COMPLIANCE DYNAMICS IN TRANS-BOUNDARY GOVERNANCE OF NATURAL RESOURCES

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ABSTRACT

The extent to which resource users abide by rules is a fundamental question in the governance of conservation efforts, such as national parks, often challenged by poaching. While a large literature studies the factors fostering regulatory compliance in national settings, we know less about these processes in transboundary conservation areas, an increasingly common type of park that straddles the borders of several countries. This study aims to explore how the previously identified dynamics associated with achieving compliance play out in transboundary settings. Focusing on the world's largest transboundary conservation area – the Kavango Zambezi Tranfrontier Conservation Area – the study uses interviews with elite actors involved in the management of the area to provide insights in the process of fostering compliance in transboundary conservation areas. As in nationally governed parks, it appears crucial that efforts in sharing the benefits from conservation and involving stakeholders in management are successful. Yet, the empirical analysis reveals that transnational settings provide even further challenges: the governance of such parks depends critically on trust-building efforts among a larger number of actors positioned at different levels. It also involves the need for harmonizing policy between the involved states, both in terms of the design of regulations and as regards the sanctions imposed on rule violators.

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Introduction

At the heart of most efforts to promote sustainable use of natural resources lies the issue of how to overcome collective action problems and foster compliance with rules and regulations. While numerous field studies have verified or modified Ostrom's findings about the importance of institutional design principles (Ostrom, 1990; Agrawal, 2001), others have through laboratory experiments shown that levels of cooperation – and hence compliance with rules – can indeed be sustained by informal mechanisms such as trust, reciprocity, and reputation (Fehr & Gächter, 2000; Chaudhuri, 2011). These findings have been complemented by scholars arguing that compliance depends on the presence of a capable and legitimate third party that can settle disputes and enforce collectively binding decisions (Mansbridge, 2014).[1] Scholars such as North (2006) and Levi (1997) in turn provide theoretical underpinnings about how to understand states' capacities to provide political order in their national territories and to foster regulatory compliance among their citizens.

However, there is now an increased recognition that the complexity of many environmental dilemmas presents challenges to existing modes of governance (Duit & Galaz, 2008). For example, one influential stream of research on governance of natural resources builds on the concept of polycentricity and argues that the level of governance ideally should match the scale of the environmental dilemma (Ostrom, 1999; Lebel et al., 2006). In line with these insights, recent decades have witnessed the emergence of a large number of transfrontier conservation areas (TFCAs) – parks that straddle the borders of several countries – or "peace parks" as they are popularly called.[2] While these institutional arrangements potentially are more appropriate to govern resources and populations that transgress the geography of man-made boundaries, they are also likely to face larger challenges than nationally oriented governance schemes in terms of fostering compliance, due to their increased scale and complexity (see Petursson, Vedeld, & Kaboggoza, 2011; Death, 2016). Yet, how the earlier recognized dynamics associated with achieving compliance play out in these settings have rarely been investigated.

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[1] Though Ostrom has been interpreted as promoting self-governance by local collectives, the role played by the state is central to her argument. Solving collective action problems has hence been seen as "the most significant reason for government" (Mansbridge, 2014, p.10) and "the core justification of the state" (Ostrom, 1998, p.1).
[2] A TFCA is defined as "the area or a component of a large ecological region that straddle the boundaries of two or more countries, encompassing one or more protected areas as well as multiple resource use areas." (SADC, 2012). TFCAs are generally founded with the aim of collaboratively managing shared natural and cultural resources across international boundaries for improved biodiversity conservation and socio-economic development.

This study aims to explore how the previously identified dynamics associated with achieving compliance play out in transboundary settings. It focuses on the world's largest transboundary conservation area – the Kavango Zambezi Tranfrontier Conservation Area – situated within the five republics of Angola, Botswana, Namibia, Zambia, and Zimbabwe and encompassing a total area larger than that of Spain. The study uses interviews with purposively sampled elite actors, many of which are involved in the day-to-day operations of the management of the area, to provide insights in the process of fostering compliance in transboundary conservation areas. The findings provide further understanding of how to achieve rule abidance among resource users. As in nationally governed parks, it seems that it is crucial that stakeholders are involved and that the monetary and nonmonetary benefits from conservation are shared with the communities. Yet, the accounts suggest that transnational settings provide even further challenges as the governance of such parks hinges critically on trust-building efforts among a larger number of actors positioned at different levels. It also involves the harmonization of policy between the involved states, both in the design of regulations and in terms of the degree of sanctions imposed on actors who violate such rules. In providing insights into the process of fostering compliance in a transboundary setting and, especially so, from the perspective of key actors working to achieve such outcomes, this article contributes to the compliance literature in general (Tyler, 2006; Keane, Jones, Edwards-Jones, & Milner-Gulland, 2008) as well as to the literatures on transboundary management of resources (Agrawal, 2000; Duffy, 2006; Thondhlana, Shackleton, & Blignaut, 2015), and the governance of large-scale commons (e.g., Evans, Ban, Schoom, & Nenadovic, 2014; Fleischman, Ban, Evans, Epstein, Garcia-Lopez & Villamayor-Tomas, 2014).

Theory

The literature on governing natural resources holds that "inducing rule compliance" is an essential element for achieving sustainable outcomes (Dietz, Ostrom, & Stern, 2003, p.1909). In terms of defining such behavior – which is often associated with activities such as poaching of mammals and illegal logging of forest resources – noncompliance to rules can be seen as an "either-or" situation, yet it more often refers to "the degree of adherence to rules, as when a person breaks some rules but not all, or respects most of the rules but not always" (Arias, 2015, p.134). The study of compliance with rules and regulations involves many disciplines and is, of course, far from new (see Keane

et al., 2008).[3] Within economics, political science, and sociology, theoretical models largely focusing on costs and benefits associated with compliance and noncompliance can be contrasted to frameworks where one regards perceptions of legitimacy and the fairness of rules as crucial to the decision to comply or not.

The instrumental, or economic, models build on the idea that rational individuals' willingness to comply with rules depends critically on whether the benefits anticipated from following the rules outweigh the costs (Becker, 1968). In other words, people's decision to not comply with rules and regulations is based on a calculation of potential gains of breaking the rules versus risks of being caught by law enforcement officers. Hence, advocates of this conceptualization proclaim deterrence as a solution to rule violations, implying that people will only follow rules when confronted with hard sanctions (Becker, 1968; Keane et al., 2008). Systems of monitoring, control, and surveillance are in this perspective seen as core ingredients for fostering compliance. Achieving compliance through coercive means alone, however, is prohibitively costly and may encourage the state to instead aim for so-called quasi-voluntary compliance (Levi, 1997; 2006).[4] In trying to accomplish such quasi-voluntary compliance, the ruling elite tend to search for noncoercive strategies producing a high level of constituent cooperation. The coercive and noncoercive ways of fostering compliance can also be understood from what North (2006) labels authoritarian or consensual political orders. In this conceptualization, enforcement frameworks can lean toward either coercion and the ambition to deter people from noncompliance (i.e., what North calls an authoritarian political order) or an approach that tries to encourage quasi-voluntary compliance through a more cooperative approach emphasizing co-management and participation (i.e., what North labels a consensual political order) (North, 2006). Coercion is clearly the Hobbesian solution to compliance problems and rests on the state's repressive apparatus of policing and a legal system where noncompliers are punished heavily (Becker, 1968; Hauck, 2008). The consensual political order on the other hand resembles the way in which Levi (1997) sees quasi-voluntary compliance function. Similarly, Kahler and Gore (2012) distinguish between regulatory approaches which entail statutory laws legislating eco-

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[3] For example, psychological theories have for decades contributed greatly to our understanding of individual-level factors affecting the likelihood of achieving compliance. Cognitive theories, for example, hold that varying levels of compliance with rules and social norms stem from differences in the moral development of individuals. Social learning theories on the other hand hold that an individual's decision-making processes are fundamentally conditioned by the environment in which he or she is situated (see Keane et al., 2008).

[4] As argued by Levi (2006, p.7), "Governments are more able to carry out their policies when they achieve quasi-voluntary compliance – that is, compliance motivated by a willingness to cooperate but backed by coercion. This requires that subjects and citizens receive something from the government in return for the extractions governments take from them. It also means that compliance is always conditional."

nomic or penal sanctions, deterrence, and formal enforcement measures on the one hand, and normative approaches focusing on how moral obligations, social influences, and perceived legitimacy of laws and regulations affect compliance on the other hand.

The normative models hence hold that compliance is a function of people's moral obligations; people are more likely to adhere to rules if they perceive that these rules correspond to their moral beliefs and values (Tyler, 2006). In addition, people's perceptions of what is right or wrong can be driven by the shared moral norms of the collective (Gezelius, 2004; Keane et al., 2008). Hence, noncompliance can be tolerated within the collective if the motive is a morally accepted reason, for example, breaking rules for subsistence needs (Gezelius, 2004). Moreover, this research field emphasizes the importance of norms of trust and reciprocity, both between citizens (i.e., horizontal trust) and between the citizens and the state (i.e., vertical trust) (Ostrom, 1998; Ostrom, 1990; Firmin-Sellers 1995; Sjöstedt, 2013). If users don't trust that other users will comply with regulations – or if they don't trust the state to enforce rules effectively and impartially – the overall incentives for compliance is predicted to decrease. Trust is also closely linked to the legitimacy of both the rules and regulations and of the enforcer. Legitimacy is commonly defined as the public's general acceptance that the law and the authority has the right to prescribe public behavior (Levi, Sacks, & Tyler, 2009). As such, if authorities are perceived as legitimate, then people either will feel a personal responsibility to comply with the rules voluntarily or compliance simply becomes a habit (Tyler, 2006; Jackman, 1993). The perceived legitimacy of the authority is in turn linked to the justice and effectiveness of the outcomes of rules as well as the fairness and efficiency of the regulatory process (Sutinen & Kuperan, 1999). In contrast to the deterrence model, the normative strand also highlights the importance of including and empowering local communities in order to improve compliance (Jentoft, 1989; Jagers, Berlin, & Jentoft, 2012). If the moral voice and social influence of stakeholders are ignored, the legitimacy of state authorities tend to erode and compliance decrease (Gezelius & Hauck, 2011; Stern, 2008).

Many of the above insights have in turn been formalized in game theoretic analyses of strategic interactions among individuals. Within this perspective, an individual's anticipated costs and benefits of certain actions, for example, compliance, are affected by the anticipated behavior of others. These expectations and interactions can in turn be modelled, using a variety of game theoretic tools. Within this tradition, predictions from Olson's logic of collective action (1965), Hardin's tragedy of the commons (1968), and Alchian and Demsetz's property rights paradigm (1973) have been for-

malized into models where resource users expect that others are overharvesting the resource, and for that reason they engage in overuse themselves (see also Bromley, 1992; Rothstein, 2005; Axelrod, 1984). Despite the dismal predictions from these models, however, a vast literature has shown that cooperation in fact can be achieved if certain conditions are fulfilled, for example, relatively small group sizes or when allowing for repeated interactions (Axelrod & Hamilton, 1981). Cooperative outcomes can also result if individuals are allowed to punish noncooperators, which is called the strategy of "altruistic punishment" (Fehr & Gächter, 2002; Fowler, 2005).

Previous research on compliance has hence shown that simple collective action problems often can be governed – and compliance problems overcome – by informal mechanisms such as trust, reciprocity, and reputation. Research has, for example, shown that if two actors are involved in repeated interactions, or if the actions of one of the actors can easily be monitored by the other actor, the risk of reneging decreases substantially (Ostrom & Walker, 2003). However, in cooperation or coordination problems where actors cannot directly monitor the performance of others – and where outcomes are uncertain and not directly observable – such bilateral mechanisms become less efficient. As the complexity of the coordination or cooperation problem increases – there might be more actors involved, the geographical distance might increase, or there might be more severe temporal delays in the interaction – the simple institutions effectively fostering compliance and governing the relationship between two actors hence need to be complemented with more complex institutional underpinnings.

The more complex institutional underpinnings might, for example, rest on the institutional design principles suggested by Ostrom (1990). But as the complexity of the problem to be addressed increases even further, community enforcement too is likely to become less effective. For example, as the size of the community grows it becomes more difficult to observe other's actions or to share information about transgressions, and there is an increased need to evolve from informal to formal modes of governance, which in turn could facilitate exchange and interaction beyond community, friends, kinship, or family bonds. North has described this movement from personal to impersonal exchange as the essence of the process of economic development (North, 1990). This process is also central in the work of Fukuyama (2011) in which he describes how social organization has evolved over time from bands to tribes, chiefdoms, and, ultimately, states. More specifically, Fukuyama (2011, p.192) argues explicitly: "the tribal level of organization was displaced by state-level organization in China, India, and Europe because it could not achieve sustained collective action."

The fact that interactions and exchange became more complex over time thus required a need for organizing societies on a larger scale. This has in turned spurred a lot of research on how properties of the state affect the prospects for fostering compliance.

The recognition that more complex problems demand more complex governance schemes has further led to the emergence of transboundary governance arrangements. That is, with the recognition that many of the world's environmental problems are at scales beyond the nation state, both researchers and policymakers have advocated for the need to match the level of governance to the scale of the environmental problem (Ostrom, 2010; Schoon, 2013; Vasilijevic et al., 2015). This idea stems partly from the concept of "bioregionalism" asserting that boundaries of protected areas should be drawn around ecosystems that require protection, rather than following political boundaries to enhance conservation effectiveness (Ramutsindela, 2007; Wolmer, 2003). This, in turn, has resulted in the development of a rather large number of so-called TFCAs spread around the world (Muchapondwa & Ngwaru, 2010). Yet, while highly praised by the international community, the effectiveness of these transboundary initiatives has rarely been evaluated empirically. More specifically, while we know a lot about compliance dynamics in local or national settings, the extent to which these insights travel to the context of transboundary governance is still to be explored.

The research on transboundary governance is however far from new, with a rather developed field on transboundary water management (see, e.g., Kliot, Shmueli, & Shamir, 2001; Frisvold & Caswell, 2000) as well as examinations of potential biodiversity outcomes from these transboundary entities (Van Aarde & Jackson, 2007). Previous research has also paid attention to how environmental co-operations between states could function as a means of peace-making (Ali, 2007; Shaw, 2003; Westing, 1998; Barquet, Lujala, & Rød, 2014), the role of the state in relation to the emergence of transboundary parks and global environmental governance (Duffy, 2006; Buscher & Dietz, 2005), and TFCAs' potential in enhancing regional economic development and the effects on peoples' livelihoods (Spenceley, 2006; Schuerholtz & Baldus, 2007; Munthali, 2007; Ferreira, 2006). Within recent work a group of scholars have turned their focus on how institutional design principles could influence the performance and robustness of transfrontier conservation areas, seeing them as socio-ecological systems (see, e.g, Spenceley & Schoon, 2007; Schoon, 2013; Taggart-Hodge & Schoon, 2016).

Hence, these scholars take a somewhat similar departure as this study when recognizing the role of institutions in transboundary governance. Nevertheless, there is still limited empirical work on how compliance dynamics behave in transboundary settings. Several characteristics of transboundary conservation, however, make such an assessment theoretically and empirically relevant. First, while previous research has shown that compliance is enhanced if the resource to be governed has well-defined boundaries (Ostrom, 1998), transboundary conservation concerns fugitive wildlife that straddles over political borders. The boundaries of the resource are hence difficult to define and enforce. Second, transboundary conservation between several countries includes a large number of resource users with a variety of interests and identities, factors that have been argued to lower compliance with conservation rules since they affect the prospects for creating and maintaining shared norms of trust and reciprocity (Ostrom, 1999). Third, transboundary conservation involves countries that diverge in terms of social, economic, and cultural contexts. This in turn could potentially have repercussions on resource users' incentives to comply with rules and regulations (Agrawal, 2002). Fourth, while previous studies have shown that excluding outsiders at a relatively low cost is essential for people to follow rules (Agrawal & Gibson, 1999), the transboundary character of the resource – as well as of the governance structures – potentially makes this more difficult.

In sum, previous literature has identified several potential factors affecting compliance with rules and regulations: economic benefits (Becker, 1968; Keane et al., 2008); moral obligations (Tyler, 2006); social norms of trust and reciprocity (Ostrom, 1998); and trust in the state (Sjöstedt, 2013). However, while previous research has generated important insights about the factors potentially generating compliance – from the very local level to that of the nation state – we know far less about compliance dynamics in transboundary settings. Yet, if not able to achieve compliance, protected areas are at risk of becoming so-called "paper parks," only being protected formally on paper (Gibson, Williams, & Ostrom, 2005). Thus, understanding the challenges facing authorities in transboundary conservation in terms of ensuring compliance becomes a critical concern, both for policy and research.

The empirical investigation

The case

The focus of this study is on the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA), a collaboration between the governments of Angola, Zimbabwe, Zambia, Botswana, and Namibia, and situated in the Okavango and Zambezi river basins where the borders of the partner countries converge (KAZA TFCA, 2015). The initial steps of creating the conservation area were taken in 2006 when the five partner countries signed a memorandum of understanding, and it was further formally established in 2011 when all countries endorsed the KAZA Treaty, establishing a common ground for conservation and management (KAZA TFCA, 2016). Its overarching goal is "to sustainably manage the Kavango Zambezi ecosystem, its heritage and cultural resources based on the best conservation and tourism models for the socio-economic well-being of the communities and other stakeholders in the region" (KAZA TFCA, 2015, p.2). The collaboration further involves both national and transboundary actors with KAZA TFCA having its own organizational structure (i.e., the Ministerial Committee, the Committee of Senior Officials, the Joint Management Committee, the National Committee, and finally the Secretariat) (KAZA TFCA, 2015).

Within this complex web of conservation zones, the area hosts 36 formally proclaimed national parks and includes numerous forest reserves, game reserves, and areas designated for tourism concessions and natural resources use (SADC, 2015). Specifically, the area includes 22 conservancies, 11 sanctuaries, 103 wildlife management areas, and 11 game management areas (KAZA TFCA, 2015). The area comprises the longest wildlife migration route in Africa: zebras that travel across several borders on a year-to-year basis (Naidoo et al., 2016) and the largest unified population of African elephants (Suich, 2012). Furthermore, there are about two million people living within the area – around 30 percent living on unprotected areas (KAZA TFCA, 2015). In the long run, the hope is for the transboundary cooperation to enhance the socio-economic conditions for the communities in the region. This will mainly be done through locals co-managing conservation and tourism projects with private and state actors. Supporting communities in finding measures to mitigate human-wildlife conflicts as well as education on conservation efforts are other important aspects in reaching this goal (KAZA TFCA, 2016; KAZA TFCA, 2015).

To summarize, the region encompasses a large number of people as well as an abundance of wildlife straddling over political borders, making it hard to exclude other resource users from the con-

sumption of wildlife while also affecting the benefits to the communities. At the same time, the KAZA TFCA acknowledges that there are actors at different governance levels, both transboundary and national actors with their respective policies, aiming to govern wildlife and natural resources across borders.

Methods

The investigation is based on 15 in-depth interviews with elite officials working within the KAZA TFCA, conducted in early 2017. The authors were introduced to these informants through local contacts in the region. By interviewing elites with high-ranking positions, the hope is to attain valuable information through their knowledge on management systems, legal and organizational structures, as well as the history and future of the project (Marshall & Rossman, 2016). The elite individuals were chosen based on centrality. Moreover, since these elite actors are involved in the day-to-day operations in KAZA, being responsible for the coordination and implementation of conservation projects, they are considered to hold expertise in the field of study.

Before the interviews, the informants were ensured that their participation would be confidential and that the material would only be applied for scientific use. They were further informed about the research project, the purpose of their participation, and what kind of topics they would be asked to reflect upon during the interview – all of this to ensure their participation (Lilleker, 2003). The interviews were held in English, the official language for all the partner countries, thus no third-party in terms of an interpreter was present during the interviews. All the interviews except for one was performed with a recording device, decreasing the risk of errors when transcribing, and hence ensuring the reliability of the material.

The interviews were semi-structured with a prepared interview guide, including open-ended questions enabling the informant to talk freely about issues. In this way, new mechanisms and perspectives that could not be assumed in advance were possible to capture. First, the informants were asked about their positions and tasks followed by questions relating to different themes. These themes were connected to previous research on collective action and natural resource management, that is, international collaboration between the states; national institutions and differences in political and economic capacities; local level cooperation and community involvement; enforcement

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strategies; monitoring and evaluation of conservation effectiveness; and the goals and challenges of KAZA TFCA. The ensuing analysis focused on identifying themes and illustrations since the informants were purposively sampled compared to using a statistical approach of treating the material, which would have been suitable if applying a probabilistic sample of individuals (Bennett & Elman, 2006; Sundström, 2017).

While it is important to note that the compliance dynamics accounted for here strictly come from perceptions of people in a management position and do not necessarily reflect the views of resource users, this focus potentially adds new and important perspectives to the issue of how to foster compliance – in general as well as in transboundary conservation in particular. Theories about compliance – as well as empirical studies investigating factors potentially fostering compliance – tend to be either broad and abstract or heavily tilted towards perceptions from resource users. How the micro mechanisms potentially fostering compliance are perceived by the officials tasked to enforce compliance in practice has, however, previously been largely unexplored.

Results and analysis

Compliance due to trust in state authorities

In line with established findings in national settings – both from normative accounts and from laboratory experiments and field studies – the interviews illustrate that resource users' trust in state authorities play a role in fostering compliance with conservation rules in KAZA TFCA. State officials are for example acting both as facilitators for conservation as well as enforcement officers, however, as they are responsible for arresting people for illegal activities, they could decrease the trustworthiness in the state officials in general. As one elite official describes it:

> How would they [the communities] trust us [the state authorities] if we say, "Ok, fine we are partners in this," and there is no system that makes them believe that they are partners? And within the same departments we have people who wear the same uniform like me, who go and kick them and put them in jail on mere suspicion of poaching. And then the following day they go and say, "Let's work together, let's join hands and conserve together." So, it takes a lot to win that trust. (Interview 3)

The informants then describe how state authorities (such as rangers, and law and wildlife departments) would gain trust from people if they establish a system of benefit sharing in return for people complying with rules and regulations and even engaging in protecting wildlife and natural resources themselves. One elite official describes the relationship in the following way:

> If they [the communities] don't see any benefit in whatever you [the state authority] are doing, whether it's research, whether it's community development, it's going to be very hard for them to accept you. But I think it basically comes down to trying to gain their trust first. You have to gain their trust first and you really have to work hard to explain to them in the simplest terms what they can benefit out of what you are doing and what you want to achieve out of that. (Interview 4)

Establishing a functional system of benefit sharing was also perceived as crucial in order to address the issue of poverty. More specifically, according to the key officials, one of the underlying factors regarding why people, supposedly, do not comply with rules and regulations in KAZA TFCA is poverty. People are described as breaking conservation rules due to pure subsistence needs or for economic gains from commercial poaching to uplift their livelihoods.

> I poach because I'm hungry. I poach because I want fish. I want money. So, at the end of the day, for our natural resources to thrive and not being depleted, we have to address the issue of poverty. Because poverty is the main driver of poaching. (Interview 1)

Moreover, since human-wildlife conflicts are common in the region – with incidents of people getting their crops destroyed, or even being harmed themselves by wildlife – the interviews report a situation where there is a lot of anger and frustration involved when people are being told to protect the same animals that are causing damage. As conceptualized by officers, it appears that if people trust that they will receive benefits from protecting wildlife and natural resources, this could make people value resources higher and thus have incentives for investing time and resources in conservation.

> Because really our task at the moment, as far as wildlife is concerned, is to try and change people's attitudes towards our wildlife, from being ... right now it's

just a nurturance, it's a liability. We want them to look at wildlife as an asset and for them to see this, they got to have tangible benefits. (Interview 14)

Furthermore, informants point out that in order for people to support conservation projects, benefits need to be provided to the communities within a short period of time. The interviewees report how people have had high expectations on KAZA TFCA delivering measures through which people could enhance their livelihoods. However, it appears that KAZA TFCA has not fulfilled people's expectations because it has not provided the expected benefits on time, which in turn makes people resistant to supporting conservation efforts. This also seems to be highly related to people being poor and hence not able to wait for their livelihoods to improve.

[There] are all of those expectations from the community that we have to manage. It's a serious challenge because they expected so much. They thought KAZA was just going to come in and give them this money to start doing their businesses. (Interview 11)

And with the conservation initiative, the conservation projects, you start getting the results after a long period of time. Them [the communities] they are expecting results tomorrow. They are saying, "Okay, yes now we have KAZA. KAZA has been established now. So, we want to see the benefits now." So, it is very difficult to go to them and try to tell them that the benefits you are going to see them over time. Because they don't have that patience of time. (Interview 1)

To summarize, it appears that to achieve compliance, state officials need to gain the trust of the resource users. The lack of trust, in turn, seems to be related to the transboundary conservation project not having a functioning system of benefit sharing and that potential benefits are not delivered within a reasonable time frame.

Compliance due to co-management

Another challenge that KAZA TFCA faces in generating compliance is establishing a functioning system of co-management between state authorities and local communities. The interviews describe

how the involvement of locals into the management of wildlife and natural resources such as consultancy, is crucial to make people follow rules.

> Because you have to involve the community and show them that you take them seriously. If you come with a decision from the top, they'll most likely reject it or they don't give you any support. Most of them understand exactly what you're [the state authorities] trying to do and they know there are likely benefits of that but they are still resisting because they were never consulted. (Interview 4)

> People come to the communities and tell them what to do, instead of getting their [the communities'] ideas on how they need to deal with certain issues. And communities become very resistant because now they are not part of that; they are told what to do. (Interview 2)

In addition, the informants emphasize the importance of people having ownership and access to wildlife and natural resources for them to follow rules. Involvement in the management process – which could be both involvement in terms of user-rights as well as the mandate to monitor resources themselves – could then give people incentives to protect the resources and hence adhere to conservation rules.

> Initially when you bring together communities and tell them that "We are giving you the custody or the authority to be the custodians of this resource. This resource belongs to you and it is up to you to decide how you are going to manage it." And then it is that ownership, that this thing is ours. And then they manage it properly. But when you take everything from them and give back to them a law, they always become very radical to an extent that every time they see that resource they exploit it. (Interview 1)

> If you are not given an incentive, why should I conserve and for who? So, if you are not allowed to cut timber, I will still cut it and even overharvest and use the wrong methods. Because I'm doing it behind your back and this resource is the government's and I don't care. (Interview 3)

Connected to this, the informants reported that a key entry point to make local communities comply is for the state to establish co-management with traditional authorities in the region. Some of the partner countries' communities are governed on a local level by traditional laws enforced by traditional leaders (i.e., the "chiefs"). In turn, these traditional authorities appear to have high legitimacy among people as they are perceived to take the local perspective seriously into account. At the same time, this indicates that the state is not necessarily perceived to be the most effective and legitimate authority in the area, which in turn potentially has repercussions for states' abilities to foster compliance.

> For me, a key entry point into the communities would be through the traditional leaders. That is the key. Because when they speak with their subjects they listen. They listen to them because those traditional leaders they are always there. They are different from maybe some political leaders who can come and go. (Interview 13)

> It is the traditional authorities who understand the needs of their people. So, in most cases where the traditional authorities are the ones who have the right over land, we have not had any problems in regards to complying with the natural resource policies. But where the state has overruled the traditional authorities and taken control of … issuing the land, we have always seen a lot of resistance and labelling of wildlife. Then wildlife does not become their resource but becomes a government thing. (Interview 1)

Altogether, these insights suggest that for people to follow rules within KAZA TFCA, they need to be included into the management process over wildlife and natural resources to feel that they are being acknowledged and taken seriously. These accounts could then be related to previous theories, arguing that people will perceive that they are treated fairly by state authorities when included into management, which would increase legitimacy in state authorities (Raakjaer-Nielsen, 2003; Murphy, 2004).

Compliance due to policy harmonization and perceptions of distributional and procedural fairness

The issues discussed in the interviews connect to previous findings within the literature of compliance. However, one striking factor that expands on previous research relates to the lack of policy harmonization between the partner countries, which throughout the interviews was highlighted as one of the major challenges for KAZA TFCA. Since the different states have not yet (with some exceptions) succeeded in establishing common policies on conservation, the region encompasses different rules on how much people can extract from a common resource, where some people are allowed harvesting of resources while others get sanctioned for doing the same. The informants describe a situation where it appears that the inability of excluding others from extracting the resources, together with people being highly dependent on wildlife and fishery, makes people participate in the harvesting of the resource even though it is illegal on their side of the border. This is in line with collective action theory on free-riding: if unable to exclude others from extraction of the resource, the incentives for cooperation and compliance decrease (Ostrom, 1990; Ostrom et al., 2002). A good example concerns the previous lack of harmonization between fishing seasons in the region between Namibia and Botswana.

> You find that during those times people from Botswana would say: "Why is it like Botswana is saying stop fishing but in the other countries they are fishing in the same resource?" You didn't give people a lot of sense. But then they [both partner countries] stopped at the same time. Now, everything is fine. People are not complaining. Rather people are complying. (Interview 7)

> If you are in this side, on the Botswanan side, you see people on the other side in Namibia, and they will be fishing in the same water and here they are not allowed to fish. Then because of that we ended up with people overharvesting or fishing even outside the season – poaching. (Interview 3)

Policy harmonization could potentially be an issue in all types of global environmental problems with countries having different legislation increasing the risk of free-riding, but in the context of transboundary conservation of wildlife the interviews suggest that this is an especially salient mechanism. Fugitive resources such as elephants straddle freely over political borders without fences;

hence the resource users from one country can see with their own eyes how the animal that they have protected is being hunted and killed by the resource users on the other side of the border. This is an important issue in KAZA TFCA since there is a total hunting ban in Botswana compared to the other countries where regulated hunting of wildlife is still allowed.

> During dry season, they [the zebras] will come. They will move out to Zalambala. They will go to Namibia. Same zebras! And people [in Botswana] will feel that they have just looked after them, but we can't benefit anything from them – why? (Interview 6)

> The borders are open and you know, there is free movement of wildlife. Even we share the rivers, we share the Chobe River. So, we share the fish, we share the wildlife. In Botswana, we have currently banned hunting. But in the neighbouring states it's still open. So, we still have to continue with our mandate of conserving and protecting the species which we still share with them. (Interview 4)

> Each country has its own policy regarding conservation and I believe it's not the same policy amongst the five countries and that alone is very difficult. Because as much as we have KAZA, we've got Zimbabwe, Zambia, Botswana, Angola, Namibia, and they've got different policies when it comes to conservation. So that's the biggest challenge. (Interview 9)

It thus appears that different extraction rules could generate an unfair distribution of benefits between people in terms of incomes from harvesting resources as well as resource users being treated differently by law enforcement authorities working under different legal frameworks. These aspects relate to previous theories of compliance suggesting that unfair distribution of the outcomes as well as unfair procedures would erode legitimacy in state authorities and, in the end, trust in the state (Sutinen & Kuperan, 1999; Levi et al., 2009).

Compliance due to deterrence over political borders

Finally, even though several normative aspects are highlighted as important for compliance in the region, the interviews further expose the need to involve deterrence as a measure to mitigate poaching, especially commercial poaching. Poaching of ivory and illegal trafficking of wildlife products were reported as two of the biggest challenges of KAZA TFCA being driven by a global market including a chain of different actors. Hence, since this is an issue of global character, involving people from outside the region, the interviews suggested that other measures need to be considered and that in order to mitigate these types of illegal activities there was a need to work at several different institutional levels.

> For communities, incentives will help. Get them involved, let them get more benefit from wildlife, let them help you to protect it. Let them stop poaching themselves. For the international syndicates, that's an international problem now where you need assistance from various levels of government. That's something that we are grappling with. … Now, as long as that demand is there, the supply is going to grow. (Interview 14)

In this sense, hard sanctions and surveillance are important measures in mitigating poaching by people coming from outside the region. This is illustrated in the interviews as they highlight how the different legislations between the partner countries – combined with poachers being able to pass easily over political borders – influence where people poaching for commercial purposes go.

> In Zimbabwe if someone poaches an elephant, he goes to jail maybe for nine years, and then in Zambia it is two or three years. In Botswana, it's another scenario [suspected poachers can be shot on sight by the military]. So, it means, when it comes to those illegal activities, these poachers might end up changing from where they are getting higher sentences, targeting where they know that "If I get caught, I'll just spend a year or two years and then I'm out." (Interview 13)

Again, the harmonization of policies seems to be an important factor for fostering compliance in the KAZA TFCA but in contrast to solely appealing to moral sentiments, this would also increase the costs of noncompliance. In sum, depending on whether the poacher comes from outside the

region and on whether rule breaking is connected to the ivory market or to people's subsistence, deterrence could play an important role in fostering compliance.

Conclusion

While a strong coalition of interests in recent years has found common cause in the promotion of transboundary governance initiatives in respect to natural resources, we know surprisingly little about its effectiveness in fostering compliance with rules and regulations and hence promoting sustainable use of natural resources. This paper uses interviews with key actors involved in the management of the Kavango Zambezi TFCA to examine how these dynamics play out in a transboundary governance setting – an issue which so far has been rather unexplored.

The main findings indicate that the primary factors held to be important for fostering compliance in a transboundary setting stem from both normative and instrumental understandings of compliance. More specifically, the interviews with key elite informants show that trust in authorities was perceived to be a key factor influencing levels of compliance. Key factors influencing whether or not resource users expressed such trust were in turn related to the system of benefit sharing as well as the extent to which resource users were included in decision-making through co-management. In addition, the importance of sanctions and systems for monitoring, control, and surveillance were also identified as important factors fostering compliance. Finally, the study adds to previous research by illustrating how the management of rivers, wildlife, and habitats that straddle over political borders put much more demands on coordination among law enforcement departments as well as harmonization of policies over political borders compared to resources that can be managed within one country solely. The Southern African Development Community (SADC) identifies that one of the challenges facing TFCAs is "harmonizing the pertinent legal and policy frameworks within and between Member States" (SADC, 2016). The analysis of the empirical material suggests that this process is not yet fully successful in the KAZA TFCA and that this has repercussions for compliance. For example, without such harmonization there is a risk of inducing free-riding among resource users. Free-riding is in turn not only a threat for the sustainability of wildlife, forestry, and fish stocks but could also further intensify noncompliance. If some people get away with poaching – or if some people are allowed to extract resources while others are not – there is an evident risk that rules and regulations are perceived as unfair. This in turn risks eroding both the general morale

among resource users and the legitimacy of the authority tasked to foster compliance (Sutinen & Kuperan, 1999). Hence, the management system should be consistent rather than flexible over political borders. Thus, in a transboundary setting, the different state authorities need to be aware of the distributional consequences of the rules imposed upon resource users as well as the procedural fairness by which rules are enforced. Previous theories should hence be developed in terms of understanding how differences in formal extraction rules between states could cause free-riding among resource users. It would also be important to gain more in-depth knowledge on the causal mechanisms at work, for example, distributional and procedural fairness. In addition, future studies would benefit from investigating the congruence between the perceptions expressed by elite officials and the perceptions of resource users.

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