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# Exploring the Motivations Associated with the Poaching and Trafficking of Amur Tigers in the Russian Far East

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## ABSTRACT

Poaching for the illegal wildlife trade is the most direct threat to the persistence of Amur tigers. Despite the recognition that reducing poaching is necessary to prevent extinction, the motivations that drive this activity are not well understood. Understanding this behavior is the first critical step to implementing tangible policy solutions. This study utilizes ethnographic methods to gather empirical evidence about the motivations associated with the poaching and trafficking of Amur tigers in the Russian Far East. By conducting interviews with those directly involved in the illegal tiger trade, three main motivations are identified: status and impunity, poverty (both economic and cultural/traditional poverty), and human/tiger conflict. Economic factors, due to the value of tiger parts for traditional medicine in China, is by far the largest influence on poaching in Russia. It is facilitated and exacerbated by systemic structural inequalities between social classes, including unequal distribution of power and resources and embedded corruption.

## ARTICLE HISTORY

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## Introduction

Poaching, defined here as the illegal taking of wildlife in violation of formal laws or rules (Eliason 1999), is being increasingly criminalized globally (Rizzolo et al. 2017). It has led to the localized extinction of species across the world (Rasphone et al. 2019; Brook et al. 2014; Goodrich et al. 2015) and is contributing to the rapid decline of thousands more (Davis et al. 2019; Prasetyo et al. 2021; Taylor et al. 2017; Wong et al. 2020). The complexity of motivations that drive poaching have been explored in various contexts, but informed applicable solutions remain rare. In most settings, poaching is considered illegal or sensitive (Ibbett and Brittain 2020; Nuno and St. John 2015), therefore these activities are frequently cloaked in uncertainty, affecting the ability of scientists to research, understand, and address these types of threats. Knowledge may have been hindered historically by the fact that a lot of empirical research addressing wildlife crime has been academically compartmentalized, specifically within conservation biology studies, due to the field's focus on protecting biodiversity (Drury, Homewood, and Randall 2010; Kurland et al. 2017; Pooley et al. 2017). Increasing recognition that preventing extinctions is ultimately about people and the choices they make (Balmford and Cowling 2006; Schultz 2011) has led to more interdisciplinary research into the social and behavioral factors associated with wildlife crime (e.g., Agu and Gore 2020; Struebig et al. 2018) and the increased use of social science methods for this research (Ibbett and Brittain 2020; Young et al. 2018). Understanding the variation in *why* individuals are poaching in a specific context will help inform conservation practitioners as to what type of prevention strategies are most appropriate (e.g., human/wildlife conflict dispute resolution, targeted enforcement, community outreach).

Tigers (*Panthera tigris*) are acutely threatened by poaching and the illegal wildlife trade (Davis et al. 2020; Goodrich et al. 2015; Sharma et al. 2014). Despite treaties of protection, tigers are one of the most exploited wildlife species, predominately due to the enduring demand for traditional medicine in

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Asian countries, especially China (Peter et al. 2020; Wong 2016) and Vietnam (Davis et al. 2020; Stoner et al. 2016). Although it has been recognized that reducing tiger poaching is necessary to prevent extinction, the motivations that drive this activity are not well understood (Inskip et al. 2014). The last link in the supply chains have been explored, with some studies aiming to identify and understand tiger part consumption behavior to reduce demand for tiger products in China (Moyle 2009; van Uhm and Daan 2016; van Uhm, Daan, and Wong 2019; Wong 2016), Vietnam (Davis et al. 2020; Peter et al. 2020; Stoner et al. 2016), and Nepal (Karmacharya et al. 2018). The first link, including the range of people involved, their motives and methods, and associated links to the commercial trade, have been examined in Bangladesh (Inskip et al. 2014; Saif et al. 2016, 2018), India (Sharma et al. 2014), and Sumatra (Risdianto et al. 2016; Shepherd and Magnus 2004). Similar data does not exist within the Russian context.

In the Russian Far East (RFE), poaching has been identified as the most direct threat to the Amur subspecies (Robinson et al. 2015), however minimal empirical evidence exists about poacher motivation. With approximately 300–350 adults remaining in the population (Wildlife Conservation Society Russia 2021), filling in the knowledge gaps about tiger poaching is critical and time sensitive to determine appropriate intervention strategies. Driven by external demand, the primary destination for tiger parts from the RFE is across the border in China,<sup>1</sup> yet even complex wildlife supply chains that cross international borders begin at the local level where the initial act of poaching occurs (Braden 2014). Considering the importance of understanding the first step in the supply chain, this article focuses on determining the specific drivers of poaching behavior.

In the RFE, the government transition in the early 90s led to the privatization of resources and wealth, systemic corruption, weak governance, and organized crime, all of which have been tied to wildlife and environmental crimes in that region (Wyatt 2009, 2011, 2014; author 2021a, author 2021b). A greater emphasis on political, economic, and social processes, both historical and contemporary, must be addressed in discussions about motivations to engage in poaching in this region. A growing body of literature acknowledges how criminology, a field within both the behavioral and social sciences, has much to offer in understanding the human dimension of wildlife crime (e.g., Gore 2017; Lemieux 2014; Moreto and Andrew 2015b; Moreto and Lemieux 2015a; Sollund and Rebekka Runhovde 2020; South and Wyatt 2011; van Uhm and Daan 2016; Wong 2016). This article further contributes to this literature by emphasizing the value of a criminological perspective to advance our understanding of wildlife crime commission and highlight the importance of social science methodological approaches to study it, with the goal of effectively mitigating threats. By utilizing ethnographic methodology, I conducted interviews with those directly involved – the poachers, buyers, middlemen and smugglers – in the illegal tiger trade to gain nuanced and detailed information about the motivations associated with tiger poaching. This article answers Duffy et al.'s (2016) call to conduct more qualitative and ethnographic work directly with poachers to gain a better understanding of motivations, in recognition that conservation must be built on a better understanding of human behavior (Inskip et al. 2014), as these insights remain key to preventing poaching acts (Rizzolo et al. 2017). The goals of this article are twofold: first, to explore the complexity of poaching motivation in the RFE; second, to bring increased recognition to the methodology of ethnography as a tool to gather such data.

## Theoretical explanations for drivers of poaching behavior

Poaching behavior is a complex phenomenon because it is socially constructed. It manifests contextually due to diverse economic, geographic, social, and psychological environments in which it occurs (Kahler and Gore 2012; Kuperan and Jon 1998; Rizzolo et al. 2017). It is also complicated by the fact that ‘poaching,’ as contemporarily understood, has only recently become criminalized in many

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<sup>1</sup>According to my research, China is the sole destination for Russian tigers; however, Stoner et al. (2016) argue that Russian tigers are a major supply for the Vietnam market.

societies (Lubilo and Hebinck 2019; von Essen et al. 2017). Scholars have offered various explanations to understand the motivations associated with this wildlife crime and several theoretical approaches have been utilized to explain its manifestations.

Muth and Bowe (1998) summarized much of the research by developing a typology for poaching behavior, citing 10 motivations including: Recreational satisfaction, thrill killing, trophy poaching, gamesmanship, protection of self and property, commercial gain, household consumption, poaching as rebellion, poaching as a traditional right and disagreement with game and wildlife regulations. Expanding on a few of these, economic poaching can be broken down into subsistence and commercial. Subsistence poaching is usually a symptom of a lack of basic household necessities and the ability to acquire them; whereas commercial poaching is stimulated by a desire for wealth beyond mere subsistence living and is driven by a combination of economic wealth creating demand from consumers and a lack of legitimate income sources in regions with desirable species (Mariel et al. 2015). Although it is widely assumed that poaching behavior is driven by poverty, ultimately, it is driven by wealth and not by poverty per se; the poor who are involved in the illegal wildlife trade are generally not the major drivers nor those reaping the rewards (Hübschle 2017; Mariel et al. 2015). Protection of self and property motivate poaching behavior in response to reducing costs incurred from large carnivores, including livestock loss (Carter et al. 2017; Zabel and Holm-Müller 2008) and emotional cost related to fear of human and/or domestic animal fatalities (Anders et al. 2013). Thrill killing, where poaching does not occur from necessity but from the adrenaline and fun of the illegal act has been explored in various contexts (von Essen et al. 2014). Forsyth and Marchese (1993b) documented how the excitement and adventure offer benefits that compensate for the risks involved in crime commission. Massé, Givá, and Lunstrum (2021) demonstrated how rhino poaching is a consequence of poaching syndicates taking advantage of declining options for men in Mozambique to pursue migrant work in South Africa, which has been the main source of employment for most men since Portuguese colonization – work that is often as perilous and difficult as poaching. Their increasing willingness to take on the risk of rhino poaching is facilitated by a history of colonial exploitation, long-standing expectations of men as income earners, traditions of masculinity, willingness to pursue dangerous work, feelings of hopelessness, and poaching networks exploiting these vulnerabilities by offering a lucrative alternative (Massé, Givá, and Lunstrum 2021). Poaching can also manifest as a response to the imposition of modern hunting laws thus criminalizing traditional or cultural types of hunting that were once legal (Comaroff and Comaroff 2006; Eliason 2004; Forsyth, Gramling, and Wooddell 1998; Muth and Bowe 1998). It can occur as an act of rebellion/social defiance or lack of respect for authority or government (Bell, Hampshire, and Topalidou 2007) and an act of political and social protest (Hübschle 2017). Theoretically, motivations of poaching behavior can be categorized into two main groups: instrumental and normative, which will now be explained in depth.

### ***The instrumental perspective***

The instrumental perspective derives from theories of microeconomic behavior; with a focus on the agency of individuals, it is premised on the idea that an individual violator is driven by self-interest. Under this perspective, economic deprivation receives a comparatively large amount of attention as a driver of poaching behavior (Agnese et al. 2011; von Essen et al. 2014). Rational choice theory is often used to explain how deviant behaviors are driven by utility maximization (Clarke and Cornish 2001) and an individual will evaluate the immediate risks and rewards associated with a specific act/behavior (e.g., poaching) with the information available to them (Ostrom 2010). This cost-benefit approach to understanding why individuals engage in poaching is situated within a deterrence model of behavior. The goal of deterrence is to increase the risk perceptions of individuals through threat (implicit or explicit) and/or fear of legal punishment to deter both repeat and potential offenders and prevent illegal behavior (Gibbs 1975). A lack of strong deterrence mechanisms in place may influence the decisions of individuals to engage in poaching (Kuperan and Jon 1998). Alternatively, defiance theory

(Sherman 1993) predicts that punishment can have the opposite effect and provoke future illegal activity if the offender does not see the punishment as just, is alienated from mainstream society or does not recognize/respect the authority sentencing the punishment (Filteau 2013). Defiance theory posits that in the absence of weak social bonds to mainstream society, offenders who are harshly punished can become radicalized toward stronger law-breaking behavior and have a higher likelihood of reoffending (Hirschi 1969; von Essen et al. 2014). The routine activity approach (Cohen and Felson 1979), a theory from environmental criminology, focuses on the opportunity structure of poaching that places wildlife at risk to exploitation by examining the choice-structuring properties of a motivated offender (i.e., poacher) within the context a suitable target (i.e., a high valued endangered species) and a lack of capable guardians (i.e., park rangers). Studies have used this approach to explain poaching behavior (e.g., Eliason and Eliason 2012; Lemieux 2014; Moreto and Lemieux 2015b; Warchol and Harrington 2016), with the focus not on the characteristics or backgrounds of the criminals, but rather the context-specific opportunity structures and situational characteristics that facilitate a criminal event to occur within a broader social system.

One limitation of the instrumental perspective is its depiction of poaching as a crime that can be rationalized on the level of the individual offender with a focus on micro-level motives, ignoring the broader structural context and socio-political dimensions (von Essen et al. 2014). While the decision to poach is decided by an individual, the choices associated with that decision are not operating in a vacuum and can be shaped by the larger institutional influences, i.e., the broader political-economic context in which that individual finds themselves (Massé, Givá, and Lunstrum 2021). Therefore, it is not possible to dislocate these broader systems from the individual that resides within them. For example, while economic poverty may encourage people to poach high valued species for income generation, such poverty is usually only a driver if there is market for the products – i.e., commercial demand (Challender and MacMillan 2014; Duffy et al. 2016). Globally, the illegal wildlife trade is becoming ubiquitous, frequently driven by the low risk, high reward nature of the activities (Julie, Graham, and Lantsman 2018; Warchol and Harrington 2016), coupled with globalization, which eases the challenge of international communications, coordination, and delivery (van Uhm, Daan, and Nijman 2020), and persistent demand, particularly from Asian countries (Duffy et al. 2016; Wyatt et al. 2018). Structural explanations can highlight how context influences micro-level individual choice.

Another critique of this perspective is its focus on economic poverty. While in the literature the accepted definition of poverty is largely an economic one, its origins and effects are much more subtle than material deprivation. von Essen et al. (2014) explain how scholars have nuanced the instrumental perspective to account for non-traditional measures of value. Poverty can be multicausal and encompass lack or loss of identity or status, culture, customs, prestige, personal expression, power and the ability to decide one's own future – all difficult measures to reliably quantify (Sen 1999). If poverty reduction schemes focus strictly on economic incentives, this assumes, for example, that market forces will protect the environment (Duffy et al. 2016). If one operates under the assumption that economic poverty is the root cause of poaching, then the problem can be alleviated by providing paid employment and/or ‘alternative livelihoods.’ However, this idea can falter when it does not take into consideration forms of poverty that are not economic, i.e., cultural or prestige/status. For example, the IUCN began a program to halt declining ibex populations by implementing an international hunting trophy scheme, requiring locals to stop their historic and cultural hunting of ibex. The scheme failed because hunting was a source of prestige and status and selling trophy permits to wealthy international hunters did not remove all the incentives to hunt (MacDonald 2005).

### **The normative perspective**

The normative perspective depicts poaching behavior as a product of the morals and socialization process within an individual poacher’s sphere of influence, rather than driven strictly by utility maximization. Under this perspective, culture plays a central role in crime and deviance (Forsyth and Marckese 1993a) and compliance with conservation laws correlates to how people only adhere

to the laws and rules implemented by authorities if they are perceived to be legitimate and within their own norms and morals (Carter et al. 2017; Kuperan and Jon 1998). This includes individual belief about what is morally right and wrong and collective beliefs as a society about what is acceptable behavior, both of which can determine whether rules are adhered to, independent of the legality of an act (Rizzolo et al. 2017; St. John et al. 2010; von Essen et al. 2014). In this way, poaching has been witnessed as an acceptable act of social defiance against conservation laws perceived as illegitimate or culturally oppressive and can even be community sanctioned (Eliason and Eliason 2012; Hübschle 2017; Pohja-Mykrä and Kurki 2014; von Essen et al. 2014). Within the normative perspective, deviant behavior, (i.e., poaching) can be analyzed from the micro-level and macro-level of analysis.

Micro-level theories employ concepts that look at the small-scale features of a criminal's immediate social environment, such as interpersonal relationships and group influences on behavior. Differential association theory (Sutherland 1939) posits that transmission of delinquent values is a learned process through social interaction with those within an individual's tight social group. Close social ties, including family and friends, play a fundamental role in the socialization process that leads to poaching (e.g., Curcione 1992; Eliason 1999; Forsyth 1993; Forsyth and Marckese 1993a, 1993b). Basic beliefs about poaching are formed early in life (Curcione 1992) and during this process delinquent values often become entrenched in a culture where violating wildlife laws becomes normalized (Green 1990). In this way, crime is a social rather than antisocial behavior. Researchers make connections here between differential association and neutralization theory because during the process of learning illegal poaching behavior, individuals also learn the ability to justify these acts – techniques of neutralization (see e.g., Eliason 2004; Filteau 2013; Forsyth and Marckese 1993b; Sykes and Matza 1957). The use of neutralization techniques to rationalize behavior have been found to not simply provide excuses or justifications after participation in illegal activity but they are used prior to engaging in illegal behavior to justify the behavior and relieve cognitive dissonance, enabling poachers to engage in wildlife crime without developing a guilty conscience (Eliason and Dodder 1999; Sykes and Matza 1957). Importantly, the neutralization process does not involve a total rejection of the dominant cultural values of the society in which a person lives, but instead involves the acceptance of those values, while at the same time, making exceptions to those values to cognitively justify misbehavior (Eliason 1999).

Eliason and Dodder (1999) discovered that violators often used neutralization techniques in situations in which they poached for household consumption. However, it was suggested that this rationalization was sometimes used to cover up the true intentions of individuals engaging in illegal activities because household consumption is considered a more socially acceptable motivation to poach than other reasons (i.e., selling into illegal trade, poaching for a trophy, thrill killing) (Eliason and Dodder 1999; Glover and Baskett 1984). In this context individual rationalizations and motivational factors may overlap. It is important to note, however, that contrary to rationalizing or neutralizing poaching behavior, in some societies, there is little conscious thought of justification: poaching is a term that has been used to label what is simply traditional hunting to those involved (von Essen et al. 2017).

At the macro-level, anomie theory (Durkheim 1893/1984) posits how broad social conditions influence deviant behavior and crime. Anomie is a societal condition where there is a breakdown or disappearance of shared societal norms and values that bind community and regulate behavior. This disintegration of previously held beliefs and standards usually follows periods of drastic and rapid changes to the social, economic, or political societal structures. Passas (2000) references the potential of societal anomie to create 'criminogenic asymmetries,' where structural discrepancies and inequalities in the sectors of the economy, law, politics, and culture are created during interactions between unequal actors (individual or organizational) or systems. These asymmetries engender criminal opportunities and weaken social controls leading to crime, corruption, and deviance becoming both more common and more accepted as status quo (Passas 2000).

Subculture theory explains deviance as the result of the socialization process, where the values, norms, and beliefs of a subculture that are shunned by mainstream culture are learned and perpetuated (Sutherland and Cressey 1955). In his study on poaching subcultures, Brymer (1991), argues that rather than being static and isolated from mainstream society, subcultures evolve, and changes in the organization and characteristics of a subculture are the result of continued contact and negotiation with the dominant cultural world. In this context, the dominant culture not only reacts to and aids the development of the subculture, but through interaction, also provides the opportunity structures engendering individuals of the subculture to create new methods of deviant behavior (Brymer 1991). In a holistic perspective combining both micro-level and macro-level, as a collective response to marginalization, neutralization techniques have been found to facilitate the adoption of specific norms and values different from mainstream culture, (i.e., subculture values), through the process of socialization, or differential association.

## The legacy of perestroika

The shaping of the modern RFE is framed by the abrupt and dramatic collapse of the seemingly irrevocable Soviet Union in 1991. The RFE, characterized by abundant, valuable natural resources, is also one of the most remote, impoverished, and corrupt regions in Russia (Wyatt 2014). Historically, the region was almost exclusively resource-dependent; as an outlying region nine time zones away from the capital, it was locked into an enduring colonial type of economic relationship with European Russia and relied heavily on state subsidies and support (Bradshaw and Lynn 1998). Following *perestroika*, the formal restructuring of the Soviet Union's economic and political systems, the central government initiated an abrupt cessation of management, investment, government resources and industry, causing development in this region to not only stall, but regress. Overnight the division of state property and resources became chaotic and anarchic, as the capture of assets became a battleground (Dewey, Pedro Miguez, and Fabian Sain 2017). The destabilization of the central state and hasty transition to a market economy and democratic state caused a breakdown of rural economies. In the RFE, many people lost jobs and access to services, such as education and health care, initiating a protracted socio-economic crisis (Kuhrt 2012). Structural asymmetries due to a breakdown of a functioning government marginalized the population, as without the state managing essential services the region failed to maintain basic social and economic infrastructure (Newell and Henry 2017; Poelzer 1995). Privatization of state-owned companies in the absence of a credible regulatory regime led to a criminalization of the economy (Passas 2000). Increased crime, capital flight, emigration, and poverty became embedded systematically in society.

The devolution of the central state also eroded legitimacy within environmental state agencies, causing the deinstitutionalization of environmental regulation (Mol 2009) and the cessation of natural resource protection efforts. The disparity that exists between Russia's formal environmental laws and state agency capacity and interest in enforcing them, has caused scholars to define the illegal harvest of natural resources as Russia's most persistent and intractable environment challenge (Newell and Henry 2017). *Perestroika* opened the border with China, leading to an influx of Chinese citizens offering money and basic necessities for trade opportunities of the RFE's natural resources. The resultant confusion, corruption and ineffectiveness of natural resource policies coupled with open international borders and high external demand caused significant increases in exploitation pressure on valuable wildlife (e.g., tigers and bears) and other natural resources, (e.g., timber and ginseng) (Braden 2014; Wyatt 2014).

In the RFE, the result of these events was an increasingly self-sufficient population and the rise of an informal shadow economy that many came to rely on in lieu of the government (Kuhrt 2012). This informal economy flourished. Similar to legal and state-controlled economic operations, informal and illegal economies in the RFE formed networks of mutual aid, reciprocity, and cooperation (Holzlehner 2006). A side effect of this informal economy has been the subsequent rise of a subculture that fosters deviancy, endemic corruption, and the sustained illegal harvest of the

region's natural resources. As Stoecker and Shakirova (2014) point out, "Russian society has an inherent system of commonplace norms and values that allow for the inclusion of corrupt practices into everyday business. That system is respected and accepted on par with formalized laws." An overt promotion of principles that legitimize corruption have become so embedded in Russian society and they are often inseparable from daily socio-economic relations. What was once coercion has become legitimacy in society (Dewey, Pedro Miguez, and Fabian Sain 2017) and there is generalized belief that nothing will get done *without* corrupt practices (Stoecker and Shakirova 2014). This systemic divergence from legitimacy is even more pronounced in the RFE, where the region has been left to fend for itself.

In summary, the RFE has specific characteristics that make it especially vulnerable to poaching: remoteness, poverty and unemployment, abundant natural resources that are poorly managed and monitored, high external demand, backwards bureaucratic processes, high levels of corruption, and a society of obligatory self-sufficiency that has engendered a deviant subculture.

## Methods

The illegal wildlife trade lacks generalizability: the species/products in demand and the crime commission process all have their own distinct markets, drivers, actors, supply chains, and modus operandi (Pires, Schneider, and Herrera 2016; van Uhm and Siegel 2016). In such situations, qualitative methods are often the preferred choice, by facilitating a deep exploration of a topic while preserving context (Inskip et al. 2014; Rust et al. 2017). By utilizing ethnographic methodology, I conducted interviews with those directly involved – the poachers, buyers, middlemen and smugglers – in the illegal tiger trade to gain nuanced and detailed information about the motivations associated with tiger poaching. Such methods have been used successfully to interview those directly involved in the illegal markets of parrots in the neotropics (Pires, Schneider, and Herrera 2016), black caviar in Russia (van Uhm and Daan 2016), tigers in China (Moyle 2009; van Uhm and Wong 2019; Wong 2016;) and Bangladesh (Inskip et al. 2014; Saif et al. 2016, 2018), and live wildlife trade in Peru (Leberatto 2016). Acquiring data from offenders themselves offers undiluted information that is crucial and cannot be acquired with as much accuracy using any other method. Thus, despite the associated risks, I made the decision to interview offenders directly.

### Preparation

Empirical data was gathered during 5 months in the field spanning two separate trips to the Primorye region of the RFE: January-February 2019 and January-March 2020. In the RFE 80% of the Amur tiger range is within the Primorye region, which was why I selected the region as my study location. I visited 14 distinct locations and covered approximately 7000 kilometers by car (Figure 1).

Deciding to embark on a project of this nature in the RFE requires considerable reflection and was not taken lightly. Before my research trips, I had already visited the region on multiple occasions to participate in The Amur Tiger Symposium and in tiger monitoring research in Khabarovsk Krai, therefore I was familiar with the region and culture prior to beginning my field work. Entry into this world was made possible by a fortuitous meeting with a scientist who became my gatekeeper. Interactions with my gatekeeper occurred only at the beginning of my research, setting up initial introductions. This level of engagement, at the onset of the project, was sufficient to help define the study and launch the fieldwork. Also, for security reasons to keep my gatekeeper's identity a secret, limited contact was essential. Due to the nature of the project, I undertook an extensive Institutional Review Board (IRB) application process (University of California Santa Cruz IRB # HS3434), where I had to explain how I would present myself to participants (overtly as a student researcher), obtain verbal informed consent, and the how I would guarantee the anonymity of willing participants (no identifying names/features/locations would be used, and no recording devices would be used).



**Figure 1.** Primoyre region in the Russian Far East. Points indicated main locations visited for interviews.

I learned from my gatekeeper that having my information confiscated and being deported would be my biggest risk, due to the political nature of my topic and the government's desire to keep tiger poaching information confidential. I was informed that acquiring a scientific exchange visa, rather than a tourist visa, would be vital. Even though in Russia foreign scientists are often met with skepticism bordering on paranoia, if I had conducted research in Russia on a tourist visa, rather than scientific exchange visa, it would have been considered illegal, and the consequences would have been severe. A scientific exchange visa would establish my legitimacy, make my presence conducting research in Russia legal, and offer an additional layer of protection. I would be uncovering information I suspected would implicate the government, so I needed every type of leverage available. As I was eventually deported from Russia, this visa became critical.

One of the primary goals during my first research trip in 2019 was to establish what characteristics (personality, age, sex) of interpreter would work best for my study. I worked with three interpreters during my initial trip and decided it would be best to work with a young woman, like myself. Women are considered non-threatening and submissive in Russia, and I decided that two women would have a greater chance of acquiring the information I needed. Finding the right interpreter was not an exercise I took lightly, and I spent months finding someone I knew would not only interpret but understand the importance of the work. For this type of project, an interpreter and researcher must

have a connection and comradery; my interpreter and I developed a strong bond – we had our own sense of rapport and trust – that was not only crucial for acquiring information, but also important for our safety. To focus on my research and to mitigate the possible influence on participant behavior that two women alone in a remote and male-dominated environment might have, I hired an older local male Russian as a driver. Due to the extreme climate during this time of year and lack of maintained roadways, his local knowledge of remote villages and accessibility proved vital. My driver proved to be excellent at melting into the background and was not present for interviews, however his masculine presence could have aided in reassuring participants to speak openly with me.

### **Participant recruitment**

Due to the covert and often unreported nature of criminal networks, finding those engaged in illegal activity can be a difficult task. The people involved are hidden populations outside the scope of conventional society, and they often purposely conceal their activities due to their illegality (van Uhm and Daan 2016). The RFE is remote, has one of the lowest population densities in the world, there is generally no cell coverage, the climate is extreme (often -30 C in winter), and moving from village to village requires a 4 × 4 truck. Multiple trips to Russia before the start of my research and information acquired from my confidential gatekeeper helped me develop my strategy for recruiting participants.

While all hunters are not poachers, all poachers are hunters, therefore my initial task was to locate hunters. Legal hunting occurs during the winter months, a time when hunters can be found concentrated on hunting leases, therefore the winter months were chosen as the timeframe for my research. The Primorye region is divided into about 100 large hunting leases which are each autonomously run by a manager and to which hunters have membership to a specific one. These hunting lease managers were my main resource to initially secure introductions with hunters. Through my gatekeeper, I was able to make initial contact with a few managers of hunting leases who subsequently asked hunters if they would be willing to speak to me. These initial introductions led to a snowball sampling method (Goodman 1961), where future participants were recruited among acquaintances of initial participants. By working through networks using this method, locating, and building trust and rapport with these hidden populations was possible. I followed this method for every new location I went, getting references or introductions from participants to others in their network.

### **Interviewing and participant observation**

In total, I spoke to 116 participants, all who were members in some capacity of the hunting community. These talks ranged from quick semi-structured interviews that lasted 30–45 minutes, to multiple day interactions that incorporated several informal interview sessions and hours of participant observation. Conversations varied from one-on-one talks to group-setting interviews, often including conversations over a meal and excursions on snowmobiles or skis into the taiga. Due to the sensitive and clandestine nature of the topic, extensive effort and time went into building trust with participants, which included participating in sociocultural norms and activities. If I was introduced to a participant in a more formal setting, (i.e., an office), I actively sought invitation to a hunting base<sup>2</sup> or to the home of the participant for a meal or *banya*.<sup>3</sup> Often, I spent one, and sometimes multiple nights, as a guest in the home of a participant or at a hunting base. During these visits I participated in social activities, where people are drinking, become more relaxed and gossip is shared. These types of

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<sup>2</sup>Hunting bases are usually located in remote areas, on hunting leases. They are permanent communal living cabins that groups of hunters will use as a base to hunt. They are used for a large portion of the winter months by the men who belong to a hunting lease.

<sup>3</sup>A *banya* is a traditional Russian sauna and is a place for relaxation, drinking and socializing.

participant observations<sup>4</sup> can often turn into informal, spontaneous chats and during these informal settings I could note important details that I would not necessarily have access to during a formal interview. The prosaic day to day activities of my participants often led to unexpected conversations. Capitalizing on these chance encounters, chance opportunities, became an unanticipated well of opportunity for knowledge.

Hunting is an essential part of the culture – the lives of locals in the RFE are structured around it. During hunting season, friends come together, are gregarious and love to drink and gossip. I obtained much more information in informal group settings and adapted my approach to fit this reality. I would speak to 4 or 5 hunters at once, assess who knew what, develop camaraderie and then seek one-on-one conversations with those I felt could especially aid my research. As a conservation biologist with a background as a ranger in South Africa, I knew that I had the necessary mental and physical skills and situational awareness to feel confident conducting this work. My prior familiarity with the culture and ease at which I adjusted to the life in the RFE made it possible for me to acquire sensitive information. Participant observation in organic settings engender trust and comfortability. Because of this I was able to establish insider status, gain better access to participants and their activities, and obtain a more nuanced understanding of the phenomena I was investigating.

I would begin questioning in a passive and indirect way by asking about how and when participants learned how to hunt, what they like about being in the taiga, and personal questions about friends and family. These types of questions are critical to building trust, understanding important contextual details, and letting themes emerge naturally. I would eventually begin questioning in a spectrum of increasing difficulty, beginning with questions about poaching legal game (i.e., many hunters kill game that is technically legal to hunt but they do not have a license for it), transitioning to questions about poaching wildlife that is frowned upon but not as politically sensitive as tigers (i.e., bear, musk deer), before finally (sometimes hour or even days later) asking about tiger poaching. Similar to van Uhm's (2016) research, my participants would often begin to tell me about a 'friend' who was involved in tiger poaching, later admitting that they themselves were also involved. My chosen snowball sampling design method also facilitated trust. Recruiting participants through individuals that could vouch for my sincerity and motives alleviated feelings of mistrust and suspicion. Additionally, I allowed participants to select the location of our meetings.

As per my IRB application, full anonymity was given to participants and no interviews were recorded, due to the risk to participants should the data be confiscated. Technology can also alter the behavior of participants, especially those dealing in illegal goods, as its use can influence what they disclose. Whereas, anonymity can aid a researcher in building trust and enhance receptivity during the questioning process (Ong and Weiss 2000). Organic, informal discussions, without recording devices, made my participants feel more at ease and also helped avoid potential Hawthorne effects.<sup>5</sup> During the interviews I took extensive notes for each question, directing my interpreter to clarify specific details, expand a response, or pause for me to catch up with my notetaking when needed. Most of my notes included just the relevant details, however, verbatim quotes were frequently recorded. During the interviews I also observed and recorded participants behavior and demeanor. These notes, both observational and interview, were reviewed, and discussions took place with my interpreter for clarity and accuracy as soon as possible following each interview. As interview locations were selected by participants and full

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<sup>4</sup>There is ongoing debate as to what constitutes participant observation (Adler and Adler 1987); here, I define it similar to van Uhm (2016), in that I participated in the everyday lives of poachers, seeking to disrupt their routines as little as possible, but did not actively participate in poaching. I did, however, see the aftermath of poaching. For example, I was shown processed tiger products multiple times and taken into the forest to see a tiger carcass. DeWalt and DeWalt (2010) refer to this type of participant observation as direct, naturalistic observation and it facilitates a more in-depth understanding of the general context of the everyday lives of participants, as well as their modus operandi, that cannot be gleaned from interviews alone.

<sup>5</sup>Hawthorne effects can occur when the presence of the researcher changes the way subjects behave and what they disclose (Oswald, Sherratt Simon, and Smith 2014).



anonymity was given, I did not encounter much resistance from participants who agreed to be interviewed. I put a lot of time and effort into establishing a comfortable environment and developing trust. If a participant did not want to answer a question, this choice was respected. As a precaution, I transcribed my notes into my computer, saved them in the cloud and then destroyed the hand-written notes and deleted everything from my hard drive every night.

### Analytic strategy

43 of 116 (37%) participants admitted to being directly involved in the poaching and/or trafficking of tigers. This can be further broken down to buyers ( $n = 12$ ) and poachers ( $n = 31$ ). All participants who admitted involvement in the illegal trade were male. I did not collect age specific information. Less than 10 female participants were interviewed, when they were present with their husbands, however I found no evidence of direct female involvement in the illegal trade.<sup>6</sup> Of the 73 participants who did not admit to involvement, many still provided useful information. Due to strong community ties within the small, remote villages that made up the study, even if a participant was not a poacher, they almost always knew who the poachers were in their village and detailed information about what was occurring. The data from these individuals was used to provide additional knowledge and triangulate data, therefore information and direct quotes from all participants were used to develop motivation categories. Data were analyzed using Nvivo and interview transcripts were coded over a multi-stage process so that different themes and behaviors about poaching motivation could be separated and analyzed individually to find commonalities across participants. After entering the 116 interview transcripts into NVivo, the first step was to code any mention of an individual's motivation for being involved in the illegal tiger trade under a primary node titled 'general motivation.' There were 43 direct references (31 poachers, 12 buyers). Secondary coding was then performed on these references, to break down each distinctive themes on specific motivation. Motivations that emerged were: 'competition with hunting,' 'for fun,' 'due to connections and/or corruption' 'lack of job/income,' 'price drop for legal game,' 'self-defense' and 'human conflict.' Related themes were then combined into three motivational categories described in Results below. 'Price drop for legal game' and 'lack of job/income' (**poverty**); 'self-defense' and 'human conflict' (**human-tiger conflict**); and 'for fun' and 'due to connections and/or corruption' (**status and impunity**). These categories are not mutually exclusive, as a single poacher may have multiple motivations. I categorized them based on the primary motivation described. Within the breakdown of the categories below I have included select verbatim quotes as explanatory tools within the text. In recognition of the importance of anonymity, especially in the context of dominant power imbalances, (Ibbett and Brittain 2020) the names of towns have been removed from all information, as the towns in rural Primorye are very small and including these names could be used to identify participants.<sup>7</sup>

## Results

**Status and Impunity** ( $n = 5$  or 16% of poachers): This category highlights the division of power, influence, and wealth in the RFE. Poaching is a demonstration of power and status through impunity, described as 'elite violators' or 'VIP illegal hunting' in Braden's (2014) work on poaching in Russia. These elite violators are wealthy and/or connected and are insulated from the law in some capacity. Generally, they do not poach for profit, but because they are above the law and the system protects them. These people include those in FSB,<sup>8</sup> the police force, those in specific government or insulated

<sup>6</sup>A buyer I interviewed mentioned that there was a female buyer in his region, the only one he knew about, but she refused to meet with me.

<sup>7</sup>All identifying information has been removed for the safety of participants and author. More specific details that do not identify participant can be requested directly by contacting the author.

<sup>8</sup>Federal Security Service of the Russian Federation (FSB) is the principal internal security agency of Russia and the main successor agency to the USSR's Committee for State Security (KGB).

positions, and people with connections to those in power. Killing of tigers is done for the thrill of it or simply because they can get away with it. Most often these poachers do not even sell the tigers they kill but leave the carcass where it was shot. While ‘thrill killing’ as a motivator has been identified in the literature (e.g., Forsyth and Marchese 1993b; Muth and Bowe 1998; von Essen et al. 2014), this category varies slightly from previous descriptions. For the poachers in this category, the thrill of killing a tiger is underscored by the recognition that their elite position/power allows them to get away with it, therefore they operate openly, rather than trying to cover up their poaching activities.

Corruption is facilitating this motivational category. For example, in a region in Primorye infamous for corruption, one participant said, “The police shoot tigers here – no one can stop them. They don’t even sell them.” Another participant said “... here a few people hunt for money, but most are police who shoot tigers for fun.” The corruption among the police officers and FSB in this region is so extreme, that it appears to be integrated seamlessly into the formal governing system. For instance, a scientist told me, “Here, in (name of town removed), the corruption is so bad that when the head inspector<sup>9</sup> went to his boss in (name of town removed) to ask to fire staff because they were poaching – he was told to leave the matter alone.” In this same town I was told by a poacher, “I have poached about ten tigers in my hunting career. I have two sons in the FSB. So, who will stop me?” These examples all highlight the embedded corruption in this region.

Corruption, either generally or within a specific agency, was referenced by a staggering 82/116 (71%) of the participants. Corruption manifests in many forms: officials taking bribes by poachers at road checks or at the Chinese border crossing, involvement in poaching/buying/smuggling of tigers by police/FSB/government members and covering up or lack of enforcement over poaching arrests, to name a few examples. Participants openly discussed how being in the ‘tiger business’ as a poacher or buyer is frequently facilitated by connections within the government and/or police force. During an interview, a participant told me, “People who know people kill tigers. Everything depends on a person’s connections.” A buyer told me, “Yes, the government and police know about the tiger poaching – of course. The people up top are getting money from this. If I weren’t talking to people in the government, I wouldn’t be able to be a buyer.” Another buyer told me without hesitation, “I work with many members of the government and police because of the connections – without that I would not be able to do what I do.” I found examples of former police officers transitioning to the illegal tiger trade. A participant told me “A buyer here used to be a police officer. He buys illegal goods from everyone. He doesn’t need to follow the law.” In another example, a powerful group of individuals, with ties to Moscow and access to a significant amount of government and international NGO tiger conservation funding are pushing to legalize trophy hunting for tigers. A participant told me: “Yes, I support the legal tiger trophy hunting proposed by them (name removed).” In 2020 canned hunting, the trophy hunting of animals that are drugged, incapacitated or unable to escape an enclosed area, was legalized in Russia for game species (Federal Law of February 18, 2020 N 26-FZ). The legislation was pushed through by these same individuals who are lobbying for tiger trophy hunting. These examples give credence to an implicit consensus among Russian citizens that ‘connections’ are the most important aspect of getting ahead in a career or just getting a task accomplished and that corruption is assumed to be part of everyday life (Kofanova and Petukhov 2006). The examples of corruption in this study are similar to other studies of corruption and wildlife trafficking (e.g., Morcatty et al. 2020; van Uhm and Moreto 2018; Wyatt et al. 2018; Wyatt and Cao 2015; Wyatt, van Uhm, and Nurse 2020).

Poachers within this category are not necessarily all wealthy, but there is an implied necessity that they have some type of connection to avoid suspicion and prosecution. I came across inspectors, tasked with wildlife protection, who are responsible for tiger poaching. These individuals, who work for either the government in a National Park or *Zapovednik*<sup>10</sup> or for a private company to assist on

<sup>9</sup>In Russia, wildlife game wardens are referred to as inspectors.

<sup>10</sup>*Zapovednik* is a term that was established during the Soviet Era and is still in use. It refers to a protected area which is kept “forever wild”. It is the highest degree of environmental protection in Russia and access by the public is restricted.



hunting leases, are in a good position to poach without repercussions. They know about tiger locations, come into direct contact with tigers often, and usually hold job positions insulated from suspicion. Based on my interviews, poaching by inspectors is motivationally complex because it appears to be driven by economic reasons, as they earn on average \$230-\$350 per month.<sup>11</sup> A participant told me, “The inspectors (rangers) get paid so poorly, so poorly. It is bad! I do not know one that is not corrupt in some way or another.” While the primary motivation appears to be economic, the act itself is facilitated by the individual being in a protected position and insulated from suspicion or repercussions. South and Wyatt (2011: 547) also reference this type of motivation for poaching in Russia, stating . . . “another category of poachers is those people who are not rich but that they have some protected position or know someone. For example, a chief of police or a prosecutor knows that there will not be any sanctions against them because of their position in society.” I was told about an inspector who was caught with two tigers in his freezer. “He (the inspector) got caught with two tiger cubs in his freezer. He tried to say he was framed for this crime. His boss (director of a local National Park) got him out of trouble.” I learned that this inspector’s superior, a man who is in a position of power within the National Parks system and has direct connections to Moscow and FSB, aided in acquitting him of conviction. This director is a member of the family trying to get tiger trophy hunting legalized in Russia.

**Poverty:** (n = 19 or 61% of poachers): Poaching tigers due to poverty is a complex and difficult motivation to disentangle, with some examples of clear economic motives, but also types of cultural/traditional poverty fostering the activity. Economic deprivation is the largest contributing factor motivating people to poach tigers. In a region plagued by chronic unemployment, subsistence hunting has always been critical for survival and wildlife is hunted for nutrition and for fur to sell. However, the drop in price in legal game and the privatization of hunting leases, have affected this activity as a viable livelihood. The prices on most legal animal products have dropped significantly within the past ten years. For example, based on my interviews, sable fur more than halved in value in just a few years: from 6000 rubles (~\$76) per pelt in 2013/2014 to 500–3000 rubles (~\$7-\$38), depending on quality and sex, in 2020. This drop in price is linked to a decrease in international demand, as fur has fallen out of fashion due to more ethical shopping practices by consumers. As one buyer expressed to me:

“Nowadays, there was a recent auction, and a female sable cost 500 rubles. And why would I go there as a hunter? Why would I sell this poor animal for that kind of money? The sable was the jewel of Russia, but now, I don’t know why. Maybe sanctions from Canada, but the market is a market, and it is down.”

This downward trend in the market has had a significant impact on hunters, as sable hunting for many was a primary source of income. One participant said, “Hunting is no longer a sustainable livelihood for the people here. Back in the day hunters lived, now they just manage to survive.” With sable prices below a livable wage, hunters have transitioned to hunting more profitable animals for international markets, like musk deer and tiger. Without many alternatives, hunters will adapt to kill what is valuable – regardless of the legality. Due to the low risk, high reward for poaching a tiger, many hunters will take the opportunity to kill a tiger if they get the chance. From a local buyer, a hunter can expect to receive between \$3300-\$5000 for an entire tiger carcass, depending on the size and sex of the animal. A participant told me, “So now people are looking for other sources to sustain themselves, and this obviously includes poaching. Yes, this includes tiger poaching.” A poacher expressed to me, “Unemployment drives poaching – there are no jobs here. You can get 350,000 rubles (~\$4800) for a tiger. Such money will sustain you for a long time.” People involved in poaching or trafficking of tigers are not only aware of the low risk, high reward to the activity, but also the consistent demand for tiger parts across the border in China. A buyer explained to me, “People poach tigers because of the demand in China – we all know those tigers are worth something.” Similarly, another buyer told me,

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<sup>11</sup>For reference, in Russia GNI (Gross Domestic Income) is \$11,260/year or \$938/month making the average salary per ranger about 25–40% of the national average (World Bank 2019).

"Yes I am dealing in illegal musk deer and tiger – there is always a demand for this. Especially the bones and canines (of a tiger). I will give a hunter 70,000 rubles (~\$1000) for male canines. I can get three times that amount from the Chinese."

Non-traditional measures of value are also important motivators. Many hunters kill tigers due to unemployment and lack of income, however in many cases this situation has been exacerbated by a confluence of historical and social factors. Over the past two decades, due to the Soviet transition, many hunting leases have become privatized by the wealthy elite – primarily 'outsiders' from Moscow. Hunters are now required to buy membership to a specific hunting lease if they wish to hunt, therefore the 'right' to hunt, now must be paid for. This has upset rural villagers who view the taiga as a common resource, as there is a long history of equal public access to hunting ground dating back to the 1917 Revolution (Braden 2014). Many rural hunters ardently believe these new regulations have led to the infringement of their rights by outsiders, as their families have hunted in the same areas for many generations (Braden 2014). After purchasing membership to a hunting lease, hunters are also required to buy a license for each specific animal they wish to hunt from the manager of the hunting lease. These licenses have become unaffordable because the prices have been driven up due to many hunting leases being bought and privatized. In this case, anti-government sentiments and anger/lack of acceptance over modern laws incentivizes poaching. For example, a hunter told me, "The taiga has changed so much – now wealthy people from Moscow own it." Along the same line of thought a buyer said, "There is a lack in understanding on what is legal or illegal – the government does what they want. We can't keep up with the laws changing."

Sen (1999) describes the lack of ability to decide one's future or have belief in a secure future as a type of cultural/traditional poverty, and I found evidence for this in the RFE. There is an overall disenchantment/lack of belief in the Russian government's ability to provide for their citizenry; this knowledge has given rise to an informal economy that often now relies on close social ties within their communities, as well as poaching. Similar to perspectives found in the work of Muth and Bowe (1998) and Bell, Hampshire, and Topalidou (2007), poachers in the RFE are social actors, with group solidarity forming an important component of poaching behavior. This study lends further support to the importance of normative behavior, where peer group norms dominate, and individuals do not necessarily follow the rules and laws of society, but rather adhere to local values and beliefs on what is deemed morally right and wrong. Exasperation at the government has led to overall disenchantment and lack of respect for the laws. For example, a poacher said, "Poaching – it's money, feeding your family. In Russia, the government was formed in a way that doesn't let people live. They don't care that we need to make some sort of small revenue, they won't fund any small factories that could make jobs or anything, since the government can't benefit from it." One buyer told me he had tried to have legitimate sources of income for many years, but that the government made this task impossible. He explained:

"I opened up a small supermarket, and I had a few stores around here and I had a salmon business. And then in 2003 the leadership in government changed, and they taxed us so much they caused every business to go bankrupt in this area. If you make even a small profit the government taxes you heavily and it bankrupts you. I make money illegally now. I buy tigers and other Red Book animals<sup>12</sup>"

Muth and Bowe's (1998: 10) findings reference the cultural nature of poaching: "Poaching often is embedded in subcultural webs of meaning that involve tradition, ethnic heritage, individual and social identities, and other socio-cultural factors." As poaching behavior is self-reinforcing through time based on social ties, established norms, and peer interaction, there is evidence supporting Sutherland's (1939) differential association theory. Building on characteristics of differential association, similar to Forsyth and Marchese (1993b), I discovered that close social ties serve as examples for justifications of and facilitators for poaching activities. Hunters spend the winter months in the taiga together, forming social ties on par with traditional families. If an individual of the group, or the group as a unit, engages

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<sup>12</sup>Red Book animals are those listed on Russia's endangered species list and illegal to kill.

in poaching, secrecy is guaranteed, reinforcing the idea that loyalty to community is stronger than adherence to rule of law and government. Therefore, engaging in poaching is a collective undertaking and law-breaking behavior is not taboo. For example, a group of poachers explained, “A few years ago, we were all hunting in the taiga. We came upon a tiger. We killed it and sold it for 350,000 rubles (\$4500) – we split this between all seven of us. This is good money.” This type of social bond has been demonstrated in other studies related to carnivore poaching (e.g., Treves and Bruskotter 2014).

**Human/tiger conflict** (n = 7 or 23% of poachers): These poachers are also rural and poor, however their *stated* primary motivation for poaching was conflict with tigers. Human/tiger conflict is both the retaliatory killing for a tiger killing livestock, humans, or dogs, and hunters killing tigers they view as competitors for prey species. Overall trends in the RFE indicate that tigers are more and more frequently coming into villages, which is increasing the encounters and conflicts between humans and tigers. This phenomenon was first noted as an increasing problem by Goodrich et al. (2011) and was very apparent during my research between 2019–2020. When tigers come too close to villages, they are often killed by hunters who use self-defense, preventive defense, or defense of livestock/domestic animals as a justification. Interviews indicated that when a tiger enters a village, it will be targeted. For example, one poacher told me. “ . . . run-ins (with tigers) have increased – which increases poaching rates – people know they are valuable. Even if they do not go into the taiga looking for a tiger, if one comes into town, that tiger will be targeted.”

The primary reason tigers are more frequently coming into human settlements appears to be due to the increase of illegal logging in the region, for both the trees themselves and for the construction of roads needed to access the remote forest. It is estimated that 50–80% of the logging in Primorye is illegal (Environmental Investigation Agency 2013), and without a coherent natural resource agency (Mol 2009), many of these roads cut for logging purposes are not permitted and are illegal as well. The largest increase in road density in the RFE in the past 35 years has been within the secondary, remote forest road type (Bergen et al. 2020). 52% of the Primorye region is accessible to hunters/poachers from the road network, which is the primary method that poachers use to kill tigers (author 2021b). Illegal logging as a facilitator of poaching was mentioned in 34/116 interviews (~30%). As one hunter explained, “Illegal logging is everywhere around here. Tigers are being forced out of their territory from excessive logging, and that’s the main reason of them coming into a village and killing someone.”

Beside facilitating access for poachers, illegal logging is pushing tigers into human settlements more frequently due to habitat disturbance (Kerley et al. 2002) and prey base depletion (Goodrich et al. 2011; Robinson et al. 2015). The tiger’s main prey, red deer and boar, rely on the nuts and acorns produced by the hardwoods that are selectively targeted for logging. Less food resources for the tiger’s prey base reduces the carrying capacity of the ecosystem, creating an imbalance between populations of key prey species and the tiger itself. Since 2019 the African swine fever has undergone an intensive spread in the RFE, which is also causing a severe decline in the boar population (Zakharova et al. 2021). Lack of prey is driving tigers into human settlements with increasing frequency, where tigers frequently kill domestic dogs, livestock and sometimes people, incentivizing retaliatory killing. One participant explained, “Tigers don’t have anything to eat, hunting boars has become hard, it’s easier to wander into a village and catch a stray dog or cat.”

Tiger depredation on dogs is a frequent occurrence due in large part to the practice of keeping dogs staked outside overnight in insecure locations. Goodrich et al. (2011) demonstrated that dogs in this region were killed much more commonly by tigers than other domestic animals (63% of 254 animals in the study) and that this behavior provokes a strong response and is the primary reason for retaliation killing. For example, one poacher told me, “Tigers have killed many of my dogs – I have gone through so many dogs!” And another said, “Villagers kill tigers for safety and because they kill our dogs.” This is an important point, because in much of the literature, human-wildlife conflicts occur most frequently when carnivores prey on domesticated livestock and the owners of livestock retaliate by killing carnivores (Potgieter, Kerley, and Marker 2016). In these types of situations, guardian dog programs have been demonstrated to be a promising way to avoid retaliatory killing (Gehring et al. 2010; Treves, Krofel, and McManus 2016; van Eeden et al. 2018), including use on tigers

in Bangladesh (Khan 2009). However, due to the context-specific issue of dog predation in the RFE being a much larger issue than livestock, as livestock is managed well (Goodrich et al. 2011), and overall body mass of Amur tigers, this program would most likely be unsuccessful.

The opinion that locals do not like tigers in the RFE is almost universal, as is the fact that human/tiger conflict is on the rise. Besides being targeted if they enter a village, tigers are also persecuted because they are viewed as direct competition with hunters for prey species. Prey species have declined overall throughout the region, due primarily to poaching and illegal logging, but hunters blame prey reduction on tigers. As one participant expressed “I am a hunter – I have absolutely no positive outlook on tigers, nor does anyone else I know.” And another also conveyed a similar sentiment, “All hunters are passionately against tigers – they kill our deer.”

It is important to emphasize that motivations for poaching are not always straightforward or singular. Even if motivation for killing tigers is primarily due to human/tiger conflict, those that do kill tigers for that reason, know that their parts are valuable. I found evidence that after tigers are killed out of conflict, they usually end up in the illegal trade. For example, one participant told me, “And if there are strict laws and punishments, people are still going to protect themselves if a tiger enters their village. If anyone wants to sell the parts after, they will, that won’t go away. They know those tigers are valuable. What do people here have to lose?” Saif et al. (2016) found that in Bangladesh a main source of tiger parts in the illegal market were from tigers that had come into villages and were subsequently killed by local residents. Range-wide, there is ample evidence that villagers will use self-defense or defense of livestock as an argument to poach tigers to sell into the illegal market (Goodrich et al. 2011; Johnson et al. 2006; Karanth and Gopal 2005; Saif et al. 2018) and my findings in the RFE supports this. This behavior has been demonstrated in lion poaching as well (Everatt, Kokes, and Lopez Pereira 2019). It is difficult to discern whether tigers in these instances are, in fact, being killed primarily due to anger/fear/retaliation or if those reasons are merely justifications for killing a tiger to sell the parts. Rooting out true motive could be difficult, therefore confounding intervention measures. Future research should be directed at discerning the nuances of retaliatory killing behavior.

## Discussion

As in other wildlife crime related contexts (e.g., Bell, Hampshire, and Topalidou 2007; Gore 2012; Hübschle 2017; Kahler; Inskip et al. 2014), poaching is not a single phenomenon. The collapse of the Soviet Union in 1991 led to a chaotic transition from a command to market economy and the disorderedly deregulation of the central government’s institutions. The criminalization of vast aspects of society was caused by an intense privatization of agencies and resources,<sup>13</sup> the strengthening of power and influence of an informal economy inclined to corruption, the proliferation of opportunity structures and motivation for crime, and weak systems of control. In the wake of *perestroika*, motivations for crime coupled with an increase in illegal opportunities and weak controls, caused successful deviance, which became patterned and then normalized (Passas 2000). The abuse of power and impunity of offenders is widely known in Russia, causing a breakdown of both systems of control and binding normative structures within society. As a result of this weakening of collective adherence to convention, the behaviors, values, and societal norms that support various forms of criminal conduct and endemic corruption became prosaic and assumed (Varese 2006). This withdrawal from traditional norms and the check such ideas put on behavior has contributed to the rise of two different deviant subcultures, both of which are contributing to tiger poaching.

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<sup>13</sup>For example, by 1994, 70% of state assets were controlled privately (Kuznetsova 1994).

### **Poaching as a subculture of the connected elite**

Poaching of tigers due to status and impunity characterizes the first subculture of poachers. This group is an excellent example of one of the unique characteristics of Sutherland's differential association theory: that it was envisioned as being applicable to all levels and classes of society and was able to account for the offenses "... committed by a person of respectability and high social status in the course of his occupation." (1949: 9). This was the first time the term 'white-collar crime' was used to describe the crimes committed by the wealthy or connected elite (Zembroski 2011). Cohen (1955) originally envisioned deviant subcultures to be characteristic of the impoverished, lower, or disenfranchised class. However, Urban's (2010) study on the culture of the elite in Russia redefines this traditional view of 'subculture.' He suggests that for those within the elite subculture or 'in group,' law and morality do not go hand in hand, but actually frequently can work in opposition: moral criteria are established through interpersonal relationships, while the law itself is regarded as a weakness. In Russia, legality has become tied to dependence and acceptance of the illegal. Passes (2000: 37) summarized this paradox, "In the end, distinctions between white-collar crime, organized crime, corruption, and legitimate business are almost impossible to make. Lawbreaking behavior and success are fused." This study lends further support to this concept.

Individuals who engage in tiger poaching as a demonstration of status and impunity usually do not cite economic motivations. For them, it is an amusing pastime, but more importantly, they know they can get away with it. Although, as previously mentioned, 'thrill killing' has been examined by Muth and Bowe (1998) in the United States, in the Russian context, this motivation varies in its element of secretiveness, with poachers in Russia operating in the open, rather than diligently attempting to hide their deviancy as is the case in the United States. This is one of the reasons why this elite group, despite their overall smaller number (16% of poachers), has a disproportionate impact on perpetuating poaching behavior, as their actions breed contempt for the law and foster systemic corruption. It is therefore a particularly ominous behavior, and the repercussions are far-reaching. Results from this study corroborate with Braden (2014: 476) who argues in Russia, elite poaching "... sets a destructive tone not only because of direct damage to wildlife sustainability, but also because it contributes to corruption of inspectors and prosecution personnel, cynicism about rule of law, and a discouragement to non-elite hunters, who are increasingly cut off from prey due to regulations and higher costs." The participant who admitted to poaching 10 tigers in his life, protected from prosecution due to his connection with the FSB, provides a stark example of this phenomenon. In a population of less than 350 adult tigers, 10 is a very concerning number for one poacher to kill. This example highlights how one person, and a relatively small group of individuals, can have a considerable impact. As the government and police force are supposed to be tasked with the protection of tigers, their actions give rise to further disregard for the laws protecting tigers and broader societal contempt for regulators and regulations.

Corruption is an extremely powerful mechanism because it works in two different ways: actual corruption and *perceived* corruption. The theme of corruption was overwhelming in interviews; it was mentioned by 82 of the 116 (71%) participants. Kofanova and Petukhov's (2006) survey on public opinion on corruption in Russia describes how people believe that law enforcement is the group most susceptible to corruption, but at the same time are the very agencies tasked with fighting it. Overall, Russian society is firmly convinced that corruption is total and that it has infiltrated all spheres of public life. Passas (2000) references this condition in Russian society as societal anomie – where in the absence of shared societal standards and values that bind community and regulate behavior, chronic and self-perpetuating instability and corruption take hold. This condition has contributed to both a disregard for poaching regulations and lack of belief or respect in authority and government. Poaching behavior by this group of individuals is dangerous for this very reason – it creates an erosion of the social and moral climate in society where deviance becomes patterned and normalized. When there is no real boundary between lawful and unlawful actions there is

a tendency to think of unlawful actions as status quo. Corruption within this subculture is also responsible for facilitating the illegal logging practices in the region (Wyatt 2014; author 2021b). As described, illegal logging is one of the primary reasons tigers are more frequently entering villages, inciting human/tiger conflict, and subsequently poaching with increasing frequency, as well as creating access to the forest by expanding the road network, which is the primary method that poachers use to kill tigers (author 2021b). This subculture has strong influence both directly and indirectly on poaching.

### ***Poaching as a subculture of the rural poor***

Within the rural poor subculture, which includes the motivations described in both types of poverty and human/tiger conflict sections, it is evident that poverty is a complex condition and those involved in this illegal trade defy simplistic categorization. There is ample evidence in the literature (Goodrich et al. 2011; Johnson et al. 2006; Karanth and Gopal 2005; Saif et al. 2016, 2018) that villagers will use self-defense or defense of livestock as an argument to poach tigers to sell into the illegal market. Results from this study support this. Therefore, even for those citing human/tiger conflict, economic poverty is most likely the primary motivation for poaching. Widespread knowledge that there is wealth and demand in communities further down the supply chain (i.e., China), and income can be obtained by killing a tiger, was found to be the largest contributing factor to poaching in this subculture. However, cultural/traditional poverty and an overall feeling of disenchantment, hopelessness, and lack of belief in the government, while less quantifiable, are also important factors. The individual monetary need to poach is interacting with dynamic social settings, historical context, power relationships, and the lack of viable economic alternatives on a broader scale. As a result, micro-level economic motivations are reinforced by macro-level cultural and social factors in a way that has fostered a deviant subculture. This group is engaged in the poaching of tigers out of economic necessity, but also because the members are marginalized from mainstream society, are aware of the corruption in the elite subculture, and do not feel beholden to the laws. Forsyth and Marckese (1993a) describe how this type of subculture behavior arises from state governing structures failing their citizenry.

Along with evidence of differential association theory as a strong influencing factor, neutralization techniques also were evident. For example, condemnation of the condemners (i.e., law enforcement officers are hypocrites/corrupt); the appeal to higher loyalties (i.e., loyalty to family and close friends comes before society); the denial of the necessity of the law (i.e., individuals feel regulations are not fair and they have been marginalized); and the defense of necessity (i.e., breaking the law is ok when necessary), were all used in interviews.

Neutralization theory is typically used as a unit of analysis on an individual or micro level; however, von Essen et al. (2014) offers a more holistic perspective that captures not only individual motivations but the cultural transmissions by which values are maintained in the offending subculture. Although originally conceptualized to explain initiation into deviant behavior, like Maruna and Copes (2005), I found neutralization techniques to be particularly useful to explain the persistence of deviant behavior, conceptualized here as the perpetuation of poaching behavior within this subculture.

There are two additional themes that reinforce poaching behavior within communities. First is the knowledge that tiger poaching is a low risk/high reward activity. Like Kahler and Gore (2012), I found high levels of awareness about poaching laws among participants; in the RFE the illegality of killing a tiger is very well known. Not only is the law well-known, but also the lack of respect for it is apparent. Poachers within this subculture do not respect the law for a few reasons: they are aware that the police and government are involved in the illegal tiger trade, therefore they see little incentive to follow the law themselves, and conviction rates are notoriously low for tiger poaching. Secondly, irrespective of motive, opportunity is the most important factor determining if an individual will poach. Almost every single participant admitted that even if they had never killed a tiger, they would, if the chance



presented itself (author 2021b). A buyer told me “What I’m going to say is that 95% of the hunters in this area will kill a tiger if they see one. Because it’s money. People don’t have jobs and they need to feed their families, so unfortunately most of them will kill a tiger.”

Hauck (2007) described poaching as an adaptive behavior (e.g., a person’s response to life’s stresses or oppression or helping a person survive changes in society) and my findings support this. This subculture is very attuned to both the dynamics of the mainstream Russian culture as well as global demand markets, adapting to survive based this knowledge. Poaching as resistance against regulations perceived as unlawful or unfair has been described in the literature (e.g., Bell, Hampshire, and Topalidou 2007; Forsyth, Gramling, and Wooddell 1998; Kahler and Gore 2012; Muth and Bowe 1998), and results from this study further supports this motivation. Poaching motivations that reflect adaptation and/or resistance can be detected as a collective response to the privatization of hunting leases and subsequent monopolization of poaching licenses coupled with the fall in prices on legal sable markets. Hunters are angry about being pushed out of legal hunting opportunities, as hunting is both a traditional part of Russian cultural as well as a necessity due to unemployment. Therefore, poaching tigers could be representative of a backlash against the new regulations, which are deteriorating a way of life, economically and socially. It could also be reflective of the fact that this subculture does not find these new regulations legitimate. It also appears to be an adaptive strategy because of the decline of the sable market; therefore, tiger poaching could also be out of absolute necessity for fear of starvation, without any political or larger scale motivation. The behavior could also be representative of a combination of both. Further research could focus on teasing out these nuances.

When studying poaching in Russia Makarova (2014) found that many of the poachers were people who had licenses or belonged to hunting leases. This lends support to a trend I witnessed in the field, which is a perspective on poaching that may not be addressed in the literature and has to do with the concept of a ‘slippery-slope’ of declining resistance to major poaching resulting from successful minor infractions. Based on this idea, most poachers are in fact legal hunters, and these individuals transition from the relatively minor violation of poaching legal game, usually for household consumption, to endangered wildlife that is purely profit driven and a much more severe form of law-breaking. Many participants who did not admit to tiger poaching still readily admitted to poaching other animals like sable, bear, and deer. Also, in many cases, individuals who did admit to poaching tigers have transitioned from poaching legal game (e.g., taking beyond allowed take limits specified in licenses) for household consumption or to sell, to taking tigers, a purely profit-driven behavior. In this way, poaching of other animals, like deer and sable, can be seen as a ‘gateway’ or ‘slippery-slope’ to poaching more endangered and protected wildlife, such as tigers. This ‘slippery-slope’ perspective, where poaching game that is legal to hunt appears to evolve into poaching illegal wildlife based on opportunity, should be explored further.

### **Conflict theory**

On a micro-level, economic motivators appear to be the ultimate driving force behind tiger poaching for individuals who are not part of the connected or wealthy elite. However, normative factors and the interaction between subcultures play a critical role in the acceptance and perpetuation of this behavior on a broader scale. Brymer (1991) proposed that subcultures are dynamic and interact with and evolve in a response to the mainstream culture and society. Within the literature, there are references to illegal hunting as an act of extremism resulting from a deviant subculture that actively reinforces an ‘us’ and ‘them’ orientation between the subcultural group and the rest of mainstream society (e.g., Eliason 2004; Forsyth and Marckese 1993a). However, I suggest a reorientation from this perspective: that the ‘us’ and ‘them’ within this context are not the rural poor subculture vs the rest of mainstream society, but rather the rural poor subculture vs the elite/connected subculture. The existence of this elite subculture, motivated by status and impunity, fosters resentment and an escalation of poaching

activity within the rural poor subculture, resulting in economically motivated poaching on an individual micro-level, exacerbated and reinforced on a macro-level by feelings of prolonged resentment and marginalization.

Due to context of this struggle, conflict theory can help explain tiger poaching in the RFE. Conflict theory, originally derived from the work of Karl Marx (1818–1883), views social order as a continual conflict between the powerful dominating the less powerful. Deviance can be viewed, not as the result of a breakdown in society, but rather a constant and perpetual struggle between those who have power and authority and those who do not (Zembroski 2011). Crime is a product of conflicts over the distribution of resources and power, and the illegitimacy of such a distribution (Mills 1956). A powerful elite group maintain order over the continued marginalization and perpetuation of conflict with lower classes. State and social institutions reflect this unequal distribution and conflict and in their inherent inequalities and this helps maintain unequal social structure. Coleman's (1994) industrial capitalism theory can also help explain this struggle by stressing the importance of considering white-collar crime, where the modern political economy of capitalism generates deviant behavior through introducing unsustainable and perpetual competitiveness (Eliason 1999). Coleman (1994: 198) viewed the phenomenon of white-collar crime as the facilitator of deviance in modern society, stressing "... it still seems fair to say that most of our attitudes, values, and definitions are learned from others. But that still doesn't explain the origins of those ideas. To do that, we must look for their structural causes." The collapse of the Soviet Union was the catalyst for this process in the RFE.

Conflict theory has been used to explain the legacy of colonial power structures (Imhonopi, Urim, and Iruonagbe 2013) and although the RFE was not a colony, it was in a central-periphery type of colonial relationship with the central state in Moscow for decades during the Soviet Era (Bradshaw and Lynn 1998). Exploited of resources and labor for decades, the situation echoes what Marx explained as economic exploitation leading directly to political oppression (Imhonopi, Urim, and Iruonagbe 2013). The current tiger poaching crisis in the RFE is a consequence of the transition after the collapse of the Soviet Union, causing an unequal redistribution of wealth and power in society and perpetual conflict between social classes.

## Policy recommendations

Despite the growing attention on demand-reduction campaigns in consumer countries, these interventions have yet to produce noticeable results reducing the demand for tiger products. Reasons for this include the poverty gap between source areas for tigers (the RFE) and end markets (China in the case of the RFE) and the cultural affinity with tiger products creating an inelastic demand (e.g., Challender and MacMillian 2014; Conrad 2012). It is highly questionable whether demand-reduction campaigns can change behavior *in time* to save tigers, therefore long-term strategies should include these interventions, but other short-term strategies to reduce poaching to sustainable levels is required. Similar to Morcatty et al. (2020), where high levels of rural poverty and corruption was tied to involvement of local people in illegal jaguar poaching, interventions in tiger poaching in the RFE must prioritize a focus on the supply side. Based on Cooney et al. (2017)'s conceptual framework to combat the illegal wildlife trade, multiple interventions are required to address tiger poaching including: increasing benefits from wildlife conservation, decreasing the costs of living with wildlife and increasing costs associated with engaging in the illegal wildlife trade.

Local communities living in the vicinity of high-value species offer the best chance of conserving them (Challender and MacMillan 2014), therefore, to *increase the benefits from wildlife conservation*, local people should be given incentives to protect, rather than kill tigers. Only 3–4% of Amur tiger range is inside of protected areas (PAs) (Carroll and Miquelle 2006; Matyukhina et al. 2014), as such, protection outside of PAs is essential. Payments for Ecosystem Services (PES), which traditionally target the conservation of broad land use qualities, can also be implemented for the conservation of species for direct payments to locals (Nelson 2009). These payments address the 'market failure' created by the existence value of a carnivore on a global scale being not economically valued locally.



Nelson (2009) cites PES as an especially useful option in regions where ecotourism is not a viable option (as is the case in the RFE where the infrastructure is lacking) and describes how a PES has been implemented to encourage carnivore conservation in Mexico, where ranchers are paid between \$50 and \$300 if camera traps record a jaguar on their land. Although the land ownership structure is different in this example, an area of future research could investigate the viability of this type of program in the RFE. A similar approach is conservation performance payments (CPP), which establish a direct link between a specific desired conservation objective and a monetary payment (Persson et al. 2015; Zabel and Engel 2010). In Sweden, a CPP was successful in recovery of the adult female wolverine population, which doubled in a decade with the implementation of a payment program that offset reindeer depredation losses and created incentives for wolverine conservation (Persson et al. 2015). In the RFE, an international NGO could fund the placement of camera traps, where local communities would get paid for proof (GPS location and time stamp) of a tiger remaining in their region over time. In the Swedish example, the population recovery was successful because reproducing females were chosen as the indicator because it is the demographic variable to which population growth is the most sensitive (Jens et al. 2015). Like wolverines, adult female tiger survival is most important factor determining population growth and persistence (Chapron et al. 2008), so a variation in payments could be made with females and females with cubs receiving the most money for camera trap evidence. More research would be needed to discern the best way to do this type of payment to avoid corruption and make sure the money reaches communities.

In the Brazilian Amazon, social norms, which have been shown to be a strong indicator of attitudes toward killing jaguars, were harnessed via school children's influence on parents (Marchini and Macdonald 2020). The study demonstrated how a positive conservation outcome could be achieved by students learning and then influencing their fathers' perceptions of jaguars. In the RFE, a similar study demonstrated perceptions on tigers could be changed via schoolchildren as well (Mukhacheva et al. 2015). However, there was a clear decline in tiger conservation commitment over time, demonstrating that educational programs targeted at children can have positive influence on overall attitudes toward tiger conservation goals, but they must be a long-term, systemic process, rather than a short-term effort. The strong community ties can and should be used positively to influence perceptions of tigers, however because most projects have limited time and resources, the very way research is conducted needs to be overhauled to see a lasting impact in the RFE if this policy solution was attempted.

Human/wildlife conflict has been shown to exacerbate where there is no economic upside to sharing habitat (Conrad et al. 2012). Therefore, *reducing the cost of living with tigers*, in this region is critical. The frequency of tigers entering villages is increasing, due primarily to illegal logging which is reducing prey base and habitat. Schemes incentivizing the restoration of abandoned logging sites and roads could be multi-beneficial. If unemployed locals could be paid by the government or an NGO to reforest these areas with native species, it would serve three purposes: provide paid employment to locals; bolster the native tree population, thereby helping to increase tiger prey species and reduce human/tiger conflict in villages; and help reduce access to the forest, which would in turn reduce poaching opportunities. The situation in the RFE appears unique in the fact that my research concurs with Goodrich et al. (2011): in contrast to most parts of the tiger's range, where livestock depredation is one of the primary issues of human-tiger conflict, livestock is generally managed well in Russia, and the focus should be on securing dogs. By adequately securing dogs and subsequently reducing attacks, there would be less incentive to put villagers in the situation where there is the opportunity to kill a tiger. Knox et al. (2019), also suggest reducing depredation of small domestic animals by jaguars as a policy recommendation to change perceptions and behaviors toward jaguars and reduce jaguar killing in the Brazilian Amazon. I think one of the most important nuances for future research to flush out is uncovering the underlying motivation in tiger/human conflict in the RFE. What level does it actually exist and in what form? Or are people using it as an excuse to kill tigers that enter villages because they know they are valuable?

Finally, *increasing the costs associated with engaging in the illegal wildlife trade*. This usually takes the form of deterrence and top-down regulation. The class conflict discussed above is one reason why traditional deterrence mechanisms will not work. Corruption is thought to be the most critical enabler of the illegal wildlife trade (Mariel et al. 2015). Within the elite subculture in the RFE this has led to a loss of accountability, respect, and legitimacy for the governing and policing forces by the impoverished subculture. These types of attitudes will prevent deterrence measures from being effective (Duffy et al. 2019). Programs that seek to neutralize corruption, for example anonymous tipping/whistleblowing, could be implemented to increase accountability of enforcement mechanisms and personnel. Such programs could also increase detection probability and the social disincentives of law breaking – making poaching culturally taboo (Veríssimo 2013). In Bangladesh, Saif et al. (2018) found that participants cited a lack of a trustworthy crime reporting system as a barrier to reporting poaching-related activity. Saypanya et al. (2013) successfully establishment of a telephone hotline for reporting illegal tiger poaching and other wildlife-related activities in Lao. Implementing such a hotline could have many benefits including: providing monetary income to locals through incentivizing tiger protection, neutralize peer pressure anonymously in a very tight-knit community, and help root out corruption.

## Conclusion

This study was the first of its kind to gather data on tiger poaching motivation in the RFE directly from the individuals involved. Due to its novelty, it should be considered preliminary. Results were gathered using ethnography, a method that naturally lends itself to understanding the nuances of complex social-wildlife systems. My research suggests that social setting, the historical context, power relationships and the lack of viable economic alternatives facilitates an environment where tiger poaching flourishes. Structural inequalities within the RFE have created a huge division of power and resources in which tiger poaching is one result. The rural poor participating in poaching behavior due to instrumental economic motivations, has been a common discourse in the poaching literature. One of the goals of this paper has been to call attention to the complexity of poaching motivations in the RFE and to incite more attention to the role of elite violators. These individuals, who poach out of status and impunity, display behaviors that have strong cascading effects. Although representing a small amount of the poaching cases, elite poaching is particularly dangerous because it fosters impunity and breeds contempt for the law thus contributing to the decline of moral standards of the community overall, corruption of rangersinspectors and government personnel, cynicism about rule of law, and a further marginalization of the rural poor.

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