The Feedback Loop of Poor Governance: The Direct Correlation Between Poor Governance and Environmental Degradation Seeing Both as Amplifiers of Poverty and Conflict

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Introduction

Developing nations face multiple well documented challenges when ecological stress is put on their society. How does this weak governance mediate the relationship between the environment, poverty, conflict? Weak governance not only fails to mitigate the effects of the degradation of the environment in relation to poverty but can actively affect them and serve as a further catalyst for armed conflicts. These include fragile institutions, endemic poverty, and increasing ecological stress, all of which often culminate in armed conflict. In many such countries, state capacity is insufficient to manage natural resources equitably, enforce the rule of law, or respond effectively to socio-economic grievances. Instead, weak governance can amplify vulnerabilities and catalyze instability. The deficit in governance in developing countries can manifest in many different ways. This failure can prevent the effective implementation of important environmental policies which safeguard the environment and alleviate poverty in these nations. Furthermore poverty and environmental stress can create an interplay in which a positive feedback loop is formed, causing the issues themselves to deepen. In more depth, the enhancement of this poverty by environmental stress can lead to impoverished populations to turn to exploitive measures such as illegal logging, unregulated mining, and overgrazing; these practices both are dangerous to the individual and the environment and the absence of a government to regulate such things is responsible. These conditions can escalate into contestation and conflict, Bourdeaux et al.(2022) says “natural disasters and environmental shocks significantly reduce entrepreneurial activity in countries with weak governance, deepening poverty”. This can be seen in multiple cases throughout the globe such as DRC, Somalia, Sudan, Bangladesh and many more. These cases serve as cautionary tales for bad

governance in states of environmental distress. Bad governance can also be seen in many forms such as corruption, lack of transparency, bad/loose, and a low bureaucratic complicity. These factors put strain on already fragile economies and environments becoming a catalyst for the issues present in developing nations.

This deficit in governance can manifest in various ways but all hinder the efficacy of further policy and implementation, this not only makes environmental policy ineffective but exacerbates already existing issues in these places. Furthermore, degradation of the environment due to lack of protection, such as loss of tree cover, can continuously, through multiple channels, displace the local community while pushing them more towards poverty. The state's ability to uphold the rule of law, manage natural resources fairly, and properly address socioeconomic complaints is usually inadequate. Rather, ineffective administration can increase susceptibilities and spark instability.

Literature Review

In the case of Somalia, the most representative measures to prevent further Climate degradation are seen. These are continuously proven ineffective. Climate-related security risks and peacebuilding in Somalia (SIPRI Policy Paper No. 53) is a policy paper, authored by Karolina Eklöw and Florian Krampe Research Institute in 2019. The authors see the ongoing climate change as a significant factor in the overall security landscape, and undermine the UN'S peacebuilding efforts. Somalia is highlighted in this policy as one of the most vulnerable countries in terms of climate change globally. The highlights of the mentioned climate vulnerabilities are identified, things such as severe droughts are examined over the last three

decades of ongoing conflict. The paper claims that the environmental phenomena at play hinder the success of the UNSOM mandate which is meant to peacebuild in Somalia. The report specifically emphasizes how climate impacts undermine UNSOM's efforts to provide peace and security, as well as to construct functional governance and judicial institutions, through its effects on livelihood, migration, and forced displacement. The implementation of the UNSOM mandate is directly hampered by the loss of livelihood opportunities and rising poverty, which fuel grievances and fragility. The authors successfully demonstrate the security risks that impede peacebuilding attempts due to this climate phoneome. This demonstration further perpetuates a proiven cycle between conflict and environmental crisis, while not specific environmental degradation the crises presented impact the livelihood of the local community. To further explore the past political troubles of somalia, we can look to *Cooperation and Conflict at the Horn of Africa: A New Regional Bloc Between Ethiopia, Eritrea, and Somalia and Its Consequences for Eastern Africa* by Ingo Henneberg and Sören Stapel 2021, In 2020 a regional bloc which is referred to as the HoAC, the proposed bloc is a cooperation of the horn of africa, including Ethiopia, Eritrea and Somalia. Although cooperation is necessary and there has been great progress in the Horn of Africa toward regional peace and development, the HoAC proposal, which is primarily motivated by security and domestic political concerns, has significant drawbacks in terms of funding, capacities, and overlap with existing institutions. Not many analysts concur that a new RO is required. It runs the risk of damaging peacekeeping operations in places like Somalia and South Sudan by causing functional issues, enragement with neighbors like Djibouti and Kenya, mistrust, and possibly the fragmentation of regional security cooperation. This is a step towards the haunting of conflict in the horn of Africa, as the paper addresses economic interest and is still present in what is proposed.

The use of multiple case studies allows for a more empirical approach to the topic at hand, however it could lack nuance when it comes down to specific countries and provinces, luckily there's is a large volume of research done in specifics to each of these locations that provide insight into more of the fine details of situations at play. While elements from these research are present in the following case studies it is important to discuss the intricacies.An article that discusses situations in Sudan is Local warming and violent conflict in North and South Sudan by Maystadt, J.-F., Calderone, M., & You, L. (2015). This article contains micro level research seeing if a connection is seen between localized weather variation due to climate change, and violent conflicts. It specifically focuses on North and South Sudan and does an investigative analysis of the local warming and risk of conflict. The research is positioned within a debate that argues the before mentioned factors correlation. These researchers use this comparison of data from local warming and conflict data from the ACLED. The results of a study provide strong out of sample proof of a strong connection between temperature and conflict. A change in temperature anomalies was found to increase frequency of violence by 32%. This creates a quite relevant direct causation between climate change and the frequency of violence in Sudan. The increase in temperature creates an environment prone to conflict, which is shown in this research. Other relevant research includes Environmental Security and Its Relation to Ethiopia and Sudan by Arthur H. Westing from 1991 is older research but still relevant to the long lasting issue in discussion and adds historical context. The author expands on the concept of security, he argues that environmental security requires “environmental protection and sane resource utilization”. The environmental protection proposed would act as a safeguard against wartime environmental abuse. Additionally Westing proposes that without social security, environmental security is unobtainable. The author's central conclusion is that Ethiopia

and Sudan need to strive for a goal of cooperation both in ecological and social science, which fundamentally address a seemingly endless string of border wars in Sudan. The authors point out that environmental security requires social security, which adds to the connection between poverty and environmental degradation. It is a step that is in a cycle, without the proper social support a government cannot focus on environmental stability, but the environmental stability further continues a cycle of poverty and social decline.

Amid the Congos conflicted landscape, is the DRC attempt to adopt decentralized reforms. This attempt is detailed in The Failure of Decentralization Reforms in the Democratic Republic of Congo by Pierre Englebert and Emmanuel Kasongo Mungongo 2016. This reform is a central point to the fragmented state of the federal rule of the Democratic Republic of Congo. The paper delves into the decentralized reforms that were widely adopted across Africa since 1990. The goals of these reforms were to approve the accountability of the government, reduce corruption, diminish non government rule, and reattach the government to the population. However as of 2014 this implementation has produced outcomes opposite of the original intention. It worsened the qualities of government. This circumstance is described as "captured reform," where the changes were appropriated by those who were supposed to implement them, repeating the very issues that decentralization was meant to address, rather than just partial reform, which is typical in African contexts. When Provinces were granted taxation rights, these rights were exploited to extract income and resources from citizens, through a multitude of taxes without any of the corresponding services. The provincial governance also lacked any transparency and therefore accountability, audits revealed numerous anomalies, including multiple unjustified costs. These governments were mostly self-serving, with most resources being allocated to the governors furthering corruption. Actions like these further opened the door

for the future illegal mining operations that transpire. The lack of accountability displayed by the centralized governments are the same reasons that the current DRC cannot control the rate of illegal mining. Furthering the cycle of syphoning money from the people. Power remains informal with the networks open to influence from outside groups and interests.The governance failures were not properly evaluated before jumping into a decentralized government.Even with reform the proper problems were not addressed in order to prevent future issues. This still halts the progress of environmental sustainability in the Congo and the suppression of mines impact on the environment, such as the tree cover.

Case Study 1: Somalia

Somalia experienced a complete collapse of the central government in 1991 and it came with both social and environmental consequences. The current Federal Government of Somalia remains weak and filled with corruption and infighting due to limited territorial control. The prolonged state of unrest that is present in the horn or Africa not only has led to many humanitarian conflicts but has exacerbated an already degrading environment. The interplay between the environmental challenges and weak governance becomes apparent with the state of armed conflict and complex web of issues that are a hindrance on Somalia's development and stability. The continued environmental degradation that is present in Somalia is a multifaceted issue that is driven by many factors. The consequences of poverty and the environment are directly mediated by this institutional failure. Without effective governance structures, Somalia is

unable to carry out initiatives aimed at reducing poverty or protecting the environment, as Leeson (2007) shows, which makes the country vulnerable to violence.

Between 2000 and 2021 Somalia saw an annual rate of deforestation of 429000 hectares, which comes down to an annual rate of 4.95%. This primarily stems from Somalia's charcoal production for both domestic use and export. The percent of land degradation is between 23% and 30%, with other major losses being attributed to erosion. In addition to this Climate change has significantly exacerbated Somalia's droughts, which we see lead to crop failures, and livestock deaths which leads to further food insecurity. This becomes especially concerning when you take into account the fact that 75% of the GDP of Somalia is attributed to agriculture. As Hussein (2018) notes, “The absence of environmental governance has transformed Somalia's landscape into both a victim and fuel source for conflict”. While laws such as the 1988 Environmental Protection Law, which were set to control and prevent air water, and soil pollution, exist the implementation of such was ineffective in enacting the policies that were outlined in such laws and policy. In addition to this Somalia has ratified but ignored nine global/major environmental connections, this weak governance further enables unchecked environmental destruction which can be seen in the 8.8 million tree loss mentioned previously In 2022 the new government of Somalia created the Ministry of Environment and Climate change. While this was a step forward it overlaps with resource shortage and growing mandates that hinder the ministry's success. Bureaucratic redundancies hinder the MoECC's responsibility to monitor climate degradation and environmental conservation. For instance, participants at the ministry's 2023 consultation workshop on environmental justice noted that "climate resilience remains siloed within sectoral ministries" 9. The session also revealed gaps in the integration of climate adaptation into larger development frameworks. This is indicative of a larger inability to

coordinate policies across agencies with competing interests, such as agriculture, water, and energy. Combined with this the Ministry of Environment and Climate Change or MoECC operates with a 1.4 million dollar budget. Along with this less than 10% of international climate funding nationally reaches local communities, and is often lost in bureaucratic processes. This is shocking considering that 80% of Somalia's resources for environmental programs comes from abroad and outside actors. (De Waal, 2022, p12) states “donor-driven initiatives often bypass state institutions, deepening dependency and eroding local ownership". This effect is further exhaustipated by the post conflict state that Somalia is. (Menkhaus, 2018, p 34), states “"Institutional rebuilding often prioritizes short-term stability over long-term systemic coherence". There is an absence of any unified legal framework, despite the drafting of the environmental management bill in 2023 =, which aimed to centralize governance and jurisdiction particularly when it came to land use and biodiversity conservation.

The constitutional ambiguity between both Somalia's state and federal adds the confusion that has paralyzed any environmental governance. For instance the Nation Climate change policy centers decentralized adaptive strategies, yet these federal directives are often rejected by FMS citing it as a violation of their autonomy. A 2024 BTI Project report notes that "the lack of clarity on resource-sharing mechanisms has turned environmental policymaking into a battleground for political leverage". This discord is extreme in contested regions such as Galmudug, where these state level authorities put an emphasis and priority on coal production and revenue, directly opposing federal level bans. As Hussein, ((2018) observes, "environmental policies become casualties of Somalia’s unresolved state-building project, where federalism fuels competition rather than collaboration". This further concretes the general mismanagement and miscommunication within the Somali government when it comes to environmental policy.

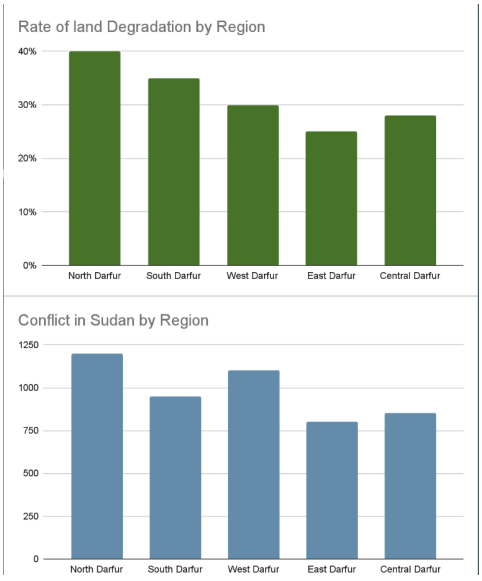
Framework is constantly put into place and not executed on at a federal or state level due to lack of funding and cooperation. The MoECC minister of state even said himself “Government officials cannot visit certain regions to implement adaptation measures due to security risks… Weak coordination across ministries means even basic tasks like water catchment planning stall indefinitely"” (Dr Adam Aw Hirsi). These priorities that the state level government holds can even be a projection of the feelings of the people. As a country in crisis beyond climate change it can be a hard message to rally people to, because to some there are more pressing issues within their lives and country. In addition to undermining environmental stewardship, Somalia's long standing inadequate governance system feeds the vicious cycle of armed conflict and ecological degradation. Environmental resources, especially arable land, charcoal, and timber, have increasingly turned into commodities of war, particularly in regions controlled by non-state organizations like Al-Shabaab. Through consistent government failure Somalia exacerbated the already existent environmental crisis.

Case Study 2: Sudan

Sudan presents as an important case when it comes to the effect of weak governance on environmental degradation and lack of environmental regulation. To add context Sudan gained their independence in 1956. The post-independence period was defined by the alteration of military and civilian governments, both failing to build the framework a lasting and strong governance and structure to the state. This amplified the long standing marginalization of certain regions like Darfur, South Kordofan, and the Blue Nile. This set violence and conflict with the creation of separatist movements further creating a political fracture in the government. These

fractures created confusion and competition over resources such as land, water, and oil. As de Waal (2015) observes, “the Sudanese state has functioned less as a provider of public goods than as a kleptocratic network prioritizing elite survival over national development” (p. 149). This legacy of an exclusive governance severely damaged Sudan's ability to regulate and halt the environmental degradation that was both already at play, and exacerbated by this conflict. Through these conflicts environmental management became extremely politicized in Sudan.

The states have consistently shown a general inability to manage their natural resources in an equitable manner. A prime example of this mismanagement is the current state of Sudan's land governance. The unregistered land act and civil transition act were supposed to be the backbone of land applying to unregistered land, declaring all of it state property. This framework has created a large-scale land grab between different groups, resulting in Sudan ranking in the bottom 10% of the BTIs indexed report of land governance. Central to the failure of Sudan's land governance is the Unregistered land act of 1970 which declared all land as state land. The repercussions are environmental and conflict-prone, in addition to being long bureaucratic battles. These land disputes, particularly in the regions of Darfur, South Kordofan, and eastern Sudan, have been exacerbated due to the lack of a secure land tenure system. According to the United Nations Environment Programme (UNEP, 2007), “land tenure insecurity and weak state institutions have directly contributed to unsustainable land use practices, soil depletion, and deforestation, deepening poverty and fuelling conflict” (p. 51). Government not only fails to mitigate these



environmental disasters but they exacerbate them, effectively converting resources and their scarcity into the main driver for these armed conflicts, further concreting the patterns at play. Furthermore, escalating violence speeds up environmental deterioration, resulting in a vicious cycle. These militias often destroy things like water structures or will cut down trees for tactical purposes. These actions in essence displace local communities due to ecological fragility and lack of resources. Thesen spaces also become hubs for intensified deforestation, water contamination, and soil exhaustion. This destruction becomes a part of war, as Verhoeven (2011) argues, "resource mismanagement and environmental degradation in Sudan are not incidental—they are deliberate tools of war, embedded within state strategies of coercion and control" (p. 690). Environmental in this context becomes a weaponized einsteins used to weekend the individuals for territorial control. Displayed as systematic components to a territorial war, the ecological devastation undlines and amplifies the poverty already present, starting a positive feedback loop of both personal and environmental destruction and peril.

These collapses of various local structures of governance in conflict zones, eliminates any basic environmental protection that may have slowed the present environmental degradation. The institution vacuum that is created renders further attempt to create new environmental lawmaking a useless endeavor. As Kevane and Gray (2008) argue, "without legitimacy at the local level, environmental policies are destined to remain hollow, especially in fragile states like Sudan where natural resource governance is central to both livelihoods and conflict" (p. 28) .Without an agreement between a the state level and federal level the miscommunication can leave the people of the country vulnerable. Marginalized groups are more vulnerable in the absence of fair resource management and effective regulations: In Sudan, 42% of people currently face severe food insecurity. To put in context, 64% of Sudanese people work in

agriculture, which accounts for 80% of Sudan's workforce. Due to climate change Sudan has experienced 28% decreased rainfall since 1989 launching the country into a drought. Due to this Sudan's production of agriculture has decreased 46% between 2023-2024. The FOA attributes this decrease to be the impact of conflict on agricultural production. While this is due to both insecurity and high price of agricultural products, another factor is the migration towards urban areas due to conflict. Conflicts arise surrounding land disputes and most of these conflicts are in the name of gaining or keeping land, the devastation and disruptions that these small wars cause on the community and ecosystem make farming impossible for some small rural farmers. To come back to the regions of Kordofan, Darfur, and Gezira, as of 2024 multiple side conflicts are limiting access to pastoral areas. The large-scale land debate in Sudan consistently raises tension among local groups. These tensions transform into large scale conflicts that create a positive feedback loop for environmental destruction ending in the increase of poverty and food insecurity.

Case Study 3: The Democratic Republic of the Congo(DRC)

The Democratic Republic of the Congo (DRC) is a prime example of how colonial exploitation and post-independence instability have historically led to weak governance, which has exacerbated poverty, armed conflict, and environmental destruction**.** The Democratic Republic of the Congo(DRC) exists as a historically and currently fragmented political landscape. The DRCs was formerly The Belgian Congo from 1908-1960, the regime that existed put most priority and emphasis on the infrastructure centering around the extraction of resources, this included ways of transporting minerals and other resources. In 1960 The Belgian Congo

gained independence and became The Democratic Republic of the Congo. In 1965 Joseph Mobutu seized power and centralizing authority. This began the congos exploitation of resources as this regine infomisly siphoned the gained mineral wealth to the elites of the society. The country was launched into war in a series of conflicts that centered on controlling the more resource rich part of the DRC. In modern times the 2019n marked the first peaceful transition of power in DRC history. However there are still groups like M23, which is Rwandan Backed, and controls the eastern province of the DRC, which M23 uses to exploit and control the cobalt mine in the region.

Mineral wealth and enormous forests are among the many natural resources found in the Democratic Republic of the Congo . However, the nation's capacity to manage these resources sustainably has been severely hampered by poor governance, which has resulted in ongoing poverty, violence, and environmental destruction. The DRC sits on a vast and rich mineral reserve, which contains about 30% of the world's coltan supply which is an ore that is essential for the production of smartphones. Along with this they sit on large reserves of copper, cobalt, and gold. Despite this large wealth 74% of people live on less than $2.15. These large scale mining operations both legal and illegal have led to the mass deforestation in the DRC. Over 500,000 Hectares of tree cover have been lost. The government has made an attempt to slow and reduce this loss through the REDD+ program. While the REDD+ program shows the government's attempts to improve, it relies too heavily on foreign aid which has hindered the programs effectiveness, furthermore the program has proven ineffective in the M23 control eastern province. Even with these policy frameworks, there are still many obstacles to overcome in terms of execution. Environmental rules are frequently undermined by political instability, corruption, and a lack of enforcement. For example, in spite of legal bans, illicit mining

operations continue in protected places such as the Okapi Wildlife Reserve. Deforestation and biodiversity loss result from such practices being permitted to continue by conflicting land use maps and lax enforcement. As noted by Trefon (2011), "the Congolese state is characterized by a lack of capacity and legitimacy, which undermines its ability to implement policies effectively" (p. 408). This lack of legitimacy is exemplified through M23 continued control of the eastern mining region, alone in 2023 over 1 billion dollars was lost in illegal mining operations. Reforms aimed at enhancing governance through decentralization have also failed. According to Englebert and Kasongo (2016), "the redistribution of rents has been more about the Congolese decentralization process than about the empowerment of local authorities" (p. 7). Environmental deterioration has been exacerbated by this rent-seeking conduct, which has taken funds away from environmental conservation initiatives and toward personal wealth. As noted by Autesserre (2010), "the illegal exploitation of natural resources has been a major driver of conflict in the DRC" (p. 12). This further concretes the direct link between the need to extract these natural resources and the degradation and poverty of the community and people that occupy the areas that hold these resources. Addressing the issues of the intertwined politics of the environmental degradation and poverty in the DRC requires a holistic approach, the complexities of the situation and the trickle down effects of mining touch most ways of life. The vulnerability that conflict opens communities up to can often cause devastation effects.

While the DRC is endowed with a continuous vase array of natural resources, the mining of such the catalyst for most issues talked about in the DRC already. In 2010 the then president Joseph Kabile attempted to suspend mining operations in the eastern provinces such as North Kivu, South Kivu, and Maniema. This aimed to stop the operations of the almost mafia-like networks that controlled these areas . This suspensioned was supposed to stop the flow of cash to

these groups, therefore severing their finacle lifelines, such as paid armed groups. Despite the positive intention of President Kabila to reassure government control over mining operations and profits, reports the Armed Forces of the Democratic Republic of the Congo (FARDC) exploiting the general situation for their own gain, while tasked with enforcing the ban it was found that they took control over mining sites, engaged in illegal taxation, and even courses civilians to work under these exploitive conditions. The band also brought with it massive economic repercussions for local communist. Artisan miners suddenly face rapid unemployment, while simultaneously not stopping rebel groups in the region. Satellite images taken during the ban actually showed the growth of illegal mines, proving the ban to be an effective policy in trying to stop explorations. The only ones impacted were small legal miners and not the large scale operations causing most major issues. Montejano and Mathysen(2013) state in relation to the ban"In late 2010, before the presidential ban on artisanal mining, [the town of] Bisie was home to about 13,000 people. An estimated 3,000 artisanal miners were then digging for cassiterite in deplorable conditions at the mine. Mineral trade slowed down during the suspension but it did not cease. Congolese state institutions lacked the capacity and will to enforce the ban, which was bypassed in different ways, and ironically allowed for the further consolidation of military control over the mining sector". Once this ban was lifted in 2011 a code of conduct was imposed to try to increase transparency and decrease fraud. It introduced permits and other regulations in order to mine, but this has proven unsuccessful due to the inability to police groups such as M23 and bureaucratic miscommunication. While well intentioned these polices underscore the systemic issue and corruption at play, highlighting a need for both economic support and in depth strategies.

Conclusion

The feedback loop that is displayed within the case studies of Somali, Sudan, and The Democratic Republic of the Congo is one that exists through continued poor governance of environmental degradation and the suppression of conflict.. Across Somalia, Sudan, and the Democratic Republic of the Congo (DRC) a clear pattern emerges, weak governance fails to not only provide the framework to protect the environment, but more often than not the framework that is put in place amplifies both the poverty experienced by the local population and the environmental ecosystem. Not only do these frameworks fail to protect the environment they fail to deter and halt conflicts, conflicts that are often waged in the name of resources and the gaining of land. In the case of Somalia numerous actions were taken in order to slow or halt effects of environmental degradation, these measures are often proven to be punitive, like the 1998 environmental protection law which set standards for air, ater, and soil, the ambiguous nature of the bill left enforcement difficult away from the major province. Examples like this are not exclusive to Somalia, in Sudan we see the unregistered land act create tensions when it comes to land governance, this tension turns into conflict without regard for the land around it, destroying local ecosystems and displacing communities of people, resulting in increases and poverty, furthermore the deficit in usable land threatens both the food supply and the livelihood of local farmers. Similarly the 2010 ban on mining operations in the DRC was improperly implemented leading to the further illegal mining and strengthening of government organizations. Many more examples exist just within these three case studies. Conflict, environmental degradation, and poor governance are all catalysts and amplifiers of each other. This loop can only be broken by complete government reforms at every level of government. It is important to the survival of the government in these places.

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