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**Environmental Conflict in Kenya's Tana River District:
Tracing the Role of Political Corruption in the Scarcity-Conflict
Mechanism**

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Abstract

Recent studies have attempted to explain the mixed results in the literature on environmental scarcity and intrastate conflict by exploring factors that might enable or mitigate the effects of scarcity. However, the role of one of these factors, political corruption, remains underexplored. While scholars have made strides in uncovering whether corruption influences the scarcity-conflict relationship, they have failed to analyze its role in the causal mechanism connecting environmental scarcity to intrastate conflict. In this study, I address this gap in the literature by examining the role of political corruption in the causal mechanism linking environmental scarcity to intrastate conflict incidence. Using theory-testing process tracing in a case study of the 2012-2013 Kenyan Tana River District clashes, I demonstrate that political corruption in environmental governance can play a crucial role in the environmental scarcity-conflict mechanism by further diminishing natural resource availability. This increases confidence in the notion that political corruption might explain the mixed results in the literature. However, future research should test these findings in multiple different contexts to explore their generalizability and rule out possible alternative explanations.

Introduction

On the surface, the 2003 conflict in Darfur and the Syrian civil war seem unrelated conflicts with distinct causes. Yet, scholars and analysts have linked both conflicts to a scramble for scarce natural resources (e.g., Faris, 2007; Gleick, 2014; Sachs, 2008; Werrell et al., 2015). For example, Faris (2007) claims that the conflict in Darfur was more instigated by competition over scarce land than over ethnic grievances, while Gleick (2014) stresses the role of water scarcity in contributing to the collapse of social structures and the engendering of violence that led to the Syrian civil war. These examples illustrate the increasing attention to environmental scarcity, defined here as low, climate-induced natural resource availability (Koubi, 2019), as a driver of intrastate conflict incidence (e.g., Koubi et al., 2013; Mildner et al., 2011; Vesco et al., 2020). Moreover, since climate change is thought to further degrade natural resources in conflict-prone regions, scholars and analysts warn that scarcity-related conflict will become more and more salient in the future (e.g., Barnett and Adger, 2007; Busby, 2017; Gleick, 2014; Werrell and Femia, 2023).

However, scholarly literature remains divided over the presence of a causal relationship between environmental scarcity and intrastate conflict incidence, as existing research has produced mixed results (e.g., Hauge and Ellingsen, 1998; Theisen, 2008). Some scholars argue that environmental scarcity increases the likelihood of intrastate conflict (e.g., Hauge and Ellingsen, 1998; Homer-Dixon, 1994; Raleigh and Urdal, 2007), while others find no relationship between scarcity and conflict (e.g., Theisen, 2008; Theisen, 2012). Some even find that natural resource abundance, not scarcity, causes intrastate conflict (e.g., Hendrix and Glaser, 2007; Salehyan and Hendrix, 2014). As a result, it is unclear whether and how environmental scarcity affects intrastate conflict incidence.

Scholars who have attempted to explain the ambiguous findings in the scarcity-conflict literature argue that most studies have mistakenly focused on establishing or disproving a direct linkage between environmental scarcity and intrastate conflict (e.g., Bretthauer, 2015; Gleditsch 1998; Gizelis and Wooden, 2010). They maintain that such studies have omitted important economic or political factors that mitigate or enable the effects of scarcity (e.g., Baechler, 1999; Gleditsch, 1998; Gizelis and Wooden, 2010). Accordingly, several scholars have made strides in exploring the role of factors such as state adaptive capacity and democratic institutions (e.g., Gizelis and Wooden, 2010; Regan and Kim, 2020).

Another factor of interest has been political corruption (e.g., Bretthauer, 2015; Rus, 2014), the use of authority by government officials to influence policies for private gain (Gupta et al., 2002). The role of political corruption has been examined most notably by Rus (2014)

and Bretthauer (2015). Rus (2014) proposes a model to explain how corruption in resource management can cause intrastate conflict via forest depletion. However, he focuses on constructing a theoretical framework and does not test the working of his hypothesized causal mechanism (Rus, 2014). Furthermore, Bretthauer (2015) examines the influence of, inter alia, political corruption on intrastate conflict incidence in resource-scarce countries in a fuzzy-set qualitative comparative analysis. Yet, one crucial limitation of Bretthauer's (2015) study is that she focuses on the conditions under which conflict arises in resource-scarce countries rather than establishing a link between natural resource scarcity and conflict. As such, her study does not shed light on the causal relationship between environmental scarcity and conflict. As a result of the limitations of existing research, the role of political corruption in the theorized causal mechanism that connects environmental scarcity to intrastate conflict remains underexplored. This is problematic for policymakers concerned with conflict prevention, as it is unclear whether and how scarcity causes intrastate conflict.

In this thesis, I address this gap in the literature by examining the causal mechanism linking environmental scarcity and intrastate conflict, with close consideration of the role of political corruption. Specifically, I will answer the following question: What is the role of political corruption in the relationship between environmental scarcity and intrastate conflict incidence? To examine the plausibility of political corruption being a crucial factor in the scarcity-conflict mechanism, I will trace the possible intervention of political corruption in a 'most likely' case, the 2012-2013 Kenyan Tana River District clashes. To this end, I will employ theory-testing process tracing as a method of empirical analysis.

I argue that political corruption might moderate the relationship between environmental scarcity and intrastate conflict through the following causal mechanism. When natural resource scarcity occurs, this may enable political corruption in environmental management (Gupta et al., 2002; Kurer, 1993; Rinaudo, 2002; Rose-Ackerman, 2002; Sun and Johnston, 2009). Thereafter, I expect that political corruption affects the scarcity-conflict mechanism in two ways. First, political corruption may hinder the development of adequate water management as government officials prioritize personal economic benefits over ecological efficiency (Madani, 2014; Porras et al., 2019; Wang et al., 2020). Second, political corruption may lead to the exclusion of underprivileged groups from scarce resources (Benjaminsen and Ba, 2009; Kahl, 2006), since wealthier groups are better able to influence policy (Bretthauer, 2015; Gupta et al., 2002; Le Billon, 2001). As a result, political corruption may exacerbate scarce natural resource availability in resource-scarce conditions, especially for disadvantaged groups (Anbarci et al., 2009; Madani, 2014; Porras et al., 2019). This may lead to increasing

competition, violence, and, eventually, the incidence of intrastate conflict (Barnett and Adger, 2007; Kahl, 2006; Regan and Kim, 2020). Therefore, I hypothesize that political corruption moderates the relationship between environmental scarcity and intrastate conflict incidence.

In the following section, I will first devote attention to the literature on environmental scarcity and intrastate conflict. Thereafter, I will elaborate on my theory, delineating the hypothesized role of political corruption in the scarcity-conflict mechanism, and formulate my hypothesis. In the third section, the methods of this study will be discussed, including the observable implications and case selection. The fourth section contains the analysis of the 2012-2013 Tana River District clashes. In the conclusion, I will reflect on the findings of this thesis, consider their implications, and make suggestions for future research.

Literature review

The relationship between environmental scarcity and intrastate conflict has sparked considerable debate in the literature (e.g., Gleditsch, 1998; Hoffmann, 2018; Salehyan, 2008). This is reflected in the conflicting results with regard to the scarcity-conflict relationship that have been produced by scholars (e.g., Hauge and Ellingsen, 1998; Theisen, 2008), as well as in the various contestations of the theoretical premise that scarcity can cause conflict (e.g., Salehyan and Hendrix, 2014; Selby and Hoffmann, 2014; Verhoeven, 2011). While the topic has gained increasing attention in the literature (e.g., Koubi et al., 2013; Mildner et al., 2011; Vesco et al., 2020), to this day, scholars remain divided over the existence of a causal relationship between environmental scarcity and intrastate conflict incidence (e.g., Gleditsch, 1998; Gleick, 2014; Hoffmann 2018; Homer-Dixon 1999; Regan and Kim, 2020; Salehyan, 2008).

The literature on environmental scarcity and intrastate conflict can be divided into three waves. The first wave started in the '90s and was primarily initiated by the work of Homer-Dixon (1994). Early studies build on the notion that rapidly growing populations will ultimately deplete natural resources, causing competition and, eventually, conflict over scarce resources (e.g., Homer-Dixon, 1999; Kahl, 1998). Such claims predominantly received validation in qualitative case studies (e.g., Homer-Dixon, 1994; Kahl, 1998; Renner, 1996) and more cautious support in a number of quantitative studies (e.g., Hauge and Ellingsen, 1998; Urdal, 2005). Nevertheless, initial findings were met with substantial criticism (e.g., De Soysa, 2002; Gleditsch, 1998; Theisen, 2008). For example, Theisen (2008) could not reproduce earlier findings by Hauge and Ellingson (1998), which showed that population density, soil

degradation, deforestation, and water scarcity increase the likelihood of intrastate conflict. Additionally, Gleditsch (1998) criticizes the studies in this wave for, amongst others, neglecting other potentially relevant factors, such as regime type and economic strength.

A second wave of research emerged during the late 2000s, shifting the focus to environmental scarcities resulting from climate change (e.g., Hendrix and Glaser, 2007; Raleigh and Urdal, 2007), instead of resulting from population growth. This wave consisted of studies that were mainly of a quantitative nature (e.g., Hendrix and Glaser, 2007; Reileigh and Urdal, 2007; Theisen, 2012). Still, research within this wave produced ambiguous findings. For example, Raleigh and Urdal (2007) show that land degradation and water scarcity increase the risk of intrastate conflict, while Theisen (2012) finds no support for a link between farmland scarcity and the incidence of violence in Kenya. Additionally, Hendrix and Glaser (2007) provide no evidence that land degradation increases conflict risk and even find a negative effect of water scarcity on conflict onset.

A third, partly overlapping wave started in the late 2000s. In an attempt to explain the mixed results from previous studies, scholars associated with this wave took additional potentially relevant factors into account (e.g., Barnett and Adger, 2007; Gizelis and Wooden, 2010; Regan and Kim, 2020). By doing so, these scholars incorporated critique from academics who argued that the literature had largely overlooked economic, social, or political factors that might play a role in transmitting resource scarcity to conflict (Gleditsch, 1998; Koubi et al., 2013; Le Billon, 2001). Subsequently, they have made strides in exploring the role of factors such as institutional strength, agricultural dependency, and gross domestic product (GDP) per capita in the scarcity-conflict mechanism (Gizelis and Wooden, 2010; Regan and Kim, 2020; Selby and Hoffmann, 2014). For instance, Gizelis and Wooden (2010) have explored the effect of democratic institutions on the relationship between water scarcity and intrastate conflict. Although their findings suggest that democratic institutions decrease the likelihood of conflict onset, they find that water abundance, not scarcity, increases the likelihood of conflict onset. In contrast, Regan and Kim (2020) find a positive effect of water scarcity on the risk of intrastate conflict. Additionally, they show that a state's adaptive capability mitigates this effect. The increasing attention to external factors in environmental scarcity-induced conflict is also reflected in qualitative studies (e.g., Fetzek and Mazo, 2014; Gleick, 2014). For example, Fetzek and Mazo (2014) argue that the interaction between environmental, social, political, and economic factors caused the Syrian civil war in 2011. While they discuss a broad array of factors, Fetzek and Mazo (2014) primarily highlight the central role of economic insecurity and its connection with resource scarcities, such as land and water scarcity.

Another factor that has been of interest to scholars analyzing the scarcity-conflict relationship is political corruption. The role of this factor has been mainly explored by Rus (2014) and Bretthauer (2015).¹ Rus (2014) constructs a theoretical framework to explain the instance of scarcity-based intrastate conflict, employing theory from the political economy field. He argues that corruption in resource management may engender intrastate conflict through forest depletion (Rus, 2014). By conducting an explorative quantitative analysis, Rus (2014) finds some evidence that supports this argument. However, one limitation of his analysis is that it does not demonstrate the working of the hypothesized causal mechanism (Rus, 2014). Another notable contribution has been made by Bretthauer (2015), who executes a fuzzy-set qualitative comparative analysis to examine the influence of several social, economic, and political factors on intrastate conflict incidence in resource-scarce countries. In the analysis, some evidence is found that political corruption increases the likelihood of conflict. Yet, a shortcoming of Bretthauer's (2015) method is that she limits her analysis to countries enduring resource scarcity. Hence, while Bretthauer's (2015) analysis sheds light on the conditions under which scarcity might cause conflict in a resource-scarce context, she does not provide insights into whether and how scarcity causes conflict. In other words, she does not examine the causal mechanism connecting environmental scarcity to intrastate conflict (Bretthauer, 2015). In light of the limitations of existing research, the potential role of political corruption in the causal mechanism connecting environmental scarcity to intrastate conflict incidence remains understudied.

Theory

I expect that political corruption plays a central, moderating role in the relationship between environmental scarcity and intrastate conflict incidence. Political corruption is theoretically linked to environmental scarcity, as corruption might arise in response to scarce conditions (Rose-Ackerman, 2002; Sun and Johnston, 2009). In these situations, corruption is thought to be a means of allocating scarce resources to the highest bidder, as demand exceeds supply (Gupta et al., 2002; Kurer, 1993). In conditions of environmental scarcity, thus, political corruption may be concentrated in environmental governance (Rinaudo, 2002). For example, Rinaudo (2002) shows that water scarcity in Pakistan's public irrigation system has prompted

¹ Fetzek and Mazo (2014) briefly address corruption in their discussion of the relationship between environmental scarcity and conflict in the Syrian civil war. Yet, as corruption was not the focus of their research, they merely mention anti-corruption protests in Daraa that were partly aimed at corruption in groundwater distribution and the licensing of wells (Fetzek and Mazo, 2014).

illegitimate bargaining and illegal transactions between farmers and government officials with regard to water rights.

Political corruption in environmental governance, then, may further diminish natural resource availability in two ways. First, high levels of corruption may result in incapable and ineffective natural resource management (Anbarci et al., 2009; Madani, 2014; Porras et al., 2019). This inadequate environmental management is expected to arise as policymakers prioritize pursuing personal goals over achieving effective policy objectives when corruption is present (Gupta et al., 2002; Wang et al., 2020). In the context of environmental governance, thus, long-term ecological efficiency can be victimized (Porras et al., 2019; Rus, 2014; Wang et al., 2020). For instance, Porras et al. (2019) describe how government officials enriched themselves by accepting extralegal payments from farmers seeking to obtain access to scarce water resources in the Mexican Rio del Carmen watershed. According to their research, this has caused policymakers to implement water policy with a disregard for ecological efficiency (Porras et al., 2019). Neglecting the ecological consequences of policy is thought to adversely impact environmental planning, infrastructure, and overall management (Porras et al., 2019; Rinaudo, 2002), resulting in conflicting and incapable environmental policies (Porras et al., 2019). Inadequate environmental management, then, may further degrade natural resource quality and quantity (Molden, 2007). Hence, political corruption may contribute to a decrease in natural resource availability (Anbarci et al., 2009; Madani, 2014; Porras et al., 2019; Rinaudo, 2002; Rus, 2014), strengthening the relationship between environmental scarcity and intrastate conflict incidence.

Second, high levels of political corruption in environmental governance may lead to the exclusion of underprivileged groups from scarce natural resources (Bretthauer, 2015; Kahl, 2006). This expectation arises from the premise that political corruption is likely to benefit more wealthy groups in society (Bretthauer, 2015; Gupta et al., 2002; Hope, 2014). These groups are better able to influence government officials than disadvantaged groups, as they have more economic resources that are of interest to corrupt officials (Gupta et al., 2002). As a result, corrupt systems often neglect issues concerning the disadvantaged strata of society (Bretthauer, 2015). As such, political corruption may intensify social inequalities (Bretthauer, 2015; Gupta et al., 2002; Le Billon, 2003). In the context of environmental governance, this may translate into further inequalities between privileged and underprivileged groups regarding access to scarce natural resources (Bretthauer, 2015; Jenkins, 2017; Kahl, 2006). For instance, inequal access to natural resources may be related to the exclusion of poorer groups from access to adequate water facilities or infrastructure, such as water wells and irrigation pumps (Mehta,

2003). For disadvantaged groups, thus, political corruption may ensure a further decrease in natural resource availability under conditions of environmental scarcity (Kahl, 2006).

When natural resource availability is diminished, people’s livelihoods may be disrupted (Barnett and Adger, 2007; Filho et al., 2022). This is especially the case when communities depend on a certain natural resource for their livelihoods. For instance, the livelihoods of societies that rely on rain-fed agriculture are substantially affected by water and land scarcity, as they require sufficient water and land resources to achieve food and income security (Besada and Werner, 2014; Regan and Kim, 2020).

As a result, individuals and communities seeking to maintain their livelihoods may become entangled in intensifying competition for increasingly scarce resources (Homer-Dixon, 1999; Kahl, 2006). This competition is thought to generate grievances between different social groups, as competition becomes attached to preexisting perceptions of inequality between groups (Martin et al., 2006). This may engender the consolidation of group identities, a reinforcement of inter-group attitudes, and a tendency to frame issues in inter-group terms (Martin et al., 2006). These grievances may lead to intergroup violence and, eventually, the incidence of intrastate conflict (Martin et al., 2006; Kahl, 2006).

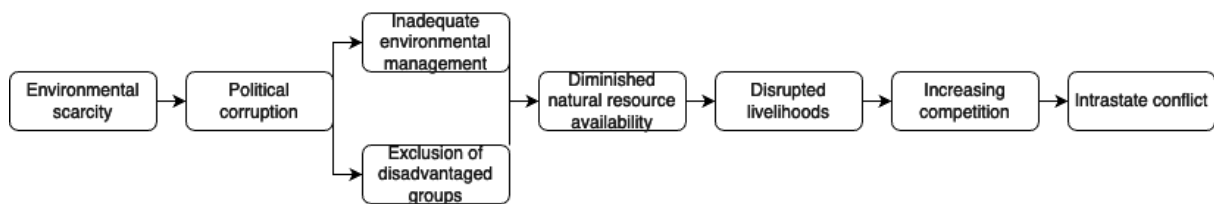


Figure 1. Hypothesized Causal Mechanism (Simplified)

In sum, I propose that political corruption intensifies the relationship between environmental scarcity and intrastate conflict and that, therefore, this factor might explain the ambiguous results in the literature. Political corruption may arise from conditions of environmental scarcity and may affect the scarcity-conflict mechanism by further diminishing natural resource availability, in particular for disadvantaged groups. Therefore, I formulate the following hypothesis:

Hypothesis: Political corruption moderates the relationship between environmental scarcity and intrastate conflict

Method

In order to examine the role of political corruption in the relationship between environmental scarcity and intrastate conflict, I employ theory-testing process tracing as a method of empirical analysis. Theory-testing process tracing tests whether and how a hypothesized causal mechanism operates within a case (Beach and Pedersen, 2019). Hence, this method can reveal whether and how environmental scarcity causes conflict in a certain case, as well as the possible role of political corruption.

Case selection

I will conduct a single case study selecting a most likely case, given that these cases are particularly well-suited for theory-testing purposes (George and Bennet, 2005). To this end, I select the case of the 2012-2013 Kenyan Tana River District clashes. This is an appropriate case for several reasons. First, with regard to environmental scarcity, Kenya has been classified as a chronically water-scarce country (Ogendi and Ong'oa, 2009) and has been experiencing a lack of arable land (Flood, 2013; Njagi, 2018). Moreover, the country endured severe droughts leading up to the conflict (BBC News, 2011), affecting the Tana River District among other regions (Global Facility for Disaster Reduction and Recovery [GFDRR], 2012; The New Humanitarian, 2008). Second, during the conflict period, Kenya showed high levels of overall political corruption (Transparency International, 2011). Meanwhile, the Kenyan water and land sectors also faced allegations of corruption and malpractice (Hope, 2014; O'Brien, 2011; Onguny and Gillies, 2019; Rampa, 2011). Third, the Kenyan population – and the communities in the Tana River Delta in particular – have been highly dependent on natural resources for their livelihoods (Kariuki and Ng'etich, 2016; Snel et al., 2021), making them prone to experiencing environmental conflict (Regan and Kim, 2020). Fourth, the Tana River District is home to several rival ethnic groups (Nyabira and Ayele, 2016; Weiss, 2004), allowing grievances to arise between different social groups (Martin et al., 2006). Lastly, the Tana River District clashes have been covered extensively relative to other potential cases (Pacific Institute, 2022). In light of these case characteristics, the Tana River District clashes are a suitable most likely case.

The Tana River case involves water and land scarcity. These scarcities are particularly appropriate for making inferences about environmental scarcity as water and land scarcity are often at the heart of environmental scarcities (Mancosu et al., 2015; Pietz and Zeisler-Vralsted, 2021; Swatuk and Cash, 2018). Moreover, this focus is consistent with the scarcity-conflict

literature, which has primarily concentrated on environmental scarcity in relation to water and land (e.g., Hendrix and Glaser, 2007; Regan and Kim, 2020; Raleigh and Urdal, 2007; Theisen, 2012). Consistent with the definition of environmental scarcity formulated above (Koubi, 2019), I define water and land scarcity as climate-induced scarcities (Ding and Gosh, 2017). This is in line with current trends in the literature that focus on environmental scarcity resulting from climate change instead of from population growth (e.g., Gleick, 2014; Hendrix and Glaser, 2007; Koubi, 2019).

Observable implications

To confirm the moderating role of political corruption, first, the connection between environmental scarcity and political corruption must be established. This should be identifiable in reports that indicate that Kenyan government officials were enabled by conditions of environmental scarcity to distribute scarce water and land resources to the highest bidder through corrupt processes. Importantly, it should also be observable that government officials profited personally in the process. Thereafter, political corruption's influence on the availability of natural resources should be evident in two ways. First, it should be observable that corruption in environmental governance has led to a disregard for the ecological impact of water and land projects such as the construction of dams. Subsequently, it should be identifiable that water and land projects or infrastructure have degraded the quantity or quality of water and land resources as a result of this ecological negligence. Second, it must be determined in reports or news articles that political corruption in environmental governance has constrained access to scarce water and land resources for certain disadvantaged groups. For example, news articles could mention the eviction of disadvantaged groups from a certain area, leading to a loss of access to crucial water and land resources.

To establish the detrimental impact of the diminished availability of water and land resources on people's livelihoods, reports must be identified that note that communities in the Tana River District cannot maintain their way of living as a result of the diminished water and land availability. These reports should indicate that the disruption of livelihoods is caused by previously identified inadequate environmental management or a lack of access to water and land resources for disadvantaged groups. The reports of disrupted livelihoods can include descriptions of failed harvests, job losses, or loss of homes caused by diminished availability of natural resources. Furthermore, to establish whether disrupted livelihoods have led to increasing competition over natural resources, news articles or reports should indicate that

individuals or groups engaged in competition in order to maintain their livelihoods. Escalating tensions should be identifiable in reports of (non-)violent conflict or dispute over scarce water or land resources between individuals or groups in the Tana River District. Lastly, it should be apparent that such conflicts escalate into intrastate conflict through reports of escalating violence related to this conflict.

To examine the presence of these observable implications in the case of the 2012-2013 Tana River Delta clashes, I will examine secondary sources, such as reports by non-governmental organizations (NGOs) and news articles. Given the limited freedom of speech and press in Kenya (Freedom House, 2023), I expect a reasonable possibility of bias in primary sources. To mitigate the effect of bias in the analysis, I will only include information in my analysis that has been confirmed by multiple unrelated sources. I will also analyze secondary sources, including academic literature on Kenyan history, politics, economics, ecology, and their interplay.

Analysis

In this section, I will test the working of the hypothesized causal mechanism in the case of the 2012-2013 Tana River District clashes. To comprehensively examine the causal mechanism, the analysis will be structured around the observable implications formulated above. After briefly discussing the conflict background, I will, first, determine how environmental scarcity has contributed to political corruption in environmental management. Thereafter, I will analyze the effect of political corruption on water and land availability in the Tana River Delta. In the following subsection, I will examine how diminished water and land availability has impacted the livelihoods of communities in the Tana Delta. Last, I will analyze how disrupted livelihoods fostered competition that eventually resulted in the violent clashes between two local communities.

Conflict background

The 2012-2013 Tana River District clashes were a violent conflict between the Orma and Pokomo ethnic groups in the Tana Delta in southeast Kenya. The conflict resulted in approximately 150 deaths (CNN, 2013; Onyango, 2012; Gogineni, 2012a; Times of Malta, 2012) and erupted in August 2012, when 52 Ormas were killed by members of the Pokomo community (Agence France-Presse [AFP], 2012; BBC News, 2012;). The clashes are part of a recurrent conflict between the two ethnic groups, with similar deadly violence reported in 2001

(Pacific Institute, 2022; Weiss, 2004). Yet, the conflict intensity of the 2012-2013 clashes was unprecedented (Al Jazeera, 2013; Gogineni, 2012b; Pacific Institute, 2022).

From environmental scarcity to political corruption

In the years leading up to the 2012-2013 Tana River District clashes, the region was facing increasing water and land scarcity (Asaka, 2012; Global Facility for Disaster Reduction and Recovery [GFDDR], 2012; Lawrence et al., 2023; McVeigh, 2011). The 2009 and 2011 droughts diminished the fertile water and land availability throughout the country while also negatively impacting the ecology of the Tana River Delta (GFDDR, 2012; Lawrence et al., 2023; McVeigh, 2011). These regional droughts also engendered growing water and land demand in the Tana River Delta (Asaka, 2012; Climate Diplomacy, n.d.; GRAIN et al., 2014). Orma nomadic pastoralists contributed to a heightened water and land demand by seeking more permanent refuge in the relatively fertile Tana River Delta to escape increasingly common droughts (Climate Diplomacy, n.d.; GRAIN et al., 2014). At the same time, Pokomo farmers living in the Tana Delta had been expanding their operations given that droughts affected their crop harvests (Asaka, 2012).

Despite theoretical expectations that this heightened resource scarcity might generate corruption since scarce water and land can be illegitimately allocated to the highest bidder, no sources explicitly mention such a dynamic. Nevertheless, natural resource scarcity in the delta provides important context to the political corruption that arose in land governance prior to the 2012-2013 Tana River District clashes (Africa Biodiversity Collaborative Group [ABCG], 2013; Asaka, 2012; Duvail et al., 2012). In the wake of the 2007-2008 global food-price spike, governments and companies started making investments in Kenyan viable agricultural land, particularly in areas with access to freshwater (ABCG, 2013; Franco et al., 2013; Temper, 2012). As such, several water-intensive land deals in the Tana River Delta aimed at biofuel and food export were initiated by large (foreign) companies in the late 2000s, sometimes in close cooperation with Kenyan government agencies (Franco et al., 2013; Temper, 2012; McVeigh, 2011; Nunow, 2011). However, as natural resources had become increasingly scarce in the delta (Asaka, 2012; Climate Diplomacy, n.d.; GRAIN et al., 2014; Lawrence et al., 2023; McVeigh, 2011), the water and land required for these large-scale land acquisitions (LSLAs) inevitably conflicted with water and land rights and needs of local communities including the Orma and Pokomo ethnic groups (ABCG, 2013; Duvail et al., 2012; GRAIN et al., 2014; Kariuki and Ng'etich, 2016; Nunow, 2011; Temper, 2012).

The socioeconomic as well as the environmental impact of these projects were evaluated in Environmental Impact Assessments (EIAs) that companies proposing LSLAs were required to conduct (Duvail et al., 2012; GRAIN et al., 2014). These EIAs were regularly subverted in the process of Tana Delta LSLAs, often with explicit or tacit support from government officials (Duvail et al., 2012; GRAIN et al., 2014; Médard and Duvail, 2023). This was deemed necessary given that these agricultural projects often infringed upon the water and land rights of local communities (ABCG, 2013; Duvail et al., 2012; GRAIN et al., 2014). For example, a report by the NGO GRAIN describes how LSLAs in the Tana River Delta involved political patronage, as political elites assured investors that they did not have to adhere to existing legal requirements, such as conducting adequate EIAs (GRAIN et al., 2014). Additionally, Smalley and Corbera (2012) indicate that illegal mechanisms such as bribery have been linked to LSLAs in the area. In return for illegitimately facilitating land deals, Kenyan government officials acting as intermediaries profited personally through the negotiation of land ownership documents by gaining economic resources (Duvail et al., 2012; Médard and Duvail, 2023; O'Brien, 2011). Still, given that the expected enabling effect of scarcity on corruption has not been explicitly identified in reports, the connection between environmental scarcity and political corruption cannot be confirmed.

From political corruption to diminished natural resource availability

In line with my expectations, political corruption in LSLAs led to diminished water and land availability in the Tana River Delta, especially for disadvantaged groups, through two mechanisms. First, corruption caused water and land degradation in the Delta (ABCG, 2013; Duvail et al., 2012; GRAIN et al., 2014; Temper, 2012). Government officials involved in and profiting from land acquisitions in the region disregarded the ecological consequences of these deals (Duvail et al., 2012; GRAIN et al., 2014). As noted, EIAs were frequently subverted with the help of government officials through corrupt practices (Duvail et al., 2012; GRAIN et al., 2014; Médard and Duvail, 2023). Due to this environmental negligence, natural resource degradation has been exacerbated in the Delta (ABCG, 2013; Bucx et al., 2014; McVeigh, 2011). For instance, several reports mention a decrease in river water quantity and quality and an increase in soil pollution and coastal erosion resulting from large-scale land acquisitions and related poor environmental management (e.g., ABCG, 2013; Bucx et al., 2014; Duvail et al., 2012; McVeigh, 2011; Temper, 2012). This observation confirms the expectation that political

corruption in environmental governance substantially diminished the availability of water and land in the Tana River Delta.

Second, political corruption in environmental management in the Tana River District restricted access to water and land resources for disadvantaged groups (ABCG, 2013; Kariuki and Ng’etich, 2016; Nunow, 2011). As Kenyan government officials involved in land deals often pursued private economic interests (Duvail et al., 2012; Médard and Duvail, 2023; O’Brien, 2011), they prioritized the interests of wealthy investors over the socioeconomic needs of the local population (Bucx et al., 2014; Duvail et al., 2012; Kariuki and Ng’etich, 2016). As such, large-scale agricultural projects arising from these land deals restricted the access of local communities, including the Orma and Pokomo ethnic groups, to crucial water and land resources (ABCG, 2013; GRAIN et al., 2014; Kariuki and Ng’etich, 2016; McVeigh, 2011; Nunow, 2011; O’Brien, 2011; Onguny and Gillies, 2019). Regarding land access, at least hundreds – including Ormas and Pokomos – have been displaced in the Tana Delta as a result of LSLAs (ABCG, 2013; McVeigh, 2011). With regard to water, public access points to freshwater resources along the Tana River were cut off by companies that had acquired large strands of land in the Delta (ABCG, 2013). Meanwhile, river water was also diverted to maintain the water-intensive agricultural projects (GRAIN et al., 2014; McVeigh, 2011). The identified constraints reported for local communities in accessing water and land resources align with the formulated observable implications in this regard. Therefore, it can be asserted that political corruption led to a further decrease in water and land availability for disadvantaged groups by causing the exclusion of local communities from accessing land and water resources.

From diminished natural resource availability to disrupted livelihoods

The livelihoods of local communities in the Tana River Delta were gravely impacted by the diminished water and land availability caused by the LSLAs in three ways. First, the decrease in land availability, which manifested itself in displacements, meant a loss of homes for a considerable portion of the inhabitants of the Delta (McVeigh, 2011; Nunow, 2011; Onguny and Gillies, 2019). For instance, hundreds of families lost their homes as they were evicted from a village in the Tana Delta to make way for the establishment of a sugar cane plantation in 2011 (McVeigh, 2011). In accordance with the formulated observable implications, the reports of large-scale losses of homes indicate that local communities could not maintain their

way of living as a direct result of the diminished land availability linked to political corruption (ABCG, 2013; McVeigh, 2011; Nunow, 2011; Onguny and Gillies, 2019).

Second, the reduced access to natural resources in the Tana Delta impaired the cultural identity of local communities such as the Orma and Pokomo ethnic groups (Nunow, 2011). Given that certain lands and the activities enacted upon them held significant cultural value for the inhabitants of the Tana Delta, the loss of access to land resources resulted in the discontinuation of these cultural practices (ABCG, 2013; GRAIN et al., 2014; Nunow, 2011). As such, the diminished land availability disrupted livelihoods through undermining local cultural identities (ABCG, 2013; Nunow, 2011). The inability to engage in cultural practices is directly tied to large-scale agricultural projects in the Delta (ABCG, 2013; Nunow, 2011), consistent with the formulated observable implications.

Lastly, diminished natural resource availability disrupted the economic activities of the inhabitants of the Tana Delta (Duvail et al., 2012; Jacinto, 2013; Kariuki and Ng'etich, 2016; Nunow, 2011). The loss of access to land resources interfered with farming activities from Pokomo communities (Duvail et al., 2012; Kariuki and Ng'etich, 2016) and hindered grazing by cattle from Orma pastoralists (Duvail et al., 2012; Jacinto, 2013; Nunow, 2011). At the same time, the reduction in freshwater availability led to a loss of fishing grounds in the Delta (Duvail et al., 2012; Nunow, 2011) and prevented communities from watering their livestock (Kariuki and Ng'etich, 2016). In line with my expectations, the disruption of economic activities is again directly linked to LSLAs in the Tana River Delta (Duvail et al., 2012; Jacinto, 2013; Kariuki and Ng'etich, 2016; Nunow, 2011).

From disrupted livelihoods to competition, violence, and intrastate conflict incidence

In order to maintain their livelihoods in the wake of decreasing availability of crucial natural resources, exacerbated by political corruption, the Orma and Pokomo ethnic groups became more and more involved in competition over scarce water and land resources (ABCG, 2013; Asaka, 2012; Onyango, 2012; Sheekh and Mosley, 2012). The activities of both groups intersected, as Pokomo farmers required farmland and river water for their farming operations, while Orma pastoralists sought pastureland and freshwater to feed and water their cattle (Associated Press [AP], 2012; Asaka, 2012; Onyango, 2012). The competition for increasingly scarce water and land resources caused mounting tensions (ABCG, 2013; Al Jazeera, 2012a; Odula, 2012; Onyango, 2012). Small-scale attacks over access to river water and pastureland started to occur between the two ethnic groups in early 2012, targeting individuals and cattle

(Al Jazeera, 2012a; Human Rights Watch, 2012; Onyango, 2012). Multiple sources attribute the competition and subsequent violent attacks over scarce resources to the LSLAs and its grave consequences for natural resource availability (e.g., ABCG, 2013; Asaka, 2012; Jacinto, 2013; Médard and Duvail, 2023; Sheekh and Mosley, 2012), increasing confidence in the working of the hypothesized causal mechanism. Moreover, the reported competition over scarce resources between Ormas and Pokomos seeking to maintain their livelihoods and the escalating tensions resulting in violent confrontations correspond with the formulated observable implications.

The dispute over natural resources further escalated into intrastate conflict in late August 2012 due to an incident related to pastureland (Al Jazeera 2012b; AP, 2012; Asaka, 2012; Onyango, 2012). On August 22, hundreds of Pokomo farmers attacked an Orma village, killing 52 villagers, including women and children (AFP, 2012; AP, 2012; Onyango, 2012). Orma pastoralists had allowed their cattle to graze on farmlands belonging to the Pokomo community, damaging crops that are crucial to the livelihood of Pokomo farmers (AP, 2012; Asaka, 2012; Onyango, 2012). After this incident, several Pokomos allegedly assaulted Orma pastoralists and injured hundreds of their livestock. In a retaliatory attack, Ormas are reported to have killed two Pokomos (AP, 2012). In response to these killings, Pokomo farmers then engaged in the large-scale violence of late August (AFP, 2012; AP, 2012; Onyango, 2012). After the violent outbreak of August 2012, tit-for-tat attacks linked to competition over water and land continued until early 2013, killing approximately 150 people (Al Jazeera, 2012a; CNN, 2013; Jacinto, 2013; Onyango, 2012; Gogineni, 2012a; Times of Malta, 2012). The escalation of the dispute between the two communities over scarce natural resources into intrastate conflict is in line with my theory and observable implications.

While most sources underline the role of natural resource scarcity when reporting on the outbreak of the 2012-2013 Tana River District clashes (e.g., Al Jazeera, 2012b; Odula, 2012; Onyango, 2012; Times of Malta, 2012), some mention other contributing factors (Al Jazeera, 2013; Al Jazeera, 2012a; Jacinto, 2013). For example, it has been argued that local political dynamics were a more prominent factor in the clashes (Al Jazeera, 2013; Al Jazeera, 2012a; Gogineneni, 2012b; Jacinto, 2013). According to this point of view, Pokomo politicians concerned with losing the electoral edge over other ethnic groups in the March 2013 general elections aimed to forcibly reorganize constituencies (Al Jazeera, 2012a; Al Jazeera, 2012b; Human Rights Watch, 2012; Jacinto, 2013). By instigating the violence, Pokomos allegedly sought to drive away Ormas from certain constituencies, thereby shifting the demography of the electorate in favor of their preferred candidates (Al Jazeera, 2012a; Jacinto, 2013). This

perspective finds support in the uncommonly large-scale and organized nature of the attacks (Al Jazeera, 2013; Gogineni, 2012b). However, solely focusing on this perspective would fail to explain the small-scale violence over natural resources that had been occurring since early 2012 and the consistent reports on resource competition throughout the conflict.

Conclusion

Thus far, political corruption's role in the relationship between environmental scarcity and intrastate conflict incidence has been underexplored. While Bretthauer (2015) and Rus (2014) have made strides in this regard, the working of the hypothesized causal mechanism connecting environmental scarcity to intrastate conflict had not yet been examined. In this thesis, I have contributed to filling this gap in the literature by answering the following research question: What is the role of political corruption in the relationship between environmental scarcity and intrastate conflict incidence? Given scarcity's theoretical links to political corruption and corruption's ability to distort effective and equal resource distribution, I hypothesized that political corruption moderates the relationship between environmental scarcity and intrastate conflict incidence.

Analyzing the case of the 2012-2013 Kenyan Tana River District clashes using theory-testing process tracing, I have found moderate support for the premise that political corruption plays a moderating role in the relationship between environmental scarcity and intrastate conflict incidence. While environmental scarcity in the Tana River Delta provides important context to the occurrence of political corruption in environmental governance, it has not been proven to have enabled corruption. Nevertheless, political corruption in environmental governance has played a crucial role in the functioning of the scarcity-conflict mechanism. It has resulted in inadequate environmental management and the exclusion of disadvantaged groups, such as the Ormas and Pokomos, from natural resources. Consequently, natural resource availability for these groups has been further diminished. This has caused intensifying competition between the Orma and Pokomo communities, rising tensions, increasing violence, and, eventually, intrastate conflict. Except for the unobserved relation between scarcity and corruption, this thesis's findings closely align with the formulated observable implications, supporting my theory and hypothesis.

Still, while the unproven link between environmental scarcity and political corruption hinders confirmation of my hypothesis, my findings indicate that the presence of political corruption in environmental governance can intensify the scarcity-conflict relationship. This

increases confidence in the notion that political corruption might explain the ambiguous results in the literature on environmental scarcity and intrastate conflict, which, to date, are not fully understood. On a more abstract level, these insights contradict advocates of a deterministic perspective on human-environment relations in environmental conflict (Hoffmann, 2018). The significance of political corruption in the scarcity-conflict linkage suggests that environmental factors alone are not sufficient to incite intrastate conflict. This indicates a balanced perspective on human-environmental relations in environmental conflict, in which environmental actors and human actors share agency. This lends support to critical scholars who consider the interplay between both environmental, and social, economic, and political factors when explaining environmental conflict (Robbins, 2012).

However, this study has two main limitations. First, as I have focused on theory testing, alternative explanations for the incidence of the 2012-2013 Tana River District clashes cannot be entirely dismissed. For example, international economic dynamics, such as the 2007-2008 food-price spike, were largely responsible for the rise of LSLAs in the Delta, contributing to a diminished availability of natural resources (Franco et al., 2013; Temper, 2012). Furthermore, given the history of conflict between the two ethnic groups, ethnicity might have been an enabling factor in the scarcity-conflict relationship. The analysis has also produced some evidence that political motives fueled the clashes, as Pokomo communities allegedly aimed to oust Ormas from constituencies in which Pokomo candidates were in danger of losing in the 2013 general elections. Second, as I conducted a single case study selecting a most likely case, the results of this research merely concern the general plausibility of corruption's prominent role in the relationship between scarcity and intrastate conflict. As such, the generalizability of my findings is limited.

In light of these limitations, future research is necessary into the influence of political corruption on the scarcity-conflict linkage. To rule out the relevance of alternative explanations, future research should take into account other possible factors contributing to the incidence of intrastate conflict when examining the role of political corruption. For instance, this can be done by conducting a comparative study. Additionally, to explore the generalizability of this thesis's findings, future research can be aimed at multiple different contexts. First, other intrastate conflict outcomes could be analyzed. In the case of the 2012-2013 Tana River District clashes, the violence was primarily of an intergroup nature. However, as some police casualties (Gogineni, 2012a) and violence towards those engaged in land acquisitions have been reported (Smalley and Corbera, 2012), it is plausible that different types of intrastate conflict types can arise from the hypothesized causal mechanism. Second, future research could consider the

effects of short-term environmental scarcity. Given that the effects of environmental scarcity in the Tana River District case manifested themselves after a rather extensive period, it remains unclear whether the mechanism also functions in the short term. Third, as Bretthauer (2015) notes, most scholars who find a positive relationship between environmental scarcity and intrastate conflict have focused on Africa. Hence, future studies should focus on potential cases in other continents. Furthermore, another way to assess the extent to which this thesis's findings can be generalized would be to examine the role of political corruption using sophisticated quantitative analyses.

The insights derived from this thesis also provide relevant information for policymakers interested in preventing the incidence of intrastate conflict. Notably, I have demonstrated that political corruption in environmental governance can intensify the relationship between environmental scarcity and intrastate conflict. Therefore, combating political corruption in environmental governance might reduce the likelihood of intrastate conflict. This indicates that anti-corruption measures might have a pacifying effect on intrastate conflict. These implications should be considered by policymakers aiming to reduce conflict risk.

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