En Pie de Marcha

– Commoning in Times of Crisis

An Extended Case Study of the Caño Martín Peña Community Land Trust in San Juan, Puerto Rico after Hurricane María

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"It requires that, well, you stay informed and active as far as you can, and help out with everything you can. For this beautiful battle it is to continue the struggle, to see if little by little the small things get achieved, that there is satisfaction for those who are in the struggle, and watch that the struggle doesn't cease to continue. It is an intense struggle, it isn't easy, but nobody said it would be easy, nobody said it would be easy… And here we are."

Interview with one Caño community leader from Barrio Obrero Marina, 12/03/2019, talking about the struggle to fight for environmental justice and the right to pursue their own kind of development in their neighbourhood

"Commons debates show that diverse peoples and worlds have an interest in common, which is nevertheless not the same interest for all involved, as visions and practices of the commons are world-specific."

Arturo Escobar (2015: section 6)

"No vendas tu casa, no vendas tu terreno, no vendas tus días, no vendas tu patria"

[Don't sell your house, don't sell your land, don't sell your days, don't sell your home]

Artwork by Ed Méndez

Abstract

The continuous and on-going enclosure of the commons has been identified as critical for the expansion of capitalism, through processes of dispossession, expropriation and commodification. In the light of the rapid erosion of our cultural and environmental common pool resources, the concept of the commons is increasingly gaining interest, since it presents new political and cultural perspectives as an alternative to market and state solutions. Community Land Trusts (CLTs) are discussed by urban commons scholars as one type of housing commons: they facilitate collective access to urban land and work as an instrument to prevent gentrification and displacement,for underprivileged groups. Although scholars emphasize the institutional and co-productive dimensions of CLTs, little attention is paid to processes of collective action, ie. 'commoning' at work, and the relationship of the actors with local institutions. This thesis examines one of few CLTs in the Global South through the lens of commons theory, with an emphasis on the relationship of the involved communities with the government.

Through employing the extended case methodology, the Caño Martín Peña CLT in San Juan, Puerto Rico was investigated using qualitative methods, and later analysed within its context. The inquiry specifically emphasized the role of collective action before and after hurricane María. Findings show empirical evidence for multiple layers of commoning within the CLT, and an intensified role of collective action specifically after the hurricane. At the same time, the investigation disclosed the communities' pro-active approach when it comes to communicating with the local government, to bring forward their demands. The combination of these practices reveals not only the feasibility and benefits of commoning on the ground, but also its transformative potential when it comes to challenging structures of domination.

Key words: Community Land Trusts, urban commons, commoning, disaster recovery, civil society participation

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1 Introduction: Commons in Times of Globalizing Capitalism

In our society of the 21st century, capitalism has become the status quo system logic. Various scholars refer to this logic as “the Empire” (Hardt & Negri, 2000) or “the neoliberal era” (Piketty, 2014), leading to the continuous commodification and privatization of almost every aspect of our existence (Caffentzis & Federici, 2014). We live in a world, where everything, from our drinking water to our body’s DNA cells, has a price tag, and there is no halt to companies’ right to enclose the last open spaces on our planet and making us pay to have access to them (ibid.). Not only land, fisheries and forests are being privatized and appropriated for commercial uses, but these predatory practices extend into urban areas as well: street vending gets forbidden, gated communities enclose whole districts, and gentrification displaces neighbourhoods due to rising real estate values (Harvey, 2012:53) .

Critical scholarship has identified such dynamics as enclosure of the commons (Linebaugh, 2014). This line of enquiry focuses on processes of dispossession and expropriation that are necessary for the expansion of globalising capitalism and put our reproductive and environmental domains at risk (Tola & Rossi, 2019). The common stands in contrast to the public and the private; in its simplest terms it describes goods and resources that share a special relationship with a group of people or a community (Helfrich & Haas, 2009). Yet, commons are more than a resource: the process of *commoning* or producing the commons through collective action is as crucial as the resource itself. The common is “primary to human life” and “invisible until it’s lost” (Linebaugh, 2014:13-15). This explains why in our times, where common pool resources experience rapid erosion, there is a renewed interest in the political dimension of commons that profoundly challenges the neoliberal worldview (Helfrich & Haas, 2009). It does so by exploring the emancipating potentialities of sharing and by questioning the very foundation of ownership (Stavrides, 2016).

One type of commons institution discussed by scholars in the urban domain are Community Land Trusts or CLTs. Best described as common ground, CLTs seek to preserve affordable housing by taking land off the market and transferring its ownership into the hands of a certain community (Davis, 2017). Buildings on the land can be owned individually, but land management is taken care of collectively to the best interest of the respective community. This thesis will focus on the Caño Martín Peña CLT as one type of housing commons, where eight communities own 78,9 hectares of land collectively around the Martín Peña canal

in central San Juan, Puerto Rico. The CLT works as an instrument to prevent involuntary displacement and gentrification, while enabling the communities to pursue ecosystem restoration of the canal, and to implement a comprehensive District Development Plan.

The CLT has been put under a harsh test both as a land ownership institution and as a project for collective action when hurricane María hit Puerto Rico on September 20th, 2017. Within the district, more than 75 families lost their homes completely, more than 1000 homes had their roofs partially or completely destroyed, and 70% of the communities were flooded with contaminated water. Municipal and government aid was slow and incomplete, and the public recovery discourse evolved around privatization, while providing limited support for marginalized communities (Farber, 2018).

Hence, even more than before the hurricane, collective action and solidarity played a crucial role in the recovery of the Caño district, and according to one of the community leaders, previous community organizing had given them "the tools to be able to cope with events of this nature" (in interview, 21.03.2019). Yet, in contrast to classic commons literature, their collective action did not take place in isolation from the government and market. The communities engaged in an active dialogue with the government, and through protest contested some of the public recovery plans. This relationship between the government and the common, as well as the role of collective action when recovering from a natural disaster triggered my research question and analytical approach: the communities in the Caño seemed to be following a distinct logic when it comes to organizing their neighbourhoods, which transforms both their life and challenges the structures they operate in.

1.1 Aim and Research Questions

In a time of intensifying multiple crises, resulting in the rapid decline of biological diversity and cultural traditions, it is challenging to introduce new political and cultural perspectives. Such perspectives must be theoretically and substantively sound, at the same time as being capable of changing political and social realities (Helfrich & Haas, 2009). The commons have been identified as a concept that has the potential to fill these demands, as an entry-point to challenge the neoliberal economic worldview and our social relations under the latter (Linebaugh, 2014). Yet, we cannot expect that there will be one alternative strategy corresponding to the problems of all: in the words of a Zapatista dictum, "another world is necessary, a world where many worlds fit" (EZNL, 1996).

During my fieldwork in the Caño CLT in San Juan, Puerto Rico, I encountered one type of commons institution and explored the life-worlds of engaged actors, with an emphasis on their response to hurricane María. Not only did the central

role of collective action become evident especially after the hurricane, but also the communities' pro-active approach to contesting government action in the crisis situation. Hence, by using commons theory as a framework, the aim of this thesis was to provide empirical evidence for commoning in CLTs, while examining the relationship of actors with the local government. This was done by examining two specific examples, related to Puerto Rico's policies on school closures and recovery funds in the aftermath of the hurricane. Moreover, by introducing knowledges of the communities in the Caño, this thesis intends to provide a practical understanding of commons in connection with academic contributions on the latter. The case was situated within the wider context of the city of San Juan and Puerto Rico, and pre-existing theory was employed as a tool to re-structure materials gathered on the ground, to enable moving from micro to macro and "extending out from the field" (Burawoy, 1998).

The research questions developed are the following:

1) *What was the role of collective action in the Caño-CLT, before and after hurricane María?*
2) *What was the Caño communities' relationship with the government throughout hurricane recovery?*

Hence, the questions lean towards a critical model of science, aiming at uncovering non-explicit processes and relations to promote progressive social change (Scheyvens, 2014:23). As described earlier, the Caño CLT represents *one* case of commons, one type of visions and practices that are specific to the life-worlds of engaged actors. Yet, by integrating the case in its structural context, the aim is to investigate interconnections with other cases and extra-local forces. According to Escobar (2015: section 6), this is one of the strengths of the concept of commons: its ability to connect struggles in the Global North and Global South, by emphasizing that diverse people have an interest in common, even though this is not the same interest for all involved.

1.2 Delimitations

For this study, I entered the field with a broad research interest in *locating everyday life in the Caño communities within its extra-local and historical context from a commons perspective,* given that they had been living in and operationalizing a Community Land Trust for more than fifteen years. The recent occurrence of hurricane María, and its continuing impacts on the communities directed my focus specifically to the role of collective action in hurricane recovery, without losing the aim of integrating the case within its wider structural context (Burawoy, 1998). Moreover, through continuous inquiry with the communities, I ensured to keep my topic of interest and importance to them, to already give something back to participants through the research process by

creating mutually beneficial relationships in the field (Scheyvens, 2014:175). I could have opted to compare the experience of the Caño communities with those of others in Puerto Rico who had similarly suffered from the hurricane to increase generalizability, however I decided to keep the focus on the Caño, in order to achieve gaining an in-depth perspective. Finally, it is important to emphasize that the theoretical framework for this thesis evolves around commons theory, rather than taking theories on disaster recovery as a vantage point. Hence, even though the case could be of interest for the field of disaster management, the emphasis was on processes of commoning, in a disaster situation.

2 Literature Review and Background

The literature review aims to give an overview of existing academic work on the phenomenon under study, that is, Community Land Trusts and more specifically, the Caño CLT. First, both the history and implementation of CLTs, as well as their recent coverage in commons literature will be discussed. Second, a short introduction into the context of Puerto Rico follows, with an emphasis on its relationship with the U.S., the recent economic recession and informality in the housing sector. Third, an introduction to the case of the Caño CLT will be provided, to create a common point of departure for the upcoming analysis. A fourth section will be concerned with the impacts and response to hurricane María in Puerto Rico, with a special focus on events related to the Caño CLT.

2.1 Community Land Trusts (CLTs): History and Implementations

Community Land Trusts (CLTs) present an alternative model for providing affordable housing, where "community-led development of individually-owned buildings is carried out on community-owned land" (Davis, 2017:2). In most cases, the CLT is a non-profit, tax-exempt corporation, which is dedicated to preserving land for low-income housing and community benefits. Land preservation is usually pursued through long-term ground lease. The CLT model was first implemented in the 1960s in rural Georgia, U.S., and its origins are closely connected to the civil rights movement. Since then, the model slowly spread through the US, first from the grassroots and eventually with local government support (Curtin & Bocarsly, 2009). Today, CLTs also exist in the UK, central Europe and in a number of locations in the Global South such as Kenya (Midheme & Moulaert, 2013) and Puerto Rico (Algoed, Hernández Torrales & Del Valle, 2018).

The CLT model is argued to be especially effective for promoting equitable and sustainable development in residential neighbourhoods. Regarding equity, it economically favours low-income groups on a long term, while protecting redistributive gains against market forces. Also, empowerment of CLT members is promoted through participatory planning and direct democracy in decision-making structures. Regarding sustainability, the CLT model provides a higher longevity and resiliency than conventional development programmes, through legal, operational and organizational features. Hence, the relatively durable and safe conditions lay a ground for long-sighted community development and in

some cases even ecological recovery of the target area (Davis, 2017). Also, certain characteristics, including high benefits for limited subsidies, prevention of predatory lending, and the possibility to subtract the cost of land out of housing support schemes potentially make CLTs appealing for policymakers. However, the implementation process can be lengthy and challenging: on the one hand, due to the high level of required stakeholder engagement. On the other hand, despite well-documented benefits, the idea of de-commodifying land often receives rejection, especially in a context where cultural, financial and institutional practices heavily rely on land being treated as a commodity (ibid.).

In the context of the Global South, so far the CLT model has been implemented in Voi, Kenya (see Midheme & Moulaert, 2013), in the selected case for this investigation in San Juan, Puerto Rico and is currently being tested in informal settlements or *favelas* in Rio de Janeiro, Brazil (Williamson, 2018). In developing countries, providing decent housing for marginalized urban groups becomes increasingly challenging, especially since market mechanisms often de-favour the poor. To elaborate, the growth of informal settlements is ususally countered with a variety of policies based on individual property and 'received' forms of landholding, where former squatters obtain titles to small parcels of land on an individual basis. Yet, residents remain vulnerable to economic fluctuations, gentrification, or district improvement plans, which might increase the value of their obtained land and alter living costs in the area. By removing land from the market, Midheme & Moulaert (2013) argue, that CLTs offer a form of pro-poor property, since they work for long-term neighbourhood development and against social exclusion. Nevertheless, in addition to the often precarious situations in informal settlements, similar challenges apply when it comes to the implementation of CLTs as in other contexts: acceptance and utilization can be hard to achieve, since the de-commodification of land is far from mainstream approaches.

Recently, the CLT is considered as a form of housing commons by commons scholars, who emphasize the role of collective action in establishing and managing the land trust. Two main characteristics of commons-institutions are present in CLTs: first, a resource, which is sustained and managed by the community – the land – and second, *commoning*, the act of creating and maintaining this resource (Aernouts & Ryckewaert, 2017). Commoning occurs both on the institutional level and in the daily management of the CLT. Commons scholars argue, that collective action in CLTs can have benefits beyond the realm of housing, including capacity-building and empowerment of members, as well as 'bonding' and 'bridging', or bringing together people both from similar and different backgrounds over a shared matter.

2.2 Puerto Rico: Colonization, Economic Recession and Informality

Puerto Rico has been a U.S. unincorporated territory since 1898, after being a Spanish colony for around 400 years. Hence, Puerto Ricans are American citizens, however they are neither eligible to vote in U.S. presidential elections, nor do they receive all advantages fully incorporated U.S. states are granted. In practice, their status is comparable to that of a colony, with limited capacities to take decisions over fiscal policy, and a dependence on imported food and fuels (Klein, 2018).

Since 2006, Puerto Rico has experienced an economic recession, with an annual net growth rate of –1.5% (Algoed, Hernández Torrales & Del Valle, 2018:5). Consequently, the island experienced an accelerating net population loss since 2006, and currently more Puerto Ricans are living on mainland U.S. than in Puerto Rico. Also, $70 billions of unaudited public debts have been reported in 2018, leading to the implementation of a number of austerity measures, including the privatizations of the national airport, roads and parts of the public university. Part of Puerto Rico's economic recovery strategy is attracting foreign investments and capital to the island, for instance by offering personal and corporate tax advantages to U.S. citizens who decide to relocate their own, or their company's residence to Puerto Rico (Klein, 2018: chapter 2). Especially in the aftermath of hurricane María, an increasing amount of terrain was opened up for investors: according to the National Recovery Action Plan, 95% of the island are classified as "Opportunity Zones" aiming at attracting investment capital, which gives investors the opportunity to realize almost any project in the name of economic development (Government of Puerto Rico, 2018).

Even before the economic recession, access to land, as well as housing informality have been critical issues especially for low-income communities. Puerto Rico's rapid industrialization in the 1940s, 50s and 60s caused a mass exodus of farmers to outskirts of cities across the island, where they settled predominantly in informal settlements. In the beginning of the 21st century, 135 informal settlements were reported to exist across the island, 28 of them in the capital San Juan (Algoed, Hernández Torrales & Rodríguez del Valle, 2018:7). Given that the majority of these settlements still exist today, the development of inclusive models for regulating land tenure is especially needed in Puerto Rico. This is even more the case after hurricane María, since the aforementioned policies open up land in informal settlements for foreign investment. The Caño CLT presents one alternative strategy, that allows for the improvement of living conditions, while enabling the communities to stay put in their neighbourhoods and giving them the decision-making power over developments in their district.

2.3 The Caño Martín Peña CLT

Since 2002, the eight communities living alongside the Martín Peña canal (*Caño Martín Peña* in Spanish) in central San Juan have worked on creating, legislating and maintaining an adapted, creole version of the CLT: the *Fideicomiso de la Tierra del Caño Martín Peña.* Before hurricane María, 25.000 people lived in the eight communities in the Caño district, today the number is slightly lower due to post-hurricane emigration. With 52% of the district's residents living with an annual income below the poverty level of the USA, the neighbourhoods have a higher poverty rate than the 45% reported Puerto Rico as a whole (ENLACE, 2018). The CLT was initiated as a project for ecosystem restoration of the Martín Peña canal, which is currently clogged with sediments, debris and waste, impacting both the ecosystem and lives of people alongside the canal. Due to the blocked canal, frequent floods with contaminated water affect homes, schools and streets in 70% of the communities (ibid.). Through putting land ownership in the hands of the communities, they can pursue the drainage of the canal without risking displacement or gentrification, in case land values would rise once the canal is cleared.

The Caño CLT is operated through a combination of three legal units: a non-profit organization, a public entity and a committee of community leaders (Algoed, Hernández Torrales & Rodríguez del Valle, 2018). The non-profit CLT organization owns and manages the land, while the public entity, named ENLACE, is responsible for the operational management of the CLT, including the implementation of the District Development Plan. The G-8, Inc. is a committee of community leaders appointed democratically by each of the eight communities in the district, and also brings together civic and recreational groups, as well as grassroots organizations from the neighbourhoods (see Figure 1).

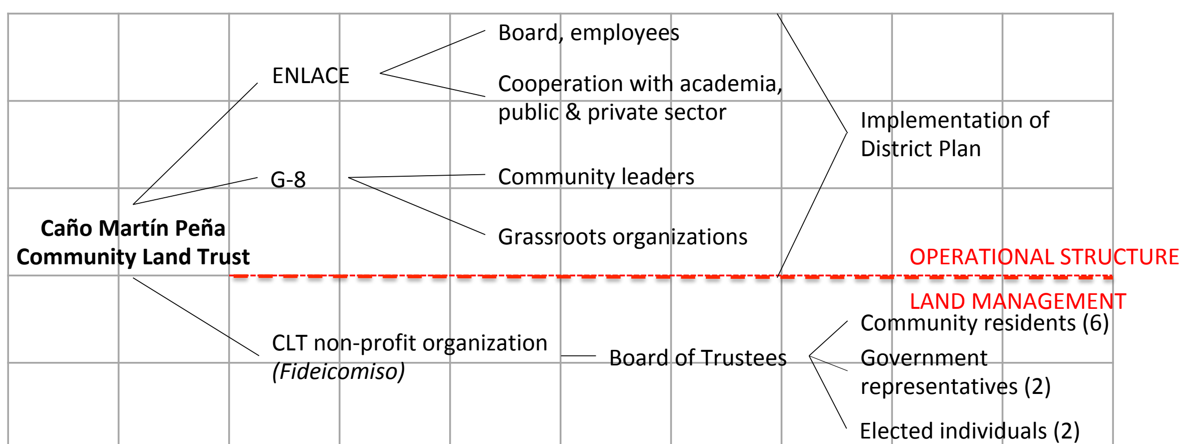

Figure 1: Institutional set-up of the Caño CLT (scheme made by author)

Through regulating land tenure in the Caño district, the CLT ensures affordable housing and prevents involuntary displacement and gentrification, at the same time as pursuing the ecosystem restoration of the clogged Martín Peña canal. The CLT board is comprised of eleven trustees, six of which are residents of the district appointed by the G-8 or the CLT members assembly. Of the other five trustees, two are selected by the board *en banc*, and three are representatives of the state and local government. These trustees establish the administrative policy of the CLT, to ensure that the land best serves the interest of the larger community and households living on CLT grounds. The board is accountable to the CLT membership, consisting of individuals and families who are beneficiaries or 'users' of the collectively owned land. The assembly of members makes important decisions about land and other assets within the CLT, and thereby contributes to the co-production on the project level (Algoed & Hernández Torrales, 2019).

The legislation of land rights in the CLT works through surface titles, meaning that households obtain a legal document giving them the right to construction on a certain parcel of land. Also, they are formal owners of the structures *on* the land, even though the land itself is held collectively. Currently, around 2.000 of the 25.000 residents in the Caño neighbourhoods possess these formal documents: on the one hand, because the writing of these certificates is time-consuming, and on the other because many residents are still sceptic about any kind of institutional arrangements concerning their housing situation (CLT employee in interview, 07/03/2019).

The public entity ENLACE operates as an umbrella organization, and cooperates with alliances from academia, the public and private sector, within Puerto Rico and internationally. These alliances contribute expertise and resources for realizing projects within the neighbourhoods, and for implementing the District Development Planning, including the drainage of the Martín Peña canal. In the post-hurricane emergency situation, the importance of these allies was proven, who supported the communities with both material and financial resources.

2.4 Hurricane María: Impacts and Recovery in Puerto Rico

Hurricane María hit Puerto Rico on September 20th, 2017 and as a category 5 storm with >155mph winds, it was the strongest hurricane that landed in the country in 80 years. While initially, the government reported an official death count of only 64 people, a much discussed investigation published in May, 2018, found that death counts might have been as much as 70% higher than the official number, estimating around 4645 victims of the hurricane (Kishore et al., 2018). After harsh criticism from multiple media outlets, the governor of Puerto Rico,

Ricardo Rosselló, increased the official death count to 2975 people in August 2018, making hurricane María one of the deadliest hurricanes in U.S. history.

Apart from the high number of deaths, hurricane María caused a range of destructions on Puerto Rico's infrastructure. Besides the devastation of personal homes, the impacts affecting the electricity and food supply system especially exacerbated the critical situation of Puerto Rico's inhabitants. When it comes to electricity, 98% of the island's demands are covered through imported fossil fuels from mainland U.S., which are distributed from a handful of large power plants using trucks and long-distance transmission lines. Hurricane María caused a collapse of this system on numerous dimensions: not only were ports damaged and diesel for trucks lacking, but also 80% of transmission lines got knocked out by the hurricane (Klein, 2018: chapter 1). Hence, 4 months after María around 40% of Puerto Rico's inhabitants and 40% of the schools still remained without electricity (García-Lopez, 2018). When it comes to food supplies, the island is characterized by a similar dependence on imports as when it comes to electricity: roughly 85% of the food Puerto Ricans eat gets imported through the main port in San Juan. After the hurricane, food imports were inhibited by damages to the San Juan port, and damaged roads prevented food aid to reach the more remote mountain areas for weeks (Klein, 2018: chapter 4).

Investigations on Puerto Rico's response and recovery to Hurricane María found, that on the one hand, the island was already in an extraordinarily vulnerable state even before the hurricane hit. On the other hand, the U.S.' federal response to the hurricane was rather slow and incomplete, especially when compared to the response to the recent hurricanes Harvey in Texas and Irma in Florida (Farber, 2018). Two economic factors played into the increased vulnerability of Puerto Rican citizens: first, even before María Puerto Rico was facing a number of challenges. These include a long-lasting economic decline since the Great Recession in 2007, coupled with a shrinking labour force due to emigration, high costs of living and high unemployment rates. Hence, around 45% of Puerto Ricans live in poverty, and the median household income is only a third of the one in mainland U.S. Second, austerity measures played into disaster response: not only was there a lack of support from local authorities for the Federal Emergency Management Agency (FEMA), but also disaster funding was delayed due to difficulties with finding appropriate payback conditions. Following this, scholars argue that FEMA did not take limited local capacities, due to poverty and a weakened economy, into account accordingly (Farber, 2018; Klein, 2018).

In this context, it becomes especially relevant to investigate the response to hurricane María from the perspective of low-income and marginalized communities, such as the Martín Peña neighbourhoods. Not only were these communities more vulnerable from the start, but in many cases they had to organize immediate relief completely by themselves. In the Martín Peña district, for instance, municipal aid made its first appearance only 30 days after the hurricane, to distribute food and water supplies. Therefore, it was clear that

collective action would have to play a crucial role in these communities' recovery process. In addition, the question of housing informality, concerning land and property titles was critical for these communities after the hurricane. While informality had been disregarded in Puerto Rico for decades, it became impossible to deny when María hit, and residents were asked to prove their property titles to be eligible for repair funds from FEMA (Algoed & Hernández Torrales, 2019). Initially, more than 60% of applications for FEMA funding were denied, and only later criteria were loosened for occupants of informal homes who could prove their residency (Florido, 2018). This was problematic also in the Caño communities, where formally, the land is held collectively through the CLT, but in practice many families lack written documents for their surface rights within the land trust, or documents proving their ownership of infrastructure on the land.

When it comes to long-term recovery, policies around privatizations and the allocation of recovery funds especially affected low-income and historically marginalized communities, such as the Martín Peña district. First, the closure of around 300 public schools, as well as the transformation of public schools into charter schools was announced as an austerity measure in the aftermath of the hurricane (Chávez & Cohen, 2017). For many communities across the island, this was one of the indirect hurricane impacts that affected them the most: the lack of a place where children could go on with their normal lives, while parents were busy with reconstruction efforts (Klein, 2018: chapter 5). A second challenge relates to the $20B of recovery funds, allocated to the government of Puerto Rico under the Community Development Block Grant – Disaster Recovery (CDBG–DR) from the U.S. Department of Housing and Urban Development (HUD). Such funds present an opportunity for reconstruction in low-income communities, who lack the economic means to do so otherwise (Algoed & Hernández Torrales, 2019). However, the Action Plan presented for the first $8.3B of these funds contains strategies that promote the displacement of vulnerable communities, especially those living in flood zones. Even where on-site risk mitigation is possible, the plan focuses on relocating individual families from floodplains, and prohibits reconstruction and rehabilitation within the floodplain (Government of Puerto Rico, 2018). Hence, in communities such as Martín Peña, where flood reduction is feasible, such policies can have the effect of displacing families in need. Moreover, it seems like these regulations will target mostly low-income communities, as on-site reconstruction is not prohibited to others who can afford it themselves. In response to such policies, local social movements demand a 'just recovery', which questions Puerto Rico's colonial relationship with the U.S. and urges for collective sovereignty over land, energy, food, water through decentralization measures (Yeampierre quoted in Gabriel, 2018).

Overall, what becomes apparent is that disaster response to hurricane María in Puerto Rico was rather slow and uneven. Additionally, existing economic challenges and socio-economic inequality driven by high poverty rates put Puerto Rico's citizens in an especially vulnerable position when the hurricane hit the island (Farber, 2018). According to the IPCC (2012), both pre-existing

vulnerability and inequalities directly determine disaster risk management, as well as local coping and adaptive capacities. The case of hurricane María in Puerto Rico emphasizes this statement, where disaster management was hampered both on a local and national level, considering FEMA's difficulties of effectively working with pre-existing vulnerability. While top-down accounts on general trends when it comes to disaster response exist, there is a limited number of local bottom-up investigations covering data on place-specific coping strategies and adaptive capacities. By examining how communities in the Caño CLT experienced the hurricane, emergency relief and which strategies they applied to cope with disaster impacts, this study aims to provide information, which not only sheds light on local adaptive practices, but could also potentially aid on-site vulnerability reduction.

3 Theoretical Framework

The theoretical framework of the underlying thesis mainly builds upon classic theories on commons and more recent extensions to these regarding the specificities of urban commons. Commons as a concept and practice have received increasing attention in recent years, given the latest wave of privatizations, enclosures, spatial control and surveillance that is jeopardizing not only the commonality of urban life, but also the very domains of reproduction and the environment. These have traditionally been located outside of capitalist market, and scholars argue that it is precisely their loss, that expands our awareness on the significance of their existence (Caffentzis & Federici, 2014; Harvey, 2012).

The role of theory in this thesis was the structuration of data on the one hand: this means integrating knowledge of the external field with observations of the 'locale' or the specific case, and thereby delineating social forces that act upon the case. On the other hand, through investigations existing theories was extended upon or 'reconstructed', to deepen and elaborate on previous literature (Burawoy, 1998). Hence, the chosen theories created a frame of reference for studying the collective action before and after hurricane recovery in the Caño CLT, on the basis of the explanatory model that is made up by the theoretical framework. This takes into consideration that qualitative research will never be free of subjective presumptions, therefore, philosophical as well as methodological assumptions will be declared clearly. Theory-testing through verifying or rejecting one or more null-hypothesis was not a primary aim of the study, as the chosen theories, methods, and aims lean more towards extending upon existing theory. Moreover, it is important to note that the theoretical framework corresponds with the primary research aims: they facilitated the linking of observations from the field with extra-local, national or global connections. Thus, building on existing theory enabled moving from 'micro' to 'macro': situational knowledge from the everyday realities of people in the Caño CLT was located within wider processes of hurricane recovery in Puerto Rico (ibid.).

The following section will first provide an introduction into classic commons theory, and consequently present contributions from contemporary urban commons scholars, shedding light specifically on the relationship between the commons and the public, as well as the commons as an entry-point for anti-capitalist critique.

3.1 Commons Theory

The concept of the commons has been theorised upon since the 1980s, and has been studied by two distinct groups of scholars. The first group is concerned with common pool resources, and investigates how groups of people collectively manage these resources, outside the logic of the state and market. Hardin's (1968) classic article on the 'Tragedy of the Commons', where he presents a seemingly irrefutable argument for the superior efficacy of private over common property has dominated countless discussions on this domain. Yet, a more thorough reading reveals that Hardin's main preoccupation was population growth, and Harvey (2012:68) argues furthermore, that Hardin's metaphor of individually owned cattle on collectively owned land has certain limitations. Not only would the picture look very different, had the ownership of the cattle also been collectivized, but extrapolating such a small scale example on the global scale is problematic in itself: often, the 'Tragedy of the Commons' is mentioned as a metaphor for our deteriorating environmental commons. In contrast, Ostrom fundamentally disrupts some of the presumptions around this 'tragedy', and underlining especially that there are more solutions than the private property system and authoritarian state intervention proposed by Hardin. Her book 'Governing the Commons' (1990) contains systematic evidence through anthropological, sociological and historical studies, underlining that self-organizing forms of collective governance do exist and have existed for centuries. Ostrom draws out an institutional framework for investigating the dynamic interaction between a 'common-pool resource' and a group of "appropriators". Among appropriators, she identifies "providers", "producers" and "users", which can be the same people and take on different roles at different points in time (Ostrom, 1990:31). Yet, this framework focuses mainly on rural areas and natural resources, working outside market and state imperatives.

The second group of scholars engaging with commons instead emphasizes not so much the material dimensions of managing resources, but rather commons as a collective political experience. Here, scholars such as Linebaugh (2014) and Hardt & Negri (2009) are interested in capitalism and its effects, while perceiving commons as an entry point for anti-capitalist critique and a way out of life strictly defined by capitalism and the state. This group of scholars also grants increased attention to immaterial forms of commons, such as cultural commons or intellectual commons in the cyberspace. Hence, beyond ecological resources shared as a basic environmental commons, these extend out to languages, social practices, modes of organizing relationships and so on. According to Hardt & Negri (2009), these commons are built up over time and are in principle open to all.

For the purpose of this thesis, a three-part definition for commons will be adopted, comprising: a) resources (material or immaterial), b) institutions for regulating these resources and c) the community that devises the institutions, both through

shepherding and benefiting from the resources (Dzokic & Neelen, 2015). To extend on this, Harvey's definition is useful, describing a commons as "a relationship between a particular self-defined social group and those aspects of its actually existing or yet-to-be-created social and/or physical environment deemed crucial for its life or livelihood" (2012:73). Hence, a common is not to be confused with a certain asset, thing or even a social process, since is less stable than that. Consequently, there is a social practice of *commoning:* a practice that produces or establishes a social relation with a common, which can be either open to all or exclusive to a particular group of users. The central point is, that the relationship between the social group and the aspect of the environment being treated as a common is collective and non-commodified, as well as off-limits of the logics of market-exchange and valuation. This helps to distinguish commons from public goods, set up as productive state expenditures.

A frequent issue within commons discourse concerns the tension between openness and exclusion, or in other words, the questions 'to whom does the commons belong?' and 'who's common interests do we seek to protect, and by what means?' While initially, enclosure might seem like an antithesis to the commons, on the grander scheme of things (especially on the global level) it can actually be a practical means by which the commons can be protected, "in a world populated by enemies" (Thompson quoted in Huron, 2017:5). For instance, the protection of our global and cultural commons such as biodiversity or indigenous cultures will most certainly require an act of both enclosure and the support of state authority, to be guarded from short-term money-driven interests (Harvey, 2012:70).

3.2 Urban Commons

> "The city is the site where people of all sorts and classes mingle, however reluctantly and antagonistically, to produce a common if perpetually changing and transitory life."
>
> (Harvey, 2012:67)

As pointed out in the previous section, classic commons theory has traditionally focused on either rural areas and natural resources, or intellectual and cultural commons such as language or the Internet. Only recently, interest in urban commons is growing, pointing towards the specific aspects, which distinguish them from more classic conceptions of commons. Today a focus on commons in urban domains is especially relevant: first, because urban life is experiencing increasing commodification, and the quality of this life becomes more and more exclusive, available only to those with financial means to afford it. Hence, commons can be perceived as an entry point to reclaim the commonality of urban life, and to fulfil the human aspiration to remake the city in a different image, more "after our heart's desire", as the urban anthropologist Park (quoted in

Harvey, 2012:4) puts it. Second, with accelerating privatization of literally every sphere of human live, even reproductive and environmental domains, traditional commons in rural areas, such as collectively owned land or indigenous commons practices in the Global South have been enclosed by capitalist practices. According to Linebaugh (2014:40), it is precisely because of the enclosure of these commons, and because of increasing urbanization on a global scale, why "the city itself must be commonized".

3.2.1 The Commons and the Public

After reviewing the literature on commons in the urban context, what comes up over and over is the debate on the relationship between the public and the common. To start with, public goods are generally distinguished from commons both in urban and non-urban contexts: in most cases, the state works primarily for market interests and thus conflicts with principles of the commons (Huron, 2017). Moreover, public property is traditionally managed by the government, in contrast to commons, which are owned by a community and collectively taken care of. However, Harvey (2012:73) argues that public goods can become commons, when social forces appropriate, protect and enhance them for mutual benefits. For instance, the social movements who occupied Syntagma Square in Athens, Tahrir Square in Cairo or Plaza de Catalunya in Barcelona transformed these spaces into platforms to express their political opinions and make demands. Also historically, the street has often been transformed into a commons of revolutionary movement, and in many instances, subsequently turned into a site of violent suppression. Along these lines, Ulloa (quoted in Huron, 2017:5) coins the term "radical commoning", describing the process in which citizens were able to convert public goods and spaces into urban commons. In short, even though the public is not in its traditional sense a form of commons, under certain circumstances it can be transformed to become one.

At the same time, scholars such as Caffentzis & Federici (2014) claim that struggles over the commons should be connected with demands to expand the supply of public goods. To elaborate, what we call 'the public' is actually wealth that we have produced and should therefore re-appropriate as ours. This is even more relevant in cities, where, according to Susser & Tonnelat (2013), public space and public services are becoming increasingly exclusive, particularly for poor and immigrant classes. Urban public space, for instance, is subjected to a trend of privatization, due to community control through gates, corporate control or aggressive policing. Hence, the struggle over the common and the public are intrinsically connected and overlap in many aspects. Together, they constitute central issues for democratic social movements, questioning the continuous expansion of capitalist markets in areas where there might still be remnants of commons (Loomba, 2015:256).

3.2.2 The Commons as an Entry-Point for Anti-Capitalist Critique

Another recurrent theme in the reviewed literature is the potential of commons to "disentangle our lives from the market and the state" (Caffentzis & Federici, 2014:101) and to create an entry point for anti-capitalist critique. Stavrides (2017) argues, that commons do so by promoting a different kind of social values and priorities, based on the sharing of power and forms of radical or direct democracy. Hence, urban commoning in particular "may become a force to shape a society beyond capitalism so long as it is based on forms of collaboration and solidarity that decentre and disperse power" (ibid:272). Along these lines, Caffentzis & Federici (2014) elaborate, that under certain conditions, commons can transform our social relations and create alternative, autonomous spaces where we can reclaim control over our conditions of reproduction. These 'anti-capitalist commons' do not intend to simply provide social services to act as a buffer against destructive effects of neoliberalism, and are more than communal resource management. They require an active community that is producing, using and renewing such commons, while emphasizing democratic decision-making and engaging in a struggle to defend and expand public goods.

While such accounts sound utopian at first, authors such as Linebaugh (2014) and Bollier & Helfrich (2015) remind us, that commons have existed for centuries, in the form of indigenous practices, communal property systems, shared subsistence resources, and increasingly also in the sphere of the Internet, when it comes to open source technology. These phenomena are more than small-scale experiments: the authors speak of large-scale social formations, which stretched over entire countries, such as common land in England, or whole continents, in the case of communal societies in pre-colonial America. Examples like those are important to dispel assumptions that a society based on commons is a utopia, and cannot reach beyond small-scale projects unfit to provide the basis of an alternative model for production (Caffentzis & Federici, 2014).

Accordingly, Escobar (2015: section 1) argues that commons can be perceived as 'relational worlds', defying the logic of the 'One-World', which is capitalist, secular, liberal, patriarchal and white. Activists in rural and urban territorial communities around the world provide powerful evidence for this resistance: in a struggle over their territory, life and the commons, they defend a common world that deconstructs our mainstream worldview based on the individual and the economy. Escobar goes on to elaborate, that commons projects imply a transition from universalist concepts within the 'One-World', such as globalization, to concepts centered on "the pluriverse, made up of a multiplicity of mutually entangled and co-constituting, but distinct worlds" (ibid: section 4). Hence, commons could act as an umbrella bringing together critical discourses from the Global North and South. Yet, the solutions and strategies applied by different commons projects in no way have to be the same, as these visions and practices are specific to the 'relational world' they are located in.

Inspired by the above-mentioned literature, and considering the Caño CLT as a concrete case of commons, a number of questions on similarities and disjuncture between theory and empirical evidence arise. Do modern commons, located in the urban domain, still function outside state and market logic, as Ostrom (1990), suggested? Or is it much more the dynamic interplay with external institutions that consequently characterizes their transformative potential as anti-capitalist critique? The upcoming analysis will take classic commons theory as an entry point to understand dimensions of commoning within the Caño CLT, and go on to discuss findings in the light of contributions from urban commons scholars, more specifically concerning the relationship between the public and the commons, as well as the commons as a challenge to the capitalist status-quo logic. Before that however, the reader will be taken on a journey that traces my methodological procedures to gather empirical materials and analyse these, as well as my positionality in relation to the research.

4 Methodology

4.1 Summary of the Research Design: The Extended Case Method

The following chapter introduces the methodology that was used when conducting fieldwork, and goes on to describe how I gathered, analysed and interpreted my empirical material. It follows my process of engaging, questioning, understanding and making meaning. The extended case methodology (ECM) provided a framework for the research design (Burawoy, 1998) and one specific case was studied using qualitative methods (Flyberrg, 2006; Yin, 2009) that will be outlined in the upcoming section.

The ECM builds on a reflexive model of science, which takes the social embeddedness and context effects of research as a point of departure, rather than trying to eliminate them such as commonly done in positive science. Intersubjectivity between the researcher and the participant form a central premise, and dialogue is perceived not only as the defining principle, but also as the main means of creating knowledge (Burawoy, 1998). Since the aim of the study is to investigate realities of people in the Caño CLT, without discrediting the importance of external forces and broader dynamics acting on the latter, the ECM was chosen as the most appropriate approach for investigation. It allows on the one hand, to focus on local word-views and the context of knowledge creation, and on the other hand, to situate qualitative data within extra-local dynamics by applying theory, and triangulating with secondary sources (ibid.).

To avoid inconsistency between ontological beliefs and the epistemological foundation of the investigation, the philosophical foundations will be explained briefly. The required consistency between the former is important on the one hand, for determining how data is generated and if findings are extrapolated, and on the other hand, to link epistemology to the choice of methods (Prowse, 2010). Critical realism was adopted as the philosophical position for this thesis, as it presents a viable middle-path between positivism and social constructivism, which is consistent with the ECM framework and the aims of the investigation (ibid.). This standpoint claims that social science should be able to make generalised claims, however it takes into account that subjectivities of the individual are central to understanding the external world. In contrast to social constructivism, it avoids 'judgemental relativism', making it impossible to extrapolate beyond the investigated case. Moreover, when compared to positivism, it rejects the concept of independence denying the social

embeddedness of knowledge creation. Hence, in the context of the underlying study, by working with critical realism as a foundation, subjective individual accounts derived from interviews can be valued as sources to understand dynamics of disaster recovery in the Caño CLT. At the same time, these individual accounts can be connected to broader dynamics such as national recovery strategies and politics, since critical realism allows for an extrapolation beyond the specific case.

4.2 Introduction of the Case

In this research, I have worked with one unique and extreme case (Bryman, 2012:70). Within the context of Puerto Rico, the Caño CLT it is the only institutionalized CLT and therefore allows for the investigation of collective action institutions that were already in place in events of crisis, such as after hurricane María. Generally, the case study has become a credible research method in social science, given that it enables tracing specific patterns and developing a nuanced view of the latter, due to its closeness to reality and human behaviours (Flyberrg, 2006). Case studies are especially useful for investigating contemporary phenomena in depth and within their real-life contexts, also when boundaries between the phenomenon and its context are not clearly evident (Yin, 2009:18). They do so by integrating different sources to understand *how* a specific setting operates, and *why* a group of people acts a certain way (ibid.). The justification of the selected case plays an important role and should follow a certain logic connected to the research aims and purpose (Flyberrg, 2006).

In my research project, the choice of the case, the Caño CLT in San Juan, Puerto Rico, was made due to the unique and extreme conditions it is undergoing. Its unique characteristics help to reveal processes of unusual occurrences, which might be harder to trace in other circumstances (ibid.). To be precise, as mentioned earlier, in the Caño CLT collective action and community organizing had already played an important role before hurricane María. Tracing collective action in the aftermath of the hurricane, when government support was first absent and later highly contested throughout Puerto Rico, enables uncovering perceptions and practices from below, while considering the actors' interaction with the local government. Moreover, from the standpoint of theoretical work on the commons, the Caño CLT as a case is especially unique: not only does it provide evidence for various levels of collective action or commoning, but it also represents one of few documented CLTs in the Global South.

To elaborate, CLTs in the Global South as institutions of collective action are not fully investigated, which of course corresponds to the low number of CLTs that exist in these contexts in the first place. Some scholarly research has emerged in recent years, focusing on these cases within their urban contexts (see Midheme & Moulaert, 2013; Algoed & Hernández Torrales, 2019), and a number of reports

and working papers document the history of the Caño CLT specifically (see Algoed, 2017; Hernández Torrales, 2016). However, it is important to mention that first, none of these contributions consider CLTs in the Global South from the perspective of commons theory. Second, they were not examined under the occurrence of an external disruptive event to trace the role of collective action in a situation of crisis. Therefore, the choice of the case in this study is an attempt to fill this scholarly gap. Moreover, by linking the case to its structural context, it is possible to elevate certain arguments to a macro level and extend their validity to different temporal and spatial settings (Burawoy, 1998).

The extended case method takes context effects of the research situation as a starting point, where phases of intervention and process are followed by the structuration and reconstruction of gathered materials (Burawoy, 1998). I believe that similar phases characterized my research project, and therefore the upcoming section is structured accordingly: first, the methodological processes *in the field* and methods for gathering empirical material will be described, referring to intervention and process. Second, the procedure of *writing the field*, including the methods used for analysing and interpreting the gathered materials will be outlined, which relates to structuration and reconstruction. Finally, some limitations of the underlying study, as well as my positionality in relation to the research will be discussed.

4.3 In the Field

Puerto Rico as an island is still recovering from hurricane María, and while this might not be evident in economically advantaged areas, it is certainly true for more marginalized communities (Klein, 2018). Scholars have started to engage with the hurricane, its impacts and aftermath from an academic perspective recently, and together with newspaper articles and other publications, such accounts provided me with an initial understanding of the context my case was situated in. However, since little information was available on perceptions and practices on the ground, especially within the Caño CLT, it was clear from the beginning that the employed methods would entail a series of dialogues with actors. Consequently, local knowledge would enter in an interaction with academic theory, while taking into consideration the "situational knowledge" embedded in the research location. In short, the context was perceived as a point of departure, rather than an unwanted side effect of the intervening researcher (Burawoy, 1998). For this thesis, I spent eight weeks in San Juan, Puerto Rico, where I carried out informal conversations, participant observations, walking interviews and qualitative semi-structured interviews to be able to grasp the embedded knowledge from the Caño communities. This field visit between the 6th of February and the 8th of April, 2019, resulted in a variety of collected materials, which served as the main empirical evidence for building my analytical arguments.

4.3.1 Entering and Gaining Access

The Caño CLT is located in the heart of San Juan, right next to the central business district, the hip Santurce neighbourhood and the upper class residential areas Ocean Park and Hato Rey. One can take a side street from the so-called *Milla de Oro,* or Gold Mile, where modern skyscrapers host banks, government departments and corporations, and immediately end up in a very different environment, that of the Martín Peña district. The first impression that captured me when walking the streets of the CLT district was its clear contrast from its immediate surroundings and other parts of San Juan. Compared to the traffic-packed streets of most of the city, the Martín Peña neighbourhoods appear almost peaceful, with the occasional cyclist, pedestrians, sounds of children or creole music played in one of the backyards. Posters, graffiti and colourful murals remind the passer-by that he walks on collectively owned land, and draw attention to one of the many activities or current struggles of the communities. This is not to romanticize the situation: at the same time, it is evident that residents in this area lack the economic means their neighbours on the *Villa de Oro* certainly possess, houses are smaller and in poorer conditions, many of them still have not been rebuilt fully after the hurricane.

During my field visit, the first interventions into the field, more specifically into the CLT area were through exploring the district by foot, engaging in informal conversations and taking part in some of the activities organized there, such as the monthly produce and arts market, as well as a cycle tour arranged by Caño residents. While carrying out exploratory walks and participant observations, I would converse with residents and ENLACE employees about current issues affecting the CLT and their specific neighbourhoods. These walks and brief dialogues helped me to gain an initial geographical understanding of the area and to feed my own curiosity. Given that I was rather unfamiliar with the case and the context since it was my first time visiting San Juan, I was aware that the process of getting access to actors within the field would be important in itself, and require a certain degree of flexibility and open-mindedness (Scheyvens, 2014:144). Together with initial conversations with key informants, including ENLACE employees and an external researcher who had been working in the Caño before, these activities helped me to get closer to the realities of actors within the CLT, while sharpening my preliminary themes and starting to shift towards finding interviewees and conducting interviews.

4.3.2 Qualitative, Semi-Structured Interviews

Interviews are one of the most commonly used techniques in qualitative inquiry (Bryman, 2012:469). They are employed to explore how subjects experience or understand their world, and to produce knowledge about the human situation, in order to get relatively close to people’s lives (Kvale, 2011). At the same time, the interview is embedded in a social context, and cannot be analysed without taking

into account the socio-political structures around it. For my project, the choice of interviews as a main investigation technique was made first and foremost, to be able to capture the role of collective action in the Caño CLT after hurricane María, while taking into consideration people's knowledge, perceptions, views and understanding. Dialogue and mutual interaction were perceived as necessary entry points for knowledge creation, to discover underlying properties of social order (Burawoy, 1998).

Since the aim of interviews was to trace the hurricane recovery in the Caño communities and understand the role of collective action in this process, it was clear that interviewees would have to provide me with their own localized knowledge and personal experiences in these processes. The target group of research participants was defined within the boundaries of the Caño CLT and consisted of two different types of actors: first, employees of the organization ENLACE and the CLT organization; second, community residents and leaders. By interviewing actors in both of these groups, the top-down, organizational perspective of employees could be integrated with the bottom-up, community perspective of residents. Within the respective groups, participants were selected applying a snowball sampling strategy, which apart from facilitating access also enabled the uncovering of social networks within the CLT (Bryman, 2012:424). The collaboration with key informants, including one Belgian PhD-researcher who had been working with the CLT before, as well as community participation coordinators working for the CLT non-profit, assisted the process of gaining initial access to research participants. Overall, while selecting interviewees, the emphasis was on striking a balance between representativeness and purposiveness, at the same time as keeping the limited scope of the study in mind (ibid.). Within the context of the CLT, eleven semi-structured interviews were conducted, six with community leaders or residents and five with employees of ENLACE or the CLT organization. Moreover, three unstructured expert interviews were carried out with local researchers, who were working on topics related to mine and provided me with an additional contextual understanding (see Appendix).

Different interview styles were applied throughout the fieldwork, corresponding to the respondents and their context. A set of themes and questions that I was striving to explore was prepared before each interview, taking into account the background and engagement within the CLT of the respective interviewee. Yet, I was aware that maintaining flexibility was key, in order to allow for diverse interactions to emerge (Bryman, 2012:473). A narrative approach was employed in parts of the interviews, to make respondents feel more comfortable when sharing somewhat traumatic experiences related to the period after the hurricane. The language in use was Spanish, which enabled respondents to articulate themselves freely in their own mother tongue, while using expressions they are familiar with. Since my own conduct of Spanish is fluent, no interpreter was needed in the interviews. By already transcribing in the field with a focus on reoccurring themes, an adequate amount of information redundancy and data

saturation was achieved (Bryman, 2012:425). Throughout the fieldwork process, I aimed to stay active and reflexive, by taking notes in a fieldwork notebook after each interview, dialogue or observation. Hence, already in the field I could slowly start aggregating situational knowledge into an understanding of social processes (Burawoy, 1998).

4.4 Writing the Field

Writing up and analysing empirical materials is not less central to epistemological consequences of a thesis than the fieldwork itself, yet, these processes are entangled, inseparable and mutually constituted. As Scheyvens (2014:236) puts it, this is "because as you write the field, you continue to performatively bring it into being". After returning from the field visit, I started a process of structuration of the gathered empirical materials, with the aim of 'extending out from the field' to investigate local, national and global links. In this stage, existing theory was used to integrate the case in its context, and to make novel theoretical contributions (Burawoy, 1998).

Even before exiting the field, through transcribing, taking field notes, and reflecting on the latter, recurrent themes and regularities within the gathered information were detected. Hence, the analysis of materials began already *during* the fieldwork. Consequently, when returning from the field, these recurrent themes were then formed into concepts in a process of thematic extraction. After reading all transcripts, field notes and going over collected documents, core themes and key quotations were written down in separate documents. Such focused coding helped me to find conceptual and analytical tools to create an interpretive framework for practices and experiences within the CLT, in relation to the government. The focus was on uncovering latent meaning in the text, by first coding different themes or meanings, and consequently condensing and interpreting them on the basis of existing theory and literature (Kvale, 2011). Here, the emphasis was on generating more theoretical codes, comparing and contrasting them and investigating contradictions or questions arising from the data. Thereby, I was able to construct my own arguments by relating the case to structural forces, through examining the fit between materials, theory and literature (Scheyvens, 2014:76). At the same time, through "abductive reasoning" (Bryman 2012:401), I could ground a theoretical understanding of the case in the language, meanings and perspectives that form the worldview of the Caño communities. Here, it was crucial not only to understand the accounts from the communities' perspective, but further to build a social scientific account without "losing touch with the world as it is seen by those whose voices provided the data" (ibid.).

Apart from interview materials and field notes from observations, I also integrated documents and reports from ENLACE into my analysis, especially for

complementing qualitative accounts with quantitative measures of the phenomenon under study. This way I could, for example, triangulate personal accounts of hurricane impacts and recovery with absolute numbers, and investigate tensions between statements in the government's Action Plan and experiences with the latter on the ground (Prowse, 2010). For all secondary materials, I was aware of the context and purpose they were written for, and the possible existence of biases (Scheyvens, 2014:82). This was especially relevant for ENLACE documents or government sources, which represented the standpoint of a certain interest group and therefore had to be interpreted in the context of their creation (ibid.).

Overall, the process of *writing the field* and analysing the empirical material was one of structuration and reconstruction, with the aim of comprehending how the everyday world is both shaping and being shaped by external forces (Burawoy, 1998). At the same time, during the analysis process it was vital not to lose sight of the expanded notion of the field and the impossibility to fully detach myself from fieldwork experiences (Scheyvens, 2014:250).

4.5 Positionality

Rather than perceiving observations as detached, impartial and objective, today development researchers increasingly emphasize the role of positionality in research, where the influence of a person's gender, age, race, ethnicity, sexuality, motivations and beliefs on the research process are discussed (Scheyvens, 2014:244). This is especially relevant when conducting international fieldwork, where one has to be attentive to histories of colonialism, development, globalization and local realities (Sultana, 2007). Without a doubt, my position as a European bachelor student, coming to Puerto Rico as an intervening outsider had an influence on my research process, and reflecting on this position is necessary to make explicit my own role in knowledge production (Longhurst, 2009:583).

I was well aware that residents and employees within the CLT would perceive me as an outsider, one of numerous academic visitors that had become interested in their project through the increased international attention and coverage about the Caño. Hence, I needed to be attentive to politics of knowledge production from the beginning to the end of my research project: starting from delimiting a topic area that was relevant to my research participants, once in the field and in later stages when reconstructing collected materials (Sultana, 2007). Especially since the Caño CLT has received more scholarly attention in recent years, I made sure to "give something back" through my research process, in order not to become one of the external researchers who merely "extract data" from locals for his/her own benefit (Scheyvens, 2014:174). Also, I found it crucial to show appreciation for the local culture, which, together with speaking Spanish, made it easier to connect to interview respondents and informants.

Another key issue I have been aware of are effects of power and their influence on the research process, especially in the interview situation. As an intervening researcher, domination cannot be avoided, both dominating and being dominated: on the one hand, I actively steered interview questions and themes, but on the other hand, through snowballing I was dominated by the field context to a certain extent (Burawoy, 1998). Here, I want to point out that in no way I presumed my inherent power (due to socio-economic preconditions, my education etc.) and expertise over the interviewees and other actors I encountered in the field. According to Miraftab (2007:602), assuming such a polar relationship "risks victimizing the research participants as subjects of the researcher's privilege and power".

Finally, a short comment shall be made on the use of "I" throughout this text. In line with Valentine (2013:112) I strongly believe, that "all research work is explicitly or implicitly informed by the experiences, aims and interpretations of the researcher". While this might not provide a route to absolute truth, it offers a path to partial insights of what people do and think (Longhurst, 2009:583). Consequently, as part of the quest for reflexivity, that is, acknowledging one's position in relation to the investigation, I consider it necessary not to pretend that this research project happened in an objective vacuum. Hence, where appropriate, I opt for using "I" instead of a more neutral, passive phrasing, as a reminder that "no claims of impartiality can release us from being part of the world we study" (Burawoy, 1998).

4.6 Limitations

Being a qualitative inquiry based on fieldwork, the underlying investigation is affected by a number of limitations, first and foremost due to context and power effects influencing both the process and outcomes of the research (Burawoy, 1998). As discussed earlier, context effects are perceived as a point of departure for the investigation, through considering its embeddedness in a social context. Power effects include domination, silencing, objectification and normalization, for example through ruling ideologies, inappropriate extrapolation of findings, or the tailoring of the case to a certain theory. While acknowledging the existence of power effects, this thesis seeks to reduce them by using a reflexive model of science, that "highlights the ethnographic worlds of the local", to "challenge the postulated omnipotence of the global" (ibid.:30).

Furthermore, since this is a study of a unique case, the generalizability of results is limited to a certain extent (Bryman, 2012:70). However, the purpose here is not to generalize, but to generate theoretical concepts out of findings and say something more general about commoning processes. Hence, what is sacrificed in breadth is gained by going in depth with the specific case, while using literature and theory to conceptualize it and to extend from the micro to the macro (Burawoy, 1998).

5 Analysis

The aim of the following analysis was to provide answers to the research questions of the presented thesis: '*What was the role of collective action before and after hurricane María in the Caño CLT?',* as well as '*What was the Caño communities' relationship with the government throughout hurricane recovery?'* The analysis did so by re-structuring materials collected in the field, and by applying theory to extend out from the locale of the case, to enable delineating social forces acting on the latter (Burawoy, 1998).

The first section of the analysis investigates the co-productive dimension of the Caño CLT through the lens of commons theory, before and after hurricane María. It thereby presents empirical evidence for commoning processes and relates them to existing academic contributions. The second section goes on to examine the Caño communities' relationship with the government throughout disaster recovery, by focusing on the contested public policies regarding school closures and recovery funds. Finally, a discussion considering on the one hand, commoning practices on the ground, and on the other hand the CLTs relationship with external actors follows.

5.1 Collective Action in the Caño CLT: Before and after Hurricane María

5.1.1 Co-Production in the CLT before the Hurricane

The following section will briefly explore the role of collective action in the foundation and day-to-day organizing within the Caño CLT, with the aim of providing an understanding of these practices specifically *before* hurricane María. Already the process leading up to the legislation of the Caño CLT in 2004 has been characterized by a high degree of participation. When the project of dredging the Martín Peña canal got assigned to Puerto Rican Highway and Transportation Authority (PRHTA) in 2000, the social workers and government employees in charge of the project took a very different approach than usual. Rather than reducing community participation to a minimum, they started a comprehensive process of 'planning, action and reflection' (as the communities name it) to discuss the communities' concerns and develop the District Plan.

After an initial round of meetings with community leaders of each of the communities, another round of assemblies was organized, where a wide range of

residents was invited to think critically about their living conditions, and started expressing distrust in the government when it comes to the displacement of families to public housing. During the first two years, between 2002 and 2004, in this process of planning, action and reflection more than 700 community meetings and outreach activities were realized. These activities were designed in a flexible, participatory manner together with community leaders. Yet, neither leaders nor external workers took decisions for the communities, but rather acted as facilitators to provoke dialogue and critical reflection. As a result, what was initially an infrastructure project got transformed into a project for integral community development. In workshops, meetings, focus groups and assemblies, community residents elaborated on options and potential alternative scenarios for the sustainable and just development in their communities. They selected a creole version of the North American CLT model as their preferred strategy for preventing displacement, at the same time as being able to pursue the ecosystem restoration of the canal and implementing the comprehensive District Development Plan. In this process, the leadership of the communities also created the G-8, Inc., which brought together all grassroots organizations from the different neighbourhoods. As one of the community leaders explains, the key to cooperation has been to focus on the challenges the communities had in common, rather than their differences:

> The Caño [canal] has two margins, one in the North and one in the South, and we unite the problems of the two sides, that's why the eight communities work together, because even though the Caño divides us, our needs are the same.
>
> (Caño community leader 5, Las Monjas, 22/03/2019)

As Helfrich & Haas (2009) argue, the communication necessary for managing common resources, such as land in the Caño CLT, create social bonds and (re)-produce social cohesion. In line with this argument, a number of Caño residents and ENLACE employees I spoke to referred to the *tejido social* (social fabric) sustaining and holding together their neighbourhoods.

An emphasis on creating spaces for participation and co-production has been like a red thread running through the history of the Caño CLT. After the initial phase of planning the CLT, its regulations were co-created in a participatory manner as well, and workshops were conducted to ensure that residents would understand its implications. Challenges and issues affecting the communities are tackled collectively, also by reaching out to alliances and in dialogue with the local government, or if necessary, by organizing demonstrations and marches. What became apparent when talking to Caño residents and experiencing their day-to-day life-worlds during my fieldwork was that much more than living on collectively owned land, 'the common' perpetuated a number of aspects in their lives, including in their physical environment. Community centres are important meeting points in the Caño neighbourhoods, used for assemblies and for hosting a variety of programmes reaching from adult alphabetization to a neighbourhood 'university' for popular education. Along with community gardens, sports fields

and parks, these spaces are produced and shaped by 'collective inventiveness' (Stavrides, 2016:6), and explore the emancipating potentialities of sharing and co-creation. Despite the numerous activities within the neighbourhoods, which can be understood as commoning on the ground, the Caño communities also maintain a pro-active relationship with the municipality of San Juan and the government of Puerto Rico. On the one hand, this connection is fostered due to the fact that the organization ENLACE is a public entity, and by definition, its employees are government workers. On the other hand, community leaders within the G-8 are in constant dialogue with local politicians, especially in times of elections, to ensure the continuing existence of the CLT and government support for implementing the District Development Plan.

To sum up, as a result of seventeen years of constituting and maintaining the CLT, the Caño communities had structures of collective organizing in place when hurricane María hit Puerto Rico on the 20th September of 2017. Few, if any CLTs have experienced a category 5 hurricane, and consequently needed to recover in a country that was implementing austerity measures at the same time as overcoming impacts of a natural disaster. Hence, it is relevant to ask what the role of collective action in the CLT neighbourhoods was in the aftermath of María, and how the relationship with the government evolved simultaneously. This question becomes especially pertinent when considering the slow government response to the hurricane, and as one community leader noted:

> (…) The government, I think, it was that they didn't expect the magnitude [of the hurricane], and they were, they paralyzed. Here in the Caño we didn't paralyze but we continued with all the things, and the community and everyone was united with a machete, we went here and there (…)
>
> (Caño community leader 1, Parada 27 08/03/2019)

5.1.2 Commoning Disaster Respone

> In Puerto Rico you had a big curtain hiding everything. And the hurricane took care of that. So the people could see what was really happening on our island.
>
> (José Caraballo Pagán, Caño Martín Peña resident, UNC, 2018)

It was clear that the role of collective action would be crucial after hurricane María, given its devastating impacts and the slow and incomplete government response. In my discussions with residents of the Caño area and ENLACE employees, they all emphasized the importance of solidarity among the neighbourhoods and the notion of *pensar en colectivo,* or thinking collectively when recovering from hurricane María. Rather than everyone giving priority to their individual material losses, the focus was on joining forces to rebuild the community, and supporting those who were most vulnerable. Davis (2017) argues, that such rethinking is part of the transformative potential CLTs carry when it comes to changing ideas, institutions and relationships around property

and power within the community. In the Caño CLT, especially after hurricane María, it became evident that the history around commoning land ownership had influenced the communities' priorities in the recovery process:

> (…) This process of collective land ownership teaches us a different way of doing things, of taking decisions, that we are all confronting a hurricane, not as single households, that my house got destroyed, no, our houses got destroyed, our community got destroyed, but we are here to lift it up again.
>
> (ENLACE employee, 20/02/2019)

As discussed by Caffentzis & Federici (2014), commons not only transform our social relations, but can also be the means to create an egalitarian and cooperative society. Such transformations have the potential to question capitalism and its effects, and present "a way out of a life strictly defined by state and market" (Huron, 2017:2). How egalitarianism and cooperation were enacted on the ground came up again and again when talking to Caño residents about their hurricane recovery:

> Through the community work, the people basically united in every sense, and we were united, the people saw the union, even my neighbours who normally aren't very open came, I hardly ever see them, they don't have pets, they don't come out, but after the hurricane these people came out to clean the streets, to put up the tarps, it motivated the people.
>
> (Caño community leader 5, Las Monjas, 22/03/2019)

Consequently, the same community leader commented on the cooperation between different neighbourhoods in the Caño district, and how decisions were based on needs and necessities:

> Of course, where we saw most necessity, where there was most necessity, there all of us went. If it was on the other side [of the canal], well we went to the other side. If they needed more resources, there we were.
>
> (Caño community leader 5, Las Monjas, 22/03/2019)

Moreover, the fact that the Caño communities had been active and organized for years, establishing local and international collaborations as well as gaining recognition from local authorities strengthened them when confronting the hurricanes Irma and María:

> But yes, we were more resilient. We are better prepared, possibly, and we were more resilient, well because seventeen years of community organizing, seventeen years of community organizing have given us the tools for dealing with events of this nature, with more precision than maybe twenty years ago.
>
> (Caño community leader 4, Las Monjas, 21/03/2019)

As explained in Chapter 3 (Theoretical Framework), commons consist of three parts: a community, a resource (material or immaterial) and a form of collective management (Dzokic & Neelen, 2015). After hurricane María, the Caño residents appropriated both the material (such as food, water, tarps, trucks for collecting debris) and immaterial (such as contacts to international support and FEMA) resources needed for recovering from the natural disaster by organizing collectively, and founded temporary institutions to regulate the resources. These institutions included new organizational structures to cover special recovery needs, daily meetings to discuss tasks in the process, and in later stages community programmes and projects established specifically to meet post-disaster challenges, such as a project for rebuilding roofs (called *Techos Para El Caño* or Roofs for the Caño) and programmes to attend elderly people in need. Consequently, it was the communities themselves who devised these institutions in order to benefit from the resources. Overall, the process of hurricane recovery within the Caño communities can be considered as an act of commoning, where leaders and residents, as well as ENLACE employees were actively engaged in realizing the reconstruction of their communities.

5.2 The CLT's Relationship to the Government after Hurricane María

> And still we continue forward, *en marcha* [in the struggle], they don't get me to take one step backwards, to keep our communities united, working for the communities, and we have to do three times the work, because one has to fight so that the government does its work as well.
>
> (Caño community leader 5, Las Monjas, 22/03/2019)

While pursuing the reconstruction of their neighbourhoods, an ever-existing tension between the Caño communities' efforts and the lack of government support or in some cases even their counter-productive decisions perpetuated the recovery process. To elaborate, two issues within the public recovery discourse, which especially affected the Caño district will be discussed in the following section. These issues will be investigated with an emphasis on the communities' role as a commons, in relation to the government: first, the closure of public schools in the aftermath of the hurricane, and second, the regulations around access to public recovery funds.

5.2.1 Resistance to School Closures

The decision of Puerto Rico's ministry of education to close 300 public schools in the months after hurricane María not only directly affected the Caño district, but also illustrates their stance to public policy and their relationship with the

government. In the CLT area, four out of eight public schools were to be closed, amongst them one with a special curriculum for youth leadership curated by the communities. According to the community leaders and residents I talked to, the government's 'attack' on their school spaces, in a situation of hardship and crisis, was one of the indirect hurricane impacts that affected them most on an emotional level. They could understand the reasoning behind it (that is, austerity measures), but not the timing:

> We were arguing and fighting that they wouldn't, that maybe later they could close them [the schools], but that wasn't the moment to close them. The children needed to return to their schools, to their teachers, to their friends, to see that they were alright, that nothing had happened, to share, talk, let go, because they were suffering as well!
>
> (Caño community leader 3, Bitumul Israel, 13/03/2019)

Yet, despite the numerous other recovery activities the communities were engaged in, they immediately started a process of community organizing, where they involved parents, teachers and residents to contest the government's decision. A dialogue with the ministry of education was initiated, and numerous protests and marches were organized to demand that the school closures were to be postponed. Finally, the Caño communities came to an agreement with the government that the schools would be re-opened, and only closed for good after the end of the on-going school year, in August 2018. That way, children could return to some kind of normality, while other community members were busy with rebuilding their neighbourhoods.

Examining the Caño communities' response to public school closures enables grasping their pro-active approach to communicating with the government, which includes protest as well as dialogue. Their mobilization builds on collective conscientization and organizing around issues that affect their neighbourhoods, to transform them into a sort of common struggle:

> (…) There was a process of common struggle too, that was the struggle within the struggle. That they were fighting to survive in these circumstances, where they don't have electricity, they don't have water, where everything is more difficult, everything is slower, where transportation is more difficult, and at the same time there is an attack with a situation of school closures, [schools] which understand your community.
>
> (ENLACE employee, 20/02/2019)

According to Susser & Tonnelat (2013), such struggles over the access to public services in cities are crucial at certain moments of capitalism, when public services run the risk of being privatized or commodified. At the same time, the communities' resistance to school closures can be understood as part of a wider struggle in defence of their common space. In his anthropological work on the commons, Latin American scholar Escobar (2015: section 1) refers to commons

as 'relational worlds', where boarders between the communities and their environments become blurred. Such 'relational worlds' exist in contrast to what constitutes the 'One-World', which is capitalist, secular, liberal, patriarchal and white. Consequently, in 'relational worlds' the defence of life, territory and the commons becomes one and the same, and constitutes what Escobar refers to as the 'ontological dimension of the commons' (ibid.: section 3). In the case of the Caño communities, the resistance to protect a part of their common world became explicit in the case of schools, which they perceived as an essential part of the *tejido social* (social fabric) making up their neighbourhoods.

However, during my fieldwork it became apparent that *la lucha,* the struggle, entrenched many other issues, in 'the defense and affirmation of the commons' (Escobar, 2015: section 3): the contestation of a just discourse over hurricane recovery, the defence of their common land in the CLT and the on-going activism for realizing the drainage of the Martín Peña canal, to restore their common body of water. To illustrate, when I talked to community activists and leaders, a standard reply to the simple question *¿cómo estás?* (how are you?) would be *en pie de marcha,* which can be translated as 'in the struggle'.

5.2.2 Contesting Discourses around Recovery Funds

Regarding long-term recovery, the Caño communities' aims for achieving on-site reconstruction and risk reduction contrast significantly from public policy, promoting displacement of already vulnerable communities in flood zones (Algoed & Hernández Torrales, 2019). For instance, the CDBG–RD recovery funds could be an opportunity for the Caño to realize the District Plan and drain the canal, as a measure to reduce impacts of future extreme weather events. Yet, regulations for these funds presented in the Action Plan by the government prohibit on-site reconstruction in floodplains, and instead focus on displacement to other locations. Estrella D. Santiago Pérez, environmental affairs manager at ENLACE, sees this as a risk for the Caño communities:

> But this will displace communities, it will leave gigantic patches of land without residences, and possibly in ten years there will be a condominium here. And what you claim for one family is unsafe to live, for another family it is, with better infrastructure and less vulnerability. So, we don't want this, we really don't want that the communities get displaced.
>
> (Estrella D. Santiago Pérez, 26/02/2019)

Similarly as with the issue of school closures, also here the Caño communities entered in a dialogue with the local government, and continuously bring forward their position at forums and panels on public recovery funds. As one of the community leaders explained:

> And we are fighting, we talk to the senators, we communicate with the residents… Until this moment, the G-8 has kept a relationship with the current government, you understand me, we didn't have a lack of communication with them or anything, we are there to let them know. And that's what we are working with at the moment. That the drainage [of the canal] happens, that the money appears, watching the process, so that with that money [the CDBG-RD funds] the drainage happens, and the CDBG-R funds are important for us because the discourse here is about displacement of the communities. Especially in the Caño, there are many eyes here on the Caño.
>
> (Caño community leader 1, Parada 27, 08/03/2019)

Apart from community organizing and communication with the government to contest public recovery plans, the role of the CLT as an instrument to secure land tenure became crucial, especially after hurricane María. In line with what Davis (2017) argues, the presence of the CLT makes Caño residents more resilient against shifting politics and a changing environment, favouring in that case displacement as a recovery strategy. The legal and operational dimensions of the CLT ensure not only, that its existence is harder to co-opt than the one of individual land titles, but also its intimate relation with residents allows for more concerted action against external threats.

Overall, the Caño communities' relationship with the government when it comes to public recovery policies, specifically related to school closure and the allocation of funds, provides empirical evidence for the dimension of commons that questions existing power structures (Caffentzis & Federici, 2014; Harvey, 2012). Community leaders and residents in the Martín Peña district are not only fighting against corrupt governments and unjust policies, as Stavrides (2016:2) suggests, but also communicate with the government around concrete demands. Their struggle runs over an extended period of time, and emphasizes Susser' & Tonnelat's (2013) point: institutionalizing the urban commons indeed is a contested, erratic and long-term process. In the words of one ENLACE employee I talked to, this process includes protest, resistance, but also a proposal of concrete requests:

> And, above all, this is about recognizing the importance of citizen participation, more than voting at elections, also more than participating in a protest, which is of course essential to citizen participation, but in this case [of the Caño CLT], it is about tackling the protest, the resistance as well as the proposal.
>
> (ENLACE employee, 20/02/2019)

5.3 A Two-Dimensional Political Attack

The Caño communities' emphasis on collective organizing and citizen participation on the ground, coupled with their constant fight to demand from the government to fulfil their responsibilities becomes a transformative strategy for creating a more cooperative, egalitarian society. As discussed by Stavrides (2016:2), commons projects today present emerging potentialities of resistance and create alternatives against contemporary forms of domination in urban space. He asks: "Do people in many parts of the world fight against corrupt governments, unjust policies and everyday exploitation not only by demanding what they need, but also by organizing their common life themselves?" Through collective action, the Caño communities demonstrate that living a common life is possible, at the same time as enforcing *la lucha* (the struggle) to claim the governments' obligations and to protect their 'relational world' (Escobar, 2015). In the words of Harvey (2012:87), such a "double-pronged political attack" forces governments to supply more public goods on the one hand. On the other hand, it enhances the quality of non-commodified reproductive and environmental commons, through self-organization of communities to appropriate, use and supplement those public goods.

Yet, it is necessary to ask: don't many poor communities common? Rather than being a choice, is their solidarity a means of survival, which does not question the status quo, but rather reproduces dominant power structures? Thereby, one of the main tensions within commons research is addressed: the relationship between commons and capitalism, as well as the risk of co-optation of the commons (Huron, 2017; Caffentzis & Federici, 2014). This becomes especially relevant when investigating commons in the Global South, where collective action might actually be necessary to survive. Indeed, Alejandro Cotté-Morales, who has been working in as Director of Citizen Participation in ENLACE since its foundation in 2002 states, when talking about the early days of the project:

> These communities, they were always about solidarity. They always have been, and community values still exist.
>
> (Alejandro Cotté-Morales, 15/03/2019)

However, he goes on to explain about the dimension of citizen participation ENLACE has been working with:

> But we have promoted critical thinking. It's different (…) That you think that the government doesn't do you a favour. The government has an obligation, you see? And I establish with the community how it has to work, I put my state to function. That's what we have promoted all the time.
>
> (Alejandro Cotté-Morales, 15/03/2019)

This addition of critical thinking is crucial, as it allows the communities to extend their actions beyond the local context and put in question the very structures that created the communities' marginalization. It presents the second part of the aforementioned "double-pronged political attack" (Harvey, 2012:87): demanding what they need and putting the government under pressure. According to Cotté-Morales, to reach this point a Freiran approach was implemented, aiming at provoking the conscientization of the Caño communities to achieve "the greatest humanistic and historical task of the oppressed: to liberate themselves" (Freire, 2014:44). Only by adding this dimension of critical conscientization, the project moves from being one of *asistencialismo,* of assistance and welfare, to a truly empowering and transformational endeavour.

To sum up, empirical evidence from the Caño communities provides an example for what scholars coin as "anti-capitalist commons" (Caffentzis & Federici, 2014): commons, which challenge structures of domination while organizing a common life around values of cooperation and democratic participation on the ground. This life entails many layers of commoning, including collective land ownership through the CLT, a variety of projects for citizen participation, common spaces such as schools, community gardens and centres in the district, as well as collective organizing and activism to claim the government's support needed for living in a just and healthy environment. Moreover, the Caño communities emphasize the importance of linking action on the ground with wider struggles, in order not to get co-opted by neo-liberal interests or market forces (Caffentzis & Federici, 2014). I argue, that achieving this link is crucial, especially when considering collective action or commoning in historically marginalized communities. At the same time, it cannot be taken for granted that a link between commoning and anti-capitalist critique will always exist: here, the immense efforts that went into establishing this dimension in the Caño communities have to be acknowledged, through years of provoking critical thinking as well as citizen participation. Finally, the contingency of such activism becomes apparent, underlining that the process of commoning will always shape and be shaped by the very actors that pursue it (Stavrides, 2016:259). Considering this, the ever-changing nature of collective action itself becomes an entry point for anti-capitalist critique:

> The capitalist system is about continuity. So it will reinvent itself, reinvent itself, the capitalist system, to meet its objective. So you, from a social point of view, constantly have to provoke reinventing yourself to combat that pressure. This is constant! Or in other words, the workers from before aren't the workers of today. Therefore you can't organize the same way as before. That's it!
>
> (Alejandro Cotté-Morales, 15/03/2019)

6 Conclusions

The purpose of this study was to bring together theoretical contributions on the commons and empirical evidence of commoning within CLTs, while examining the involved actors' relationship with the local government. By investigating the Caño Martín Peña CLT in San Juan, Puerto Rico as an embedded unit within its structural context, links could be drawn between the case and extra-local forces acting on it. This was achieved through employing the extended case methodology, which takes context effects and dialogue as a premise for uncovering social structures (Burawoy, 1998).

First, it has been shown that collective action, or commoning, has played a crucial role in the Caño CLT both before, but especially after hurricane María. Co-production has been an essential component in the CLT as from its foundation in 2004 (in fact, even before that), and creating spaces for citizen participation, where critical thinking is provoked forms a central part of the work by the supporting organization ENLACE, as well as of the community leaders. Hence, commoning occurs on many levels, starting from collective land ownership, and reaching to the sharing of spaces in the neighbourhoods, but also collective decision-making when it comes to issues concerning the district. Given the devastating impacts of hurricane María, and the lack of government support both when it comes to immediate relief and long-term recovery, the role of collective action became even more important in the crisis situation. The Caño communities successfully appropriated and managed the means for relief and reconstruction collectively, so rebuilding the neighbourhoods became an act of solidarity and union among the residents. Having structures of collective organizing in place *before* an event of crisis was crucial, and allowed the communities to organize their recovery efficiently, without having to rely on immediate government support.

Second, when it comes to the communities' relationship with the government in the period of hurricane recovery, it is important to emphasize that they took a pro-active, rather than passive stance. By investigating the examples of public policies concerning school closures and recovery funds, the analysis showed that instead of working in isolation from local institutions, the CLT communities seek dialogue with the government to bring forward their demands and needs. Consequently, they not only defend their common world against co-optation and privatization, but also challenge government decisions and request the continued structural support for marginalized communities.

Finally, by linking these empirical findings with critical commons literature, the transformative potential of the Caño communities' struggles became evident: on the one hand, the communities establish a lived common world in their neighbourhoods, building upon sharing principles, democratic decision-making and citizen participation. On the other hand, the project goes beyond solidarity, it includes provoking critical thinking and challenging structures of domination, as was demonstrated from investigating the relationship with the government. Hence, the Caño CLT constitutes what scholars term as 'anti-capitalist commons' (Caffentzis & Federici, 2014:100), which not only transform social relations to build a more egalitarian and solidarity-based society, but also demand from the government to fulfil its responsibilities. In extension, I argue that the second dimension of this definition is especially important in historically marginalized communities such as the Martín Peña district, as otherwise commons can easily be co-opted as just another strategy to take responsibility *off* the structures that caused marginalization in the first place. Commons, and the CLT in this specific case, is no magic bullet, it is hard work that comes together over years of continuous collective effort and struggle. Yet, as the case of the Caño communities illustrates, it can offer a glimpse of a society based on a different way of thinking that transforms both the life of involved actors and the structures they operate in. By promoting the critical questioning of structures of oppression, in combination with solidarity-based work on the ground, the communities achieve slowly entangling their lives from the market and the state, as well as from colonial and neoliberal institutions that cause marginalization.

In the process of arriving to such conclusions, I could only start to grasp the realities of many other communities in Puerto Rico, that similar to the Caño were struck by hurricane María and at the same time struggle to cope with the implementation of austerity measures and a wave of privatizations. In the current political climate on the island, these communities, social movements and grassroots organizations present a counter-narrative to the mainstream public discourse, one that circles around environmental justice and sovereignty. If I am to recommend something for future research, it is to look closer at the role of commoning in such processes, and especially their potential for realizing what Puerto Rican activists call not only a 'just recovery', but also a 'just transition' towards an ecologically sustainable and equitable island.

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Artwork on front page:

Ed Méndez, *Taller 24 de Septiembre*, San Sebastián, Puerto Rico (linol cut)

Appendix: List of Interviewees

No.	Date	Place	Affiliation	Type	Gender
1	15/02/2019	Café at University Campus	Gustavo García, local researcher working on environmental justice	Un-structured	Male
2	20/02/2019	Café at University Campus	ENLACE employee, planning and budget director	Semi-structured	Male
3	26/02/2019	ENLACE office	Estrella D. Santiago Pérez, ENLACE environmental affairs manager	Semi-structured	Female
4	01/03/2019	Caño district	José Caraballo Págan, Caño community activist	Walking	Male
5	07/03/2019	G-8 office	CLT non-profit employee	Semi-structured	Female
6	08/03/2019	ENLACE office	G-8 community leader from Parada 27	Semi-structured	Female
7	10/03/2019	Café in Santurce	Antonio Carmona Báez, local researcher	Un-structured	Male
8	12/03/2019	ENLACE office	G-8 community leader from Barrio Obrero Marina	Semi-structured	Female
9	13/03/2019	G-8 office	G-8 community leader from Bitumul Israel	Semi-structured	Female
10	15/03/2019	ENLACE office	Alejandro Cotté-Morales, ENLACE director of citizen participation	Semi-structured	Male
11	20/03/2019	G-8 office	G-8 coordinator for citizen participation	Semi-structured	Female
12	21/03/2019	G-8 office	G-8 community leader from Las Monjas	Semi-structured	Male
13	22/03/2019	Home of interviewee	G-8 community leader from Las Monjas	Semi-structured	Female
14	02/04/2019	Café in Santurce	Sarah Molinari, PhD working on Puerto Rico's debt and María	Un-structured	Female