LETTER

Rethinking Corruption in Conservation Crime: Insights from Madagascar

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Abstract

Corruption affects biodiversity conservation. Mechanisms that more effectively reform corruption and mitigate negative effects of corruption on conservation are needed, especially in biodiversity hotspots such as Madagascar. Local definitions of corrupt behavior, attitudes about reforms, and motivations for noncompliance may generate deeper understanding about corruption, which in turn may advance the conservation community's thinking and invite new solutions. We conducted in-depth interviews with Malagasy residents living adjacent to the Makira/Masoala Conservation Area, querying perceptions about regional corruption, rules in use (i.e., social norms or rules in action), rule breaking, and mechanisms for reform. Most participants framed noncompliance with conservation rules as a deficit/absence (e.g., lack of knowledge of rules), defined local corruption more as an omission of duty than a commission of crime, and discussed poverty, unfairness, and diverse rules in use related to corruption. Traditional framing of corruption singularly as a lack or absence of honesty and morality or as a normative phenomenon does not seem wholly accurate at reflecting, or for thinking about, the local context. Data herein allude such inaccuracy may be most noteworthy at the level of corruption reform. Rethinking corruption in conservation crime as a blend of dimensions may liberalize the suite of reform mechanisms available to conservationists.

Introduction

Scientific understanding of human behavior is essential for more effective conservation practice and to improve human's ability to predict and adapt to environmental change (Sethi & Somanthan 1996; Gore 2011). Corruption is one such behavior; most of the world's biodiversity occurs within developing countries and many of these countries experience corruption (Smith *et al.* 2003). According to standards of many international donor organizations (e.g., The World Bank), corruption and poverty appear correlated (Esty *et al.* 2008), however, this relationship remains nebulous (Peh & Drori 2010). Greater understanding of corruption may help focus reforms needed to mitigate negative effects of corrupt human behaviors on biodiversity conservation (Forest Governance Integrity Program 2012). Deficit/absence (e.g., Sundstrom 2012) and normative (e.g., Robbins *et al.* 2009) conceptions of corruption, defined below, offer different paths for reform. However, to date neither seems to be resulting in the type of change being called for by the conservation community and justice for biodiversity and the people that interact with it (e.g., Transparency International's 2010 Corruption in the Forestry Sector Report, World Wildlife Fund and TRAFFIC's 2012 South Africa-Viet Nam Rhino Horn Trade Nexus Report). In this article, we present results from an exploratory study of local people's perceptions of corruption in conservation, using Madagascar as a case study. Local definitions of corrupt behavior, attitudes about reforms and motivations for noncompliance may generate deeper understanding about corruption which

in turn may advance the conservation community's thinking about corruption in a way that invites new solutions and reforms.

Corruption in conservation

Criminologists typically define corruption as the abuse (Forest Governance Integrity Program 2012) or misuse (Sundstrom 2012) of entrusted power, unlawful use of public office (Transparency International 2002) for private gain, and absence of a strong state and lack of order (Robbins 2000). Corruption may manifest as a: (1) commission of crime whereby an official is directly engaged in crime (e.g., facilitating timber extraction from a protected area); or (2) omission of duty whereby officials allow misconduct (e.g., accepting bribes to ignore fishing violations). Reformists adhering to this orientation must explain why certain rules are not enforced and certain norms do not take hold before addressing how to implement corrective measures including procedural (i.e., improving fairness in corrective processes) and substantive justice (i.e., improving fairness in corrective outcomes). For example, in Cameroon, the presence of forest guards in protected areas has not prevented protected species such as chimpanzees from being served at local restaurants. Anticorruption reforms have in part focused on using education to improve political capacity of officials to stop misusing short-term logging permits meant for building roads to grant access to timber (Peh & Drori 2010).

An alternative definition of corruption, adapted from political ecology (i.e., study of relationships among and between human social systems, politics, and economy), includes the system of culturally normalized rules, traditional legal authorities, existing inequalities, and cooperative relationships (Robbins 2000). Here, the focus is not on absence of state institutions, but presence of informal or traditional authorities that vie for legitimacy and trust among diverse players within both state and civil society. By defining corruption as the presence of alternative norms (e.g., social standards for grazing rotations) or variations of accepted behavioral norms (e.g., harvesting a protected tree species for the funeral of a respected community elder), reform focuses on social obligations supporting networks of unequal power distribution and disintegration of common property management (Robbins 2000). Reformists subscribing to this orientation often focus on *rules in use* (i.e., "rules in action" as opposed to the rule of law or "law on the books") as the ritualized informal, soft, or normative procedures and practices governing natural resource use. For example, in the Bahia region of northern Brazil and Maine lobster fishery, rules in use respectively dictate sustainable agricultural harvests and fishing territories as well as consequences for noncompliance (e.g., cultural isolation, sabotage of equipment; Sethi & Somanthan 1996). Changing who is allowed access to a resource, to whom they must apply, at what rate of exchange and under what conditions first requires defining and describing rules in use. Rules in use are one type of informal institution that allow conservationists to consider local people may not necessarily view inequality based on power as corruption. Such consideration can also help avoid cultural parodies of local people as either singular causes or helpless victims of environmental degradation (Jones *et al*. 2008).

Irrespective of the definition, reducing negative effects of corruption on conservation are key to success because conservation necessitates rule compliance (Kahler & Gore 2012). Compliance is shaped in part by institutional trustworthiness; a concept whereby corruption absence is important (Sundstrom 2012). For example, in the USA Great Lakes Region, gray wolf (*Canis lupus*) poaching occurs partly because of distrust in government's ability to adequately address human–wolf conflicts (Treves 2008). Motives for corruption (i.e., noncompliance) may include low salary, insufficient resources (e.g., shortage of personnel, fuel), and inadequate behavioral controls (e.g., insufficient monitoring, feeble sanctions; Miller 2011). When noncompliance is criminalized through rules of law or rules of use, economic opportunities emerge, are sometimes considered corruption (Robbins *et al*. 2009), and negative effects on conservation ensue. For example, in Lake Victoria, Tanzania, corruption resulted in officials accepting lower bribes than official fines to allow harvest using less restrictive gear and catch limits, resulting in sustained negative pressure on local fisheries (Eggert & Lokina 2010). Positive effects of corruption in conservation may also relate to compliance, for example, when a chief in Vanuatu decrees a taboo on fishing a reef for personal gain (e.g., benefitting family, community, ancestors, ethnic group) and concomitantly conserves biodiversity (Hickey 2006).

Conservation and corruption in Madagascar

Madagascar is a biodiversity hotspot (Goodman and Benstead 2005); although geographically close to Africa, Madagascar's biodiversity and culture are specific. In 2012, the International Union for the Conservation of Nature concluded 91% of lemurs—endemic primates with remarkable diversity (Yoder 2007)—were threatened or endangered (Black 2012). Madagascar can serve as referent for global conservation; challenges, constraints, and opportunities surrounding resource degrading behaviors in Madagascar are similar to other

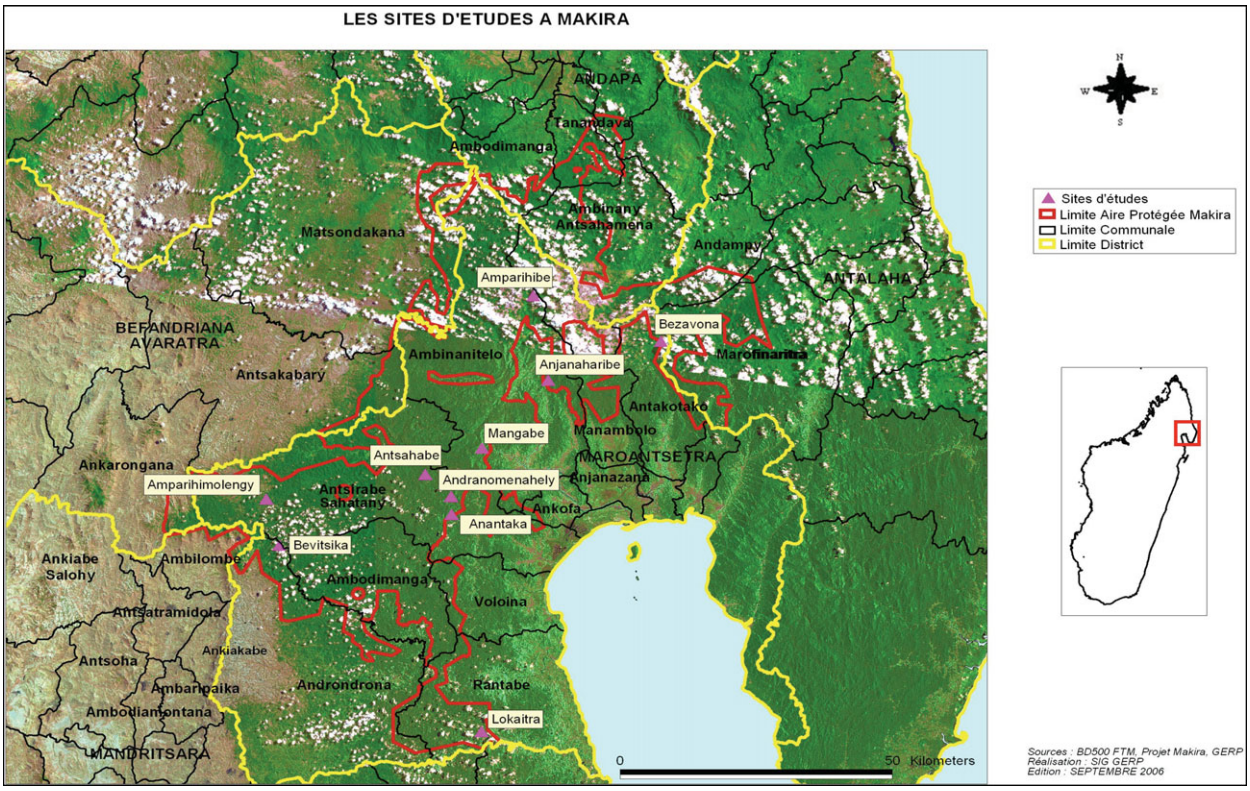

Figure 1 The Makira Conservation Area of northeastern Madagascar.

nations (Duffy 2010; Horning 2012). To the extent that Malagasy experience similar challenges and react similarly to rules impacting their natural resource, insights from Madagascar are transferrable with adaptation to other locales. Three human activities contributing to the vulnerability of Madagascar's ecosystems and the people dependant on them include: (1) wildlife poaching for direct consumption or trade (e.g., fruit bats for human subsistence [Jenkins & Racey 2008]); (2) illegal timber harvest and export for furniture and musical instruments (Gore 2011); and (3) *tavy* (i.e., slash-and-burn agriculture) for subsistence in ecosystems that are rare, threatened, or extremely biodiverse (Barrett & Ratsimbazafy 2009). Ecological implications of these activities are widely discussed in the literature and myriad causes are cited, including commercial gain, recreational pursuits, acts of rebellion, exercise of traditional rights (Hampshire *et al*. 2004), and corruption (Smith *et al*. 2003; Wright *et al*. 2007; Bradshaw *et al*. 2009; Garnett *et al*. 2011).

The Makira Conservation Site in the Greater Makira/Masoala region of northeastern Madagascar may hold up to 50% of Madagascar's floral diversity, 1% of global biodiversity, and the greatest lemur diversity existing in a single protected area within Madagascar (Crowly and Holmes 2007; GERP 2006; Figure 1). Illegal timber trade in Masoala is a regional conservation problem. As such the adjacent town Maroantsetra is an important point of entry and staging post for conservation and criminal justice reforms (Table 1). Compliance with conservation

Table 1 Sociodemographic characteristics of study participations (n = 10) in Maroantsetra, Madagascar.

Characteristic	Details[a]
Approximate population (density); average household size	10.6 (44,500 people/4,400 km)
Ethnic group composition	Betsimisaraka, Sakalava
Educational attainment	5.2 mean years of schooling[b]
Participation in livelihood strategies	Forest resource extraction, shifting agriculture, rice production, livestock production, cash crops such as vanilla and coffee, fishing, local market trade, tourism and mining
Local languages	Malagasy, French
Inequality-adjusted human development index (HDI)	0.332 (category: "quite low HDI")[b]
Poverty	67.8% live below international poverty line ($1.25/day)[b]

[a]UNEP (2011), Kremen *et al*. (1999).
[b]Madagascar-wide statistic.

rules in Madagascar has been discussed within the context of local *fady* (i.e., social norms), *fokonolona* (i.e., community-based authority groups living within the same community), and *dina* (i.e., traditional court; Jones *et al*. 2008; Ratsimbazafy *et al*. 2013). (See Supplemental Material for information about the cultural role of family in rule breaking.) To this end, our research goal was to explore local conceptions of corruption vis á vis conservation in Makira. We based our exploration on both deficit/absence and normative conceptions of corruption, not presupposing which would be wholly able to describe or define corruption in the local context.

Methods

We used a qualitative research paradigm to achieve study goals; we digitally recorded semi-structured, voluntary, in-depth face-to-face interviews (Trochim 2001) with Malagasy residents in Maroantsetra, June 2012 based on preliminary visits to the region over 4 years before commencing data collection. Participants 18 years or older were solicited using a purposive, nonproportional sampling technique, provided they self-described themselves as being aware of conservation activities in the area. One female American research assistant and one male Malagasy translator conducted interviews in accordance with a predetermined field protocol (see Supplemental Material for information about the researcher's role in qualitative field research, study boundaries, and study reliability and validity). We asked participants their perceptions about regional corruption, rules in use, rule breaking, and reform mechanisms. We measured sensitive concepts (e.g., rule breaking) indirectly, recognizing participants engaging in illegal behavior may be reticent to discuss personal experiences violating the law (Singer *et al*. 1995). By guaranteeing confidentiality and ensuring anonymity, researchers can encourage respondents to reveal knowledge of sensitive behavior(s) (e.g., Razafimanahaka *et al*. 2012). Drawing on our research experiences elsewhere (e.g., Gore and Kahler 2012; Kahler *et al*. 2013), we employed two explicit measures to limit biased responses. First, we ensured researcher independence by demonstrating a lack of affiliation with government agencies and not recording respondents' names or specific identifying information. Second, we asked each respondent about prevalence of *other* community members participating in such activities, thus allowing respondents to avoid implicating themselves. These strategies limited direct attribution of behavior and have been successful in identifying causes of noncompliant behavior, although not always (e.g., Weladji & Tchamba 2003; see Supplemental Material for additional discussion about bias in qualitative research as well as the role of family in protecting rule breakers).

The field team electronically transcribed each interview's digital recording; comments not relayed in English were discussed and agreed upon by consensus to maximize translation validity for future analysis (Miles and Huberman 1994; Gore & Kahler 2012). Transcripts were double-checked by the field research team for validity (see Supplemental Material for information about data collection procedures, reliability and validity in data collection and processing).

An iterative process guided the qualitative analysis of transcripts; we employed a scan, order, review, and compare method (LeCompte & Goetz 1983). This generic form of qualitative data analysis is popular because it does not dilute participant comments and data is minimally constrained by the researcher (see Supplemental Material for more information about data analysis). The University Committee on Research Involving Human Subjects at Michigan State University (IRB# x10–394) reviewed and approved methods used in this research.

Results

Ten in-depth interviews were conducted, lasting on average 50 minutes. All participants were males ranging from 18 to 60+ years had unique professional affiliations, such as employment with local NGOs, subsistence resource extraction, hotel industry, students, microfinance, rural development, education administration and environmental education, and tourist guide.

Perceptions about corruption

Participants spoke to deficit/absence conceptions of corruption in that they acknowledged both commissions of crime and omissions of duty (Table 2). Omissions of duty were more thoroughly elucidated, perhaps because of confounding factors (e.g., sampling procedure, sample size, participant experience, illicit nature of activities), or local context, as R003 noted, "power and money can force a lot of situations and keep a lot of eyes closed."

Rules in use

Rules in use help govern local interactions and relationships with natural resources. Participants delineated multiple rules in use, which we as researchers categorized as activities, culpability, enforcement, interpersonal relationships, punishment, and sanctions based on language from extant literature (e.g., Jones *et al*. 2008; Table 3). Participants did not discuss stability or origin of these rules, nor did they always link them with

Table 2 Traditional criminological categories of corruption identified by Malagasy participants, June 2012.

Major categories of corruption	Commission of crimes	Omission of duty
Criminological definition (Miller 2011)	Officials directly engage in the action of crime, such as facilitating resource extraction	Official allows misconduct, such as accepting bribes to ignore violations
Examples from interviews	"president of VOI [community group] engages in hunting and tavy in forest." [R006]	"people trading in rosewood strangely have regular papers." [R002] "never seen officials checking rules or making controls." [R001] "pay off official to make a false account of extraction." [R008] "as long as money is involved, responsibles (sic) close their eyes." [R006]

Table 3 Participants ($n = 10$) identified multiple rules in use related to conservation in northeastern Madagascar, June 2012.

Conservation-related rules in use[a]	Conservation-related interview examples[b]
Activities related to conservation, governing resource extraction or resource use	"can't build in sacred forest." [R001] "days of the week off from work." [R008] "restricted areas to work new land." [R003] "certain kinds of wood can't be used to make fire." [R006]
Culpability for breaking conservation rules, extracting resources from conservation areas, or engaging in activities noted above	"if the poor guy has no job and has to support his family, I would close my eyes."[R003] "I wouldn't say a person abuses his power, sometimes he is just a pawn. I can't blame the agents in charge of development." [R006]
Interpersonal relationships related to conservation, conservation rules, activities noted above, and culpability noted above	"some officials don't know about the Fiharanana, the link between Malagasy people that creates an atmosphere of communication and friendship." [R003] "respect ancestors." [R001] "the links between family or power position are able to step over the rules." [R008]
Punishment for breaking rules related to conservation such as activities noted above	"regular punishment for breaking rules from the government isn't needed. The fokonolona is sufficient." [R002] "those who break the rules are not the only ones to be punished; local communities may be punished, like low production during harvest." [R003] "the most important rule, the only one people respect, is punishment. If they don't see anyone from the local community in jail, they don't learn a lesson." [R006] "if someone breaks a rule they will be punished by their conscience." [R004]
Enforcement of conservation rules, such as who is responsible for enforcement	"Fokonolona is the best community to enforce the rules." [R004]
Sanctions for breaking conservation rules or engaging in activities as noted above based on culpability as noted above	"local people can resolve issues in their own way." [R009] "people go to jail but the courts let them off. At first you are surprised but you see the same guy doing the same thing instead of serving jail time. You start to be aware about where you go, what you do, and what you eat because you know someone is covering that guy." [R007] "if you are caught cutting a tree, you should replant it or clean the streets or school." [R009] "penalties by Zanahary include illness, natural fire that burns down your house, storms, or lightning." [R008]

[a]Rules in use are informal, ritualistic procedures, institutions or practices distinct from formal, codified laws. They may or may not have been created to govern use of natural resources.
[b]Examples from interviews selected to illustrate rules in use; examples do not represent the totality of participant comments about rules in use.

corruption; many rules affect conservation even though they may not have originated from attempts to manage natural resources. Because compliance with rules is a common metric for characterizing corruption, characterizing rules in use is an important precursor for assessing compliance and understanding corruption in conservation (Jones *et al*. 2008).

Rule breaking

Participants framed noncompliance with conservation rules (i.e., rules of law, rules in use) as being caused by deficits in: knowledge about what conservation entails [R001, R003], remembering forest rules [002], general interest in conservation [R001], fairness in rule

Table 4 Participants ($n = 10$) discussed punishment, penalties or sanctions for engaging in illegal conservation activities (e.g., illegally cutting protected tree). Sanctions may be considered from both a criminal justice and rules in use perspective.

Dimension of punishment or sanction for breaking conservation rule	Criminal justice perspective	Rules in use perspective
Severity	Penalties are not severe enough [R003, R004, R006]	Penalties from the fokonolona are different according to the situation [R008]
Type	Jail or fine [R006, R007, R009]	Replant trees, clean streets or school, receive warning, social work at fokonolona [R001, R009]
Who is sanctioned	Individual committing the crime in the form of jail time or fine [R002]	Entire family, village, or community in the form of natural fire, or illness [R007, R008]

enforcement [R001, R002], or consideration for the future [R003]. Other factors influencing noncompliance included age (e.g., older people respect rules more), different belief systems (e.g., "witchmakers" have different perceptions of nature), status quo (e.g., this is the way things have been and are currently), and disappointment with broken promises (e.g., school, irrigation dam).

Reforms

Ideas and attitudes about incentives for participating in corruption reform included actionable local activities including job creation, education, increased nongovernmental organization site visits to villages, and bee keeping. Participants mentioned macrolevel reforms including making conservation less tied to presidential politics; having officials be locally elected; structuring reforms according to short, medium, and long-term outcomes; and increasing surveillance.

Fairness

The notion of fairness (i.e., justice) permeated multiple interviews even though the concept was not posed as an explicit and singular question to participants during interviews; many felt conservation-related rules were unfair, although they did not specify if they were referring to formal or informal rules. Unfairness was framed as being between people with different levels of power (e.g., rich and poor). Some participants opined rules should be the same for everybody [R002] and that the rich should not be untouchable, above the law, or receive privileged treatment in being sanctioned compared to the poor [R004]. These comments may imply some participants view enforcement and sanctions as being implemented according to double standards or across a range of standards. Others felt rules were not applicable to everyone, and that they should be customized for everybody and every situation. R004 noted, "If we realize rules blindly, it will make nothing good." Unfairness was also framed as being between people and conservation [R006], "I know there are some people who will never change for conservation. They say, 'Is the lemur a priority for you? What about us?'" Attitudes about fairness were related to noncompliance with conservation rules, "rules are not fair, that is why people don't comply" [R001, R002].

Additional themes

Some participants discussed poverty as a symptom of illegal behavior. For example, R002 noted, "the rich pay the poor to break the rules inside the park." In this regard, people that are "poor" are weak, do not have a choice and must break the rules to survive, even if they are aware of the rules. A weak, struggling person who is poor does not have the power to pay for their freedom if they are caught breaking rules [R003]. In this regard, poverty can slow conservation [R006] and relates to corruption.

Lastly, participants discussed penalties, sanctions, and punishments for breaking conservation rules or engaging in illegal conservation activities (e.g., cutting down a protected tree species, falsifying paperwork; Table 4). Some participants identified the inconsistent rate with which sanctions were implemented (e.g., jail time) and the inconsistent frequency with which powerful individuals were sanctioned (e.g., "everyone who is caught should be punished, not just the poor" [R003]).

Discussion

In biodiversity hotspots such as Madagascar, noncompliance resulting in corruption can culminate in irreversible outcomes, including extinction. Our exploratory research corroborates that corruption is salient to conservation in the eyes of some Malagasy and suggests framing corruption as a singularly deficit/absence or normative phenomenon may not be wholly accurate at reflecting, or for thinking about, local contexts. Participants alluded such inaccuracy may be most important at the level of corruption reform designed to respond to people in corruptible positions. For example, we know that when corruption reforms are based on deficit/absence approaches, they often take the form of laws that create

systems of oversight where a layer of authority is empowered to oversee transactions (e.g., Convention on International Trade in Endangered Species of Wild Fauna and Flora). Legislation may be irrelevant, however, unless enforced. For example, defiance with early South African abalone fishing laws was influenced by the evolution of and unequal power relations between fishers and managers associated with fishing rules (Hauck & Sweijd 1999). Watchdog and education organizations, such as the Malagasy group Voahary Gasy, may play key roles in promoting compliance within this reform scheme by helping balance human and conservation needs. Importantly, deficit/absence-based efforts may be futile or actually serve to increase corruption by creating new groups of overseeing officials who themselves might be bribed (Robbins 2000). Confirmatory research would increase generalizability of this claim.

Reforms based on normative dimensions center on social mechanisms or informal institutions (Jones *et al.* 2008) that preexist state-level management systems. For example, village committees such as the fokonolona have endured through Madagascar's precolonial and postcolonial periods and may increase accountability more than additional layers of state control. Ultimately, reform models that align state control with local community empowerment may result in mutual benefit. This empirical question requires additional research; our data suggest a multidimensional approach for addressing corruption may best mirror local context, especially as compliance affects corruption. Other examples portend success for promoting alignment between approaches: in Vanuatu, traditional village-based regulation systems are constitutionally recognized such that chiefs can report individuals noncompliant with conservation rules to the state. Further, the state has legal precedent to prosecute based on the chief's constitutional authority. Vanuatu's traditional management systems are considered sustainable because they align formal and informal institutions (Hickey 2006).

Delineating conservation-related rules in use in Madagascar may offer one step in attending to community relationships, social norms, and informal institutions (e.g., fokonolona) that must be included in negotiations with governments over compliance with conservation rules. Informal institutions can provide conservation benefits regardless of whether they originate from natural resource management (Colding & Folke 2001). Further, as norms of acceptable behavior reinforced by social pressure, rules in use govern timing and method for harvesting wild species (Jones *et al.* 2008) independent of the rule of law. If compliance with rules is requisite for corruption reform, compliance with rules in use and rules of law must be addressed. The extent to which different rules affect engagement or abstinence in resource degrading behavior is yet untested empirically. Without retooling negotiation of corruption reforms to include both dimensions, conservation costs may remain higher and more difficult to anticipate than doing conservation through a corrupt system (Khanna & Johnston 2007); defiance will likely persist. Empirical research exploring stakeholders' motivations to comply with conservation rules has shown normative and regulatory variables equally describe and explain compliance (Kahler & Gore 2012), further emphasizing a need for multidimensional conceptions of corruption. Incorporating cultural (e.g., anthropological) dimensions into conceptions of corruption may be similarly valuable to future inquiry and practice.

Study participants discussed the concept of fairness or justice within the context of rule absence (e.g., penalty inequality) and norms (e.g., fokonolona rules). Mitigating negative impacts of corruption on conservation cannot be accomplished if people who are meant to implement protection are not treated fairly during decision-making processes (i.e., procedural justice) or do not view decisions as fair (i.e., substantive justice; Peh & Drori 2010). Incorporating citizens into reform strategies may increase acceptance which will likely result in improved implementation, stronger relationships and reduced conflict. How citizens evaluate fairness of participation processes is less understood, however, and fairness can be a major consideration in impressions about participation and compliance with conservation rules (Lauber & Knuth 1997). Study participants discussed power, culpability, poverty, enforcement, and sanctions vis à vis local conservation and corruption. They considered fairness within the context of conservation decisions more so than conservation decision-making processes, for example, R002 noted, "If a fisherman needs a boat, uses ordinary wood and gets caught by a responsible, he goes to jail and this is unfair." Perceptions of process can be similar to perceptions of outcomes, but not always (Lauber & Knuth 1997). If born out by confirmatory research, greater attention to fairness in corruption reform processes as well as reform decisions may improve compliance with conservation laws and rules in use. When stakeholders perceive equal and fair application of rules and their enforcement, they are more likely to comply (Tyler 2003). Knowledge about environmental decision-making could prove helpful for reforming process (e.g., Arvai & Froschauer 2010; Kellon & Arvai 2011); substantive justice could prove helpful to outcome reform (e.g., Stuntz 1997).

Rethinking corruption in conservation as a blend of deficit/absence and normative dimensions may liberalize the suite of reform mechanisms. Our exploratory

data from Madagascar suggest conservation corruption reforms may more directly incorporate rules in use (e.g., culpability, sanctions) and the social systems supporting such rules (e.g., fokonolona) in addition to strengthening criminal justice structures and providing appropriate training to competent authorities and local communities tailored to local hotspots. Corruption reforms may be structured according to short, medium, and long-term strategies to ensure survival of Madagascar's remaining biodiversity and human development. Such reform may mean relying on local norms, rules, and common property management for near-term strategies that target omissions of duty and regulatory mechanisms for longer-term strategies focused on commissions of crime.

The qualitative and exploratory nature of this inquiry precludes generalization and requires cautious interpretation of results, however, the value of our results for conservation is clear: with additional testing and confirmation, results may suggest entry points for new corruption reforms. Corruption affects biodiversity conservation. In biodiversity hotspots facing extinction crises, such as Madagascar, more progressive ways of thinking and doing conservation are needed. Existing approaches to thinking about corruption offer important insights but do not seem to accurately reflect local context.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's web site:

Researchers' role
Study boundaries
Data collection procedures
Data analysis procedures
Validity and reliability
References

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