioned the possible negative impacts on the region's riverside communities or their fate (Germani, 1993; Palma, 2007).

From its conception through to when the hydropower plant began operating, the Pedro do Cavalo dam was the subject of controversy and numerous conflicts. The economic interests behind this project were undeniable from the beginning and even surpassed the diagnoses that warned of the geological instability of the site chosen for construction (Palma, 2007). According to Palma (2007, p. 70-71):

[...] the intention to install a Petrochemical Complex in Bahia necessarily involved the guarantee of basic inputs for any future industrial plants, and the construction of the Pedra do Cavalo dam, according to the plan for the valorization of the water resources in the Paraguaçu river basin (1974), would ensure a water supply for these industrial units, as well as guaranteeing energy, since Pedra do Cavalo was built with the objective of being a dam with multiple uses.

The construction of the dam began in 1979 and the State Government of Bahia created the Development Company of the Paraguaçu Valley (Desenvale) to take responsibility for the

⁵ Decree No. 7,342/2010 instituted the socioeconomic register for identifying, qualifying and constructing a public record of the population affected by hydroelectric power generation projects. However, its regulation in June 2012 privatized the registration of those affected, transforming what should have guaranteed human rights into yet another business for companies (MAB, 2013).

management and execution of the work. The promise that the dam would be destined for "multiple uses" and that the entire Paraguaçu valley would undergo "development" helped to legitimize the project in the face of opposition sectors and organizations of rural workers across the region (Palma, 2007).

The Pedra do Cavalo dam was inaugurated in 1985, but the supply system only went into operation in 1987. With a height of 142 m, it is one of the highest in the country. The damming of water formed a large reservoir of 186 km², which extends over 13 municipalities, making it the second largest in the state (Palma, 2007).

The lack of planning for the resettlement of those affected by the dam generated numerous conflicts between the state government and organized civil society. The delay in defining an official relocation plan prompted dozens of demonstrations across the region, with the mediation of various organizations (Palma, 2007).

The emergency resettlement plan was finally prepared by Desenvale, and 1,660 families lost their homes, 700 of whom were resettled in 14 centers during the first stage of the process, while only 115 of the 250 registered in the second stage were resettled in five resettlement centers (Germani, 1993). The remainder of displaced people were not covered by the resettlement program, and many were left with no compensation whatsoever. This caused the disruption of hundreds of families, who were forced to migrate to urban areas, mainly on the periphery of Feira de Santana or other smaller cities in the region, with no dignified living conditions of any kind (Palma, 2007).

In the case of the municipality of Cabaceiras do Paraguaçu, families were informed of their eviction by Desenvale in 1983, and the first evictions began in 1986. Compensation was standard for all families: ten "tarefas" of land (a measurement which is equivalent to around 4.34 ha)⁷ and one house in the resettlement nucleus.⁸ The struggle of social movements and trade unions was fundamental in achieving fairer compensation than that initially proposed by Desenvale, at least for a part of the affected population. For example, it contributed to the creation of a second nucleus model, where the houses were built inside the individualized plots, rather than outside. ⁹ It also contributed to the inclusion of other social groups, mainly those who did not occupy land, but worked on it (tenants, partners, sharecroppers, small traders in the area, etc.) (Germani, 1993; Palma, 2007).

The hydroelectric plant was built on the dam in 2005, under the responsibility of the Votorantim group, to generate energy and supply the municipalities of the Metropolitan Region

⁶ Palma (2007) highlighted the participation of the Universidade Federal da Bahia, the Universidade Estadual de Feira de Santana, the Catholic Church (through the activities of Dom Avelar Brandão Vilela, the Archbishop of Salvador), MAB, the Movement for Community Organization, the Bahia Association of Sociologists, The Bahia Association of Agronomists, the Bahia Engineering Club, and the Bahia Environmentalist Group.

As Palma highlighted (2007), the area of the piece of land stipulated by Desenvale was inappropriate since, according to the Instituto Nacional de Colonização e Reforma Agrária [National Institute for Colonization and Land Reform], the rural module for the region is 72 "tarefas".

⁸ The model of the house was also standard: a storage room, two bedrooms, a living room, a dining room, a kitchen, a bathroom and a terrace. As Germani (1993) pointed out, the houses were, in general, larger than the previous ones, which also served as an advertisement for the project and contributed to legitimize the resettlement proposal for those affected.

⁹ This second model was not implemented in the first settlement nuclei, as in the case of Agrovila do Sobrado.

of Salvador and the Region of Feira de Santana. In this respect, the waters of the Paraguaçu River are now being used intensively, further compromising their quality and availability. This has jeopardized fishing activities in the municipalities downstream of the dam and at the mouth of the river, due to the decrease in its flow and an increase in water salinity, which has altered the ecosystem of the basin, causing a significant reduction in the fish population and compromising the way of life of the region's artisanal fishermen (Genz, 2006; Palma, 2007).

This first conflict over water that emerged from the de-territorialization process of riverside families caused by the "dam hydro business" may be thought of as a "territorial environmental conflict" (Zhouri; Laschefski, 2010, [s.p.]), whereby "there is an overlap of claims by different social groups, bearers of differentiated cultural identities and logics, over the same spatial area". The conflict involved, on the one hand, those affected by the dam, supported by various groups of organized civil society, who were claiming their rights to remain in the territory or to be fairly compensated, respecting their identity and their cultural logic. On the other hand, the conflict also involved the authoritarian action of the state government which served the economic interests of the companies contracted and beneficiaries of this mega hydroelectric project. In this case, the conflicts generated by the construction of the dam made it possible to expose the socioenvironmental injustices linked to its short- and long-term impacts (forced displacement of the riverside population, degradation of the quality of the river water, compromising the local way of life, etc.). It also revealed how the ruling authority had violated the rights of those affected in the compensation process, and led to the rectification of some unjust actions and the guarantee of compensation for social groups whose rights had been historically denied.

Conflict 2: the "Hydro business of scarcity" and the re-territorialization process

I could live in this place for a hundred years and I'd never get used to it. It's a terrible place to live. We have difficulties with the water; the soil is bad for agriculture, or it's either sandy or stony. Here, we are far from everything. I don't even like to go anywhere near the place I used to live because I miss it so much (Interview 3, 2021).

In the re-territorialization process, a new landscape and territorial configuration was constituted, imposing profound changes onto the lives of the families who inhabited the vicinity of the river, and who, over many years, had established different socio-environmental relations in their territories, particularly through fishing and agriculture. Once resettled, the families had to rethink their reproductive activities in the new space, with very different characteristics to those in the territory of origin, especially in terms of having access to water and the quality of the soil.

In Brazil, because governments do not create legal channels or public policies that fairly address the rights of those affected by dams, they are doubly affected, with the loss of the former territory and in the lack of essential infrastructures and services, such as education, health and basic sanitation, in the resettled areas. Resettled people usually organize themselves

into associations or seek support from either unions or rural movements so that together they may minimize the impacts suffered and claim compensatory rights. However, having limited access and use of water compromises the permanence and the quality of life of communities in the new territories, considering that, without water in sufficient quantity and quality, there are no conditions for the development of reproductive activities, thus making it unfeasible to attend to basic needs, such as food.

Thus, environmental conflicts also tended to break out in the re-territorialization process, when families, having been evicted from their territories, were offered no resettlement proposal or reasonable compensation, which would at least meet the minimal conditions for living in a dignified manner. In most cases, the resettlement nuclei were installed on cheap, precarious land, with no adequate access to water and with unsuitable soil for agricultural production, as in the case of Agrovila do Sobrado. Several residents expressed the difficulty in adapting to an imposed, inhospitable place:

We never wanted to come and live here. I already knew that the land was no good, that it was really bad for planting crops, because I had a relative who lived nearby. Since there was no other way, we came "with our hands tied", against our will, so as not to drown in the waters of the river (Interview 9, 2021).

On the former territories, at that time, the residents of Agrovila do Sobrado were squatters, living and working on land owned by different farmers, where they had easy access to river water both for consumption and for developing their activities. Despite not living in a cohesive community, the squatters knew and met up with one another, and collaborated with one another in productive and cultural activities, in the form of a joint effort, especially in planting and harvesting corn and beans, in the storage of tobacco and in the organization of events such as festivals for Saint John, Kings' Day or other folkloric celebrations.

Community life was new to most families, who used to live far from one another in the old territories. The problems of scarce resources in the new territory and the proximity between the houses generated conflicts between neighbors, compromising the resumption of many collective activities. The discontinuity of these activities represents a great loss of cultural identity for many residents, who today remember this period with nostalgia, like this resident:

There were a lot of good things where we used to live. I remember the Kings' Day festivals we used to celebrate there. During the festivities, we would go out at night to people's houses and wake up the residents with singing, and there we would dance samba circle... with singing and joy, and plenty of food and drinks, which we would take there and that other residents offered (Interview 7, 2021).

Families in Agrovila were re-territorialized from 1985 onwards, when the houses and dam works were completed. From this perspective, numerous problems were registered, both of a biophysical nature, such as water scarcity and soil infertility, and of a social nature, such as the

lack of infrastructure, basic sanitation, transport, education and health services. But the biggest problem highlighted by residents was having no access to water. According to one resident:

[...] it was very difficult to adapt here, because we used to live on the riverbank, with plenty of water, we arrived here and we felt the lack of this resource, there's a great scarcity. We had to bring in water carrying it on our heads, from a source that was far away from the house. We had no alternative (Interview 18, 2021).

Initially, there was a single water source in the Agrovila, a fracture spring, which supplied the entire community. With its increasingly intense use, the quality and quantity of its waters became compromised: the crystal-clear water started to show a muddy color, signaling that it was necessary to look for alternatives. The community used the fracture spring between 1985 and 1987, as reported by this resident:

[...] when we got here, there was a big problem to access water, since just one single spring had to meet the needs of all the people. From there we got our drinking water, and water for washing and for doing all the housework. There were many limitations (Interview 2, 2021).

Faced with these limitations, the second conflict over water emerged, due to the lack of commitment on the part of the state and municipal governments to supply the resettled community with water and to guarantee their right to have access to it. From this point on, the community began to make demands on the city hall to provide a solution for this problem. The conflict was partially resolved when two or three times a week, the city hall began distributing water from the river in a water truck, which supplied the 10.000 m³ tanks which Desenvale had installed in the homes. But this measure only lasted for two years.

The community suffered from a lack of access to water for at least five years, until the state government drilled artesian wells and, with support from the city hall, groundwater began to be pumped, stored, and piped to homes, with distribution and use by the community. However, this water was untreated, and it remains unknown whether there were ever any health problems related to this fact. For three decades, the government was unconcerned about providing good-quality water to the resettled community, as this resident pointed out:

For a long time, the water here went untreated. First from the fracture spring, then the water truck that took the water straight from the river and then the water from the well. Nobody here could ever be sure that the water was treated before arriving at our homes (Interview 2, 2021).

In Brazil, the distribution of water occurs in an irregular, profoundly unequal manner, and in some places, it is necessary to develop public policies to store and distribute it through lakes and reservoirs, in order to meet the domestic and productive activities of many families. According to Law No. 9,433/1997, known as the Water Law, the objectives of the National Policy on Water

Resources are to ensure that current and future generations have the necessary availability of water, with satisfactory quality standards for the respective uses. This policy has a decentralized character since it creates a national system that integrates the three spheres of power (union, states and municipalities) and aims to be effective in democratic and participatory processes (Brasil, 1997). However, in the case of Agrovila do Sobrado, neither the right to water, with an acceptable standard of quality and quantity, nor the participation in decision-making processes to guarantee its democratic management, as stipulated by law, have ever been achieved.

Therefore, this second environmental conflict erupted from the violation of the resettled people's right to a dignified life, in the daily realization that the compensation process was unfair and in the incessant struggle for reparation. As is so often the case in compulsory displacement processes in Brazil, whether in the urban or rural context, evicted populations are generally resettled in more precarious, marginalized areas, both in biophysical aspects (areas of risk or environmental degradation) and in socio-physical aspects (lack of services and basic infrastructure). In Agrovila do Sobrado, the lack of water and land in sufficient quantity and quality makes it impossible to produce surpluses in the cultivation of food for the economic support of families. In addition, the long distance between the river and the houses in the new territory has led most of the resettlers to abandon fishing as a way of life. This situation has generated profound social problems within the community, such as drug taking and dealing and the involvement of young people in crime. Therefore, this second conflict may fall into the category of "distributive" environmental conflicts" related to the unequal distribution of natural resources and the lack of necessary material conditions to sustain the way of life of the people affected by the current development model (Zhouri; Laschefski, 2010). In this case, hydro business operates on a different scale and, therefore, is manifested in an indirect or veiled manner, when it appropriates the most productive areas (fertile land and abundant water) for capital accumulation, leaving the local population that depends on these resources for their subsistence and social reproduction, without access to them in quality or in quantity. This production of scarcity by hydro business has been essential to justify attributing an economic value to water and its commodification.

Conflict 3: the "hydro business through charging" and the struggle for water commons

Having access to drinking water and basic sanitation has been recognized since 2010 by the UN as an essential, fundamental, and universal right, indispensable for a dignified life. In Brazil, the 1988 Federal Constitution indirectly recognizes water as a fundamental human right, based on the principle of human dignity, the fundamental right to physical integrity, health, life and an ecologically healthy and balanced environment for present and future generations. ¹⁰ However, what prevails in Brazilian legislation is its determination as a public good endowed with *economic value*.

A proposal for a constitutional amendment is currently being processed (PEC No. 4/2018), which requires water to be a basic right explicitly recognized by the Constitution.

It is through attributing an economic value to water, justified by the discourse and the social production of scarcity (Porto-Gonçalves, 2006), that a new water market has developed in Brazil and across the world, which is constituted through different types of business, among them, hydro business through charging, which is based on the possibility of the State, private companies or public-private partnerships responsible for water supply to profit from charging individuals for water consumption instead of it being free of charge, especially for low-income families. Hydro business through charging becomes even more profitable when the management of the water supply and basic sanitation services cease to be the responsibility of the State.

In Brazil, the privatization of this sector is expressed in Law No. 14,026, instituted in July 2020 by President Jair Bolsonaro, amid the COVID-19 pandemic (Brasil, 2020). This legal institute brings important changes to the National Sanitation Policy, ¹¹ mainly harming social rights by encouraging the commodification of the management of water and basic sanitation services. Privatization tends to increase tariffs, making the service inaccessible to the most vulnerable part of society, thus compromising the universalization of the service (Gonçalves, L.; Silva, C., 2020). As Swyngedouw (2005, p. 91) points out, "to the extent that water is turned into money and capital, and water users into water customers who pay for water (rather than citizens entitled to access to water)", so "autocratic forms of water governance and regulation with limited or no democratic control" are created. Furthermore, these processes contribute to the incorporation of water into the global circuits of financial capital, in which related products and services are transformed into financial assets, traded speculatively. This signifies that companies responsible for water production or distribution are pressured to satisfy the interests of investors before the "beneficiaries" of these services (Bayliss, 2014).

Hydro business through charging commenced in Agrovila do Sobrado in 2008, when Embasa began to supply drinking water to the community and proposed that the city hall should deactivate all artesian wells. The water from the Paraguaçu River was then piped by Embasa, passing through a treatment station to remove impurities, thereby making it safe to drink and suitable for consumption. This measure was approved by residents, although it generated a cost depending on the amount consumed in cubic meters. Currently, drinking water is distributed to all residences for family consumption. However, it is not used in reproductive activities, such as growing food or raising animals. The consumption of water provided by Embasa for these activities would become much more expensive, which families would be unable to afford.

As of 2020, the city hall decided to suspend the supply of water from the aquifer, failing to pay the worker who performed the function of pumping it, and began to remove the plumbing from homes. The measure generated yet another conflict, as many residents were against the suspension of this water supply, which had been used free of charge for over 30 years in the development of the community's reproductive activities. This occurred at the beginning of the term of the current mayor, who gave in to pressure from Embasa. The objective of suspending the supply of groundwater has always been to expand the service network and the consumption

¹¹ The National Sanitation Policy (Law n. 11,445/2007) makes basic sanitation a social right and indicates the need to give priority to plans, programs and projects aimed at implementing and expanding sanitation services and actions in areas occupied by low-income populations (Britto; Rezende, 2017).

of residents to generate greater profits. In reaction, the community put pressure on the city hall to maintain free access to groundwater in its territory. The testimony of a resident shows the importance of these waters for the survival of the community:

The water from the well should remain accessible to the community so that we are able to water the crops grown in our backyards, because we don't have to pay, unlike the water from Embasa, which, if we use it for that purpose, increases the cost and we can't pay the bills (Interview 3, 2021).

Throughout 2020 and 2021, in response to pressure from Embasa, the city hall continued to remove the pipes that distributed water from the aquifer to homes, in an attempt to complete the work. Once again, it encountered resistance, and many families reacted by not allowing the removal of the pipeline from their properties. One of the residents exclaimed:

Nobody comes onto my land to remove one single pipe! Can't the city hall see that this policy is going to end us all? Don't they know that the people here live on Bolsa Familia [Family Benefits]? Who will pay for Embasa's water? To get in here and remove the pipes, they'll have to climb over my dead body! (Interview 2, 2021).

Residents continue to resist, but without the support of the Rural Union of Cabaceiras do Paraguaçu, now an ally of the mayor's policy. Most of the residents do not accept the "nefarious" action taken by the city hall in compliance with the state water management policy. On the contrary, the desire of these residents is to reactivate free access and use of groundwater, with a view to improving their living conditions. In this regard, one resident reported:

I attended a Council meeting in 2021, and I asked for the floor and spoke about the conflict that we have been experiencing. I said that it will be very difficult for us to continue living in Agrovila without a supply of water from the well, because financially we are unable to pay for water from Embasa to meet our needs (Interview 2, 2021).

It should be noted that this intervention by the city hall took place in the midst of the health crisis brought on by the COVID-19 pandemic, when having access to water became key, since one of the preventive measures was for people to wash their hands frequently in order to reduce the chances of contagion. With the supply of groundwater suspended, the community's reproductive activities and their very presence in the area are at risk. However, even if access to groundwater is maintained, the problem of it being untreated still remains, which implies a high health risk for the residents. This water would need to be analyzed so as to verify its contamination content and thus certify for what use it may be administered.

Currently, families that insist on maintaining access to the aquifer water must contribute by paying a person to pump it up. This goes against the community's conception that groundwater is a common that the State should help to preserve as such. At Agrovila do Sobrado, groundwater is used exclusively for subsistence, with the awareness that this ecosystem is fragile and limited.

On the other hand, the government continues to grant the intensive use of water to large enterprises that use it to accumulate wealth, leading to environmental degradation and affecting the quality of life of several communities in the region.

This third and most recent environmental conflict experienced by the community of Agrovila do Sobrado is expressed as a conflict for *control* over the use of and having free access to water commons. In the typology of socio-environmental conflicts by Little (2001, p. 108), this would correspond to "conflicts over control of natural resources". ¹² This type of conflict refers to the struggle for autonomy by people affected by the authoritarian actions of the developmentalist State. We also understand this environmental conflict as a "valuation conflict" (Florit, 2016) in the sense of expressing different logics, visions and moral values concerning the world and our relationship with nature that oppose the hegemonic values centered on the economic dimension, on the accumulation of wealth or the instrumental value of nature. On the contrary, the Agrovila do Sobrado community has not used water as a bargaining chip, but rather for its common use value.

Final considerations

From research on the de-territorialization and re-territorialization processes experienced by families affected by the Pedra do Cavalo dam, in the Recôncavo Baiano, it was observed that the community has experienced three major water conflicts, engendered by three types of hydro business: (1) the territorial environmental conflict linked to the de-territorialization process of these families caused by the 'dam hydro business'; (2) the distributive environmental conflict arising from the lack of access to water caused by the 'hydro business of scarcity' during the long re-territorialization process; and, (3) the conflict over the control of the use and having access to water triggered by the 'hydro business through charging', which is leading to a process of commodifying water and the enclosure of a common – groundwater.

These conflicts are due to multiple forms of dispossession of the families affected by the dam over several decades. First, by eviction and the consequent loss of their territories and ways of life. The construction of the Pedra de Cavalo dam suppressed having daily access to the waters of the Paraguaçu River for hundreds of peasant families in order to supply extractive industrial sectors and large urban centers. Second, by losing free access to water and the enclosure of a common (groundwater) essential to the survival of a community systematically made precarious by the (in)actions of a neoliberal State at the service of the water market. This violation of fundamental rights demonstrates how historically de-territorialized groups continue to suffer and accumulate stories of dispossession, being recurrently deprived of their rights to occupy, use and produce territories and to maintain other relationships with nature, based on systems of non-capitalist valorization or those that are more than economic.

In this context of precarious lives and the violation of rights, there is an urgent necessity to respond to the MAB (2013) demand for the creation of a national public policy supported by

¹² The two other types of socio-environmental conflict included in Little's (2001) classification are those arising from environmental or social impacts due to human or natural action and conflicts over the use of environmental knowledge.

regulatory frameworks that ensure the rights of those affected by dams. For example, it should include a guarantee that the resettlement centers are appropriate for maintaining a dignified life, with community control of the sustainable, free use of water. It is essential that compensation for those affected by dams goes beyond purely specific, quantitative compensation, which overlooks other immaterial dimensions of human dignity. A fair compensation cannot be calculated only in terms of "pieces of land" or "number of rooms". The territory does not exist without the elements that give it life and sustenance over time. These elements are immeasurable and are products of complex, long-lasting cultural and socio-environmental relations which can hardly be reproduced in another context or within a period of time that is able to guarantee resettlers a dignified life. Therefore, it is necessary to continue to fight against forms of development that violate the right to land and territory and, consequently, the right of historically dispossessed peasant communities to water.

Conflicts over water that break out in de-territorialized communities are a reflection of a neoliberal State concerned with satisfying the interests of hydro business before respecting and guaranteeing the rights of populations that use their "hydro territories" (Torres, 2007) as a way of life, and not as a commodity. The environmental conflicts presented in this article illustrate a long history of struggle for the rights to water, basic sanitation, health, decent housing and the permanence of these populations in the territory, which deserve a fair process of reparation and a dignified life. The community of Agrovila do Sobrado continues in its struggle for groundwater to be restored to them as an inalienable common water source with free access for those who live there, and who preserve and produce the territory.

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