

Original scientific paper

UDK: 327.56:330(316.48)

DOI: 10.5937/jrs19-41648

Received: 8 December 2022 / Accepted: 9 May 2024

Scarcity and Instability: Transforming Societies Through Equitable Distribution Mechanisms

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Abstract: Under the framework of SDG 16, namely Peace, Justice and Strong Institutions, one key underexplored area of inclusion relates to the means of ensuring access to justice through the equitable governance of scarce resources, and mechanisms to promote equal and structural access to opportunities across society. This research sets out to answer the following questions across three case studies: (1) What is the relationship between critical or scarce resources and political conflict in the region under study?; (2) On what basis is the scarce or critical resource currently distributed within the region under study?; (3) What formal or informal governance mechanisms are in place to manage access to critical or scarce resources, and resolve conflicts created by it?; and (4) What improvements could be made to ensure more inclusive and equitable access to the distribution of this resource? The three proposed case studies, namely, Central Mali (land), Northeastern Kenya (water), and northern Mozambique (extraction and revenues of natural gas), have unique political and geographic features that are indivisible from peace and security. In each case, a blend of formal and informal mechanisms is used, but these often involve competing mandates, are guided by socio-economic dynamics or are unenforced, potentially leading to different types of localised conflict. This paper argues that, in order to prevent conflict around the governance of natural resources, communities need to be involved in a blend of informal and formal governance mechanisms from the outset. While the exact nature of these governance mechanisms may differ according to the nature of the natural resource and its extraction, there is a need to move from top-down towards people-centred approaches. Moreover, there should be efforts to develop specific SDG 16 targets related to environmental governance.

Keywords: conflict, inclusion, natural resources, scarcity, governance

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Introduction

The 2030 Agenda clearly outlines the need for peaceful, just and strong institutions under goal 16. This requires an inclusive approach that enables societies to have access to justice for all, in addition to institutions that are able to deliver on the mechanisms needed to manage the distribution of resources. However, as society adjusts to constant change from phenomena such as climate change, pandemics and conflict, critical resources are becoming more scarce and harder to access, with the potential to cause violent conflict. This has implications for distributional equity and, ultimately, social inclusion. These are cornerstones of peaceful and stable societies, and their advancement is, in turn, necessary for a society to map pathways to prosperity.

The negative impacts of global warming, in the form of increasing droughts, flooding, insect pests, and extreme weather events, in combination with rising population rates is increasing competition over dwindling critical resources, presenting a challenge that must be anticipated, studied, and addressed in a fair, sustainable manner. Alongside this, and over the last two decades, the skewed distribution of resources has made many societies, and particularly those in developing regions, increasingly vulnerable to internal and external shocks. This, therefore, not only raises questions about the fairness of growth outcomes, but also their sustainability. In the medium- to long-term, the intergenerational transfer of poverty, combined with population growth, and the growing impact of climate change on livelihoods, may provide fertile ground for radicalisation into violent extremism and a challenge to the very systems and institutions that were responsible for growth in the first instance. All of this underscores the contention that access to – and distribution of – critical resources will become even more central to peacebuilding interventions in the next decade. It will also ensure more inclusive economic growth and sustainable development in fragile societies in the long term. Central to this are questions about how critical resources are governed, to what extent access and distribution are just and how governance of scarce resources can be improved so that inclusion can help pave the way to lasting stability.

The article at hand endeavours to contribute to the literature that seeks to answer these questions. It begins with a review of the theoretical literature, followed by findings from the relationship between scarcity and instability across Africa. Thereafter, the three case studies will answer the questions set out above. First, water scarcity and localised conflict in Kenya's semi-arid and arid region; second, competition to access and control land in central Mali; and third, the management of the extractives industry and association revenues in northern Mozambique. While considering leverage points to create inclusion and foster peace within the case study, each example also offers insights into scarce resource management that can be scaled or applied to other regions across the world. Finally, the article ends with reflections on each case study, with recommendations on a way forward.

Literature Review

The 2030 Agenda for Sustainable Development sets out a framework for guiding Member States in achieving inclusive, people-centred and sustainable development. It contains 17 world development goals aimed at peace and prosperity for people and the planet. This ambitious framework was designed as a means of providing a common framework for countries to follow by understanding how the environmental, social and economic aspects of sustainable development are interconnected. Some aspects of the Sustainable Development Goals (SDGs) are specifically related to environmental indicators, such as Goal 7 (Affordable and Clean Energy) and Goal 6 (Clean Water and Sanitation). However, a large number of environmental activists and scholars now emphasise the link between the inclusive and sustainable management of natural resources and conflict/security, and therefore argue that SDG 16, reflecting Peace, Justice and Strong Institutions, should also encompass environmental governance indicators, which are currently not reflected in the existing SDG 16 measures. For example, SDG 16 does not encompass land rights, or community participation in the management of natural resources. Moreover, many of the indicators and targets pertain to top-down governance reform efforts that focus on improving the institutions and legal systems of countries. In contrast, Amaruzaman et al (2022) asserts that the management of natural resources requires polycentric governance, a “complex form of governance with semi-autonomous multiple decision making centres that are nested at the multiple-jurisdictional scales or involving special governance units that work across jurisdictions within the landscape or ecosystem boundary.” In this regard, targets SDG 16.3 (Promote Rule of Law and Ensure Justice for All), SDG 16.6 (Effective, Accountable, and Transparent Institutions at All Levels) and SDG 16.7 (Ensure Responsive, Inclusive, Participatory and Representative Decision-Making at All Levels) remain highly relevant for the governance of natural resources but could be further adapted to incorporate measurements of local decision-making.

A growing focus of environmental research now examines bottom-up approaches – how local communities manage their own resources, as well as the interplay between these and state-level efforts. This follows from Elinor Ostrom’s seminal work, which led her to receiving the Nobel Peace Prize in 2009. Contrary to Hardin (1998) who asserted that communities that share resources operate only in their own self-interest, Ostrom demonstrated that communities proactively devise rules and enforcement mechanisms to stop the degradation of nature. However, to avoid conflict, Ostrom stressed that the rules of natural resource management should fit the attributes of resource systems and users. Large-scale governance systems may therefore also be destructive, if they fail to take into account local institutions. Ostrom identified ten variables that affect how successful self-organisation efforts of communities are in terms of developing a sustainable socio-ecological system, including the size of the resource system, how productive it is, resource unit mobility, number of users, leadership, knowledge of the ecosystem and the importance of the resource to users.

One emerging consideration gives thought to institutional theories that support the decentralised governance of scarce natural resources. In the context of the 2030 Agenda, this is believed to be a critical means of empowering sub-national governments to implement context-specific approaches, viewing these subnational governments as closest to the individual. Scholars seeking to make sense of the literature find varied outcomes from this decentralisation, sometimes leading to improved performance, other times to ecological degradation. The literature suggests that scholars tend to evaluate the success of decentralisation by two core criteria: efficiency and equity. Here, efficiency refers to net improvements in the quality of scarce resource governance and, equity refers to the extent to which benefits are fairly dispersed across society, rather than being accrued by well-positioned groups.

This underscores that the success of decentralisation is dependent on a set of institutional constraints. Bartley et al find that decentralisation is helpful when (1) institutional complementarities exist (i.e. where policies resonate with decision making processes); (2) actors have complementary rather than competing capacities and responsibilities; and (3) incentives for local politicians coincide with broader goals of resource governance. On the other hand, decentralisation is unhelpful when (1) contradictions outweigh complementarities; (2) centralisation is deeply institutionalised and underpinned by powerful interest groups; and (3) local politicians face obstructive incentives. As such, it is critical that institutional and local dynamics are mapped and considered when adopting decentralisation as a strategy to improve the governance of critical scarce resources.

Ide (2020) further cautions that environmental peacebuilding, understood as efforts to build more peaceful relations through the cooperation and management of natural resources, as well as through climate change adaptation and disaster risk reduction, can fail if it ignores the potential adverse effects of these initiatives. He cites six categories of adverse effects, namely depoliticisation, displacement, discrimination, deterioration into conflict, delegitimisation of the state, and degradation of the environment. Specifically, Ide warns that environmental peacebuilding favours technocratic approaches and that this depoliticisation can make it harder to address the underlying drivers of grievances. In addition, large-scale environmental projects often require land, which can lead to the displacement of communities, and have a range of effects from loss of livelihood, to the obstruction of development and social conflict. Environmental peacebuilding strategies can also trigger discrimination across ethnic, social or gender lines. Depoliticisation, displacement and discrimination can then also lead to a deterioration into conflict and delegitimise the state. Finally, development initiatives can also degrade the environment. Ide notes that authoritarian systems are more likely to face legitimacy concerns, while corruption is also an issue.

As such, it is necessary to analyse the institutional landscape that impacts the governance of scarce resources. This school of thought departs from this consideration that natural resource governance is inseparable from social and ecological systems that entail multi-level interactions between both formal and informal institutions, founded upon mutually

acceptable rules (Poteete 2012). Without agreed-upon rules, there exists a risk of incoherent resource management that can create inefficiencies, become unsustainable and if left unchecked, lead to conflict. Rahman et al developed a framework to understand the institutional gaps that can lead to instability, identifying four potential causes of conflict (Rahman et al. 2007). First, conflict can arise between actors who are operating under different sets of rules (formal and informal). Second, conflict can develop when there is no capable organisation, actor, or entity to bridge the gap between rules developed and implemented by formal institutions, and modern institutional spaces such as new actors or social movements. Third, conflict can arise when there is a deficient understanding or appreciation of local, informal rules and practices causing formal practitioners to exclude or be excluded from informal governance processes. Fourth, conflict can surface when local communities or subgroups have no connection between them. This might also allow third party actors to use fragmented populations to their advantage by controlling the flow of information and dominating interactions between the disconnected groups. The study concludes by stating that mediation is central to establishing mutually agreed-upon rules for natural governance, while the act of governance itself necessitates collaboration, coordination, flexibility, accountability, and transparency.

If institutional gaps between formal and informal institutions are a leading driver of conflict related to scarce natural resources, it is critical to understand the informal institutions and the associated social landscape that is intertwined with using and managing a scarce resource so that the gaps can be bridged, supporting more inclusive and coherent governance. One idea, termed as adaptive co-management, posits that involving more actors in the governing process can help address the complexities of social and ecological systems while also being suited to respond to factors like environmental change and new knowledge (Armitage et al. 2009).

This then raises the question of how barriers to collaboration can be overcome, bringing attention to the landscape of social networks. In mapping a social network, Bodin and Crona lay out what can be clustered into three considerations. First, the network density, which is calculated by dividing the number of social ties within the network by the number of possible social ties. The higher the density of the network, the higher the possibility for communication, reciprocity (or trust building) and collaboration, which in turn facilitates collective action and knowledge development. On the other hand, too much density can reduce efficiency and adaptability. Second, is the level of cohesion within the network. The central consideration here is looking at distinctive subgroups in the network. Subgroups are created by various factors such as geography, division of labour or specialisation or a finite capacity to uphold relations. Having too many subgroups can create an 'us vs them' challenge while also decreasing network density and consequently eroding the networks capacity for collaboration, collective action and knowledge development. The subgroup challenge can be overcome by connecting groups through bridging, especially where bonding has been the primary focus. Third, it is necessary to understand the positions within the network and how they impact influence across the network. A central network position allows actors to project influence and access valuable information. In

determining the centrality of an actor, one looks at the number of the ties the actor has within the network, known as the degree of centrality, and the betweenness, which is the degree to which an actor can connect other actors (or act as a bridge). Network centralisation has positive associations with collective action, but too much centrality can also yield unequal power dynamics, which can hinder efforts to solving complex problems as the central actor can block collective action. Once the social network is mapped, it becomes easier to understand and predict how this informal structure might interact with formal governing institutions.

This section has analysed the factors that can lead to the success or failure of environmental peacebuilding initiatives. It has shown that natural resource governance needs to take into account the different sub-groups and users, as well as the political dynamics, the equal and inclusive distribution of resources and the way in which these different actors communicate and collaborate. The next section documents the rise of scarcity and conflict in the African arena.

Scarcity and Instability

In 2021, United Nations Secretary General, António Guterres, made an impassioned plea to the United Nations General Assembly, noting that “humanity has opened the gates to hell” and stressing the need for urgent solutions to climate change. Over the 21st century, the temperature in Africa is expected to increase at a rate that outstrips the global average. Droughts, water scarcity, arid land and flooding have increased in frequency and extremity on the continent. Today, as much as 70% of Africans rely on agricultural production for their livelihoods. On the other hand, 21.6% of land in sub-Saharan Africa was considered degraded land by 2015. A growing body of evidence shows that competition and poor management of access to critical resources, namely water and agricultural land, is a causal factor in political conflict and instability in several African states. In the Sahel, for example, climate change induced conflict is seemingly borne from poorly regulated competition over access to lucrative resources that enable production.

Changing contexts that create scarcity have worked to also escalate competition and ultimately trigger friction between pastoralist groups and between pastoralists and farmers. By definition, pastoralism refers to an economy that centres around raising domestic animals. Pastoralists who move across vast areas of their region, largely dictated by changing seasons, seek out pasture and water for their herds. The nature of their lifestyle creates a delicately balanced co-dependence with sedentary farming communities (Shettima and Usman 2008). Climate change and other stressors that increase scarcity are throwing this delicate balance off. Left to snowball, with little evidence that the critical scarce resources at the heart of these conflicts, such as water and land, are being managed in a cooperative and inclusive fashion, there has been a rise in conflicts.

Moreover, it is believed that climate change adaptation is key to addressing security risks. However, this needs to be well-planned and implemented. In general, current adaptation efforts tend to be “technical, fragmented, narrow, and top-down, and displayed significant gaps in planning and implementation” (Pörtner, et al. 2022). Some scholars have suggested investing in improving trust between communities and governments to exchange knowledge, set priorities and determine climate change adaptation processes as well as increasing knowledge among local and traditional leaders to strengthen local conflict resolution mechanisms (Hegazi and Seyuba 2022).

Figure 1 shows a dramatic increase in both the number and the dispersion of pastoralist-led conflicts in sub-Saharan Africa. Weak state administration¹ coincides with the countries in Figure 1 experiencing a steep increase of pastoralist conflicts. Weak administration does not imply prevalence of pastoral tensions, but where tensions are bound to arise, weak administration creates opportunities for tensions to escalate and even become increasingly violent.

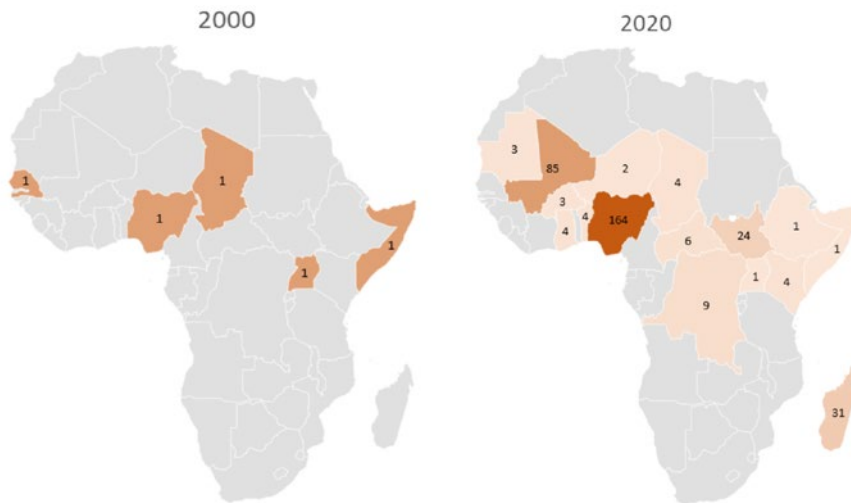


Figure 1: Pastoralist related conflicts by country in 2000 and 2020. Source: Armed Conflict & Location Event Data, authors' own calculations

Of concern is the snowballing share of armed conflicts and mob violence between pastoralists. The Armed Conflict & Location Event Data (ACLED) data in Figure 2 shows both the increasing frequency and mounting aggression of pastoralist tensions in sub-Saharan Africa. Access to light arms and weapons has increased fatalities linked to these conflicts. Predating this dramatic rise in the frequency and violence of pastoralist conflicts, researchers have predicted not only this very outcome, but also that it could lead to inter

1 See: World Governance Indicators by the World Bank: <https://info.worldbank.org/governance/wgi/>.

and intrastate conflict that can undermine regional stability and create food shortages (Bennet 1991).

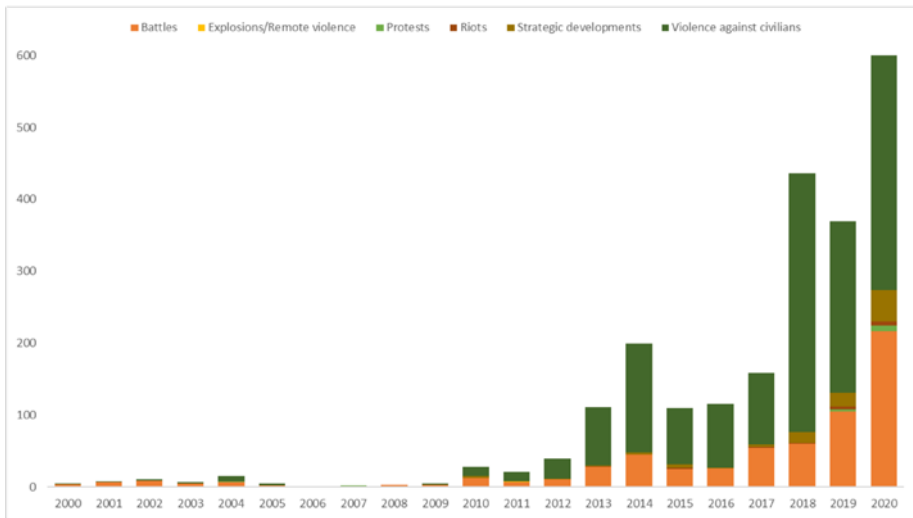


Figure 2: Types of pastoralist unrest. Source: *Armed Conflict & Location Event Data*, authors' own calculations

In addition to concerns of intensifying conflict related to natural resource scarcity and governance, there is an equal concern that a lack of inclusive governance over natural resource extraction has a detrimental impact not only on development but also stability. Critical to understanding conflict in Africa is the empirical evidence that shows that countries with an abundance of natural resources often tend to underperform economically. This is due to an excessive focus on resource-dependent sectors by political and economic elites, at the cost of building a more diversified economy to the benefit of citizens. The resources, then, depending on their geography and appropriability, become a source of rents for patronage distribution. The concentration of wealth and capital in the hands of a small number of sectors has enormous implications for the political agency of ordinary citizens. In relatively small, undiversified economies, the competition to control these sectors is fierce and frequently gives rise to the development of patrimonial relationships between the government and the private sector. In such instances parasitically reinforcing relationships develop between government officials and private sector interests at the expense of the interests of ordinary citizens with little financial leverage.²

Addressing these asymmetries through improved governance is not always easy, but an African country like Botswana might yield some lessons. The first major discovery of diamonds was on land historically linked to the Ngwato tribe, also the homeland of Seretse Khama, the first President of Botswana post-independence. Following the discovery,

² The paradox of natural resource abundance and poor economic growth, often termed the 'resource curse' or 'poverty paradox'.

Khama facilitated a change in law that ensured all subsoil mineral rights be vested at the national rather than tribal level. As such, diamond revenues, rather than falling into the hands of a few well-positioned elites and creating further inequalities, went towards state building including critical conduits for development like infrastructure development and education (Robinson and Acemoglu 2012). This is in stark contrast to the ‘blood diamonds’ that entrenched inequalities and sustained civil wars in other parts of Africa like Sierra Leone. With a forward-looking perspective, it is crucial that states with newly discovered extractable resources create frameworks for revenue sharing that is beneficial for the whole.

A Note on Research Design and Methodology

The research undertaken aims to contribute to a better understanding of (1) that which drives the relationship between scarcity and instability as it relates to equitable distribution of or access to critical scarce resources; (2) the policies and mechanisms, both formal and informal, that are in place to mediate the relationship between scarcity and instability; and (3) the improvements that can be made to facilitate equitable and peaceful distribution of, and access to, critical resources.

Natural resources were chosen as a focal point because many of the world’s most unstable or conflict-prone regions are characterised by unequal of access or unequal distribution of natural resources, placing both access and distribution at the centre of efforts to build peaceful and inclusive societies. It is oftentimes the role of institutions to ensure positive outcomes from natural resource management, and so each case study places institutions as the foundation for analysis.

A case study approach was chosen for two reasons: (1) local dynamics are critical to understanding natural resource distribution and management; and (2) each case study centres on a critical scarce resource that is of interest in other regions, offering scalability and transferable lessons.

Water in Kenya’s Semi-arid and Arid Lands

Water and Conflict in Northeast Kenya

Kenya is a water-scarce country. Climate change, an increase in population densities, changes in land use and the absence of mechanisms to address transboundary water management further perpetuates conflict that arises out of the competition over scarce resources. Importantly, a lack of coordination between Kenya, Somalia and Ethiopia has resulted in heightened competition for water resources stemming from the Dawa River.

In Kenya’s northeast region, water has become a political bargaining chip. Politicians use promises of free or low-cost water in campaigns, while water-related infrastructure proj-

ects are used as vehicles for patronage. For example, a county government official would contract and pay a private company to drill boreholes where the water table is not sufficiently abundant, rendering a dud waterpoint, but payouts for the contracted company. Some water points are also known to be given to political elites to control, thereby increasing their leverage over the local population. Moreover, water catchment areas have changed over time, and land prospecting, as well as privatisation, also has the potential to cause conflict.³

Mega projects are also encroaching on community land, further shrinking the resources available to pastoralists and farmers to secure a livelihood while also creating local grievances aimed at the state. There have been instances where community land has been 'grabbed' by private or political actors who take advantage of unclear mandates and a lack of awareness amongst communities on their rights.⁴

The situation is further complicated by migration across counties during dry periods. These conflicts, often between different groups of pastoralists and also farmers, are growing more lethal as small-arms flood into the area (Onyango and Patel 2021). Due to the inadequate presence of state authority in pastoral areas, pastoralists have increasingly used arms to defend their livestock, while rustling has become commercialised.

Following a desktop review of the literature and available evidence, key civil society stakeholders or experts were invited to join a virtual roundtable. The purpose of the roundtables was to help to identify the priority areas for society, to better understand from the perspective of civil society the various policies in place to manage the resource under question, and finally how it is implemented on the ground and felt by the local society. For that reason, key experts represented a consortium of civil society perspectives including community leaders, activities, academics, journalists, and researchers from local civil society organisations. It was particularly crucial to gather local insights for the Kenyan case as there are various policies and programmes designed to manage water in the semi-arid or arid region under study. Thus, it was important to understand how these were implemented in practice, how such efforts were coordinated and how these initiatives were seen by the key actors playing a role in the prevention of conflict. On Mozambique, a case study representing policies in the design phase, the roundtable aimed to understand to what extent civil society perspectives were included in agenda setting and design. Given time constraints, difficulties with getting a well-rounded group of key experts to consult, and few policies or programmes to gather perspectives on, no roundtable was hosted for the Mali case study. However, the desktop analysis is well-informed by a wide variety of publicly accessible sources, and in the absence of state presence today, paid special attention to the historical role of institutions in shaping contemporary outcomes for managing and distributing land.

³ Focus group with Kenyan stakeholders, 6 September 2022.

⁴ Focus group with Kenyan stakeholders, 6 September 2022.

Often, businessmen and politicians have been at the heart of this commercialised livestock rustling (Opiyo, et al. 2012). Different groups, such as the Samburu, Masai and Turkana have also taken up violence to protect water points, while groups such as the Borana have taken cases to court.⁵ Some disarmament programmes have also been launched in addition to cross-border peace initiatives by the Kenyan and Ethiopian governments, but these have failed due to disarmament being overly forceful, failing to provide security alternatives to communities, uneven (giving one community the advantage) and intertwined with the creation of local defence forces (Climate Diplomacy n.d.). System-blind measures by the governments have also exacerbated conflict. As a result, pastoralists use strategies, such as dealing with different livestock species, communal land tenure, herd splitting, informal security systems and engaging in non-pastoralist activities (Opiyo, et al. 2012).

In addition to the changing climate, some scholars argue that it is political marginalisation and social exclusion that creates the scarcity that pastoralists are confronted with (Shettima and Usman 2008). Groups such as the Mursi, Bodi, Kwegu, Suri, Kara, Nyangatom, and Daasanach are dependent on the lower Omo River basin, while others such as the Turkana, El Molo, Rendille, Samburu, Gabbra and Daasanach are based along the shores of Lake Turkana (Carr 2017). Many of these groups were dispossessed and marginalised over decades and have now been pushed to extreme dependency on an increasingly unpredictable water system. According to past reports, large numbers of the Mursi and Daasanach people that live along the north and the east of the basin respectively have been forcibly removed by the Kenyan government who claims that they are illegal immigrants (Kozacek 2011). Meanwhile, pastoralism and fishing conflicts between the Daasanach and the Turkana have occurred (Lifegate 2020). The latter two are traditionally pastoral nomads, but the Daasanach have increasingly become more agropastoral in nature, thereby increasingly competing for both land and water resources. The traditional border between these groups has moved south due to receding waters (Kozacek 2011).

Water Distribution

Water is managed through Kenya's Water Act (2002), which devolves the country's water management functions from national to county levels. While the national government retains control over issues such as water distribution, counties address other issues of water infrastructure (piping, building of boreholes, the establishment of water points etc) through their county-integrated development plans. The Water Resources Management Authority (WMRA), now the Water Resources Authority (WRA), has been established, as well as a number of water committees. However, government planning and policy are said to be poor and minority groups are often excluded from decision-making. Furthermore, the allocation of water resources is politicised, and water is used as a tool for electoral campaigning, where officials give promises to communities that they won't have to pay

⁵ Focus group with Kenyan stakeholders, 6 September 2022.

for water once the official is elected. Corruption is high and tenders are often awarded to private companies that fail to deliver. There is also inadequate funding for these country-level plans, and a lack of synergy between the numerous stakeholders involved, which also includes multinational companies, private military companies and the World Bank.⁶

Central to this is managing community perceptions of equitable distribution. Catholic Relief Services, in conjunction with the County Government of Isiolo and a business consortium, has been setting up borehole sensors in Northern Kenya to promote accountability by measuring how much water has been sold and by issuing this to communities for verification. Initially this technology was poorly received since communities argued that water is God-given and should be free, but also that it was unfair because such schemes were not in place in urban areas. The perception of unequal treatment over water demonstrates the need to be inclusive in the design, management and implementation of water management, at national and county levels.

Although Tana River has a waterpoint that cuts across the arid and semi-arid regions of northeast Kenya, there are concerns that optimal water distribution is hindered by insufficient piping, where pipes are either absent (stolen or never installed) or poorly maintained. The responsibility of which has been devolved to county governments. However, preceding concerns of infrastructure is a gap in planning and policy. There is a sense among key experts that neglect of the region from the central government has prevented thoughtful policymaking that considers the development gains that will come with improved water distribution from Tana River.⁷

Women are particularly vulnerable in these pastoralist societies, with few independent assets or businesses, such as land, wells and livestock (SIPRI 2021). In some cases, clans are less supportive once a woman's husband has died, and these women are often sent to urban areas. Women are also more vulnerable to poverty because of their limited customary rights in accessing resources. For example, there appears to be an increase in female headed households among the Turkana community resulting from their husband's deaths during raiding, although there are still low levels of participation in decision-making, especially with regards to resource use and allocation, investment, and planning about where to move or settle as a way of coping with droughts and floods (Omolo 2010).

Mapping the Network: Formal and Informal Governance Mechanisms

Regional cooperation in dealing with these challenges is limited. This can, firstly, be attributed to capacity issues. In this regard, a report by the Stockholm International Peace Research Institute (SIPRI) found that constraints to cooperative transboundary water management in east Africa are typically underpinned by weak institutions (SIPRI 2021).

⁶ Focus group with Kenyan stakeholders, 6 September 2022.

⁷ Focus group with Kenyan stakeholders, 6 September 2022.

But poor regional cooperation can, secondly, also be explained by the general lack of commitment to cross-border collaboration, with states generally prioritising domestic approaches. The completion of the Gilgel GIBE III Dam for example has put further strain on the Omo River and agreements between Kenya and Ethiopia have been controversial. Although the UN Watercourses Convention gives guidelines on how countries should use water supplies, neither Kenya nor Ethiopia has signed up to this agreement (Agano 2020). In 2012, the Friends of Lake Turkana filed a lawsuit in Kenya, forcing the Kenyan government to conduct an environmental impact assessment (EIA). The court ruled in favour of the Friends of Lake Turkana, but the recommendations have not been implemented (Namati n.d.). There are no bilateral or trilateral agreements concerning the usage of the Dawa River.

The Intergovernmental Authority on Development (IGAD), however, has developed a draft peace and security strategy, which will guide its work towards 2025. The focus areas of the strategy, which will be implemented by IGAD's Peace and Security Division, include Conflict early warning, preventive diplomacy and mediation; tackling transnational organised crime and countering violent extremism; promoting good governance; democracy; and human rights and rule of law. IGAD has established the IGAD Conflict Early Warning and Response Mechanism (CEWARN) is also in the process of developing a Regional Climate Change Strategy (IRCCS), addressed by the IGAD Secretariat and including the IGAD Climate Prediction and Application Centre (ICPAC). Furthermore, it also has a Regional Action Plan for Implementation of United Nations Security Council Resolutions 1325 (2000) and 1820 (2008), developed in 2013. Women, Peace and Security which is also meant to be implemented by the IGAD Secretariat. It will be important that the peace and security strategy considers the interlinkages with climate change and gender. IGAD has also drafted a Regional Water Resources Policy and Protocol, also addressed by the IGAD Secretariat. Moreover, the organisation has a division that deals with Agriculture and Environment and another division that deals with gender.

At a national and subnational level, Kenya lacks a coordinated system for using water resources sustainably, and formal, hybrid and informal systems exist. Overlapping mandates among different authorities and allegations over illegal or unauthorised water extraction further exacerbate conflict. The Water Resources Management Authority (WMRA), now the Water Resources Authority (WRA), plays a mediation role in water conflict, with predominantly centralised mechanisms leaving conflict resolution efforts being 'unfocused.' Water tracking is a method increasingly used to address water management. Informal traditional mechanisms between chiefs and elders have become diluted and/or changed and are criticised for becoming less inclusive.⁸ For example, the Dedha system in northern Kenya, largely used before independence, has been revived, but now operates on the basis of elected elders rather than on the basis of being a pastoralist and having experience, which has been a source of contention. Moreover, with little enforcement authority, the decisions made by informal local councils are sometimes ignored. At a hybrid level, there

⁸ Focus group with Kenyan stakeholders, 6 September 2022.

are Water Resources Users Associations (WRUAs) but these are sometimes seen as providing preferential treatment to outsiders.

In a study of water conflicts in the Ewaso Ng'iro North River Sub-Basin between 2008 and 2015, 43.5% of the respondents reported conflicts to Provincial Administrations, 23.7% to faith-based organisations and 19.5% reported to Water Resources Users Associations (Lesrima, Nyamasyo and Kiemo 2020). There is low compliance over regulations governing water, and legal and policy reforms should be scaled up, with greater enforcement by institutions.

Fostering Inclusion and Equity

Water issues could be better addressed by improving public access to information on key resources and by developing county frameworks that involve inclusive public engagement (including across different ethnic groups) in the design, formulation and implementation of water management laws and policies. Analytical capacities for guiding water management systems can be enhanced by ensuring that adequate funding is apportioned to water management systems, that water is harvested well, and that sufficient dams are constructed. Adequate Environmental Impact Assessments (EIAs) should be conducted prior to decision-making on the allocation of water resources and there should be technical reviews of the country strategies implemented, with ongoing monitoring and evaluation. Civil society should play a role in evaluating the performance of water boards, and there should be an independent Ombudsman to report water issues to. Furthermore, water committees should be given sufficient resources to enforce the fair distribution of water, and curbing corruption is essential. There is a need to strengthen transboundary water management systems, which can be developed under the guidance of IGAD, and to promote policies that stress the inclusion of communities in the development of water policy and management.

This case study has shown that the distribution of water in Kenya has become highly politicised. Water is not allocated evenly along ethnic, social or gender lines, which in turn has led to conflict. Privatisation and corruption have further posed challenges. Minority groups have often been excluded from decision-making, with a lack of synergy between national and county-level planning, and a lack of funding for more localised initiatives. Informal mechanisms are largely ignored or have become less inclusive themselves. The case study speaks to the need to strengthen the inclusion of civil society in water resource management from the outset, and to be engaged across the planning, implementation and monitoring phases, as well as for a better alignment between national, county and local level governance.

Land in Central Mali

Land and Conflict

This case study specifically examines the issue of land in Central Mali. A number of different ethnic groups exist in the region, with different lifestyles and means of survival. For instance, the Bozo ethnic group primarily relies on fishing, and has both a sedentary and nomadic lifestyle. The Dogon, the Bambara and the Songhai are primarily sedentary and rely on agriculture. The Fulani and the Tuareg are known as nomadic pastoralists.

While much attention has been focused on the challenges of armed groups in the north, Central Mali has also demonstrated ongoing conflict, with marginalised groups, such as pastoralist communities, taking up arms (now widely available as a result of the northern rebellions) to challenge urban elites. The Fulani community, in particular, see themselves as victims. At the same time, a climate of corruption and abuses by state security forces has compounded the issue (International Crisis Group 2016).

Conflict intensified during Mali's 2012 coup. The military officers that took control committed human rights violations, predominantly against the nomadic Fulani and Tamasheq communities, and since then, trust in the government and its institutions has eroded, with the government struggling to provide basic services (Koné 2022). In 2020 and 2021, Mali suffered from two additional coups. Radical Fulani-led groups have arisen amidst banditry and trafficking, building on narratives that address the rising discontent over the role of the state. In 2021, there were severe clashes between the Fulani and Dogon ethnic groups in the Seeno plains. This came after the Malian army trained a Dogon militia to address the 'jihadist insurgency,' leading to a series of attacks and counter-attacks.

The Dogon primarily see themselves as farmers, while the Fulani see themselves as pastoralists. Some Dogon have formed a counter-movement to those perpetrating violence, while some Fulani have been divided between allegiance to the Islamic State and Al Qaeda. Conflict has deepened as a result of climate change and population growth, while religious narratives have further perpetuated divides.

Land Distribution

In the 1800s, natural resource management was managed by the Dina (also a name for the State), which drew on principles of Islam and used a centralised rules-based system to initially promote mutual benefits rather than competition. Over time, this centralised system increasingly allocated resources on the basis of ethnicity, elite-level linkages and loyalty. Mali then fell under colonial rule until 1960. During this time, two parallel systems of land tenure developed, where customary chiefs could manage land under production, while the French colonialists administered land that they believed was underutilised to be given away as property titles (Ursu 2018).

During this time, the Dogon increasingly claimed swathes of land. Occasionally, payment was made to the Fulani, who viewed the land as being in abundance. As technology progressed, the Dogon adopted new farming techniques, expanding substantially. While customary rights to land were recognised, pasture rights or territorial rights were not. This shifted the power balance in favour of the Dogon (Benjaminsen and Ba 2021).

The Malian government, upon independence, also adopted an anti-pastoralist stance, allowing farmers to expand without the permission of traditional authorities. Land conflicts arose in the 1970s to 1980s – one relating to the use of a cattle corridor which had been overtaken by farming. Customary systems underwent major adaptation, aimed at shifting power into the hands of the state. In 1986, all customary land rights were abolished, and all property was transferred to the state (Ursu 2018). A vast array of state institutions were created, many unable to give formal access to justice due resource shortages, discrimination against certain groups and lengthy processes. Today, the current legal framework is “incoherent and conducive to marginalisation” while also failing to provide alternatives (Ursu 2018).

When decentralisation started in 1992, many customary authorities objected to being under the rule of mayors, and their role became primarily consultative, with little power to implement any decisions. The exact role of chieftains remains unclear, and corruption is rife, especially among chiefs with linkages to mayors. Certain customary figures are also rent-seeking (Ursu 2018). The conflict is therefore a traditional herder-farmer conflict that has developed into one in which the state is involved – for example the Dogon have good representation in Mali’s army viz-a-viz the Fulani (Benjaminsen and Ba 2021).

Mapping the Network: Formal and Informal Governance Mechanisms

In the past, conflicts were resolved by elders or Muslim scholars, but this is no longer the case. The Fulani have been divided over the issue of paying for grazing rights, leading to divisions and the establishment of groups either affiliated with Al Qaeda or the Islamic State. There are also disagreements over the extent to which groups should work with locally elected mayors, with groups linked to the Islamic State generally opposing this. Currently, there is little state presence and armed militias have stepped in to fill this gap. Some Dogon groups have received support from the government in the form of arms. In 2020, a Dogon counter-movement, Dana Atem, condemned violence perpetrated by Dana Amassagou, a violent Dogon movement, preferring to enter into negotiations with the Fulani. Their aim is to ban Dana Amassagou and introduce sharia-based family laws and taxes. They refuse any negotiation with the government (Benjaminsen and Ba 2021). As customary authorities have no enforcement power but primarily maintain relations with the community. Disputes are managed on an individual basis, without considering the entire history, and disregarding reconciliation and compensation between different groups as a whole (Ursu 2018).

The United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUS-MA) was established in 2013, but has suffered from spats with the government, leading to a withdrawal of troops. French and European troops have also pulled out, while the Russian paramilitary Wagner group has become increasingly active, bringing with it a dubious human rights record (Smith 2022). The regional grouping, the Economic Community of West African States (ECOWAS), previously instituted sanctions on the Malian government, until it vowed to hold elections (Risemberg 2022). This clearly demonstrates the lack of legitimate government authority, as well as tense relationships with the international community.

Fostering Inclusion and Equity

Suffering from a lack of legitimacy and capacity, it is critical that the Malian state needs to regain the trust of civilian populations. This can be done by clamping down on human rights abuses, elevating the role of communities in promoting dialogue and in providing resources for their active engagement. Counter-terror approaches are clearly having the opposite effect to what is intended, and a comprehensive approach to addressing inclusive governance is needed. With weak institutions, the Malian government will need to draw on informal systems of governance to support its efforts but should ensure that these informal systems are themselves equitable.

This case study has shown how abuses by security state actors have allowed groups to capitalise on discontent by perpetuating narratives of exclusion, while the state struggles to provide basic services. The abolishment of customary land rights has led to a highly centralised state system that is discriminatory against certain groups and fails to consider different power dynamics. As a result, the state suffers from a lack of legitimacy, which can only be regained by discussions and negotiations among the different groups involved and by examining the relevance of informal governance mechanisms.

Extractives in Northern Mozambique

Extractives and Conflict

This case study specifically examines the extraction of natural gas in Mozambique's Cabo Delgado province, while considering the lessons learned from the management of other natural resources in the province such as rubies and timber. Known as the "Forgotten Cape/Cabo Esquecido," an underdeveloped periphery province in the north that houses much of Mozambique's natural resources, Cabo Delgado is a site of instability and high stakes. Soaring unemployment and poor job prospects, income inequality, limited access to education and a disconnect from political leadership leave Cabo Delgado particularly vulnerable to political conflict. In the past, the region's abundance of natural resources have been exploited by small-scale artisanal miners and oftentimes illegal activity. This has included illegal logging, poaching, and the trafficking of ivory and precious gem-

stones, such as rubies (Stanyard, Nelson and Rademeyer 2022). In addition, Cabo Delgado is a well-known drug smuggling route, predominantly for heroin, as well as human smuggling.

Government crackdowns on illicit markets have been severe and often violent while also failing to provide alternative livelihoods for those involved. For example, in 2015 the government launched an ivory burning operation in Maputo. In 2017 Operação Tronco was launched against illegal timber exploitation and in the same year, thousands of illegal miners were expelled by security forces, with many forced to return home. The result was that the youth became easy targets for recruitment by an insurgent group, the Ahlu-Sunna Wa-Jama'a (ASWJ), who became prominent in 2017. A study on youth extremism in Cabo Delgado has shown that the drivers include material aspects, the manipulation of religious and ethnic identities, safety and security, politics and governance, and finally eroding social cohesion (Lucey and Patel 2022). While the exact linkages between illicit markets and the insurgency are unclear, many that have lost their livelihoods remain at best sympathetic to the insurgency and at worst directly involved.

Alongside these developments came the discovery of Liquid Natural Gas (LNG) in 2010, which is estimated to harbour up to 125 trillion cubic feet and gas and making Mozambique one of the largest future extractors of the world (Mukpo 2021). By 2019, Total (a French multinational oil and gas company) had become the main player in LNG extraction. The government initiated an acrimonious process of resettlement, displacing those reliant on the coast-line and farmlands for income. Furthermore, a recent study found that poor governance of natural resources, including LNG, has escalated the terrorist threat in the region (Ewi et al. 2022).

The Politics of Distribution

Inequalities and grievances are often pitted against the Christian-majority, politically dominant Makonde group to which President Nyusi belongs, and the Muslim-majority Mwani and Makua ethnic groups. The Makua are the largest ethnic group in Mozambique, many of whom have converted to the Shafi'I school of Sunni Islam. The Mwani are primarily fishermen, who have become increasingly sympathetic to the government opposition. Generally speaking, there is resentment between those seen to be coming from the South, as they have often taken up economic opportunities in the Cabo Delgado province, while locals often lack the qualifications for formal employment options.

For decades, the distribution of resources has operated along these political, ethnic and classist cleavages. As such, senior figures under Mozambique's ruling party, the Mozambique Liberation Front (FRELIMO) are known to have business interests linked to the exploitation of natural resources, as well as transport and mining (International Crisis Group 2021). This is compounded by extensive corruption and patronage. As such, the formalisation of certain sectors to manage Mozambique's natural resources has resulted

in companies, Makonde generals, public limited companies (registered in Mauritius), and anonymous individuals being the key stakeholders to benefit (Feijo 2022). Those previously working in informal or illegal sectors have either continued to do so at a smaller scale or have been displaced and lost their livelihoods.

Upon the discovery of gas, the initiated resettlement programmes, angering locals who lost access to farmland and fishing locations, and who claimed that they were given inadequate compensation (Stanyard, Nelson and Rademeyer 2022). The process was also beset with intimidation and force, with allegations that local leaders opposed to resettlement were replaced by authorities more amenable to the idea (Mukpo 2021). At the same time, Mozambique's former finance minister purchased a fleet of fishing boats based on a secret loan from European investment banks, leading to the cancellation of many donor agreements. This resulted in cuts to services and civil servant salaries as well as hospital supplies (Mukpo 2021). Mozambique's management of natural resources therefore continues to be driven by a corrupt political elite, with little community consultation or engagement.

Initially, the Mozambican government attempted to secure LNG sites through private military, such as through South Africa's Dyck Advisory Group (DAG). More recently, the Rwandan military has been thought to be protecting LNG sites, which observers allege serves as a proxy for French interests (Prashad 2021). Given the current security environment, Total Energies is reluctant to move ahead with the project, while President Nyusi continues to downplay the situation. The government approach therefore seems to suggest a two-tiered strategy of using harder security in its priority enclave, while considering the protection of civilians a secondary issue (Cabo Ligado 2022).

Mapping the Network: Formal and Informal Governance Mechanisms

Mozambique's history from liberation has been characterised by high-level elite bargaining, resulting in the signing of a General Peace Agreement (GPA) in 1992. This began to change over time as the government and its opposition went from a relationship of co-operation to coercion and withdrawing from the GPA. Informal elite bargaining became the norm but also halted with the changing relationship. Weak formal institutions and limited space for civil society engagement has therefore meant that there are no remaining mechanisms to address conflict, including over the distribution of resources (Tikka 2019). Following the Mozambican peace agreement, there was little accountability for crimes committed, although the process was said to open some spaces for community authorities to strengthen social healing. For example, in the Gorongosa area, traditional chiefs and Christian groups played a role in promoting reconciliation and reintegration through magamba spirits and gamba healers (Igreja and Dias-Lambranca 2011). Nevertheless, there was an overarching lack of community engagement by the elite, which has followed through to the present day. There are no localised justice mechanisms, and there is still a need for the deep trauma of the past to be acknowledged and addressed. However,

the current establishment offers little room for civil society and community engagement.⁹ Currently, Freedom House ranks Mozambique 43/100, with 14/40 for political rights and 29/60 for civil liberties.¹⁰

In 2020, the government established the North Integrated Development Agency (ADIN), with four main pillars: humanitarian assistance, economic development, community resilience and communication (The Economist Intelligence Unit 2021). The strategy for the north, the Northern Resilience and Integrated Development Strategy (ERDIN) was finally approved in June 2022 but has changed significantly since its inception. Civil society has criticised this for framing it as a development program rather than a strategy, and for shifting the blame of the insurgency from socio-economic causes to external and transnational factors (Cabo Ligado 2022). Furthermore, the strategy was developed without the inclusion of civil society, traditional authorities, and communities from Cabo Delgado province, resulting in a document that does not properly speak to the context nor the needs of the local population. Little has been done to address the issue of youth agency. The government now appears to be taking a step back from acknowledging the root causes of the conflict, preferring to take a punitive approach. At the time of writing, little of the strategy has been implemented in reality.¹¹ In August 2022, the government released a document known as the Economic Acceleration Measures Package (Pacote de Medidas de Aceleração Econômica – PAE), which states that 10% of natural resource revenue must be allocated to the province where the extraction occurs (Rage et al. 2022). Importantly, key experts are concerned that without meaningful structural reform and improved transparency, this revenue allocation is likely to be captured, as in past instances, by well-positioned local elites.¹²

In addition, in 2020, the Bank of Mozambique mentioned the creation of a sovereign wealth fund. A Civic Movement on the Sovereign Wealth Fund (MCFS), led by Fátima Mimbire, has been created and includes Mozambican NGOs such as Mozambican Christian Council, N'weti, Centro Terra Viva (CTV), Kuwuka-JDA and SEKELEKANI. The MCFS has held meetings between key stakeholders aimed at understanding what a Sovereign Wealth Fund bill should consist of and is pushing for the bill on the fund to be approved before the production of natural gas begins (All Africa 2022). However, key experts note that setting up a sovereign wealth fund, although appealing on paper and to donors or multilateral institutions, will not have the desired impact without concerted efforts to counter elite capture of the political economy.¹³

9 Focus group with Mozambican stakeholders, 7 September 2022.

10 For more see Freedom House, Freedom in the World 2022. <https://freedomhouse.org/country/mozambique/freedom-world/2022>.

11 Focus group with Mozambican stakeholders, 7 September 2022.

12 Focus group with Mozambican stakeholders, 7 September 2022.

13 Focus group with Mozambican stakeholders, 7 September 2022.

There have also been other efforts to strengthen civil society networks more broadly. For example, the Centre for Democracy and Development (CDD) has touted the need for a Peace-Making Advisory Group (PAG-CD). The organisation has also developed the National Network of Human Rights Defenders (CDD Mozambique 2020).

At a regional level, the Southern African Development Community Mission in Mozambique (SAMIM) has sent in peacekeepers, although the mission has lacked capacity and has tended to take a reactive, rather than a proactive approach. It has also failed to protect civilians (Fabricius 2022). Meanwhile, Rwandan troops have been sent to the sites of natural gas, and without a clearly visible mandate, there is speculation about the transparency of the mission (Louw-Vaudran 2022). The missions are therefore failing to address the root causes of the conflict, derived from issues of inclusive governance.

Fostering Inclusion and Equity

The establishment of civil society movements is no doubt a positive step to ensuring more inclusive and equitable access to Mozambique's natural resources. However, agreements on these resources continue to be elite-controlled. The fact that the government intends to resume production of LNG prior to establishing a sovereign wealth fund, and the absence of a strategy that deeply considers and outlines the mechanisms for civil society engagement in the Cabo Delgado province suggests that the government is insincere in its efforts to be fully inclusive.

While the ASWJ has created an informal system of re-distributing money towards local groups to garner support, the Mozambican government has not done the same. It should consider how best to address issues of reparations, improve transparency and accountability, and provide space for communities in Cabo Delgado to highlight their concerns and solutions on the way forward. The government should also formulate a strategy for business and human rights, with assertive independent oversight that is able to meaningfully enforce checks and balances. Finally, key experts observe that governance is notably weak at the micro or local level, making it essential that organisations and non-state local leadership with capacity and experience are offered a space and channel through which they might provide support and capacity. Using resource revenues to empower civil society to provide support and capacity to local government is one low-cost, high-impact intervention that can go a long way in addressing structural constraints and stem the tide of mounting grievances. It is important that international actors, including the peacekeeping missions, provide support for the development of mechanisms that bring together the government and civil society, including examining options for transitional justice.

The Mozambican case study has illustrated how government crackdowns on illicit markets, as well as the exploration of gas, have failed to adequately consider the negative consequences of displacement or the possibilities for alternative livelihoods. The benefits of natural resource extraction are seen to only benefit an elite few, tied to the political

ruling party, which has been compounded by corruption. Mozambique suffers from weak formal institutions and a limited space for civil society engagement. Strategies for natural resource governance have failed to take into account community perspectives, and the government has done little to address the root causes of the violent insurgency that has now taken over the Cabo Delgado province. The case study shows the importance of using resource revenues to empower civil society to better engage the government, but more importantly, the importance of engaging communities in discussions over exploration.

Conclusion

Each of the case studies discussed in this paper have a unique ethnic or tribal dynamic that influences access to, and distribution of, critical scarce resources. With many different groups competing for a share, each case study represents a network with many subgroups that have failed to act cohesively. As such, it would be helpful to begin thinking about how bridging between groups might facilitate cooperation. Mediation and trust building are necessary and can increase social capital which can in turn play a role in successful adaptation methods, resolving natural resource conflicts and building peace at the local level.

The other challenge in these case studies is the asymmetrical influence of the central actor(s) within the network. Critical to each case study is the dominant role of patronage in securing influence and gains from natural resources. This reality has shown itself to manifest in each example, but most obviously in Kenya and Mozambique where elite patronage has collided with private sector interests to yield the best outcomes for these two groups, at the expense of locals with little agency. This, coupled with fragmentation amongst subgroups, is preventing collective action, knowledge sharing and other forms of cooperation that are helpful in progressing sustainability and fairness.

In Kenya, there are a variety of different informal and formal mechanisms for resolving conflict over water, but corruption, competing mandates, and insufficient resources mean that water is still viewed as being distributed selectively to a few. Kenya uses a decentralised system of decision-making, but limited funds are given to county-level plans. Drawing on the literature, decentralisation can be assessed by two core criteria, namely efficiency and equity (each defined in the literature review).

Based on the insights discussed in this paper, water management in Kenya's arid and semi-arid region performs poorly across both these criteria. In addition, water management in the region is likely to fall under what is termed as 'unhelpful decentralisation', particularly for having characteristics such as deeply institutionalised centralisation that is underpinned by powerful interest groups; and because local politicians face obstructive incentives, such as rent seeking and leveraging access to water points as tools for political campaigning. Moreover, and despite efforts to decentralise some aspects of water management to the county and community level, Rahman et al's framework for understanding

institutional gaps that can lead to instability would place water management in northeast Kenya within two of the four drivers of instability: first, conflict borne from actors operating under different sets of rules; and second, there is currently no capable entity in place to bridge the gap between rules developed at different levels.

This also gives rise to a network challenge – with many subgroups, there needs to be more effort to facilitate bridging between groups. This is necessary between the various ethnic groups competing for water, but also between state and non-state actors, and between state actors at the county and national levels. Overcoming all of these challenges can help create an inclusive and thoughtful agenda-setting and policy design process for water flowing from Tana River and also water drawn from the water table through boreholes. Bridging can also be a key component of building social capital and fostering local peacebuilding.

In Mali, there has tended to be an absence of state authority, and armed groups are rife. The government has trained a Dogon militia, which has created counter-movements and a division of alliances to the Islamic State and Al Qaeda. Although natural resource management was traditionally managed under a centralised system that promoted mutual benefit, the government increasingly adopted policies that allowed for marginalisation and partiality. Human rights abuses and a forceful counter-terrorism approach have also had unintended consequences and worsened the conflict, while also delegitimizing the state. The case study illustrates the need to draw on informal mechanisms of governance in order to alleviate the situation. Getting this right would mean that informal and formal governance must be aligned, with cohesive mandates that are designed to create cooperation rather than competition amongst formal and informal institutions. Moreover, the complex social landscape requires thorough mapping so that leverage points for bridging and building social capital can be harnessed to encourage sustainability, mediation and cooperation.

The Mozambican case study highlights a very centralised system of governance that is managed through specific elite groups. Corruption is high, and there is limited space for informal governance practices to be brought into existing formal systems. Displacement without adequate attention to alternative sources of livelihoods has further worsened the situation. Dialogue involving communities in the design and implementation of policy is key and new policies that have been established require urgent implementation. In contrast to the Kenyan challenge of decentralisation or devolution taking place in a hindering environment, Mozambique faces the challenge of too much network centralisation. This analysis finds that rather than facilitating collective action, network centralisation has yielded unequal power dynamics that have prevented the networks' ability to solve complex problems as the central actor(s) block collective action. This is seen through elite-bargaining, patronage and the general discontent of civil society in the north with the management of extractives. Overcoming this would require a concerted effort to set up a system adaptive co-management. Involving more actors is useful in creating space for creative solutions to address complex social systems while also facilitating faster re-

sponses to changing conditions and new knowledge. However, this can only be successful if preceded by meaningful efforts to dismantle patronage, alongside a long-term strategy to develop the north using revenues from extractives sourced in the area.

The case studies also illustrate not all resources are amenable to the same governance systems (partly because of their different physical properties), but that in all instances, natural resource management would benefit from a people-centred approach that places communities at the forefront and which employs multiple levels of governance. While the issue of land in Mali has traditionally relied on informal mechanisms (and would do well to incorporate these perspectives into current systems of governance), the issue of gas in Mozambique is highly centralised, partly due to the nature of extraction that requires highly specialised skills. The focus on the scientific and technical aspects has therefore detracted from examining the political nuances underlying this extraction, and as such, the Mozambican government would do well to create a space for involving more actors on the ways in which resource revenues are spent. Ideally, involving these actors from the outset might have circumvented some of the conflict that has arisen in the province, by considering the implications of displacement along ethnic, social and gendered lines. In Kenya, water management is still primarily considered the ambit of the state, but the government should consider the political and discriminatory aspects of distribution (as proposed by Ide, 2020) by incorporating communities more deeply into the planning, design, implementation and management of water policies and strategies.

Looking ahead, policymakers should consider how governments can develop policies that use a blend of formal, informal and hybrid systems of governance. This affirms previous work that has emphasised the importance of polycentric governance as a means of natural resource management. At the same time, governments should ensure that sufficient resources are provided to each of these systems and that there is adequate coordination among these different models. Each of these systems should also place a premium on equity and efficiency and should share knowledge and priorities on climate change adaptation. Efforts to re-establish state authority in countries where this presence is lacking should ensure that attention is paid to human rights and selectively favouring one group over the other. Future research could focus more on success stories of local environmental peacebuilding across different areas of natural resource governance in order to determine if there are lessons for elsewhere that could be drawn upon.

Moreover, overly centralised processes can build resentment and could do well to better include civil society in the policy development and implementation of natural resource governance in a meaningful manner. To this end, multiple stakeholders should be engaged in natural resource governance, including business, civil society and the private sector. RECs should place a stronger focus on addressing inclusive governance on natural resource management and climate change in Member States, drawing on good practices to share experiences and strengthen coordination mechanisms from the regional to the national to the local. Finally, community-benefit systems need to be better explored with

regards to natural resource management, but these should be inclusive and should learn from good practices.

As a framework for strengthening the governance of natural resources, SDG 16 should be reviewed and revised to incorporate more environmental indicators. Moreover, the SDG indicators of SDG 16.3 (Promote Rule of Law and Ensure Justice for All), SDG 16.6 (Effective, Accountable, and Transparent Institutions at All Levels) and SDG 16.7 (Ensure Responsive, Inclusive, Participatory and Representative Decision-Making at All Levels) are highly relevant to the three case studies outlined in this paper and demonstrate the complexity in measuring these objectives. The case of Mali, for example, demonstrated that informal mechanisms for natural resource mechanisms have been underutilised, and that SDG 16.3 would do well to incorporate contextualised understandings of 'justice' and 'rule of law'. On SDG 16.6, the cases of Kenya and Mozambique illustrate the need for decentralisation, enhanced polycentric frameworks that are well-coordinated, and importance of participatory decision-making. The case studies also illustrate the importance of rooting out corruption, which is an important element of SDG 16.6. Finally, all case studies illustrate the importance of more representative and inclusive decision-making processes. SDG 16.7 (which currently relies on indicators of number of minorities in state institutions) could do well to incorporate better measures of local-level decision making. Getting this right will allow governments should leverage social capital through programmes that help bridging and trust building between groups, to progress positive outcomes for adaptation, natural resource governance and local peacebuilding.

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