An urban political ecology of flood control and population relocation in Ouagadougou - Burkina Faso

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Abstract

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Globally, the number of people at risk from flooding has been increasing since 2000, with the population from the South being more vulnerable. Millions of households are displaced by disasters every year. In 2009, the city of Ouagadougou in Burkina Faso experienced its most disastrous flood ever recorded. As a response, the government designed a permanent relocation plan in Yagma, a village located outside the city of Ouagadougou. The relocation plan disrupted the livelihoods of the households that were affected by the flood, leading many of them to return and rebuild their houses in flood prone areas. This paper contributes to a body of literature analyzing the heritage of postcolonialism on the flood vulnerability on the poorer communities in Ouagadougou. Using a political ecology frame, the thesis attempts to understand how the government of Burkina Faso and flood victims understand land and belongings, and how that understanding shaped the relocation program. After interviewing flood victims and government officials, an analysis revealed that contrasting views are at work. A perspective based on technical calculations and a neo-colonialist vision of development, on the one hand, and a grounded perspective based on relationships to the land and each other, on the other.

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I would like to thank my family for supporting me and giving me hope when everything seemed impossible.

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1. Introduction

According to the World Health Organization, floods are the most frequent type of natural disaster (WHO, 2021). They are a phenomenon that happens in every part of the world. Sometimes they are welcome events that help with the replenishment of nutrients in the soil and other times they are disasters that lead to expensive damages, loss in animal and human lives, displacement, and much more (Parker, 2014). The damages caused by floods can be significant. Economic losses from flooding have increased USD 7 billion per year in the 1980s to approximately USD 24 billion per year between 2001 and 2011 (Jonkman, 2005). A study by AON Benfield catastrophe modeling team argues that by 2030 the economic costs of floods could exceed USD 500 billion (Zurich, 2015). EM-DAT data show that between 1994 and 2013, floods were the most prevalent type of disaster with 43% of all recorded events. Around 2.5 billion people were affected worldwide those years (CRED, 2015). In addition to economic costs, floods have various effects on everyday people. Some impacts include material damages (IFRC, 2009; Tschakert et al, 2010) and health problems such as malaria, cholera and diarrhoea (Few et al., 2004; Thomson et al., 2006; Centre for Research on the Epidemiology of Disasters, 2014).

The effects of floods are particularly grave in Africa. On the African continent, the studies show that millions of people are victims of the negative effects of floods. Tragically, the number of floods seems to be increasing. In the West African region, the number of flood events has increased, going from less than two per year before the 1990s to more

than eight by the 2000s (Sarr, 2011). In Burkina Faso, the country experienced roughly three flood events per year from 1986 to 2016 and increased to five flood events per year from 2006 to 2016 (Tazen et al, 2018). In 2009 alone, the estimated cost of floods was around USD 230 million. 46 people died and nearly 124,000 people were affected (GBF et al, 2010). A major consequence of that flood was the displacement of over 24,000 households. The effects of the 2009 flood induced displacement were particularly grave for poorer communities.

While flooding is considered a natural disaster, political ecologists in geography and other disciplines remind us there is nothing "natural" about a disaster. Viewing flooding through a political ecology lens engages the power relations in two major ways: first, by looking at how systems of power have shaped ecological systems; and second, by looking at how systems of power shape the distribution of flooding's effects – including resettlement plans. Focusing on uneven social impacts of urban floods, Murray (2009) argues that "social production of urban space unevenly spreads the vulnerability to hazards, exposure to risk and ecological breakdown." As flooding increases as well as population relocation, it is essential to look behind the phenomenon to understand the social, economic, and political factors that lie behind flood control (Marks, 2015). On the issue of resettlement, Mortreux et al (2018) define resettlements as complex multi-faced process that governments utilize to remove communities from unsafe locations to new ones. In Burkina Faso, the state indeed implemented a relocation plan following the 2009 flood. There is a need, following the critical literature, to examine the social, economic, and political inequities that both shaped and resulted from this plan.

My thesis will develop a political ecology of flood control and population relocation in the African city of Ouagadougou, Burkina Faso. As I noted above, Ouagadougou has experienced an increase in flooding in recent years, with effects such as planned relocation for the city's poorest residents. While many scientists attribute flooding in general to climate change (Nka et al, 2015), I will examine the different perspectives of land and belonging that have shaped the relocation plan that happened in Ouagadougou after the 2009 flood. I will focus on this research questions: How do government, NGOS and flood victims understand land and belonging(s) in the flood-prone areas? And how did these understandings shape the relocation process?

This thesis is divided into four substantive sections. Chapter 2, immediately after the introduction, provides a literature review on political ecology in general and how it is relevant to urban floods. It also outlines how a postcolonial analysis is relevant to countries like Burkina Faso, and how this approach can bring new insights to political ecology. Chapter 3 is about the research outline. It justifies the methods used for collecting the data and analyzing them. There is also a reflection on ethics, the researcher's positionality and the limitations and challenges of the data collection procedure... The fourth chapter gives a background of the study by introducing Ouagadougou as a city, analyzing the past flood events.

Chapter 5 outlines the finding and discusses them while linking them to the research questions. Based on a thematic analysis, chapter 5 is divided into four parts. The first part is about how the contrasting differences on the perceived causes of the floods, while the second part analyses the different understanding of land and belonging to/of the

land. The third part is about the criteria for being officially recognized as a flood victim and the last part analyzes how the relocation disrupted lives and identities. In each of these three parts, I consider how understandings of and responses to urban flooding reveal (1) unequal power relations that (2) are shaped by the past and present of colonialism in Burkina Faso. The discussion suggests that the legacy of colonialism is still impacting the relation between the State and the citizens. The government - with a perception of land that directly derives from the French - exercises their power over citizens that still hold on to a traditional perception of land acquisition and belonging. Those contrasting views lead to the citizens resisting the Yagma relocation plan as a response to a government program that would have disrupted their lives and livelihoods .

The idea of colonialism usually showcases images and memories that seem to belong to long past events. Scholars like Sharma (2008) and Getachew (2020) highlight the importance of recognizing colonialism not only as foreign rule but acknowledging the challenges of post-colonial states to overcome the structures of exploitation, domination, and expropriation installed during colonial rule (Menge, 2021). As Willaert (2012) mentioned, “colonialism is no longer about the movement of armies, commanded by a sovereign, but about the rise and spread of systems of power.” Building on the definition of Gould (2007), this paper defines colonialism as a practice that involves “long-term takeover of a place, culture, and people” to justify how flood vulnerability and relief in Ouagadougou is linked to the colonial heritage of Burkina Faso. My argument is that colonialism in this sense continues to shape the practices and discourses of the government in Burkina Faso today and recognizing this is key to understanding the flood

relocation program of 2009. The thesis argues that following the 2009 flood event in Ouagadougou, the government and the citizens had different views on what an adequate relief program consisted of: the government considered their choices as lifesaving while the citizens saw the relocation plan as an attempt to take over their places, culture and a disruption of their lives and identities.

2. Literature review

2.1 Prevalence of floods in Africa

The occurrence of floods in Africa is undeniably increasing. To have an idea of the magnitude of the flood issue, looking at the literature on the prevalence of floods in Africa is important. Numerous studies have examined the issue of floods in West Africa (Adelekan, 2016; Aich, 2015; Di Baldassarre, 2010; Douglas. 2008). Badou et al (2019) found that the number of flood events in West Africa has increased these past years. From 1966-1998, West Africa experienced 2.8 floods per year. Between 1999 and 2017 that number significantly increased and reached 11.9. Studies show that 2010 was a particularly difficult year as fifteen countries of the west side of the continent experienced 24 flood events in total.

The economic and social toll of these floods has been significant. Studies show that lost in human lives went from 35 each year to 184 after 1998. In 2012 the number of deaths reached 510 (Badou et al, 2019). In the same part of the continent, flooding affected 800,000 people and caused around 210 deaths (OCHA, 2009; Sighomnou et al.,

2013). Two years later in 2009, more than 600,000 people also became victims with at least 193 dying. The most affected countries being Burkina Faso, Senegal, Ghana, and Niger (UN Office for the Coordination of Humanitarian Affairs [OCHA], 2009). Scientists from the Intergovernmental Panel on Climate Change (IPCC) predicted an increase in the number of flood events over the next decades (Christensen et al., 2007).

The fact that flooding has greater impacts on poor populations is impossible to ignore. A report from Action Aid identified flooding as an important factor stopping the city dwellers in the continent of Africa from escaping poverty. Flooding also decreases the chances of the millennial development goals to be reached. Kawasaki et al, 2020 concluded in a study done in Myanmar that poor communities tend to live in flood-prone areas and that the exacerbation of poverty can be a consequence of floods. Schaer and Hanonou, (2017) argued that in several cities including Cotonou, Abidjan, Dakar and Lagos, low-income populations live in flood prone areas and their vulnerability increases when floods occur. Other researchers have shown a correlation between natural disasters and poverty (Sawada, 2017; Stillwell, 1992). Kawasaki (2020) found using a quantitative method that poor people usually live in flood prone zones and those floods stop people from escaping the poverty cycle.

In one of the few studies of flooding in Ouagadougou, Tazen et al. (2018) blamed urban population growth. The authors examined flood history from newspapers and rainfall data were used for the investigation. In their study they found that the country experienced roughly three flood events per year from 1986 to 2016 and increased to five flood events per year from 2006 to 2016. They also found that some floods occurred in the

city even when the rainfall data was normal. An interview of victims reveled that the main cause of flood they perceived was the inadequate drainage facilities and their poor maintenance. They seem to all agree that even if flooding has been happening regularly for them, the most devastating flood they encountered was the 2009 flood. The study concluded that the increase of flood events was a result of unplanned urbanization and low-level investments in flood resilient infrastructure and flood management (Tazen et al, 2018).

In a study that I find particularly relevant to my own, Douglas et al. (2008) studied the public perception of flooding in the urban poor communities. Their method was to survey city residents in Alajo, Accra. In that city, the authors found, men blamed flooding on inadequate city planning, poor drainage, lack of consultation by officials with the poor and insensitivity to their problems and overpopulation. Two quotes from men interviewed in the study are instructive:

> Government and authorities take us for granted. Authorities do not respect us. They think they know it all and so will not ask for our opinion. They do not acknowledge the wisdom of the people. If they respected us and valued us, they will be sensitive to our plight and take simple but effective measures to solve the problem of flooding. Numbers of people and their houses, offices and businesses have increased in our community. If the drainage will be fixed, population will not be a problem. Without a good drainage system, population increase facilitates flooding.

The authors also interviewed women. The authors found that women identified the same issues as men but emphasized the fact that officials were not focusing enough on the problem. One quotation from a woman is instructive:

> In Alajo, there is no room created for flood water to be properly contained. There is no way for the water to pass. The floods are not always caused by rains. Sometimes, even before the rains begin to fall, the drains are overflowing and the pathways obscured with wastewater flowing from other parts of the city and into Alajo from where there are no appropriate drains. So when it begins raining, things just worsen. At such times, if you want to take somebody to the hospital, he dies before your very eyes because you cannot carry him out.

This study, while it does not provide a political ecology of flooding, is useful in its attention to the perspectives of those most affected by urban flooding. This is what I intend to provide in my thesis, as I pursue and answer my research question.

2.2 Political ecology

Political ecology was first discussed by Frank Thone in 1935 (Thone, 1935) and became known around the 1970s (Wolf 1972) as a way to further explain environmental degradation (Jones, 2008). Robbins (2012) refers to political ecology as "the complex relations between nature and society through a careful analysis of what one might call the forms of access and control over resources and their implications for environmental health and sustainable livelihoods." He argues that environmental issues are also unequal distribution issues. Political ecology politicizes environmental problems by revealing how power shapes environmental degradation and phenomena like floods, contrary to other science based ecological studies like biophysics. (Robbins, 2012).

Since political ecology is a multidisciplinary field, there is no agreed-upon definition of the field. As Minch (2011) argues, "Political ecology is, in part, constituted by and concerned with, political economy, cultural ecology, social ecology, green socialism, environmental sociology, development ecology, [and] anthropology." It is therefore understandable that various definitions appear in the literature. Benjaminsen and Svarstad (2019) describe political ecology as "a field within environmental studies focusing on power relations as well as the coproduction of nature and society." Bryant and Bailey (1997) drew three main assumptions from political ecology as a field. First, political power plays a part in inequalities that are associated with environmental changes. Second, such inequalities worsen poverty, and third, the unequal distribution of cost and benefits and the change of pre-existing inequalities has political effects in terms of the altered power relation that occur as a result (Bryan at al, 1997). To sum up, political ecology assumes that natural and cultural are entangled and sociopolitical events and ecological ones are coextensive (McMahan and Nichter 2011).

Within the broad field of political ecology, there is a subfield concerned specifically with urban settings – a subfield particularly relevant to a study of flooding in Ouaga— which is known as urban political ecology (UPE). Several studies have examined the importance of the political ecology of urban areas, and they agree that it is a good way to connect political, social, economic, and ecological problems to environmental issues (Bryant et al, 1997; Offen, 2005; Heynen, 2014). Keil (2003) argues political ecology sheds light on issues related to urban ecosystems, social and environmental justice. Swyngedouw and Heynen (2003) argue that urban political ecology operates on "an integrated and

relational approach that helps untangle the interconnected economic, political, social and ecological processes that together go to form highly uneven and deeply unjust urban landscapes."

Using a political ecology framework is a good way to improve governmental practices with policies that are not only based on fixed and physical science but also consider the reality of the affected communities by acknowledging their societal regulations, the scarcity of resources, the existence of poverty and the need for expansion of national wealth. Abogaye (2012) argues that political ecology helps understand the root causes and consequences of disasters like floods, explaining how and why hazards evolves over time (Aboagye, 2012). It is a good remedy to the neglect of the political dimensions of human/environment interactions.

Several studies within urban political ecology are particularly relevant to my study. First, Murray (2009) helpfully analyzes how processes of environmental degradation affect different populations in different ways. The author argues that the regions experiencing environmental degradation and an increase exposure to hazards and those safe from harm are not equally distributed over the topography of a city. The study was based on Johannesburg, a city where according to him, poor residents and middle-class ones live in separate worlds. He argues that informal squatter settlements, relaxed planning regulations, low building standards, lack of disaster preparation, and poor crisis management are responsible for disasters like floods and fires and that these events do not simply result from "bad luck or nature's destructive force." The author argues that disaster-vulnerability and exposure to risk are unequally distributed across the city and

that the hidden structure that marginalizes the poor can be reveal through urban political ecology.

Two further studies focus on how states respond to environmental degradation and how these responses relate to power inequalities. A study by Blaikie and Brookfield (1985) argues that the reason why land management efforts fail is because of the human response to it and that the least powerful are marginalized by the state. The authors use a wide range of case studies from the Himalayas to Western Europe, to talk about the need to use urban political ecology to explain environmental degradation. They point that degradation happens because land is poorly managed. Similarly, Veron (2006) argues that air quality has important socio-spatial patterns that influence urban socio-environments in India. After analyzing the country's policies, he noticed that while striving for a more beautiful city and modifying governmentalities middle-class bias was created and the boundary between public and private environments took place. He argues that political ecological studies need to be used to address these issues. The studies mentioned are relevant to my study as they all focus on the marginalization of poorer communities by the most powerful actors in a context of disaster and environmental degradation.

The field of political ecology suggests three theoretical perspectives (Amesimeku, 2019). The first one is the actor-oriented perspective that indicates that actors exercise power differently and consequently face different resistance and opposition. Scholars Bergius et al, (2018) classified two types of actors: those carrying out the intervention and those who resist them. Secondly, neo-Marxist perspectives and postructuralist power perspectives suggest that social structures that were historically experienced produce the

human environments that we witness today (Benjaminsen et al. 2018). Thirdly, we have the poststructuralist power perspectives pioneered by Foucault finding its way in political ecology. The last theoretical perspective differentiates between discursive power, governmentality and biopower. For this specific paper, the concept of governmentality is particularly relevant. Fletcher (2010) argues, the government uses four ways for the citizens to live by their "code of conduct." The ones relevant for this study are "disciplining" and "sovereign power." The former is defined by how the government inculcates behaviours that agree with their social and ethical norms to the citizens and the latter is defined as the use of punishments to govern the population.

2.3 Flood-Induced Displacement in Developing Countries

While political ecology provides the most useful lens through which to analyze how power relations shape environmental problems and state efforts to resolve them, there are useful findings in studies focused on the socio-economic effects of flooding. These studies, while they do not examine how power relations shape these effects, nevertheless point to the ways that the effects of flooding are experienced differently by different social groups – with the most marginalized groups experiencing the worst effects. A study by Ghimire et al. (2015) analyzed the influence of large-scale flood events on civil war using historical data from 126 countries from 1985 to 2009. They argue that refugees being unexpected and high in numbers may put some added pressure on social tensions in the communities where they move.

The study Kakinuma et al. (2020) argues that extreme weather results in population having to relocate, posing a risk to human security. For example, when large-scale, catastrophic floods strike, people seek to leave as quickly as possible to survive. The author suggests that income levels have a significant influence on flood-related relocation and as a consequence, low-income countries, particularly in Africa, are more vulnerable to flooding. Mucherera and Spiegel (2021) state that forced relocation and displacement are persistent issues debated across the social sciences. The authors investigate authoritative employments of state power all through pre-and post-flood-initiated migration systems in Zimbabwe's Tokwe-Mukosi flood resettlement. The article looks at how state power used by governments, monetary establishments, and security foundations impacts local area weaknesses during constrained migration strategies while encouraging industrialist targets, in light of account examination from 2010 to 2021. In a similar study, Ahmad and Afzal (2021) indicate that in the rural riverine areas of Punjab, Pakistan, more than 60% of families lost their homes once, while 38% lost their homes multiple times and had to relocate within the past ten years. The consequence was a threaten food security that derived from higher rural environmental vulnerability and limitations to important elements such as psychological, cultural, and socioeconomic development.

This research, while helpfully illuminating the unequal effects of flooding, generally fail to examine how inequalities are (re)produced with state efforts to respond to flooding. There is, however, one notable exception. Looking at the experiences of women in flood settlement camps, Memon (2020) argues that women in Pakistan are typically at a disadvantage due to societally perceived standards, duties, and obligations. The study

shows a link between natural disasters and female abuse. Twenty women were interviewed in flood-prone districts of Sindh using qualitative research techniques. The findings suggest that most women are subjected to various forms of violence, both physical and emotional, perpetrated by spouses and strangers. My study is also building on the latter by analyzing how different groups of people, including women, were affected by the plan.

2.4 Heritage of colonialism in Africa's planning and postcolonial intersectionality

One final literature needs to be reviewed here. An important assumption of this thesis is that the heritage of colonialism is relevant to (a) flooding in Burkina Faso and (b) the state's response to the flooding. While political ecology is attuned to the power relations involved in environmental processes and state responses to them, it is important to look closely at how (post)colonialism is an essential part of these power relations. Clearly, one of the major power relations shaping cities in Africa is colonialism and its legacies. Here, I want to provide a brief review of the literature that examines how colonialism has shaped African cities. The majority of the African population lives in rural areas, but urbanization is happening fast. A UN report (2018) stated that the urban population of the continent is expected to go from 548 million in 2018 to 1.5 billion in 2050.

The urbanization of the African continent started at the end of the colonial area (Venard 1986). 14 countries including Burkina Faso were French colonies. Urban planning was a tool for the French to modernize African spaces according to the European model to

promote their cultural and social values, achieve some colonial economic growth, control the segregation of the population and experiment planning techniques for their future benefits (Njoh, 1999). In other words, the colonial planning of the French had the purpose to benefit the French, not Africans. According to Dulucq (1989) the high investment preference of French colonialists in urban centers is at the root of urban-biased policies that keep limiting the rural residents to access basic goods and services. He also argues that contemporary housing problems are a consequence of the building and housing standards adopted during colonialism.

The growth of cities in Africa is primarily due to many years of favouring urban spaces over rural ones, leading to rural-urban migrations. After they obtained their independence in the 1960s African countries kept the European model of city planning, a model that is clearly not adapted to their environment. Also, the high rate of migration from rural to urban areas create a high demand for housing that cannot be satisfied because of inadequate planning, leading people to build on flood prone zones and making them vulnerable. Different studies linked urbanization in Africa to higher risks of floods (Teller,2021; Dodman et al, 2017; Marshall, 1969). However, these studies have not linked urbanization to colonialism. The studies mentioned are relevant to my study as I build on how the development of the city of Ouagadougou by the French contributed to the continuous migration of rural citizens towards the city and how their occupancy of flood prone zone in informal settlements due to the lack of affordable housing exacerbates their vulnerability to floods.

The human-nature relationship that shapes the present of African countries exists in the shadow of a colonial past. Said (1994) suggests that he aimed for ''an extension of postcolonial concerns to the problem of geography''. An emerging body of literature suggests that geographies need to consider colonial practices for a better analysis of political ecology. (Braun, 2002; Wainwright, 2004, Lawhon, 2013, Loftus, 2017)

Similarly, to those studies, the aim of this paper is to emphasize the need for political ecology to also bring awareness on the reality of postcolonial spaces. As argued by Wainwright (2004) it is not possible to understand spaces through a political ecology lens without engaging with the colonial experience if the studied areas were affected by colonialism. Building on those studies, my thesis analyses the dynamic between the government and the citizens in the context of urban floods while accounting for the colonial practices that constituted the flood related decisions in Ouagadougou. There is a need for work that focuses on a postcolonial contextualization of spaces and power.

Mollet (2017) argues for a postcolonial intersectionality in the context of revealing the multidimensionality of gender in environmental literature. The author suggests that even after colonialism, the practices and stereotypes that derived from its history is still present in development practices. Her study conducted in Honduras gives a critique of modernism and help advance feminist political ecology. The author justifies the use of postcolonial intersectionality for several reason: (1) to help for a better differentiation among women, (2) to prioritize a special understanding of patriarchy through racial power, (3) to retheorize gender while taking into consideration the entanglement of racialized and gendered power (Mollet, 2017). Similarly, my study aims at using a postcolonial

intersectionality approach to suggest that decades after independence, the governance that emerged is still inspired by colonial power practices.

Within postcolonial studies, two keywords are particularly important to my study. The first, discourse, refers to the forms of power embedded in dominant forms of knowledge. Discursive power determines which voices can be heard and which ones are silenced (Muller, 2011). It can operate through control of information, but it can also operate through dominant ways of knowing (or epistemologies). As Reed (2013: 203) explains, "discursive power refers to the degree to which the categories of thought, symbolizations and linguistic conventions, and meaningful models of and for the world determine the ability of some actors to control the actions of others or to obtain new capacities." Many scholars have examined how colonialism entailed forms of discursive power, ways of knowing colonized people and "resources," and how this power has carried into the supposedly postcolonial period (Ziai, 2016; Hiddleston, 2009; Jefferess, 2008). This is useful to my study, in that it brings attention to the ways that something as seemingly straightforward as a "flood" is perceived by different actors, including government officials, NGOs, and everyday people. It suggests, as well, the ways that something like flooding can be perceived very differently by different populations. Differences in perspectives like this are essential to my study.

Another keyword in postcolonial studies is governance. The term "governance" can be described as the shaping of social priorities, the decisions related to social coordination and the resolution of national conflicts (Vatn, 2018). When talking about the environment, governance is a tool that set the rules on how environmental resources are used and

protected. The government is the main actor when talking about governance, but it can include non-governmental organizations (NGOs) as well. This is particularly the case in the countries of Africa. Wapner (2002) provides a useful definition of NGOs: “NGOs are not simply political organizations, but they are also cultural agents that shape the way vast numbers of people understand themselves and the world around them.” That type of power is usually owned by NGOs, agencies linked to the government, big corporations, or academics. It is the power that resides in convincing people to share one's opinion or values by generating accessible knowledge (Benjaminsen et al, 2019). Charlemagne (2009) argues that since NGOs are perceived in a positive way by the public, their beliefs are less challenged by society.

While arguing on the importance of situated urban political ecology, Lawhon et al (2013) argues that Africa is a victim of the limitation of colonial impulses as the government is often not capable of structuring the cities and the citizens. That means they apply a set of rules and a culture that belongs to the West to a population that has different values. Building on Robinson and Parnell (2011), the author suggests that Elites navigate the city management and administration and shape the ideologies of a media-driven public (Pieterse, 2012). Myers (2003) argues that cities in Africa must be studied with consideration of historical impulses and that “human emotions and experiences of the [colonial] rule” should be addressed. Drawing on different African studies, Lawhon et al (2013). Power theory can be expended through political ecology of African urbanism. The author argues that a situated urban political ecology may involve observing everyday practices, diffuse forms of power and allowing the scope for radical incrementalism.

Like discursive power, governance is relevant to political ecology. Political ecology, for example, can study how the decisions of politicians lead to social practices and policies that exacerbate environmental problems. Different studies show that environmental problems are more and more politicized (Carter, 2014; Dunlap, 2011). Corruption within the government, meaning simply the use of government power to advance certain private interests, can negatively impact ecological efficiency (Wang, 2020). Desai (1998) argues that "political elites use their power to … exploit their countries' vast natural resources in partnership with selected businesses, with no regard to environmental degradation." According to Lopez (2000), governmental institutions in poor countries tend to be weak, which leads to more corruption (in the sense that a weak state can be more easily manipulated by private interests). A consequence of that is environmental protection agencies lack money so the officials can be bribed easily, leading to the government ignoring environmental damages. Lassa (2010) argues that risk assessors tend to overlook the impact of politicians and their governance on urban disaster risk. His study shows that countries with strong institutions are more resilient when it comes to disaster risk.

2.5 Summary and Engagement

The literature review was divided into four categories. With the undeniably increase of flood events in West Africa, the first section looked into studies on the prevalence of floods events and their impacts on the continent. The second section discussed studies on the importance of using a political and urban political ecology framework to improve

governmental practices with policies that are not only based on fixed and physical science but also consider the reality of the affected communities by acknowledging their societal regulations, the scarcity of resources and, the existence of poverty. The third3rd section analyzed studies on the State efforts to resolve environmental issues as well as how those problems were shaped by power relations. The last part looks at studies that address the essential part of (post)colonialism in power relations, precisely discursive power and governance.

My thesis seeks to contribute to these literatures by bringing together insights from political ecology and (post)colonial studies. It seeks, to analyze the power relations (central to political ecology) through an attention to colonialism and its legacies. Few political ecology studies have paid attention to the ongoing legacies of colonialism and even fewer focused on floods in Africa. This paper contributes to the body of literature on postcolonial political ecology by focusing on the city of Ouagadougou in Burkina Faso. As mentioned by Mosca (2013), before the twentieth century, families boasted of their land rights through inheritance and, in case of disputes, local authorities intervened to resolve the matter. The thesis attempts to show how the heritage of colonization still plays a role in the governance of the city in general, and more specifically in exacerbating flood vulnerability through the inadequate flood relief system. I do so by politicizing the outcomes of the relocation plan that happened after the 2009 flood.

3. Research Outline

When the population of flood victims that were relocated to Yagma decided to move back to flood prone zones, government actors as well as the rest of the population started to wonder why such results were the outcomes of the relocation plan. This contributed to forming a central question for my research, but it was also important to listen to the point of view of different actors that participate in flood management. Preliminary information accuses the flood victims of being opportunists who only saw the plots that were "gifted" to them by the government as a way to make money with no attention to following the government's directives. These accusations lead me to reflect on how the government and the flood victims understand land and belonging(s) and how those conflictual views shaped the relocation plan. That question formed the basis of the findings presented in this thesis. The specific goal is to understand the differences on the perceived causes of the floods, the different understandings of land and belongings, the criteria for being fully recognized as a flood victim, the way the relocation plan disrupted lives and identities, and the resistance that derived from that.

The research for this paper was based on three main elements. I started by assembling news articles from three main sources that are popular in the country: Ouaga News, LeFaso.net and Le Pays. Using the search bar on the news websites, I collected the articles dated 2009 and above that mentioned the key words "floods", "flood 2009" and "flood victims Yagma." The goal was to find evidence of the interviewees claims and study the state of discourse in the stories.

Secondly, I analyzed official documents like reports from NGOs, governmental meeting minutes at the National Assembly and other correspondence, as well as the official report from an investigation on illegal land acquisition conducted by the parliamentary commission of inquiry into urban land. I hoped to focus on different actors, including of course flood victims.

The third element and the most important was the interviews conducted with (over) 22 participants. For this study, semi- structured interviews were used to understand the experiences of 22 participants who are residents of Ouagadougou in Burkina Faso. Of this total, 17 were flood victims, two were NGO workers, and three were government officials. The overall approach to the research, then, was qualitative. Quantitative research used to be commonly considered as more acceptable before the 1970s, but qualitative research rose in popularity in the 70s and 80s when various disciplines started to use it (Loseke et al., 2007). It is now a common approach to research when people are the focus of the study. The approach is used for collecting data and analyzing them. The main aim in this work is to describe life experiences and give them meanings. It involves data that is expressed in words- descriptions, accounts, opinions, and feelings (Walliman, 2016). When using this method, the researcher is the main data collection instrument (Teherani et al., 2015). Qualitative research in this study involved open-ended questions that were asked so that the respondents could have a chance to explain themselves in a deeper way.

Because of time constraints, convenience sampling was the chosen method for this study. I had the possibility to be in Ouagadougou for a limited period of time but did not benefit from as much time as I would have preferred to get in touch with the participants.

As well, the restrictions linked to COVID also made data collection more challenging. Convenience sampling is a technique used in both qualitative and quantitative research. It relies on participants that are readily available to take part in the study (Faugier and Sargeant, 1997). After the topic is picked, the researcher goes to places where people are likely to have insight on the subject of interest to engage potential research participants (Padgett, 1998). For this study convenience sampling was used to identity one group of interviewees: people who were victims of the 2009 flood that were available to participate.

Of course, more than 17 flood victims were "close at hand." Therefore, it was necessarily to use another method to identify interviewees within this larger population (people close at hand). Here, purposive sampling technique was used. The sample was selected based on the objectives of my research. Purposive sampling is defined by Abrams (2010) as "strategies in which the researcher exercises his or her judgment about who will provide the best perspective on the phenomenon of interest, and then intentionally invites those specific perspectives into the study." According to Jupp (2006), in purposive sampling techniques, the sample is related to the objectives of the study, the general knowledge the researchers have of a region and the willingness of people to participate. The objectives to focus on low-income households and populations that lived in flood prone zones shaped my purposive sampling. CONASUR is a government institution that specializes in dealing with floods in Burkina Faso. Their participation in this study was important in identifying interviewees. They have participated in every major flood of the

city and are very open and accessible when it comes to helping students in their academic work.

I requested their help to contact victims of the 2009 flood that would be willing to be interviewed for my study. The process was relatively easy as they introduced me to someone who had direct contact with potential participants. After meeting with the recommended agent during my trip in Ouagadougou last January, we had a discussion on what profiles I was interested in and he then contacted some people that fit this profile. The following section gives more details into the type of profiles that I was targeting. I met the flood victims to make initial contact and get their consent to participate to my study. The meetings were short and very informal ones because of all the COVID restrictions and time restrictions. The purpose was only to build trust, allow them to consent to participate, and explain how the interviews were going to take place. After I moved back to Montreal, I conducted interviews with the selected individuals by phone.

In addition, this research was developed from my years of experience living in Ouagadougou as a child and teenager. Back in those days, I could not understand why the rain was only a minor inconvenience for some and a life altering event for others. The research is also informed by my personal experience and familiarity of the city.

3.1 The Participants

As mentioned above, the people interviewed were 17 flood victims, 2 NGO workers and 3 government officials. The NGO workers were from OCADES (Organisation Catholique pour le Développement et la Solidarité). The organization helps people living in poverty by

encouraging responses to natural disasters, by promoting human development and by spreading awareness on the causes of violence and poverty around the world. According to them, their mission is to save lives, and provide long term improved livelihoods and strengthen communities. From my personal knowledge, I knew that they are often involved in flood relief aid around the country, so I sent them an email explaining my research and was able to interview two of their workers.

The government officials consisted of two workers from CONASUR and one worker from the Ministry of Urbanism. CONASUR has a long history of helping populations with disaster prevention through the promotion of behavior change. In the past, they have rehabilitated people and coordinated humanitarian interventions after floods. They are responsible for the assistance (social and economic) of displaced people from a crisis. The ministry of urbanism is a public service that manages everything related to urban planning populations habitats.

The 17 flood victims I interviewed were mainly considered poor but three of them were middle class citizens. They all had one thing in common. They moved from their village to Ouagadougou for a better life. Five of the participants were female and twelve of them were male. They were divided into three categories: the participants that lost their houses but were not eligible for relocation, those who lost their houses and moved to the relocation spot (Yagma), and those who were eligible for relocation and refused to stay in Yagma and returned to their former (flood prone) location where they rebuilt their houses.

Table 1 Listing basic information about the flood victims

	Gender	Approximate age	Language
1	Male	35-40	Mooré
2	Male	40-45	Mooré
3	Male	40-45	Mooré
4	Female	35-40	Dioula
5	Male	40-45	Mooré
6	Female	30-35	Bwaba
7	Female	40-45	Mooré
8	Male	55-60	Mooré
9	Male	55-60	Mooré
10	Male	55-60	Mooré
11	Female	35-40	Dioula
12	Male	40-45	Dioula
13	Male	50-55	Mooré
14	Male	40-45	Kasséna
15	Male	40-45	Mooré
16	Female	40-45	Kasséna
17	Male	50-55	Dioula

In Burkina Faso almost half of the population is younger than 15 years old and the median age is 17.6 years (worldmeters, 2022). My participants were all older than 35 years old. So older than the average person in the country. Most of them spoke Mooré and were from the Mossi tribe. The Mossi tribe constitutes more than 50 percent of the population of the country (CIA, 2022). So Mossi people were modestly overrepresented in my group of interviewees. All the public officials that I interviewed were also from the Mossi tribe and were relatively younger than the majority of the flood victims that I interviewed.

3.2 Data Analysis

Qualitative research findings are usually text based and with no rigid structure. According

to Jackson and Bazeley (2019), meeting records, perception notes, diary passages, and

clinical and nursing records are instances of text-based information. Just like Jackson and Bazeley (2019) suggest, my data investigation was built on the detailed review and planning of telephone recordings, observation notes, and secondary data that I gathered to comprehend the patterns. Due to the massive volumes of data, it was important to reduce the volume of raw data, identify important patterns, generate meaning from data, and create a logical chain of evidence. The main task in my data analysis was coding. I used Microsoft Word for coding, attributing a different color in the text transcripts to every part that answered my research questions. The aim was to use labels and colors to link perceived topics and individuals with the information transcribed. Coding was probably the most time-consuming part of the analysis. Jackson and Bazeley (2019) defines it as the demonstration of separating and characterizing a lot of crude information or data into more modest pieces.

Even if computer tools in qualitative data analysis are more popular these days and increase efficiency, I still chose to do it manually because I did not have a very high volume of raw data and I find those tools limiting because of the intricacy of qualitative research's unstructured data, its diversity, and how difficult they allow for discoveries and ideas. The most important themes I was looking for were the perceived causes of the floods (pink color), the details on the direct aftermath of the 2009 flood (green colour), the living conditions in Yagma (blue colour) and the reasons for resisting the project (orange colour). Green and red were used for certain keywords that I found useful, mainly shaping the discourse of the story like “illegal”, “trust”, “irresponsible”, ”corruption” etc.

3.3 Ethics and Positionality

In science, ethics refers to the moral questions that derive from any professional activities like research or publication (Proctor, 1998). Social sciences separated itself from the discipline of humanities in the 17th and 18th century (Jesani, 2007). Social sciences are closely related to the behavior, status and relationship between different individuals with their institutions and their physical environment. That means that when undertaking research, the researcher deals with institutions, communities and human individuals. It also means that the way the researcher conducts his study and how and where the results are shared directly impact human beings. According to Henley (2007), social research is the most contested field in research in general. Another factor is that since the researcher is part of the society, even if the methodologies used appear objective, his/her opinions will still impact the research. In the last 50 years and longer, different studies covered the use and abuse of social sciences (Cashmore and Parkinson, 2014). For example, during the Vietnam War, accusations of unethical conducts were made against some US social scientists since most of the areas that were bombed based on findings from social research conducted on the rebel influence (Barnes, 1979).

Because of all these, a researcher needs to have guiding principles when conducting his/her research. Before conducting my research, I was granted ethical approval of the University Ethics Committee, meaning that they ensured that my research did not raise any ethical issues. The committee made sure that my methodology was appropriate and proportionate to the aims of the research. Privacy, Confidentiality and Anonymity were identified by Hammersley et al (2012) as important ethics to consider when doing

research. For this research, permission was asked to the participants prior to the interviews. I did my best to be friendly with them to make them as comfortable as possible. Before starting any interview, I told the participants that the answers would be anonymous and that the material gathered would be strictly confidential, meaning that their names and identities would not be disclosed and that the records would only be accessible by me. When meeting the interviewees, I introduced myself as a student from the city (as one of theirs basically) wanting to explore the issue of urban floods control. I also reminded the candidates that answering any question was entirely their choice and that deciding not to answer will not affect them. Respecting ethics was a priority for me during the data collection.

I am from Ouagadougou, but that does not mean I come to this research strictly as an "insider." The city is a challenging place to conduct research because of the cultural and political diversity of the citizens. More than 27 ethnic groups live in the city, all coming from different villages and speaking different languages (World Atlas, 2018). According to Raheim (2016) the ability to establish informal relationships with others and the political context are two important elements for the researcher to gain the trust of the participants. Getting the participants' consent or getting them to open up about their experiences can be challenging especially if the researcher does not look or act like one of them and seem to be sent by a higher institution (institution they usually see as the oppressor). Even in the case where they agree to participate, perceiving the researcher as an outsider can lead to a "performative" interview instead of an honest one.

As a researcher, it was important to me to reflect on how our shared nationality as well as my status as a "bingiste" shaped the dynamic of the interview. A bingist is a term used by local people of Ouagadougou to qualify people that are originally from the country but live in the western world. They are stereotypically perceived by poorer communities as people that live a better and luxurious life and experience very little struggle. Telling the participant that I was a student studying in Canada immediately led them to see me as a "bingist."

My positionality as a researcher was important during my fieldwork. Initially, I assumed that because I was from the city and genuinely cared about flood issues that the participant would relate to me easily since these two factors would be something we have in common but that was not always the case. Because of the age, gender, economic and social background of the participants, I was considered an outsider for some and an insider for others. It was much easier to talk to people who had a university education as they sympathized with me because they knew the challenges that come with carrying out research. The hardest to talk to were old male participants with no formal education. Certain aspects of the Burkinabe style of communication and friendship were important to establish trust. People tend to be more open when the person communicating with them can properly speak their native language and understand their inside jokes. In Burkina Faso, even if French is the official language of the country, a lot of people see it as "rich people language" and prefer to speak their tribal language. As someone who grew up in the city, I know some of the languages, but my accent definitely makes it clear that I am not use to speaking those languages so it was harder to break the ice with some of the

respondents. Just like Evans (2006) I discovered the importance of maintaining and reminding interviewees of my Burkinabe identity throughout the interviews.

The nature of power relations was not one sided. I held some type of power since I chose the topic and designed the interview, but the respondents had the power to set the conditions of the interviews and decide what questions they wanted to expand more on or which one they wanted to skip, avoid or briefly respond.

Because of my positionality, many of the participants initially saw me as a person they could get aids and benefits from. Some started responding with the hope of assistance and did not hide their disappointment when they realized that there was no compensation involved. One of the flood victims that I interviewed started citing what I believe to be some exaggerated loss from the flood and how they did not receive ANY help from anyone until I heard a voice in the background mentioning “she is just a student”, then the participant was immediately less enthusiastic. Some of them also did not want to talk about the plot they received in Yagma at all. They were more open to the conversation when it came to what they lost. This is justified because most of them were living in difficult conditions and could indeed benefit from some help. It is not uncommon for respondents to believe they can influence the outcome of the research in their favor. For most of my interviews, the situation diffused after a couple of minutes of conversation. It is however important to mention that people remember the events that followed the 2009 flood differently.

3.4 Limits of the Study

As expressed before, initial contact with the participant was done face to face but a follow up interview was conducted over the phone. Technology advancement has completely changed the way that research can be done (Costa and Moreira, 2019). For instance, whereas interviews used to be conducted on a one-on-one basis, cellphones have changed this, as the interviewer and the interviewee do not even need to be in the same state to have a successful interview. Because of how challenging it was for me to be in Burkina Faso for a long enough period of time to conduct the interviews and also the COVID restrictions, I relied on cellphones to keep in touch with the participants of the study. LYU et al. (1998) argues that telephone interviews are a cost-effective way to obtain data. In a study comparing two modes of interviews, Vogl, (2013) found that phone interview and face to face interviews showed very little difference in the results. Fenig et al (1993) found in a study that telephone interviewing is a "reliable and efficient" method of research. All these studies as well as pandemic and time restrictions encouraged me to opt and believe in interviewing my participants over the phone. However, this decision came with a number of challenges.

The first challenge in conducting phone interviews was that it was impossible to read to body language of the participants. It was difficult for me to know what type of emotions the person was revealing. Phutela (2015) argues that body language can communicates more than words. During a face-to-face interview, it is possible to tell if the participant if for example hiding some truth or if he/she feels nervous, but those observations were harder for me to make through the phone. Another challenge was the

difficulty of remaining focused during the entire interview. Irvine (2010) argues that participants get easily distracted during phone interviews and I experienced it to be true. A couple of participants had people discussing in the background. One of the men I interview was interrupted a couple of times by what seemed to be a friend passing by. In these instances, they would stop in the middle of a sentence and forget about what they were saying or simply move on and never come back to that point. I tried to lead the conversation back to the main focus for most of the cases when it happened.

Hershberger and Kavanaugh (2017), argue that phone interviews tend to be limited in complexity. Talking on the phone can be uncomfortable for certain people, especially with someone they do not know, and as such, the interviewers need to get to the point faster and ask fewer questions compared to a face-to-face interview. The effect of this is that some important details may be left untouched. Qualitative interviews require the conversation to be as detailed as possible, but this may be challenging with phone interviews. To conclude, the choice of phone interviews was justified in regard to the little time I had in Burkina and the pandemic that affected the research field this past year as it allowed for proper social distancing due to COVID-19, however I would advise that this type of research be made face to face in the future. I was still able to develop answers to my questions that I believe are relatively sound but just like for any research, particularly considering the very limited number of studies on this topic, it would be helpful to conduct further research to confirm and expand on these findings.

4. Background

4.1 Ouagadougou, the city

Ouagadougou (12.4°N 1.5°W), is the capital city of Burkina Faso, located in the central plateau and also the largest city of the country with 518 km2. The city is part of the Sudano-Sahelian region. Ouagadougou is located around 306 m above sea level.

Figure 1 Burkina Faso on the map

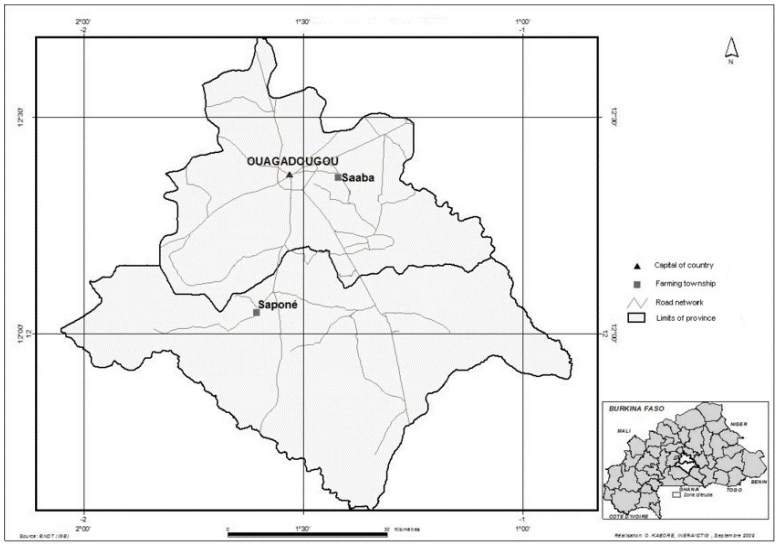

Figure 2: Simplified map of Ouagadougou

Ouagadougou is also the administrative, communications, cultural, and economic center of the country with a population of more than 2 million people (Skinnier, 1974). The geographic location of the city allows it to have a warm semi-arid climate. The average temperature is 30 degrees Celsius with a lowest of 18 degrees from December to January and 40 degrees from Avril to May. The average annual precipitation was 697 mm from 1980 to 1989 and 718 from 1990 to 1999. The highest precipitation recorded in the last century was 924 mm in 2009 (African Development Bank Group, nd).

The country of Burkina Faso is considered one of the poorest with a GDP of US$1141 with 40,1 per cent of the population living below the poverty line (UNDP, 2022). In 50 years, the population increased from 59,126 to 1,475,223 inhabitants (Boyer and Delaunay, 2009).

Just like most African cities, Ouagadougou is dealing with issues linked to rapid urban growth. 46% of the entire population of the country lives in Ouagadougou (Dos Santos et al, 2019). According to data from the UN world population prospect, for 2019, the average population growth rate of the city was 5% which is higher than the national population growth rate, 3%. That led to an important urban spatial expansion that in turn increased the need for infrastructures like drainage, water plants, electrification, and roads. The United Nation predicted that the country's population could go from 20 million in 2020 to 43 million in 2050. (ONU Population Division, 2017).

Population growth was accompanied by urban sprawl. A geographical expansion of the city that went from 14 km2 in 1960 to 520 km2 in 2009 (INSD, 2009) was a consequence of population growth and the increase of individual houses. Boyer and Delaunay (2009) argue that the unplanned and uncontrolled expansion of people in the city led to social and spatial segregation. It is very hard for poorer people to purchase safe lands. According to Rossier et al (2012), 35% of the city lives in spontaneous informal settlements without any permission from the government. He also argues that those people are usually poor and less educated migrants. Their houses are usually made of sun-dried mud blocks. Services like drainage systems, vegetation and paved roads are absent, making them vulnerable to natural disasters (Fournet et al, 2009).

4.2 Floods, a nightmare for the city

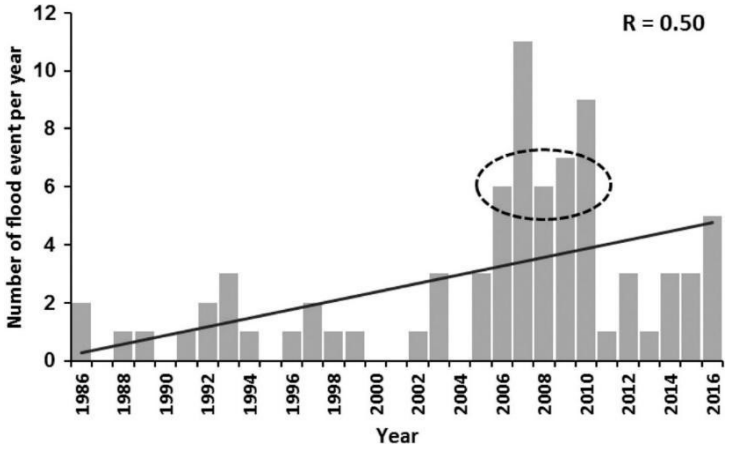

Figure 3: Interannual variation of number of flood events in Burkina Faso. R is the correlation coefficient of the linear trend. The dashed circle represents the period with maximum number of flood events per year (Tazen et al., 2018 p4)

As shown on figure 3, the issue of flood in Burkina Faso is not a new phenomenon. They are yearly events that are predictable but still causes human and economic loss when they strike. As part of the Sudano-Sahelian region, Ouagadougou experiences a rainy season that lasts from May to September and a dry season during the rest of the year. According to Haile (2005), the region experiences a downward trend in rainfall with the increase of drought and famine as a consequence. According to Dos santos et al (2019), rain patterns in Ouagadougou from 1993 to 2010 show a long-term downward trend. The variations were significant with 588 mm in 1997 and 896 mm in 2009 (Dos santos et al, 2019). These 896 mm of rainfall in 2009 was a record for the last twenty years. That record is attributed to the flood event that took place on the 1st of September 2009. It rained for 12 hours straight and 261 mm of water were accumulated that day. According to PNUD (2010) around 180,386 people lost their houses. Radio France International (RFI, 2009) said that, in only 12 hours a third of the total rainfall recorded in 2009 fell on the city. As a city

that is highly unprepared to deal with disaster, that rainfall was considered extreme and caused estimated damages of almost $3 billion US which is a high amount for a country that is among the poorest, most vulnerable and lack adaptation capacities (PNUD and World Bank, 2010).

Schlef (2018) described the consequences of the 2009 flood as follows: (1) in the public institution's category, the national hospital was flooded, some school buildings were damaged and the ones that remained were occupied by displaced victims; (2) for the private goods category, houses were destroyed as well as personal property (e.g., clothing, documents, food, and household items); (3) several roads were unusable; many people could not access electricity and potable water became scarce due to the flooding of an important treatment plant and transfer stations; and (4) on an individual level, people suffered physical health issues like malaria, mental health issues (e.g., fear, a sense of lost control, and adversarial growth in the face of challenge), displacement from their homes, work and study, and loss of life.

4.3 Causes of urban floods in Ouagadougou

In a context of frequent flooding, scholars and other researchers have sought to detail the causes of the foods. The most often citied reason why urban floods occur is heavier rainfall (Mathon et al, 2002). The most common anthropogenic cause cited in research is the insufficiency of stormwater management systems, along with a poor care of dams. It is very common to see different types of waste in drainage canals in the city. Another

frequently cited cause is urban regulations not being respected. Houses are built in flood prone zones near major canals of the city. Even the National hospital was built adjacent to a downstream dam (Schelef, 2018). The city of Ouagadougou is vulnerable to flood risk and also lacks clear adaptation and resilience strategies. Even after the big flood of 2009, populations of Ouagadougou still suffer from the recurrent floods.

An important government conference about flooding consolidated existing research on the causes of flooding. The conference was organized by the African Monsoon Multidisciplinary Analysis (AMMA) in 2018. There, public officials listed seven causes of the flooding (AMMA,2018): The disorganized occupation by the populations of the marshy zones, the bad conduct of the populations (use of gutters as garbage cans) difficulties in resettlement of flood victims, the low level of economic resilience of the populations, the unavailability of localized weather information, the non-respect of the prohibition orders of constructions in the areas at risk of flooding, the silting up of water points (dams), communities limited budget for adequate sanitation. Most of the problems mentioned are issues that directly blame the citizens. As we will see, this is consistent with my research findings. Public officials, that is, tend to blame the flooding on people living in flooded areas. The residents themselves, I will show, had a different perspective.

4.4 Urbanization of Ouagadougou, from colonial times to today

Fournet at al. (2008) provide a helpful history of Ouagadoudou, including the legacies of colonialism in the city today. The book suggests that during the pre-colonial era, the city

was a village inhabited by 5000 people from the Mossi ethnic group and the houses were built with local material, mainly mudbricks and straw. The French took control in 1896 and began to settle some French people in the city after winning against the Mossi army and decided that Ouagadougou would be the capital of Burkina Faso, previously called Haute Volta. After installing electricity in 1923, the colonizers built the city in a way that would lead to segregation. The natives were no longer allowed in certain places and architects and urban planners were moving from France to design and subdivide the city "the French way".

In 1960 Burkina Faso became independent and an important increase of informal settlement occurred. Rural populations that were not previously allowed to be in certain parts of the city started to see Ouagadougou as "the good city" and everybody wanted to move there because of how developed it was. According to the Participatory Slum Upgrading Program (PPAB, 2016), the causes of unformal settlements are caused by population growth, rural migrations, poor governance, economic vulnerability, underpaid work, displacement caused by conflict, natural disasters and climate change, and the lack of affordable housing options. Uncontrolled urban sprawl continues today with around 1/3 of the population of Ouagadougou live in informal settlements. Since 2015, the government decided to stop any subdivision activity until they find a solution to the informal settlement issues and the illegal acquisition of land. These are some of the most glaring legacies of French colonialism. I will return to the question of colonialism and its legacies later in the thesis.

4.5. Yagma relocation plan

The 2009 flood led to an unprecedented response – the relocation plan that I examine in detail in this thesis. With the help of the government and the European commission, the area of Yagma and Basseko were converted into shelters for relocation of the 2009 flood victims. They are both located in the outskirt of the city with Yagma being 20Km northwest, the most popular one and the focus of this study. The 900-ha site was supposed to be shared by 24,000 households. To help them rebuild their lives after the flood, the government gave the victims a plot, 20 sheets of corrugated metal sheet and 1.5t of cements.

As I will explain below, the plan involved many problems. Among them, many people targeted for relocation refused to participate. Not satisfied with the living conditions on the site, many people returned to their previously destroyed houses to try and rebuild. A lot of them complained about the site being too far from professional activities and not being able to afford daily transportation. According to Dos Santos et al. (2019), the people are well aware of the flood risks but still prefer to return to their informal settlement and justify it with the expression “it is always better to sleep on your own mat than that of someone else..” Because they experience the rain only a few times during the year, the balance of costs and benefits lead people to settle for the shared risk. Also, since the area is so risky, it has no market value, so the communities feel like there is no risk of their plot being expropriated by the municipal authorities.

The overview on the flood issue in Burkina Faso makes it possible now to examine the 2009 relocation plan and its social and ecological effects.

5. Findings and discussion

Public officials and flood victims lived in different worlds, a dynamic that became apparent to me when conducting the interviews. When interviewing public officials, they were seated in offices. The environment seemed quiet, and the communication was pleasant. When I interviewed flood victims, they were usually in a noisy location. Noises included a baby crying in the background, or sounds from other family members. The atmosphere felt different.

But they lived in different worlds in other, more important ways as well. The public officials and flood victims viewed flooding and the proper solution to this issue in radically different ways. The public officials linked the causes of the floods to the residents themselves, claiming they were irresponsible in their disposal of trash. The government plan was meant to remove them from a flood-prone location, but it was also, more subtly, meant to responsibilize or develop the residents – to change not just their location, but them. The flood victims, in contrast, saw other reasons for the flooding, including the construction of a major corporate warehouse in their vicinity. They believed there were other solutions to the flooding and, in many cases, preferred to remain in the same location even if flooding was to reoccur in the future. At work in these contrasting views are profound differences in perspectives: a perspective based on technical calculations and

a neo-colonialist vision of development, on the one hand, and a grounded perspective based on relationships to the land and each other, on the other.

5.1 Contrasting perceptions of the causes of the floods

In this section, I discuss the government officials and the citizen' perceptions on the factors that are responsible for floods in Ouagadougou, focusing on the neighborhood of Gounghin. The results that I found are in concordance with the work of scholars like Marks (2015), and Pelling (1999) in that climate change was not viewed as the most important cause of floods. In addition to the heavy rainfalls, according to both the government officials and the flood victims, floods are born from poor land use planning, poor waste management, and various problematic behaviors. My research shows that public officials and citizens perceive the causes of the floods differently, a difference that I will suggest later has important impacts on flood vulnerability. The public officials seem to believe that the causes of the floods are linked to the residents themselves by accusing them of being irresponsible, occupying houses that are located in flood prone areas illegally and not disposing of their waste properly. In contrast, many citizens of Gounghin blamed the floods on the building of WK, an important manufacturing company in the country.

An important finding of my interviews reveals that the government officials blame the floods on the irresponsible and illegal behavior of the citizens. When asked about what they meant by illegal and irresponsible, they frequently mentioned inadequate waste

management, precisely littering, not following the directions ordered by the government. One of the public officials explained:

> It is the obstruction of the gutters by the population that leads to these cases of flooding. Most of the gutters that we have seen, in particular the grand canal which drains water towards the Bangr-Weogo Urban Park, is completely blocked by rubbish and household waste.

Another one expressed a similar view, explained:

> People are irresponsible with their waste. The dams of the city are filled with all types of nasty things. So many campaigns have been conducted to talk about the danger of not disposing of household waste properly, but nothing changes. It is very sad but also a consequence of poverty and lack of education. This flood issue will hardly go away if that waste problem persists.

When I asked how the government was organized to deal with household waste, they did not seem to have a reliable structure in place. As they explained, people have to pay by themselves to get bins installed outside or in their houses and they also have to pay a weekly or biweekly fee for waste disposal services. That fee varies depending on the neighborhood and the type of service. In Ouagadougou, door to door waste collection is mainly carried out by private companies. It consists of going to subscribers and picking up the garbage following a pickup schedule. Some other independent workers roam the sectors and collect garbage on an ad hoc basis to make money occasionally. This type of approach is practiced with households, administrative offices, commercial and even hospital services. In sum, the residents are responsible for their own waste; they must pay

one service or another to have it picked up. Failing to do so, for the public officials, means the residents are not responsible.

If this system is burdensome, public officials stressed that it had been well explained to the residents. Over the years, different campaigns were organized by the ministry of the environment and several NGOs to sensitize the population to waste pollution. In the past, some of them even used famous comedians from the country to engage in short funny videos that aimed at spreading the message on how littering was bad for the environment. The campaigns were also broadcasted on the radio, a much more popular media for poorer communities of Burkina Faso in order for the information to be more accessible. As a resident of Ouaga, I remember seeing those campaigns. They were very popular because of the funny characters they involved, however they focused on how much littering was harmful for the environment and local people but did not really teach how to dispose of the waste, especially if one cannot afford the private waste collection. And so, the complexity of the system remained – along, more importantly, with its cost. The fact is that there is no structure in place to collect household wastes without charging a fee. People are responsible for their own waste and have to subscribe to private companies for weekly collections.

When pressed, some public officials recognized the fees charged for waste pickup could be burdensome. But then, they would say, the government does not have the structure in place for collecting individual household's waste for free. They also described the current, fee-based system as a generator of employment. One government official explained:

> The government cannot afford to collect household waste individually for the time being. However, it is important to acknowledge that those independent workers and private companies collecting those waste find a source of income doing so, reducing the rate of unemployment in the country. It is a very easy business to start with almost guaranteed customers and even if the workers do not make much it is still better than doing nothing.

This system, even if it is a good way for multiple young people and for women to have a stream of income, fails to consider the fact that some people cannot afford that service and will litter instead of paying for waste disposal. The provision of employment to a few is described as an employment program, sometimes even an anti-poverty program, when the same measures impose costs that poorer people cannot afford to pay. The (il)logic of this argument exists alongside the claim, equally problematic, that poor people are to blame for improper waste disposal and, thus, the flooding of their homes.

Putting the blame of environmental damages on the affected citizen themselves is not a new unique to Ouaga. Different studies have blamed poor communities' practices as responsible for environmental damages. Etongo et al (2016) comment on how a vicious circle (in logic) treats the poor as victims but also agents of environmental degradation. In 1972, Indira Gandhi was giving a speech at the Stockholm conference that became controversial years later after she mentioned: "Are not poverty and need the greatest polluters (Ramesh,2018)?" There are also scholars like Njoku et al. (2015), who argue that municipal solid waste management is a factor causing flooding in Sub Saharan Africa (without necessarily blaming poor people for these practices). In this work, like the views of public officials, flooding is seen as technical problem. It is produced, in part, by poor waste management. Even when the system of waste management fails to cater to

everyone's need, as it does in Ouaga, the same framing of the issue remains. The issue is waste management, and the fact that the current system is not solving the problem of flooding needs to be blamed on someone – in the case of my study, the residents. Political ecology as a discipline emerged to oppose environmental arguments that blame poor people for environmental degradation, e.g. arguments about slash and burn farmers destroying rainforest and population pressure resulting in resource scarcity and especially common property management leading to waste and over consumption, tragedy of the commons.

While referring to the citizens that often litter on the roads, a writer from a local newspaper wrote: "how to apprehend these enemies of society and punish them at the height of their crime?" (Siguire, 2021). In a similar tone, another one wrote that the residents who engage in this type of reprehensible behavior purposely forget that it is the water from the polluted dams that is treated and reconditioned for our own consumption (Ouoba, 2020). A writer from Le Pays news outlet with the nickname "le fou" wrote: "It is the lack of severity that encourages some people to be irresponsible" after describing how the government was right to no longer help flood victims that had decided to resist the relocation plan (Le Fou, 2018).

Not surprisingly, the residents of Gounghin had a different perspective on the causes of the flooding. One theme from the interviews was waste disposal. I noticed that the residents do not deny the problematic waste disposal practices. They did not, however, see "irresponsibility" as the issue. Some residents said that a lot of people simply did not know where and how to dispose of their waste. One respondent mentioned: "sometimes

you see a pile of garbage so you just add yours on top thinking that it will not change anything." Some residents also talked about the struggle for people to spend money on something when they do not see its value. One resident explained:

> It is not fair to blame the population for the waste issues. The government is supposed to take care of that. People are poor and busy… People are people and people have garbage. It is expected from a population so the government should be responsible for that. People see waste as something that has no value at all so why would they pay to get rid of something they do not even want?

If some residents admitted that waste disposal was a problem, then, they saw the reason for the problem as something other than their own irresponsibility.

A more frequent theme in the interviews was an altogether different source of the flooding: the WK warehouse. During the interviews, many respondents had hard feelings toward the WK building. They claimed to have lived in the area since the 80s and never experienced any flooding before WK built their warehouse in the neighborhood. I was surprised that the residents from Gounghin that I talked to believed that WK was to blame for the flooding. They claimed that WK was responsible for the floods. One interviewee got very passionate while talking about what she believes to be the cause of the flood. After I asked her why she thought that WK was responsible for the flood she angrily responded, "I do not think, I know ."

Interestingly, discussions of the WK building also led to an analysis of the political system in the city and the country. The residents claim that WK built their warehouse without an appropriate authorization. Many claimed, as well, that the building was

developed – with no trace of legal authorization – due to the company's close relationship with the government. One citizen said:

> Nobody was able to tell us how WK got their permit to build there. In what kind of country can such a big warehouse be installed somewhere, and nobody knows how? If it is not a lie, then it is even worst. It is negligence towards the population wellbeing and that is not responsible…The voice of the rich will always be louder than ours here.

My understanding is that the citizens believe that there is a sort of arrangement or a friendship between the management of WK and the government, a relationship that may allow the company to occupy the land without needing legal authorization. There are indeed indications in media reports of close ties between WK and the government, such as important government officials visiting the family of the CEO (News Abidjan, 2018) or the prime minister of 2014 visiting a WK warehouse and mentioning how respectable the CEO was (Balima, 2014). The comments under the article seemed to show that the public was not comfortable with the lack of transparency related to that visit. Further feeding the suspicions of the citizens, in 2016, the National Assembly established a Parliamentary Inquiry Committee on urban land in Burkina Faso. An official report was published and according to that report, the town hall never knew how WK was able to obtain that land and who authorized it (ASSEMBLEE NATIONALE, 2016). Political protests also tell a story about WK. During the year 2014 and 2015, a series of violent protests took place in Ouagadougou to force the ex-president Blaise Compaore to step down after being in power for 27 years straight. In the turmoil, the population angrily destroyed important buildings but also went for the houses of some people in power as well as their allies. One of the buildings of WK (not the one in Ghougin) was allegedly burnt down by the

population who believed that the company was an ally of the political party in power that they wanted to step down. Officially, the cause of the fire was reported as unknown (Ouedraogo, 2015).

For many residents, the WK building is not just the reason for the flooding – removing the building is also the solution. One resident, resistant to moving, said she would not move because it is her belief that those causing the issue should be the one moving, in this case WK. A resident stated "They only cares about pleasing people with money, they do not care about us. We have the right to stay here. Our entire lives are here." The suggestion that WK, as well as the close ties between WK and the government, are responsible for the flooding points in a different direction than the perspectives of public officials. Political ecologists like Robbins (2012) argue that environmental issues are caused by power structures' over exploitation and poor management. The residents, in other words, express an analysis of ecological issues that centers the question of power, a view similar to that of political ecologists.

The ties between WK and the government cannot be decisively linked to the building of the WK warehouse. However, the question of power remains. The fact that an official investigation was open, that a report was published acknowledging that the town hall does not know how the company was able to get the land, that a whole community is complaining about being flooded because of the building, and despite all this, WK is not being pressured to move while some locals were asked to leave their homes suggests some form of power imbalance. Power structures determines who is eligible to access urban land and, who is disempowered, marginalized, and pressured to leave the space that they

call home. The testimonies of flood victims, which emphasized how a relationship between the state and a large corporation has caused the flooding, are consistent with the general view of political ecology. The latter seeks to connect environmental changes and degradation to unequal power relations; power relations create winners and loser when it comes to environmental changes, producing uneven vulnerabilities (Blaikie et al, 2014).

Building on Marks (2015), my results show the difference in perception between the victims of flood and the most powerful. The author suggests that politicians in Bangkok were responsible for flooding in that city. The government of Bankgok blamed the flood on climate change while the author argues that land use change induced by urbanization as well as concretization increasing run off, canals fillings and the over pumping of groundwater. The author claims that the politicians were businessmen benefiting from urbanization in the city, blaming the occurrence of the flood on the capitalist agenda of the most powerful. In a similar way, my results show a difference in perception of the causes of the flood appear. On one hand, the government blaming it on problematic waste disposal practices and the refusal to leave flood prone zones while, on the other, the citizens blame the capitalist agenda of the corporate warehouse for the floods.

But the power relations in Ouagadougou also need to be placed in a broader context. I argue that the pattern of exercising power on the land to benefits the rich can be linked back to colonization practices. Just like the education system or the political one, urban planning and other areas of social development are highly influenced by the heritage of the colonial area. During colonization the majority of the African population were not welcomed in urban spaces. The French designed the cities for themselves, not

caring for the local population needs that they often described as primitive. The building codes and standard implemented by the French were used as a tool for segregation as they did not want to be mix with the poorer indigenous population. Instead, they wanted the houses and neighborhood to be able to attract new colonial administrators and make it easier for them to settle (Njoh, 2009; Mabogunje, 1990).

Njoh (2015) classified the characteristics of colonial urban planning into different points that can mirror the city governance that allow WK to have power over the land. Just like the Europeans came to Africa with the promise to modernize what they considered to be backward spatial, physical and social systems of human settlement; the concept of modernization is also present in the advertisement campaigns of WK. The warehouse was built to modernize the way the country uses transportation. Motorcycles are the most popular way of transportation in the city and for years WK has been offering new, fancy, and attractive designs to the citizens, instituting themselves as a modern enterprise that aims at providing the citizen from Burkina Faso with less backwards vehicles. Colonizers were mainly worried about their economic development objectives. Similarly, it is the citizens' understanding that WK is being blind to the public struggle and keeps working towards their capitalist agenda. With the high number of motorcycles that the enterprise produces daily, they are very successful, but one cannot understand that success without understanding the culture of motorcycles in Burkina Faso. Most households have at least one motorcycle. Some have as many as five. Many people would actually prefer to ride a motorcycle even if they have enough money for a car. For the middle- and high-income families, a child is expected to have their first motorcycle when they hit 15 years old. It is a

sort of unwritten tradition. It is very hard to know how much WK makes moneywise, but they have the reputation of being one of the leaders in the country when it comes to the booming motorcycle business.

There are colonial echoes, as well, in the organization of the city. Colonizers have tendencies to ensure racial residential segregation. In the present, a form of social segregation is produced from WK occupying the land if the claims about them being responsible for the floods happen to be true. They would represent a rich enterprise occupying the land at the expense of the less socially powerful. Lawhon et al (2013) argues that Africa is a victim of the limitation of colonial impulses as the State is often not capable of structuring the cities and the citizens. Building on Robinson and Parnell (2011), the author suggests that elites navigate the city management and administration and shape the ideologies of a media-driven public (Pieterse, 2012). From my personal observations, yes, some people were asked to leave the neighborhood as their portion of land was delimited as flood prone; however, within the same neighborhood, there are also some prestigious newly built houses that resist just fine to the rainy season. All these observations allow me to push my analysis around the idea that the way that the government and the flood victims understand land and belonging(s) is similar to the way that that a colonizer and a colonized person might understand it.

When it came to the cases of the flooding, then, a wide gap separated the perspectives of public officials and city residents. What I noticed from my interviews is that the perception of the causes of the floods from both the government officials and the flood victims is a story of irresponsibility, ignorance, and lack of trust. On one side, the

public officials blame the flood victims for being irresponsible with their choice of remaining in flood prone zones and their waste disposal practices: on the other, the citizens blame the government for being irresponsible with how the building authorizations are delivered in a harmful way, and irresponsible on how residents are left to deal with the cost of the waste disposal. For the government officials, the citizens have ignorant living habits and for the citizen, the government is ignorant of the reality of community life. the community lives by. For the citizens of Gounghin, that reality is that their neighborhood was not a flood prone area before WK built their warehouse.

5.2 Different understanding of land and belonging to/of the land

In addition to contrasting perspectives on the causes of the flooding, public officials and flood victims expressed different visions of propriety – different visions of what it means to claim land/space. A recurring theme in my interviews with public officials was the "illegitimacy" or "illegality" of the residents' settlements. This section focuses on the people living in informal settlements and their experience with the flooding. In those neighborhoods, people are often migrants with a lower level of education. Their neighborhoods are filled with single family homes built from sun dried mud blocks. Paved roads and drainage systems are basically inexistent, making the zone vulnerable to flooding. According to John (2020), informal settlements are at higher risks of floods. In the city of Ouagadougou, they make up a third of the total area of the city with around 35% of the households living in those unzoned neighborhoods (Boyer & Delaunay, 2009). The

officials had a vision of what it means to occupy space legitimately, and those residents clearly did not meet this standard. The officials talked about laws and regulations and criticized the residents for violating them. The residents, in contrast, talked about a complex process that landed them in the flood zone. They had their own vision of what it means to occupy space. They also emphasized the social relations that constitute belonging – a sense that belonging in a space mean belonging with a group of people.

The public officials I interviewed spoke frequently about laws and regulations. Or rather, they spoke about the residents' violation of these laws and regulations. Many officials spoke, for example, about the process through which the residents had settled on the land, a process that they termed "illegal." Some people come from the villages, one public official explained, "they usually get their plot illegally." When I asked for details about these illegal acquisitions of land their answer was that villagers just arrive in the city, see an empty land and assume they can build their house on it. I was also told that the government placed red milestones as markers to show where the lands had been declared flood prone and inadequate for habitation, but people choose to ignore them and remain there. For the public officials, then, there was a clear process through which land should be acquired. The land, for them, was subject to clear property boundaries, which were registered in a deed, and the proper acquisition of land meant acquiring a land title. In theory, the law on Agrarian and Land Reorganization (RAF) adopted in 1984 in Burkina Faso establishes that land belongs to the state (Faure, 1995). The government is allowed to transfer the ownership of the land to people and issue a title deed.

The public officials also talked about development controls. There was a proper process, then, not just for acquiring land, but for building on it. A public official mentioned that in theory, this was a list of what was needed to "legally" obtain a building permit in Ouagadougou: a stamped request addressed to the mayor of the municipality of Ouagadougou or to the minister in charge of construction, the boundary plan (in two original copies); receipts for payment of residence taxes for the past three years; a plan for septic tanks or connection to the sewer network issued by ONEA; a site plan of the building with the location of the septic tanks; architectural plans for each level of the building; the detailed sections of the project; the descriptive estimate of the construction work; an inventory of existing constructions and the redevelopment plan for the extension, modification and rehabilitation works; a soil study report prepared by a laboratory approved by the State; a calculation note; a formwork and reinforcement plan for the building structure; a fire safety study note drawn up by an approved person; and a few other smaller steps. In a letter to the prime minister published in the news outlet, Le Pays, a citizen mentioned his difficulties to obtain a building permit and reminds readers how the requirements are impossible to meet for most Burkinabe citizens. The writer mentions that he was not against the principle of acquiring a permit as a prerequisite for any construction project, however he believed that the costs were too exorbitant and out of reach for most people (BAKIONO, 2012).

The public officials stressed the legitimacy of this process with little acknowledgment for its complexity. The assumption is that the citizens knew the proper

process, or should have known it, but were choosing to violate it. One public official put the matter plainly:

> Some of the people coming to the city choose to build their homes on land that has been declared prone to flooding. They refuse to follow the legal way to acquire the land and end up having to deal with recurrent flooding.

In a similar vein, another public official stressed both the laws violation by the residents, as well as the efforts the government had made to teach them the proper process – efforts that were made in vain, as the residents refused to follow instructions. Another one mentioned that: "there is a lack of discipline in this town. People do not listen and every year we have to deal with the same issues. There is a reason why some lands are not supposed to be used for houses."

Ultimately, these claims about illegality were linked to the public officials' understanding of the flooding. The residents were experiencing flooding due to their improper disposal of their garbage (as I mentioned above), but also their violation of the rules about construction... As one official put it, "There is a reason why some lands are not supposed to be used for houses." Following the rules, then, would have prevented people from living in flood-prone areas or building in ways that rendered them vulnerable to floods. Failing to follow the rules had consequences. When I asked public officials why the residents did not follow the rules, despite the rules being in the residents' best interests, they usually replied that the residents lacked discipline or that they knew that they had a chance to be allocated a new plot in the next emergency situation by staying in informal settlements.

Sometimes, public officials as well as local journalists seem to have a big focus on the word “illegal.” When asked why they think people choose to build there knowing the dangers, they would use different terms, such as urban incivility, and stubbornness. The government in this view is responsible and establishes laws and regulations that serve people’s best interest. The residents violate these rules and end up harming themselves. A local journalist described the main cause of flooding as the uncivil behavior of men and women, while the second cause the prevalence of informal settlements. The writer mentioned:

> One can even wonder if some people who inhabit these places do not find pleasure in flirting with death. Because, there are, among those who live in the non-loti, people who have houses in the subdivided areas but who, for monetary reasons, persist willingly to remain in the non-loti area (Sidzabda, 2021).

Only after those claims does the writer consider the role of the government, particularly inadequate city planning, in the flood situation.

In addition to violating land acquisition and construction rules, several plots had been allocated to citizens in order to move them from the flood prone zones they occupy but some of them just refused to leave. After the 2009 flood for example, the citizens who had lost their houses were offered the right to a land title on a lot, along with 20 iron sheets, 10 bags of cement, and CFA 50,000 (CAD 120) to rebuild their houses. When asked one of the public officials why Yagma was the site that was picked to displace people, the answer was that it was the most obvious administrative reserve that was big enough and adequate to receive 24,000 people immediately. They also mentioned that the local people

had to be compensated for receiving so many people at once and that compensation of the local population of Yagma was at the time being taken care of. Also, the government already had development plans for the area, and it was better than choosing a place where "everything would have to be done."

A public statement delivered by the minister of housing and urbanism at the national assembly confirmed that both citizens from formal and informal settlements were eligible to receive a plot in Yagma (Premier ministère du Burkina Faso, 2010). The flood prone zones were delimited by the government and citizens were warned to not build there. However, a few years later, a large proportion of the relocated population moved back to their previous location. A government official mentioned that since the flood prone zones of the city were delimited and citizens were warned to leave, they decided to no longer provide help to the people who refused to move. "That was the price to pay. It is not possible to spend money on the same people every year when they have been warned to leave and know very well what is going to happen if they stay there."

The problem of illegal housing is important in Burkina Faso. One of the NGO workers pointed out the conditions for obtaining a building permit in the city were not realistic for the average Burkinabe citizen: "The government must work to further facilitate the conditions for obtaining housing legal documents. Officially, it is a long process that can be costly with paperwork most people do not even understand. We must not copy the French texts entirely." Another NGO worker mentioned, "we have to adapt them to the reality of the average person here."

Like the causes of the flooding, the residents viewed the matter of legal tenure very differently. When I asked them how they ended up in informal settlements, they told detailed stories of migration from their village to the city. One of the flood victims that I interviewed said that they came to the city to improve their life and provide for their family. They talked about how grateful they are for the relationship with family members already installed in the city. Thanks to their cousin, they were able to get a piece of land and build a tiny living space. I sensed some joy in his voice when he mentioned the memories from his neighbors and how they positively surprised him by being more helpful and supportive than he would have expected them to be. He also emphasized that the money from the job he managed to find in the city did not permit him to find a better place than that one:

> I came from the village to find a job and help my family. When I first arrived in Ouagadougou, I only had 20.000 fcfa (around 45 cad) in my pocket. My cousin was already installed in the city, so he generously divided his land, gave me a portion and helped me build my little place. I will always be grateful for everything he did. I remember the neighbors also helping to put everything together. I used to hear that people in the city are mean, but they surprisingly were very helpful. I had a place where I could sleep and that was a big burden that was off my shoulders. It was hard but we all shared great memories too. I am a housekeeper and all the money that I make goes back to the village to feed my wife and kids.

The story from this participant involves a different perspective on how one should settle on land. For them, having family and a community in one of the informal settlements made it legitimate for them to settle there. They did not mention any construction permit at all, almost as if they were not even aware of what that was. They settled in a flood

prone zone because it made sense to live near their family that was already installed there and because that is all they could afford.

Another respondent had a different story. He considered that he had the right to build on the land because he spent money to be able to build on the land. Who that money went to did not seem to be his concern as long as he had done his part:

> They told me I was not allowed to build there because it was illegal but when I came from the village, I used my savings to buy the rights to build on this land. I bought it from the old man that used to live not far but he passed away now. Public agents say I am not allowed to build there …

It is unclear if the respondent has been a victim of house sale through fraud, meaning that whoever sold that land sold a land that they did not own, according to the government definition of ownership. It is still a blurred case since the seller could have also believed himself to be the "legitimate" owner of the piece that he sold since, as mentioned before, the word "legitimate" in this context has a different understanding depending on who is referring to it.

The respondent above bought the rights to the land, so he considered himself the owner, or at least the development owner. He did not feel the need to have some legal paperwork however for the public officials, that paperwork is needed in order to be considered an owner. Hernando de Soto in the mystery of capital begins by talking about how prevalent property without state sanction is in the world. It is extremely common throughout the Global South (Pérez, 2002). The resident's claims show that the individual does not actually understand that the money did not go to the government officials. For

them, they had the right to build on the land because they paid for it. So, the interviews revealed that the residents understanding of belonging of/to the land involved being with a like-minded community or paying for the rights to build on that land:

> Where are we even supposed to go? Our entire lives are here. No amount of compensation or money can replace what we lost here. Even if money is given, what about the photo albums that were lost? The souvenirs my children' childhood?

How to explain the different perspectives on belonging on the part of public officials and the residents? It is clear their perspectives differed and, as political ecology would suggest, these differences are an effect of power relations. Neo-Marxist and postructuralist political ecology perspectives suggest that social structures that were historically experienced produce the human environments that we witness today. As I argued in the last section, however, these power relations need to be seen in a broader historical context. We need to see how the perspective of the state is that of a postcolonial state. The existence of informal settlements, for one thing, can be traced to the policies of Burkina Faso during and after colonial rule. This is the heritage left by French colonization. Just like the education system or the political one, urban planning and other areas of social development are highly influenced by the western way, specifically the French one that they inherited from the colonial area. During colonization the majority of the African population lived in rural places. Postcolonial policies both encouraged rural-to-urban migration and involved hostility toward the new urban residents. Laws were in place to stop rural citizen from entering cities, but nothing was done to address the reasons rural people wanted or needed to move.

The first issue that the post-colonial government did not consider, once obtaining independence, was the high difference in the quality of lives between rural and urban population. Until these days, urban development is being favored and rural ones completely neglected. Rural populations are displaced every year in Africa for international companies to exploit the rural lands. Those are usually agricultural, oil and mineral companies. They are known for leaving the zones environmentally damaged and the local population at risk of diverse environmental hazards that lead to the population feeling unsafe and/or jobless with no choice but moving to the city for a better lifestyle. It is fair to assume that land confiscation and encroachment on rural land are major factors in the rapid urbanization of Africa; in turn, this has resulted in overpopulation of cities and the multiplication of informal settlements. Even if French urban planning was cultural imperialism, it was described as an element of modernization as the aim was to completely change the way of life and the geographical organization of Africans. The French designed the cities for themselves, not by caring for the local population's needs that they often described as primitive. The post-colonial state inherited this perspective.

Public officials' perspective on belonging of/to the land can also be traced to colonial forms of land titling. Before Africa was colonized, the land tenure system operated on the communal ownership of land (Biebuyck, 1966). Occupancy used to be the key to ownership, leading to a system where the allocation of land was claimed by original occupancy of different lineages, clans and individuals (Gluckman, 1941). Land could not be sold. Only the right to use the land could be sold. That means that if a land belonged to a family, they were the owners of that land forever. They could however allow another

individual or family to use that land for a specific purpose (usually agriculture) in exchange of goods, services or money. Ikr (1984) quoted a West African chief: “I conceive that land belongs to a vast family of which many are dead, few are living and countless members are still unborn.” Traditional African people that had limited contact with the modern lifestyle still have that perception of land. In some cases, those that the government officials call informal settlers are people that believe that they do have the right to the land because a family member occupied the land before or because they “found it” first.

With colonization, the French required all transaction in land to be registered (Njoh, 2015). Also, “unoccupied” lands were converted into the possession of the colonial states. According to Hailey (1938), the French decided in 1830 to install legal controls on transactions that were related to the land. The building codes and standard implemented by the French were used a tool for segregation as they did not want to be mix with the poorer indigenous population. Instead they wanted the houses and neighborhood to be able to attract new colonial administrators and make it easier for them to settle. From land titling to building codes, then, a colonial regime of belonging was installed.

This colonial approach continues into the present in many ways. The way that traditional principles and modern law are in contradiction causes harm to the cohesion of communities. With the non-stop increase of rural-to-urban migration, villagers that are used to the traditional principles of land tenure immigrate to Ouagadougou and apply what they know of land ownership to the vacant lands that they find. A huge disconnect seems to exist between the government officials and those population. This reminds us of

Lawhon et al (2013) mentioning the need for a situated urban political ecology to involve observing everyday practices, in this case land acquisition by rural Africans.

For the government, the state owns the land. The proper way to acquire the land is through the legal paperwork, a process that is foreign to most of the residents from informal settlements. Contemporary urban planning in Burkina Faso is just a continuity of the legacy with no real change to adapt the local population and traditional people with land acquisition laws and building standards that are not relevant to the traditional African experience. As mentioned by Crawford Young's in his analysis of the post-colonial state:

> Although we commonly describe the independent polities as "new states", in reality they (are) successors to the colonial regime, inheriting its structures, its quotidian routines and practices, and its more hidden normative theories of governance. Thus, everyday reason of state, as it imposed its logic on the new rulers, incorporated subliminal codes of operation bearing the imprint of their colonial predecessors.

When it came to the different perspectives on legitimate possession of the land, another gap separated the perspectives of public officials and city residents. I noticed from my interviews that the perception of land ownership from the government involves contemporary bureaucratic steps while the residents that mostly come from rural areas still view the legitimate possession of the land through the ‘first come first served’ lens and feel entitled to ownership as long as a family member allows them to. As suggested by political ecology, these differences are related to power. The government in many cases has the power to invalidate the claims that the citizens have to land and dismisses their land related traditional values in favor of the system inherited by the French after

colonialism. The interviews indicate a continuity of the colonial history with power passed from the French colonizers to the local government. As I will now show, the issue of belonging – to whom the land belonged – also shaped the relocation plan.

5.3 Criteria for being officially recognized as a flood victim

Another source of conflict was regarding the criteria that the government used to decide who was eligible for flood relief. This section explores how the government determined who was eligible for relocation and how the citizen found that process unfair and even degrading, leading some to separate from their families and lose their jobs. The government established what might appear to be a straightforward system. The main criteria for inclusion in the general flood relief program was that the citizens that were given a plot at Yagma as well as the building materials had to have their houses "badly damaged," that they had found refuge in one of the government temporary shelters, and that they be the official owner of the land hosting the house that was destroyed. In practice, these criteria are less straightforward than they might appear, and they depart significantly from residents' sense of who should be included in the program. This section examines these different perspectives, as well as the process through which the government approach was established.

As mentioned in previous sections, the decision to relocate people was made by the government after the 2009 flood. The area that was picked is called Yagma and is located outside the city of Ouagadougou. 25,000 households were supposed to move there. It is

important to notice that moving to Yagma did not mean moving to a fully equipped house. Rather, residents were offered the right to a land title on a lot, along with 20 iron sheets, 10 bags of cement, and CFA 50,000 (CAD 120) to rebuild their houses there themselves. According to Dos Santos (2019) around 33,172 houses were completely destroyed. That means that not everyone was going to be allowed to move. Criteria were needed because the number of victims was too high for the space available at the relocation sites. As one government official explained: “The government did not have enough space to relocate all these people and needed to impose some criteria for eligibility.” One goal of the criteria, then, was to identify people to not give land titles to. There was also a sense that people might try to obtain a plot for free without being affected enough by the flood. As I explain below, the government thought that some houses were not “damaged enough” for the victims to need the plot and building materials.

In general, the government sought to provide relief to people who were victims of the flooding – and not those who were not. An important task, then, was identifying flood victims. Right after the flood, the first action the government took was to conduct a census. The censuses have been numerous. For example, the Town Hall, the mayors district, the National Emergency Relief Council and the Red Cross have all made different censuses to identify flood victims - as beneficiaries of their programs. Each institution needed to make their own census when they could have all used the one from the town hall, for example, to identify their beneficiaries. That means that victims who needed help from the government and help from NGOs had to register multiple time for each institution they wanted to benefit from. Most NGOs conducted a census to provide food,

blankets, and medicines while the government's census involved providing people with a land title. A report financed by the management and impacts of climate change (GICC) recognized the importance of gathering information on the criteria recognition of the victim (GICC-MEDDAAT, 2011). The report acknowledges that this information is not very present in the report produced by the government's institutions and in the media, and I would agree.

According to their findings, one element of the government criteria was having participated in an early relief program. When the disaster happened, the government accommodated some public schools as temporary public official refuges for the victims. The first criterion for recognizing the victim was linked to having found refuge in a public official refuge like one of the schools. Only people who had found refuge in one of the institutional shelters were allowed to register as flood victim. The government officials believe that the shelters were a good way to have everyone at the same place and make the counting efficient, as well as distributing the emergency aids faster. Those who had found refuge with relatives or friends were therefore not recognized as disaster victims (Lassailly Jacobs and Peyraut, 2016). One of the public officials answered:

> Having all the victims together made the count and the logistics of aid distribution easier… It was an emergency and the government had to act fast while avoiding opportunists … It was also beneficial for the victims as many had nowhere to go.

In addition to having stayed in a relief shelter, two other criteria were established. The second criterion was having lost a house or having a "badly damaged" house. No clear

criteria were given to me regarding what was considered “very” damaged. Implied in this criterion, moreover, was a third: people wanting the official flood victim status had to be the owners of the houses that were destroyed and had to show a property title with their names on it. Even though a large number of the victims were tenants, they were not entitled to this recognition. Such a criterion is not uncommon. A study from Lassailly Jacobs and Peyraut (2016) on the social and spatial inequality from flood induced displacements in Burkina Faso mentioned the same criterion being used.

The last criterion - being the official owner of the house – returns us to the issue of belonging. Some residents claim they were excluded from the relocation plan because they did not hold proper title to their land. However, all the citizens do not remember the event the same way, and it seems there were nuances and complexities to the process. When I asked the citizens about their eligibility with the relocation project, two different groups of respondents emerged. The first group constituted the residents who believed that they did not receive enough land, as the government only gave them one plot for the entire compound, but they would have moved if they had the opportunity to. In informal settlements, it is common for one compound to host multiple families. After the flood, each family was expecting to be compensated but the citizens claim the government in many cases gave one plot for the entire compound and one person had to be designated as the new plot legal owner. Many of the citizens from informal settlements live in houses that are in poor conditions, made from mud with low resistance to environmental disasters. Most of them are recurrent victims of flooding and are asked to leave but claim that they have no idea where they can go. As mentioned by one of the respondents: “we

are just doing what we can to survive." Many of them considered it as an opportunity to have houses in better conditions that would be made from concrete and resist floods.

Interestingly, the second group of people was made of citizens who had no problem moving, so long as they were compensated adequately. As one resident explained: "I find no problem in leaving this plot for a more viable area, provided that the government compensates me up what is reasonable … We managed to build a strong sense of community and we can always count on each other." In the end, however, many of these residents ended up selling their plot in Yagma and moving back to their original flood prone houses. When I asked why they did this, they replied that the reason why they moved back was because the living conditions were not appropriate. The government however declared war on informal settlements since 2014 with a decree pronounced by the ministry of urbanism: the suspension of allotment or restructuring operations in urban and rural municipalities in Ouagadougou and other cities, the allocation of plots and census operations with intent to an allotment are prohibited (Ministère de l'Habitat et de l'urbanisme, 2015).

While the two groups differ on certain issues, they expressed a common feeling of distrust toward the government and sometimes a feeling of injustice. The feelings of residents are similar to those found in other studies. Nikuze et al (2019), studied a relocation program in Kigali, Rwanda. The authors argue that the affected informal settlers felt excluded and were left with a feeling of unfairness and distrust towards the government. They claimed that they lost their social networks and felt impoverished and marginalized after the relocation. They suffered from losing their jobs, stress and food

insecurity after the relocation. Similarly, the participants of my study expressed they felt abandoned by the government asking them to leave without having an “adequate” plan to offer. My study is however different than Nikuze et al (2020) and Castelo (2019) in the sense that the informal settlers were not against relocating if they had proper compensation and if the new location fulfilled their needs. This is consistent with my findings for the second group of residents.

It is worth looking more closely at how government officials treated the question of land during the relocation process. The uncertainty of land claims or titles was partially addressed by the government in the relocation plan. There was an effort, specifically, to deliver land titles to the inhabitants of informal settlements. The process, however, appears to have been rushed and limited in its reach. Legalizing informal settlers is a process that usually takes time but the nature of the emergency lead institutions to proceed with the title delivery relatively fast. One public official mentioned:

> The government could only deliver one plot per households. However, the structure of a household in informal settlements is not straight forward. Sometime multiple households live in the same compound, so the land title needed to have the name of the head of the family.

For some people, a problem arises from the pressure to delegate who “the head of the family” would be.

Looking at the relocation process also reveals the tenuousness of the criteria established by the government. The three criteria, even if they could be justified, proved incredibly difficult to put into practice. After the flood, multiple government agents went

on the flooded sites to assess the damages and make a census of the houses that were destroyed. Some people did not have their houses registered but believed that their houses were damaged enough to be eligible for new plots. Those cases were treated individually. One of the government officials answered:

> We had to deal with all types of drama and all type of people. Many lied to try to receive a free plot. In a situation of crisis when some people are suffering, some people were not compassionate and lacked discipline.

Claims about residents "lying" were a common theme in my interviews. One public official mentioned remembering a man presenting himself to request for a plot "only" because one wall of his external kitchen had fallen. My personal understanding was that the definition of what "badly damaged" meant was completely up to whoever was in charge of dealing with the flood victim in front of him. GICC-MEDDAAT (2011) also mentioned not getting a clear criterion for what "badly damaged" meant. The public officials had the power to decide what house they considered damaged enough and in the main time who deserved to be allocated a new land and some building material. That constitutes a huge gap in power between the flood victims and the government officials. In cases where government officials had different perspectives on what constituted "badly damaged" than residents, the former accused the latter of lying. There was a problem with the dishonest residents, then, not the ambiguous and possibly too-restrictive system of qualifications.

If government officials believed their system was "straightforward," the residents saw things otherwise. One of the major themes in my interviews with the residents,

indeed, was the chaotic and inefficient process through which the relocation program was implemented. The citizens that were victims of the flood complained about how the government officials handled the aftermath of the flood. One of the residents expressed:

> The queues were never ending. Not only did we lose everything, we also had to queue for days and even weeks to be recognized by the different institutions as official flood victims while our belongings were still floating in the water left by the rain. I spent so many days to be able to register my name that my boss had to fire me because I was missing work. It was frustrating cause they were all asking the same information and I had to repeat the same stories for weeks.

As these comments suggest, it was not just the length of the process that mattered, but the aspects of residents' lives that were hindered or harmed as a result. This was especially the case for residents who had work or family obligations. Not only did the residents lose their houses, many of them also lost their jobs because they had to miss days, in some cases weeks, of work. One resident emphasized the effects the process had on their family life:

> My mother had to go and stay in the shelters for weeks so that we could have the help we needed. They said that those who do not go will benefit less. I had to stay at home to try and save anything that was left. My little brother stayed with me. He was crying all day long and it was a very difficult situation. He is not in good health and my mom did not want to have him there because she was scared, he was going to get sick as they were many people in the shelters. It was hard having to take care of him and saving the house.

Indeed, the relief shelters were something other than "aid" for many residents. Since inclusion in the relief program required residents to stay in a shelter, many residents went to the shelters strictly to gain inclusion in the program. Most of the citizen would

have preferred not to go the shelters. The “relief” shelters, then, were experienced as an obligation – and one with serious effects on people’s families. Lassailly-Jacob et al (2016) argues that an official recognition of flood victims based on having a collapsed house and taking refuge in a public shelter lead to inequality. The author mentioned that the people that had lost their houses were asked to seek shelter at the school if they wanted to be recognized for relief. As a result, those who went to family, friends or to shelters that were not recognized were not given official recognition (Lassailly-Jacob et al, 2016)

Residents also talked about the limited or ambiguous nature of the government criteria. One resident claimed that he personally knows many people who lost their cattle, agricultural land and expensive material but did not receive any compensation because their houses did not fall. “A house is not only four walls, it is also the people and the things inside,” they explained. Requiring residents to have an official title was another problem. One of the respondents replied that they would have actually agreed to move to Yagma if the government had offered him a plot, but issues derived from having to designate the head of the family for obtaining the land title. He believed that his name should have been on the title, but instead his father-in-law obtained it. This issue was shared by several households. One citizen responded:

> Sometimes there is not one single head of family in a compound. Multiple families live in one compound and each family have their leader… Sometimes it was difficult to be unanimous on who was going to be the legal owner of the land so the families would agree to just designate someone so that they could have the plot. They would later sell the new plot, and share the money among the different head of households and use that money to rebuild the houses that were damaged…

Several households experienced different level of conflicts from that criterion. Others decided that the fair way for everyone to benefit was to sell the plot and share the revenue equally.

The relocation process, already complicated, was rendered more complex by the involvement of different agencies, from the government to various NGOs. During the emergency phase, CONASUR and numerous NGOs rapidly intervened but their actions were uncoordinated. The flood victims complained about having to be separated from their family members. As a respondent mentioned: “I had to stay in the house to try and save whatever could be saved and try to rebuild what I could rebuild while my wife and our baby went to the shelter.” He replied that he did not want to miss the opportunity for compensation but did not believe that the place the government would choose to relocate them would be better than this one. “Most of us started rebuilding as soon as the rain was over. We were not certain about how effectively the situation would be handled.”

Another element that also contributed to the lack of trust experienced by the citizens were the rumors that several powerful agents were finding ways to obtain some plots, while they – the ones who really needed it – were being pressured to designate only one recipient in the household. The results of an investigation that was published by the National Assembly in 2016 confirmed that some of the suspicions the population had were valid. The report mentioned:

> Developers linked to political circles have benefited from enormous facilities that cannot thrive in a context of good governance and respect for ethics in matter. Same thing applies for the process of allotment operations throughout the period covered by the investigation… As Burkina Faso seeks to reconnect with the principles of good governance, vigorous actions should

> be taken to clean up the development activities and ensure strict compliance with legality, ethics and fairness in zoning and land allocation (Assemblée National, 2016).

The report also recommended that the government withdraws the lands from certain powerful actors in several neighborhoods, Yagma included.

On the surface, my findings are consistent with various studies that point to problems of communication between governments and residents in contexts of disaster. The major requirement for communication, these scholars suggest, is trust. According to Rousseau et al. (1998) trust between government and citizens entails "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another." Nakayachi and Ozaki (2014) defined the elements of trust as competency, objectivity, fairness, and integrity. My findings agree with Brooke et al (2021) saying that when it comes to disaster communication, trust is at the center of the effectiveness. This research emphasized the fact that trust is an important actor of how citizens respond to government decisions following the 2009 flood. The government did not trust the integrity of some of the citizens when it came to them pointing how damaged their houses were. On the other hand, the citizens lacked trust in the competency of the local authorities to relocate them to an adequate location. The idea of trust, however, places two parties on an equal footing. It assumes they face each other in a context of relative equality. A political ecology perspective, in contrast, would center the power relations involved in this exchange.

As in the previous two sections, I want to highlight here how colonialism and the postcolonial situation produced a situation in which states can act without the trust of the citizens – and citizens, therefore, have little reason to trust the state. The lack of trust of the citizen can find its source into colonization, a legacy that drives the fragility of the state. On different occasions, the government of Burkina Faso, just like many ex-colonies, did not have the trust of the population because the country, as well as the entire world, have a history of being ruled by wealthy and powerful people that exercise their bias against the rest of the society. How does poor governance find its roots in colonialism? To fight colonialism, liberation movements had to operate in a secrete manner in order to avoid being exposed by their oppressors. As they started accessing power after obtaining their freedom, the secrecy within the government remained highly present, feeding the foundations of corruption. Working on this thesis revealed the lack of transparency in the country, with basic information being highly difficult to obtain.

Also, sadly, an important number of the post-colonial Burkinabe elite inherited the consumption standards from the French as a benchmark for prosperity. The difference in lifestyle between the colonizers and the indigenous people was profound. At the end of colonialism, the elites who engaged in the fight for independence felt entitled to a reward. Africa Growth Initiative (2011) provide some interesting numbers on the African elite. Low-income households spend 2-3 percent of their income in bribes. The report discloses that a study from the University of Massachusetts found that $187 billion, an amount exceeding those countries external debt was estimated to be the flight capital from Africa to Swiss bank accounts during the years 1970 to 1996 (Africa Growth Initiative, 2011). A society for

whom bribing authorities turned into a normality can hardly be expected to trust that the government has their best interest and will relocate them into an appropriate location.

To summarize, three main criteria were set by the government in order to be officially recognized as a flood victim and receive emergency aid. The residents had to be refugees in one of the government shelters (usually located in public schools), their houses had to be badly damaged according to the government officials' standards and they also had to be the owner of the house according to the government perception of land ownership. Conflicts arose in the process as most of the residents preferred to find refuge with a friend or a neighbor, had a different perception of what "badly damaged" meant, and/or were either renters or did not have the approbation of all of the household to be designated as the legitimate land title owner. The citizens were being told what they needed and what they deserved instead of having their expressed needs as victims considered. The lack of trust in the government shaped the citizens' responses to flood communication and flood management. That lack of trust is rooted in the poor governance of a State that has a reputation for political corruption, a reputation that cannot be detached from the colonial past. While discussing with one of the participants, I asked where that lack of trust in government was coming from and his answer was:

> People gain access to land with no explanation, the police stop you for no reason and ask for money, you always need to pay someone somewhere when you need something important to be done.

5.4 Yagma – between resistance and disappointment

The conflicts discussed above were not simply discursive. They were not simply different points of view, that is, but also shaping forces in the world. We can see these conflicting points of view in the actions of public officials and residents. On the one hand, the government attempted to shape the behavior of the residents in many ways. On the other hand, the residents often resisted these efforts, and engaged with the relocation plan in ways that served their needs and manifested their perspective of the world – a perspective in which they were not the problem. This section looks closely at Yagma, exploring the factors that motivated people to resist the relocation plan, by moving and coming back to flood prone zones. The relocation was justified by the government to improve lives, it was described as a gift, while the citizens saw it as a "poisoned gift," as a project that disrupted their lives and identities. The factors feeding the perception of residents can be classified in different categories: (1) the geographical position of the relocation site, (2) the new living conditions, (3) the shift in social conditions, and (4) the hardship of economic conditions. I argue here that imposing those conditions reflects the legacies of colonialism, or the colonial present, as colonialism involves not only taking over a place, but also a culture and an identity.

The Yagma relocation was voluntary in nature, but it would make more sense to talk about an induced volunteerism. Yagma was promoted by the government as the land of new beginnings while making sure that the citizens understand that not relocating was not an option. The people deciding to stay in areas that are flood prone would no longer receive any help in case they were victims of floods in the future. On the political ecology side, Fletcher (2010) argues that the government uses four ways for the citizens to live by

their “code of conduct.” The ones relevant for this study are “disciplining” and “sovereign power.” The former is defined by how the government inculcates behaviors that agree with their social and ethical norms to the citizens and the latter is defined as proceeding via sanctions to govern the population… Ideally, resettlement is supposed to be used as a last resort solution. However, governments tend to use resettlement as the first “solution” when it comes to flooding in Africa (Arnall, 2016). The reason that happens is because a relocation plan usually serves several objectives at once (Arnall, 2016).

Before the government decided to use Yagma as a resettlement location, it was a village, and the local people who lived there before the flood used large portions of the lands to grow food. After the flood, the lives of people already living there were disrupted. The land they used to grow food on was the land allocated to the flood victims. Some of the locals then had to find other ways to make a living and started all types of informal businesses. The government officials claim that the locals were compensated for the lands, however some of the locals mentioned that they were never compensated for the lands that they lost. Some had to go from being farmers, which was a part of their identity, to finding something else to do.

The relocation plan’s dispossession of local residents’ parallels experiences in other contexts. In a study of the post-disaster legacy of neocolonialism in the Island of Barbuda, Lesser Antilles, PerdiKaris et al (2021) argue that after a mass settlement on their land, indigenous people are usually obliged to assimilate or are pushed out. That can be problematic because their identity is usually linked to the land and forms of subsistence, and losing the latter signifies a loss of their unique cultural values and traditions. The

author argues that a neo-settler colonialism relationship with the land was established by the government. Similarly, my study hints that the lives of the people of Yagma were affected by the relocation plan. One respondent, who was relocated to the land, talked about the area's original inhabitants ("locals"):

> The locals were helpful at the beginning as they understood that we had just lost everything but as time was passing by, the tensions started to be obvious. It is understandable. A lot of them lost their agricultural lands and said that they were not compensated.

The relationships between displaced and the local residents were sometimes conflictual. A news article from Ouaga News mentioned that the cohesion between the displaced population and the natives was "gradually crumbling" because of the mismanagement of land attribution after the flood (Tall, 2016). Larocque (2010) also mentioned how before the relocation project, Yagma was a village with huge agricultural lands and that after the flood, the natives (who were farmers) were left without land to cultivate after the government allocated their lands to the flood victims. Several news outlets also mentioned how the indigenous people struggled to get their land back after the flood victims were allocated their plots (Sankara, 2011; Sidwaya, 2011). One of the articles quotes the Ministry of Urbanism that was responsible for the project as saying: "all the natives were compensated for their land" (Zoure, 2010).

For the vast majority of the relocated people, the location choice was the first issue.

Figure 4: Position of Yagma compared to the city (Bronfort, 2017) The flood victims lived in Ouagadougou originally, about 20km away from Yagma.

As can be shown on the figure above, the participants found themselves too far from their centers of activities. One respondent mentioned: “I don’t know what they expected from us. That place is far from everything and there were no jobs there. Most of us only have bikes. we are not animals to bike five hours every day… I sold my plot.”

For those who insisted on staying in the flood prone areas, they seemed to have made peace with the fact that their houses would likely be flooded again, displaying an interesting level of disaster optimism. One respondent said: “We are used to helping each other out. The government told us they will not be providing help if we stay here, and people have heard.”

Here, we see how the threat of the flood is recognized by the people but is not part of their daily consciousness. They have higher “priorities,” and their lives are so full of daily

micro threats that floods are minimally prepared for since they are uncertain events. The citizens of flood prone zones had to adapt to their local environment and for those people, floods are less present than some of the systemic social hazards that are imposed on them.

Perspectives like these are foreign to government planners. In their interpretation of flood risk, the government did not consider the values that the victims attribute to the different kinds of outcomes. They usually offer technical solutions, while citizens are suffering from more social and political issues. The choice between giving their attention to issues related to food, health, crimes, and poverty versus a resettlement plan proposed by a government that they do not trust was easy to make for some people. They found it more beneficial to sell the plots and building material given to them by the government, rebuild their formerly flooded houses, and keep the profit. For them, there was more value in taking care of the risks of remaining in flood prone areas than reducing the risk of the low probability (even though high impact) flood event by resettling.

One of the issues that caused relocatees to leave Yagma was the absence of necessary infrastructure. The absence of a secondary school when they initially moved also discouraged some people for staying because they had children that needed to attend school and did not want to be separated. One of the respondents mentioned: “The government had plans to build a school there, but we know how slow things are in the country… we needed to go back to normal life as quickly as possible”, which translate into a lack of trust into the government. The resettlement project inspired little confidence from the start. Another respondent who also ended up selling their plot and moving mentioned:

> Our community is all we have. My parents lived here, and my children were born here. We share much more than a neighborhood. We are all connected in a way. We share the same struggles. The worst experience of flooding we had was the one in 2009. Before and after that, we always managed. We all worked hard into houses and there is a lot of history. We cannot just leave.

Alongside the absent schools, my interviews also revealed that the Yagma relocation plan exacerbated gender inequalities. When I asked the government officials if they thought that the project was a success, they answered that the situation was overwhelming for everyone and that it could have been managed better, but almost immediately went back to blaming the citizens who decided to return to their previous location. They explained that a decision was made to no longer assist people who rebuilt on flood prone zones in case of future flooding.

While staying put could mean risking another flood, acting in relation to potential future events is complicated. Oliver-Smith (2016) argues that even if an event has a high probability of happening, the unpredictability can decrease the chances of taking precautions. This helps us to understand what occurred in Ouaga. For many potential participants in the relocation program, the Yagma relocation seemed to present more risks than the future, incalculable risk of another flood. People who decided to resist and stay in their houses are well aware of the risks, but chose their homes, their community, and refused to let the government shape their lives despite the unpredictable risks of flooding.

Another group decided to stay in Yagma. Far from being fortunate, their lives were, and in some cases continue to be full of daily struggles.

According to Social Rights Advocacy Centre (2012), it goes against one of the principles of the Universal Declaration of Human Rights, the right to an adequate standard of living, including food, clothing, housing, and steady improvement of living conditions. When the populations first relocated to Yagma, there was no replacement into a meaningful context in which people live their lives. Flood victims had to be separated from their family, lose their jobs and with that their social power in local affairs and detach from their social network and the institutions they were used to. One of the women had a touching story regarding her experience with the relocation plan:

> When my house collapsed after the flood, they took us to a public school, and we were sleeping in the classrooms for about four months. From there, they kept on delaying the date when we could get our plots at Yagma. When I was finally allocated mine, I went to settle in Yagma. I slept outside for over a week. The temporary shelters were crowded... With the help of other people, I was able to feed myself. After days I had to queue for hours and finally received CFA 50000, the iron sheets and the cement. The conditions were very hard. I had to send my kids back to the village until I figure the rest out. I received a bag of cereal at some point, but I used some of the money the government had given me to rebuild the house to process it. I also used part of it to pay for one of my kid's school fees, as well as feeding myself every day. I had to go and dig myself to extract sand and stones to build my house…. It was very hard.

The general observation that appeared was the fact that the basic needs of the population was not considered when picking Yagma as a site, which discouraged people from wanted to start a life there. Many accepted the plots and building material given by the government but ended up selling everything to rebuild their previously destroyed house in flood prone zones. Some participants mentioned that the building material

offered by the government was not sufficient for them to rebuild. One of the participants mentioned:

> The idea of having a plot seemed nice, however I have a big family and I noticed that it was better for us to sell the plot and the material, come back to the city to rebuild the house and use the benefits to go back on my feet…plus my everything is here...

A participant referred to Yagma as "an empty desert" when they first moved. After moving initially, they had to stay in tents and different types of shelters. Some had to sleep outside for weeks. There was no infrastructure and even drinking water was a struggle to obtain, involving queuing for hours just to get some. Showering was even more difficult and all that made it impossible for some people to stay. Selling their plots to rebuild in the city seemed more beneficial for some people. An interview from Bronfort (2017) mentioned that even if they were given building materials, the people who could not build their houses themselves could not afford to pay for someone to do it for them and that contributed to them leaving.

The group of citizens that agreed to stay in Yagma were not happy about their living conditions. They believe that the government failed to acknowledge that their livelihoods are complex. From my interviews, I noticed that the pressure for families that decided to stay in Yagma is heavier on women. The women I interviewed that stayed in Yagma all worked as sand sellers. There is a specific variety of sand that they wake up in the morning and collect. They work in the field all day to collect as much sand as possible. In one day, they get around 13 CAD. Most of them tried to continue the activity that they were doing

in the city but it was just impossible, so they had to change career. One respondent explained that she used to sell oranges in the city before the floods. Even if the money was not a lot they used to manage since her husband also had a job, a job that he lost since they moved to Yagma. She tried many different activities, but they were all unsuccessful. She claimed that fruits and vegetables do not sell very well because most people there are struggling. She was however confident that the situation would get better as they managed to build a sense of community and help each other out.

One of the NGO workers described how young people organized themselves to help with childcare while the parents are at work or teach younger children how to play football and other sports. Lassailly-Jacobs (2013) studied the conditions of women from Yagma after the relocation plan. She mentioned:

> Many women survive in Yagma from day to day… they cannot exercise their former activity for lack of customer… Some find employment such as digging gutters, or they sell sifted sand, make adobe bricks or transport water from rare boreholes.

Figure 5: Women in Yagma working on sand collection. (image from LeFaso.net)

In an article from Lefaso.net, one of the women from Yagma that was interviewed mentioned: “It is God who protects us in this job. We are especially worried about our children who follow us here, given the dust” (Ouedraogo, 2019). Another Yagma citizen believes that even if they are now used to the environment and that the area is more lively with more infrastructures, a lot of things are still not right.

Interviewing those women living in Yagma made me question the place of the average Burkinabe woman in society and I realized that the relocation plan had highly contributed to gender inequality. Just like the findings of Memon (2020), the resettlement had heavier impacts on women than men. Memon argues that women in Pakistan are typically at a disadvantage due to societally perceived standards, duties, and obligations. The study shows a link between natural disasters and female abuse. Twenty women were interviewed in flood-prone districts of Sindh using qualitative research techniques. The findings suggest that most women are subjected to various forms of violence, both physical and emotional, perpetrated by spouses and strangers. According to Thomas (2004), refugee women are more vulnerable to physical and mental health complications. The study analyzes the need for communities to participate in the choice of their new homes.

As in many other patriarchal societies, African women have for a long time been placed in the background. Even if the women interviewed were not confronted to the same issues, the resettlement program appeared to have a heavier impact on them. Many women in the county are victims of economic, legal, political and social inequalities. In Burkina Faso, the Gender Inequality Index is 0.594 (UNDP, 2020).

These inequalities generate huge impacts on the economic and human development of women. They lead to the fragility of decision-making power and the status of women within the family reduces their ability to cope with health problems. The burden of domestic responsibilities does not allow women to have access to economic opportunities, while discrimination within the family causes the reduced access of girls to education (OECD, 2018). When asked why their husbands were not picking sand as well to generate more revenue, they replied that "they think it is a women job." It is also important to mention that before answering questions, woman usually get permission from their husbands to participate while men do not mention anything about asking for their wives' consent. The men also complained about the lack of access to jobs, blaming it on the lack of roads and the mediocre access to Yagma. They mentioned that access to the locality was very difficult and believed that it would be easier for them to find jobs if the government could fix the roads.

In political ecology, the actor oriented theoretical perspective indicates that actors exercise power differently and consequently faces different resistance and opposition. Scholars classified two types of actors: those carrying the intervention and those who resist them. In this case, the government carries the intervention, and the flood victims resist through refusal to stay in Yagma.

This section explored the different perspectives of the people that were asked to relocate to Yagma. Those who chose to stay at their original location seem to be more satisfied with their current lives than those who decided to move to Yagma. They are still

dealing with the trauma of the hardship they endured when they first moved but are also resentful toward a government that seems to have let them down.

Power was exerted on the flood victims in apparent ways. A non-decisional making power was used by the government to not involve the citizens from the relocation. My results are similar to (Bertana, 2020) in their study of the role of power in community participation. The community of Vunidogoloa in Fiji was excluded from the "technical" components of the relocation. The author suggests that excluding the affected community from the decision making on the general layout and housing structures allowed the government to avoid conflicted opinions. The citizens mentioned that they would have preferred their new houses to be similar to more traditional villages while the government went for intentional western looking houses, justifying it as a way to spark more interest for the people driving along the main road (Bertana, 2020).

Contrary to the citizens of Vunidogoloa, the citizens of Ouagadougou for the most part refused to allow the dominant power to determine their lives. Selling the lands and moving back seemed to be a form of resistance. Exploring the resistance in a society shaped by power relations that are rooted in colonial historical pathways can contribute to better understanding of the motivations of the citizens. Colonial history shapes a tense and resistant mentality in different ways (Shuller, 2016; Melis and Jean, 2021).

The way the power of the central state and the politicization of aid were experienced by the affected population in Haiti in response to hurricane Matthew appears similar to the historical society–state tensions that place the (colonial) state above, and outside of, society (Melis and Jean, 2021). A study of the disaster governance after

Hurricane Matthew in Haiti shows that citizens managed to shape disaster response outcomes by resisting state-aid power structures and relying on solidarity through covert types of resistance (Melis and Jean, 2021). The government encouraged people to seek shelter in schools or churches, but most ignored the messages as saving their belongings was more important and they distrusted the government. The study suggests that perceiving the government as politicians with ulterior motives motivated defiance of the states' message. The citizens were also angry and engaged in a series of violent protests after rumors that political officials requested that food and aid items to be allocated be taken to their own houses while the people had not received anything. Another form of resistance mentioned by the author was the illegal act of stealing aid items. They considered them to not be appropriate for their needs so instead they sold them and used the money to better help themselves. Similarly, my study shows that the flood victims chose to use the system as a way that worked better for them. Selling their plot for the money was a way to resist is a response to the internalized discourses of colonialism that shaped the relation between the government and the citizens.

6. Conclusion

The thesis used political ecology with an attention to a postcolonial thinking to analyze how the Yagma relocation plan was shaped by the different perception of land from the government and the citizens. The discourse of the government was challenged to include

the perceptions of the flood victims. The analysis indicates that the colonial history of the country, in a way, shaped the process of the Yagma relocation plan.

Ouagadougou is the capital city of Burkina Faso. With around 30 per cent of the population living in informal settlements, the city is vulnerable to flooding. In September 2009, the country was hit by the worst flood ever recorded. To relieve the population, the government implemented a resettlement program in Yagma, a village outside the city. From that project, conflictual views between the government and the population became apparent; a perspective based on technical calculations and a neo-colonialist vision of development, on the one hand; and a grounded perspective based on relationships to the land and each other, on the other.

Most citizens that relocated were not satisfied with the choice of the site and the living conditions, so they decided to move back to the city and disobey the interdiction of building in a flood prone area.

In this thesis, I approached the flooding and the relocation plan through two main lenses: political ecology and postcolonial studies. Political ecology is helpful to my study as any decision that involves the participation of multiple actors is highly affected by power distribution. Studying the relocation plan through a political ecology lens allowed me to illustrate how the political arrangement of Burkina Faso participated in existing hierarchies between the state and the citizens that are the most vulnerable to floods. To study flooding and flood relocation in Burkina Faso, however, I have found it necessary to situate political-ecological struggles within an enduring colonial arrangement of power. Postcolonial studies guide attention to the fact that, while most colonized countries /

regions ancient colonies are now independent, their governmental institutions still carry the colonial legacy by allowing the usurpation, exploitation, and expropriation of land from local people. Ouagadougou is embedded in a system that mirrors a colonial governance system as politician leaders have power over decisions regarding the people.

The findings from this paper agree that the heritage of the colonizer mentality still play a role into the governance of the city more generally, and more specifically in the exacerbation of flood vulnerability through the inadequate flood relief system. In the remainder of this conclusion, I will summarize the key findings of this thesis and how they relate to the political ecology and postcolonial studies literature.

A definition of colonialism is the control by one power over a dependent area or people (Blakemore, 2019). One of the conflicts between the flood victims and the government officials is regarding the different perceptions of the causes of the flooding. Powerful actors consider the flood victims as people who need to be more responsible in order to avoid the flooding. However, the citizens believe that the government had the power to allow one company to appropriate land that they were not supposed to have, disrupting the lives of the locals. The owners of the building are accused of being blind to the struggle of the citizens who blame the company for the floods. The government, not interfering despite knowing that the truth about the building permit of WK is suspicious, appear to the citizens as having in a way, picked the side of the warehouse and being worried about economic development while making empty promises to modernize people' s lives.

The vision that the government has of the land derives from a post colonialist heritage. The land must be registered at someone's name, with the owners having official land titles documents to prove that they are the legitimate owners. That was a system established by the French in 1830. The flood victims living in informal settlements mostly come from rural areas that were less ruled by the French and still believe that original occupants is the key to ownership. They also believe they have the right to use a land as long as a family member allows them to. The pressure to designate one person to have their name on the land title caused some conflicts and contributed to the residents selling the plots to share the money equally among themselves. As Mosca (1013) mentioned: "with colonization, has gone the affirmation of private property granted to individuals on the basis of deeds in their possession." When it comes to decision making, the post-colonial view of the land held by the government dominates over the most traditional views of the citizens.

Colonialism also led to a government that normalized operating with the absence of transparency. Several fraud scandals destroyed the trust between the citizens and the government. The citizens prefer living in a flood prone area and rely on each other rather than following the schedule that the government officials elaborated to remake their lives. Community resistance is often induced by low confidence in the government (Oliver-Smith 2010).

The flood victims resisted the relocation plan by selling their plots and using the money to rebuild on their former land. A lot of them are still occupying these houses today. They mentioned that they have experienced flooding since, however the impacts

were less intense than the ones of the 2009 flood. They help each other out when times are difficult, and they are not planning on moving anytime soon even if they risk experiencing floods in the future.

The people who followed through the relocation plan had a hard time making a living mainly because of the location of the site. It was too far from their business or their employer. Initially, the site was not equipped with essential infrastructures. Most of the citizens were living in poor conditions, they could not afford any means of transportation and earning money was difficult due to the lack of economic opportunities. The relocation plan increased inequality and poverty for the affected communities. The project was not as successful as expected because of the following reasons: 1) the criteria that were in place to choose the ones eligible for compensation was controversial, 2) the initial living conditions at Yagma were too hard and 3) the flood victims were not involved in the location picking process. The local people from Yagma claimed to have lost their lands during the initial phase of the project, and for a moment their identity as well.

The United Nation has a guideline for good practices during relocation. Comparing their standards with the reality of the Yagma relocation plan show that the situation was far from adequate for the flood victims. They suggest that those responsible for the relocation should allow the people affected to take part into the critical relocation and implementation decisions such as site selection, identification of basic needs, settlement planning, and housing designs. In this case the flood victims did not have a say into the decision-making process.

Following the UN guidelines, I argue that the relocation plan was not successful. The UN suggests that the communication between affected communities and state actors should be frequent and transparent, and mechanisms to resolve grievances need to be effective. As one of the participants mentioned, the relocated people went to the government officials a couple of times to have a conversation about their needs but allegedly, no actions were taken to resolve their problems.

The third point is that social, environmental, and hazard-risk assessments must confirm that risk cannot be mitigated in the old location, and state actors must assure the community that the relocation site is suitable. In this case the participants living in Gounghin believed that the WK building was the source of the flooding, a risk that could have been mitigated by the government by just ordering the building to be removed, or by cleaning the dam. Also, most of the participant considered Yagma unsuitable as a site since the citizens lost their jobs.

The next standard the UN insists on is that Governments must adequately fund relocation and attempt to assuage its economic impacts over a reasonable period. Some Interviewees mentioned how they felt “abandoned” by the government and struggled to find jobs in order to survive. Lastly, project feasibility analysis must show that emotional, spiritual, and cultural attachment to the old site is not excessively high. (Jha, Miner and Stanton-Geddes 2013; World Bank 2010). There is no real way to measure ``excessively” in this context however, the fact that so many people returned to their original site shows that the attachment was quite significant.

According to the flood victims themselves and the UN guidelines, it can be considered that the relocation plan was not able to accommodate the citizens in a suitable way. The disappointment was induced by different understandings of land: on one side, a perspective shaped by the colonial heritage of Ouagadougou; and, on the other side, a perception shaped by traditional African land tenure and resistance mentality.

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