

Crime, Peoples and Places

Perspectives on Rural Safety and Justice

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Chapter 26

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26 Situational precipitators of environmental and wildlife crimes in Namibia and Sweden

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Introduction

Situational approaches to crime provide a practical framework for understanding and addressing crimes by focusing on the immediate situational factors that influence criminal behaviour (Clarke, 1995). Environmental and wildlife crimes (EWCs) are examples of offences in which situational approaches can be effective (Delpech et al., 2021). Situational approaches may help to identify risk factors of EWC, including the profitability of the illegal activity, the likelihood of detection and the severity of penalties (for example Clarke, 1997; Ihwagi et al., 2018; Kahler & Gore, 2015). Situational approaches involve analysing crime patterns and identifying concentrations where EWCs frequently occur (Kahler et al., 2013; Stassen & Ceccato, 2020).

By identifying vulnerabilities in the environment, law enforcement and conservation agencies can work to protect potential targets. This might involve implementing measures (better lighting, surveillance cameras, natural barriers to deter poachers or illegal loggers and so on) or engaging local communities in conservation activities creating a network of guardians that can help protect wildlife and the environment (Kahler et al., 2023). These approaches complement broader conservation efforts and can enhance the effectiveness of law enforcement and conservation strategies in protecting our environment and wildlife.

The application of environmental criminology, including opportunity theories and situational approaches, to environmental crimes has emerged as a robust area of research focus. Particularly in the area of wildlife crimes, illegal flora and fauna extraction broadly conceived, there has been considerable research aimed at elaborating the central components of routine activity approach (Cohen & Felson, 1979): motivated offenders; capable formal and informal guardians; and suitable targets. Crime pattern theory (for example Kurland et al., 2018), target suitability models (for example Kahler et al., 2022) and crime scripts (for example Viollaz et al., 2021) have been employed. Crime prevention, built on these theories and approaches, have been a mainstay of contemporary green and conservation criminologies with intelligence-led policing and situational crime prevention approaches being

employed for diverse environmental crimes including e-waste trafficking, red-wood burl poaching and illegal wildlife trade (Kurland et al., 2018).

This body of research has pointed to ample opportunities for environmental crime and challenges in preventing them owing to difficulties in the detection of EWCs in often vast rural contexts (Kurland et al., 2017), obstacles in motivating, training and adequately compensating capable formal guardians (Kahler et al., 2023) and the diverse instrumental and normative motivations to engage in environmental crime (Kahler & Gore, 2012). This chapter takes a step back to explore the situational precipitators of EWCs drawing on Wortley's (2008, 2016) classification. The chapter reports how prompts, pressures, permissions and provocations in two rural EWC contexts – Namibia and Sweden – contribute to the production of criminal opportunities in these two distinctively diverse countries. Drawing on research experiences in Namibia and Sweden, it investigates the similarities and differences of the primary situational precipitators of EWCs in Global South and Global North contexts.

The chapter is comprised of six parts. First, it briefly introduces Wortley's (2008) classification of the situational predictors of crime and provides a review of relevant studies in EWC. Then it states the research questions, followed by a description of the study areas and methods. Results are presented followed by a discussion and conclusions. The chapter concludes with a reflection on current similarities in opportunities and challenges that lie ahead in these country contexts to combat EWC, with a focus on the situational approaches, and recommends a set of future research questions.

A brief review of the situational precipitators of EWC crime

EWC is defined in various ways. Some researchers strictly define it based on legal regulation, considering crime only when governed by law. Others embrace the idea of environmental harm, viewing environmental crime as occurring as soon as harm is inflicted on nature (White, 2014, p. 448). In rural areas, instances of littering and waste dumping frequently make headlines, typically attributed to the actions of local residents rather than companies. In rural Australia, Barclay and Donnermeyer (2007) for example discovered that, in cases of water theft, pollution and environmental violations, farmers often identified fellow farmers as culprits. These offenses included stealing water from rivers and dams, polluting water and wetlands, illegal dam construction leading to flooding or reduced water access for neighbouring farms, aerial spray drift and unauthorised clearing of native vegetation.

A UNEP-INTERPOL rapid response assessment of environmental crimes (Nellemann et al., 2016) featured sobering statistics on the growth of illegal logging, illegal, unreported and unregulated fisheries, and the illegal extraction and trade in minerals and mining, trade and dumping of hazardous waste, and trade and poaching of fauna and flora. The illicit market for these activities is estimated to be growing at two to three times the rate of the

global economy (5–7% per annum) and was estimated to be worth between USD\$91 to 258 billion in 2016 (Nellemann et al., 2016). However, likely not accounted for in these estimates are corporate environmental crime rates, which may often be committed by legal extractive industries (such as forestry, fisheries and mining) as either an intentional or unintentional violation of environmental regulations and are historically problematic to estimate and monitor (Gibbs & Simpson, 2009).

Regardless of the typology of EWCs, crimes can be seen as a result of the convergence of motivated offenders, suitable targets and the absence of capable guardianship. Wortley (2008, 2016) argues that psychological theory suggests that there are four main types of precipitators of crime,: (i) prompts; (ii) pressures; (iii) permissions; and (iv) provocations. They help explain why certain individuals may become offenders and why certain situations are conducive to criminal acts, namely:

- prompts refer to cues or *opportunities* in the environment that may encourage criminal behaviour
- pressures are factors that create a *motivation* or need for individuals to engage in criminal behaviour
- permissions involve the *absence of obstacles or deterrents* that might prevent criminal behaviour
- provocations are events or stimuli that may *trigger an emotional or impulsive response* leading to criminal behaviour.

Understanding and addressing these elements can be useful in developing crime prevention strategies. Improving environmental design, increasing guardianship and addressing social and economic pressures are ways to mitigate the factors that contribute to crime commission, including the impact of prompts, pressures, permissions and provocations on individuals or groups of individuals. Presented below is a cross-case comparison of interest to the rural criminology of EWCs: A Global South example of the provoked poaching of wildlife species and a Global North case study of corporate environmental crimes in the mining sector.

Research questions and methods

In order to narrow the scope of this research, a focus was placed on EWCs in Namibia and Sweden that are a result of conflicts around modes of economic, livelihood production and environmental protection (Figure 26.1). In Namibia, the Global South example, the focus is on human-carnivore conflicts associated with livestock husbandry practices that create opportunities for retaliatory killing, poisoning and poaching of wildlife species (Kahler & Gore, 2012; Kahler & Gore, 2015; Kahler et al., 2013). In Sweden, the Global North example, the focus is on the types of environmental crimes associated with mining industry in Northern Sweden.

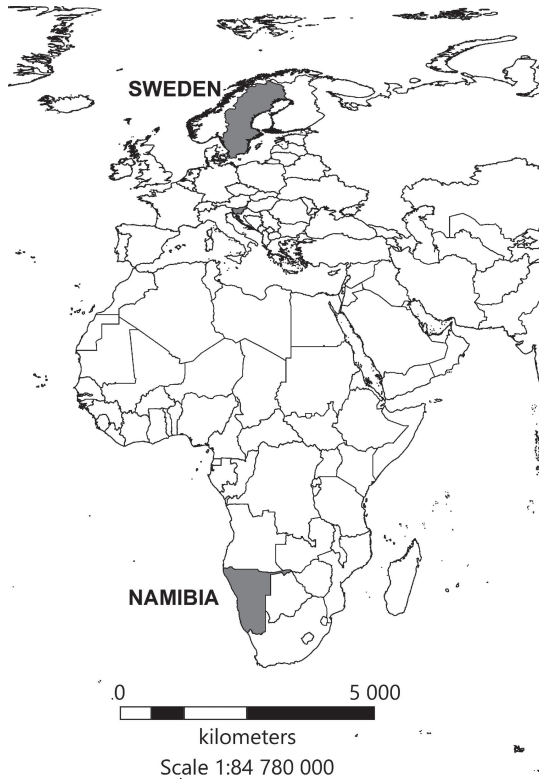


Figure 26.1 Extract of world map indicating location of Namibia in Africa and Sweden in Europe.

The empirical literature on EWCs in rural Namibia and Sweden using Wortely's (2008) typology of the situational predictors of crime was reviewed to classify the discussions of the economic, regulatory and socio-cultural drivers of EWCs. Discussed are the dominant types of prompts, pressures, permissions and provocations for each country respectively.

Study areas

The Republic of Namibia, while inhabited since prehistoric times, was one of the last countries on the African continent to gain its independence (in 1990) and is one of the most sparsely populated countries in the world (Snively, 2012). The United Nations (UN) Human Development Index (HDI), a proxy that takes into account life expectancy, educational opportunities and attainment, and economic standards of living, rated Namibia as a 'medium-developed' country in 2021, ranking it 139th overall (HDI = 0.615).

Table 26.1 Comparison of the Republic of Namibia and Sweden across a variety of environmental, economic and social indicators

<i>Indicators</i>	<i>Namibia</i>	<i>Sweden</i>
Population	2,567,012 (2022)	10,486,941 (2022)
Urban population (% of total)	54 (2022)	88 (2022)
Population growth (annual %)	1.4 (2022)	0.7 (2022)
Human Capital Index (HCI (scale 0–1))	0.4 (2020)	0.8 (2020)
GDP (Current USD)	12.61 (2022 billion)	585.94 (2022 billion)
GDP growth (annual %)	4.6 (2022)	2.6 (2022)
Gini index	59.1 (2015)	28.9 (2020)
Unemployment, total (% of total labour force)	20.8 (2022)	7.4 (2022)
Poverty headcount ratio at \$2.15 a day (2017 PPP)	15.6 (2015)	0.4 (2020)
Life expectancy at birth	59 (2021)	83 (2021)
Intentional homicides (per 100,000 people)	12 (2021)	1 (2021)
Corruption perception index (transparency international 2022)	49 (rank 59)	83 (rank 5)
Agricultural land (% of land area)	47.1 (2021)	7.4 (2021)
Agriculture, forestry and fishing value added (% of GDP)	8.4% (2022) ^a	1.4% (2022)
Forest area (% of land area)	8.0 (2021)	68.7 (2021)
Mining (% of GDP)	10% (2022) ^b	3% (2022) ^c
Terrestrial and marine protected areas (% of total territorial area)	23.2 (2022)	15.5 (2022)

Source unless otherwise noted: The World Bank Database.

Notes

^a Data source *Trading Economics* website (<https://tradingeconomics.com/>) Namibia country profile. Accessed January 28, 2024.

^b Data source United States Department of Commerce International Trade Administration: <https://www.trade.gov/country-commercial-guides/namibia-mining-and-minerals>

^c Data source Copenhagen Economics (accessed January 28, 2024): <https://copenhageneconomics.com/>

Sweden, the largest Nordic country in Scandinavia, marks its independent history in centuries rather than decades. Sweden is ranked 7th by the HDI (0.947), considered a ‘highly developed country’, with citizens enjoying a relatively high GDP, access to healthcare and tertiary education, and income equality. These countries, therefore, provide a contrast that exemplifies discussions of the Global North and the Global South (Table 26.1).

Results

Description of rural EWCs in Namibia as reported in the literature

Namibia’s semi-arid terrestrial environment and the rural landscape is characterised as a patchwork of communal and private conservancies, state-protected areas and agriculture and livestock landscapes congruent with

diverse wildlife populations including species of high conservation and market value (Kahler & Gore, 2015; Kahler et al., 2013). Further, the mining of copper, diamond, uranium and zinc is central to the Namibian economy, particularly in the export sector (Littlewood, 2014). Lastly, the fisheries sector along the approximately 1,500 km coastline boasts high plankton production owing to intense coastal upwelling, productive pelagic and demersal fisheries and low human settlement densities due to the dominance of desert ecosystems (such as the Namib Desert) along the coast (Chiripanhura & Teweldemedhin, 2016).

Owing to the country's complex and violent history, dependence on natural resources, and socio-cultural values associated with the unique places, flora and fauna, Namibia has an environmentally progressive constitution (see Snively, 2012 for a brief discussion). However, as a Global South country, the necessary financial and human resources to enforce regulations are limited. For example, in 2007 Namibia formally enacted an Environmental Impact Assessment (EIA) process that continues to suffer from poor implementation to the present day (Nakwaya-Jacobus et al., 2021). There has been uneven research and coverage on EWCs in rural Namibia with provoked (such as retaliatory for human-wildlife conflict) and premeditated illegal wildlife trade dominating the literature and with much less attention being paid to agricultural encroachment (Shikangalah & Mapani, 2020), illegal waste disposal (Zeriapi & Awofolu, 2022), mining violations and conflicts and illegal and unreported fishing respectively.

This dearth of research on corporate or small-scale environmental non-compliance within the fisheries and mining sectors is problematic given the aforementioned dominance of the sectors to the country's GDP, inherent issues of measuring corporate environmental crime rates (Gibbs & Simpson, 2009), and the stifled enforcement of their EIA processes (Nakwaya-Jacobus et al., 2021). Additionally, e-waste disposal and recycling, both domestically produced and imported, is a growing legal and illegal sector on the African continent with Namibia ranking as moderate to high in per capita generation yet no legislation, regulations or policies to monitor the potential social and environmental harm (Maes & Preston-Wyde, 2022).

For Namibia, the focus is on human-carnivore conflicts, such as the depredation of livestock and pets or attacks on persons, which may fuel retaliatory killing, the use of poisons and snares, and poaching for subsistence or commercial purposes. Drawing on Kahler's empirical research on conservation-based compliance, human-wildlife conflicts and wildlife poaching in Namibia (see Gore & Kahler, 2012; Kahler & Gore, 2012; Kahler & Gore, 2015; Kahler et al., 2013 for elaboration of wildlife poaching in Namibia) as well as observations from the field and the broader literature, considered are the situational predictors for carnivore poaching in Namibia. Figure 26.2 illustrates lion proof fencing in a Zambezi conservancy, Namibia.



Figure 26.2 Lion proof fencing in a Zambezi conservancy, northwest Namibia

Situational precipitators of EWC in Namibia

Human-carnivore conflict is a pervasive socio-ecological issue in Namibia with consequences for rural livelihoods and biodiversity conservation (Kahler & Gore, 2015). While there is anecdotal and empirical evidence that suggests all the major and minor categories of Wortley's (2008) situational precipitators of crime are likely influencing deviant, non-normative and criminal behaviour associated with human-carnivore interactions in Namibia (Table 26.2): *provocations* and *permissions* are particularly pervasive.

Provocations are driven by the complex nature of land governance and land rights in Namibia (territoriality), interactions between livestock and wildlife near water and grazing resources (crowding), frustrations over conservation-based benefit distribution and human-wildlife conflict compensation, and the amplification of these provocations through environmental irritants such as zoonotic diseases and climate change. Permissions, on the other hand, are influential due to the importance of legitimacy and normative-based compliance (Kahler & Gore, 2012), perceptions of risks from legal trophy hunting (Kahler et al., 2013), lack of awareness of the ecological role of carnivores (Schumann et al., 2012) and general attitudes and discourse around species seen as pests (Rust & Taylor, 2016).

There are very likely complex interactions between these situational precipitators of crime and one might think of these conditions as a socio-ecological

Table 26.2 Situational precipitators of carnivore poaching in Namibia based on observations and empirical research

<i>Prompts</i>	<i>Pressures</i>	<i>Permissions</i>	<i>Provocations</i>
<i>Triggers</i>	<i>Conformity</i>	<i>Minimising the rule</i>	<i>Frustration</i>
Livestock carcass detected (e.g. Lindsey et al., 2013)	Community decision to use poison to control predators in unfenced, shared land (Craig et al., 2019)	Trophy hunting licenses of big cats issued to non-local people	Inadequate or unevenly distributed benefits for wildlife conservation (Kahler & Gore, 2015)
<i>Signals</i>	<i>Obedience</i>	<i>Minimising the responsibility</i>	<i>Crowding</i>
Customary display of pelts and skins	Cowboys' setting snares, poisons or lethally removing carnivores at the behest of livestock owners (e.g. Santangeli et al., 2016)	A lack of benefits from conservancy; inadequate compensation for loss (Kahler & Gore, 2012)	Predator intolerance or removal increases with increased livestock biomass (Lindsey et al., 2013) and with farmers that own high numbers of small livestock (Santangeli et al., 2016)
<i>Imitation</i>	<i>Compliance/Defiance</i>	<i>Minimising the consequences</i>	<i>Territoriality</i>
Legal lethal removal of carnivores	Protesting conservancy rules (Kahler & Gore, 2012)	Denial or unaware of ecological role of predators increases desire to remove them (Schumann et al., 2012)	Increased incidence of poison use on freehold farms (Craig et al., 2019)
<i>Expectancies</i>	<i>Anonymity</i>	<i>Minimising the victim</i>	<i>Environmental irritants</i>
Presence of snares and poisons	Covertly setting snares and poisons	Labelling predators as 'vermin'; 'must show wild predators that you are superior ... that is one of the reasons why you hunt them' (Rust & Taylor, 2016).	Zoonotic diseases, floods, droughts (Kahler & Gore, 2015); increasing poison use in more arid environments were predator loss has disproportionate impact (Santangeli et al., 2016)

system with dynamic feedback loops. For example, the intolerance of carnivores, including retaliatory killing, increases with *crowding* such as the overall biomass of livestock in the area (Lindsey et al., 2013) and particularly with high numbers of small livestock (Santangeli et al., 2016). This may lead to *obedience* by hired cowhands in the use of snares, poisons or lethal removal of carnivores, *conformity* among livestock owners about the use of these undesirable strategies, and ultimately a general sentiment that may *minimise the rules and responsibility* (Table 26.2). In addition, frustration over inadequate or unevenly distributed benefits or human-wildlife conflict mitigation strategies have been found to increase the poaching of implicated species in Namibian conservancies (Kahler & Gore, 2015). Lastly, environmental irritants such as zoonotic diseases, floods and droughts have been found to amplify intolerance and may cause further *crowding* issues between livestock owners and wildlife over limited water and grazing resources (Kahler & Gore, 2015), hence setting the stage for further situational precipitators that lead to retaliatory killing.

Description of rural EWCs in Sweden as reported in the literature

In Sweden, environmental crimes are punishable by fines or imprisonment not exceeding two years, depending on whether they are carried out with intent or by negligence. Serious environmental crimes, as outlined in the government's penal database, involve actions leading to substantial and enduring harm to the environment. This encompasses pollution of air, water, soil or subsoil, along with improper storage or disposal of waste and similar substances (Regeringskanslietsrättsdatabaser, 2012). Interestingly, the distribution of EWC does not happen at random. In comparison with urban municipalities, remote rural municipalities have a significantly higher percentage of chemical environmental crimes since the turn of the twenty-first century, comprising unlawful handling of chemicals, disruption of control and disregard of regulations and permits for the use of chemical components (Ceccato, 2016).

On average, the Swedish police record around 5,000 EWCs each year (Stassen & Ceccato, 2020) encompassing a wide range of transgressions, this category comprises offenses officially recognised in Sweden's penal code. The offenses within this category vary in scope and severity, ranging from minor instances such as littering and waste burning to more severe cases like poaching and industrial chemical spills. Some crimes show chronic patterns over recent decades, showing concentrated patterns both according to police records and media reports. The persistence of certain serious crimes over time is interpreted as an indication that the costs of breaking environmental law are low relative to economic gains (Stassen & Ceccato, 2020). Most of the EWC records are related to water pollution or crimes like chemical usage and dumping, both which are related to mining or to the fishing industry and harbour activities (Ceccato & Uittenbogaard, 2013).

The mining industry in Northern Sweden is associated with various environmental challenges, some of which are classified as crimes and have

been covered by the national and international literature (Andersson, 2023; Ceccato & Uittenbogaard, 2013; Edstedt, 2020; Johansson & Johansson, 2019; Söderholm et al., 2015; Stassen & Ceccato, 2020). The most common problems of mining operations in this region often result in soil and water contamination as contaminants are released nearby, impacting the ground and aquatic ecosystems and posing potential risks to drinking water quality (Lindqvist, 2005; Vildevik, 2013). Mining operations in northern Sweden contribute to soil degradation, disrupting the natural balance and impacting local flora and fauna. Mining companies exploit the loopholes in environmental crime laws and a flawed criminal system, avoiding early evidence of EWC. In Västerbotten county, many Swedish mining companies have consistently exceeded permitted environmentally hazardous emissions, frequently reported by the media. In some instances, emission levels far surpass the limits considered acutely harmful to animals and plants (for more details, see Ceccato, 2015).

Clearing land for mining activities can lead to deforestation, causing habitat loss and fragmentation for wildlife (Müller, 2020). Additionally, dust and emissions from mining operations contribute to air pollution, potentially compromising air quality in the surrounding areas. The noise generated by mining activities, including drilling and blasting, poses a significant concern, disrupting the natural acoustic environment and impacting both local communities and wildlife. In areas with Indigenous populations, the mining industry can infringe upon traditional lands, resulting in conflicts over land rights and resource use (Edstedt, 2020; Müller, 2020).

These environmental issues underscore the complex challenges associated with mining activities that, on one side, create jobs and directly contribute to rural development, and, on the other hand, negatively affect the long-term sustainability of the region. Mining companies may excuse excessive heavy metal emissions by denying harm or claiming economic necessity. Regulatory agencies, pressured to maintain good relations and support local economies, may also underreport environmental wrongdoing and crime using similar justifications (Stassen & Ceccato, 2020). When large mining companies engage in illegal or unethical practices, the factors contributing to their behaviour can be analysed through the lens of prompts, pressures, permissions and provocations. It is difficult to generalise given the fact that the specific environmental problems and crimes associated with the mining industry in Sweden can vary based on the type of minerals being extracted, the location of these sites, the scale of operations and the effectiveness of regulatory oversight. These elements might manifest in the context of large mining companies acting as perpetrators.

Situational precipitators of EWC in Sweden

Poor or insufficient oversight and enforcement by regulatory authorities may act as *prompts* for large mining companies to engage in environmentally

damaging practices. As observed from the examples from the Swedish case, weak or perhaps absence of strict monitoring and penalties might prompt mining companies to act to save time or money in environmental protection measures to reduce costs. Dumping sites of chemicals in mining sites can be perceived as examples of such practices (Burlakovs et al., 2013; Raitio et al., 2020). Karlsson and Norinder (2012) demonstrate a correlation between the quantity of environmental inspectors and the reported cases of EWC in Sweden. In essence, his study reveals that an increase in the number of environmental inspectors has a positive and noteworthy influence on the reported instances of EWC.

Economic *pressures*, such as attempts to maximise profits can contribute to unethical behaviour. Companies facing financial difficulties or intense market competition might feel pressured to exploit natural resources without adequate consideration for environmental sustainability, leading to contamination of heavy metals or other substances. The extra payment of fees or other penalties are seen as a way of keeping business rolling as usual, or as the price of doing business.

An interesting example is provided by Lawrence and Moritz (2019) who examine the dynamics within the Swedish mining industry, particularly concerning Indigenous rights, the pressure emerges from conflicting discourses employed by the Swedish mining industry. Some might argue that human rights rules are not needed within the national context of Sweden, although others may think that following human rights principles might cause trouble for the mining business. This conflict of ideas creates pressure on those involved giving advantage to mining companies, which means that in practice these principles are not applied or respected by the Swedish mining industry.

In some cases, lax regulatory environments or corruption within regulatory bodies can act as *permissions* for large mining companies (Söderholm et al., 2015). If regulations are poorly enforced or easily circumvented, companies may feel they have the permission to engage in illegal or harmful practices. Söderholm et al. (2015) has studied this process in three contexts – Finland, Sweden and Russia – to show that their challenges in adapting new imposed environmental regulations lead to law breaking. Sometimes it is difficult to understand the impact of environmental regulations have on mining competitiveness because of the lack of timeliness and predictability of the regulations. This is also the case of Swedish mining companies that exceed their emission limits but are not sentenced for environmental crimes.

According to an investigation carried out in Västerbotten county, reported by Klefbom (2010), the available evidence falls short for securing a conviction. Swedish Television in Västerbotten investigated emissions cases involving Swedish mining companies since the mid-2010s. Since 2010, the Swedish Environmental Protection Agency has collaborated with environmental courts to enhance conditions, aiming to facilitate the prosecution of such cases. However, mining companies are still freed from the charges. In June 2013, a mining company was accused of having discharged far more

heavy metals than allowed by law. At its peak, the company discharged 18 times more arsenic than the state allows, and zinc and nickel concentrations have been about ten times higher than the allowed quantities (see Björkland, 2013). Unfortunately, one month later, the same newspaper reported that the mining company was acquitted by a court of the suspected environmental crimes (for a full account of this case, see Ceccato, 2016).

The international literature shows examples on how competition for lucrative mining contracts, disputes over resource-rich territories can serve as *provocations*. These factors might lead large companies to engage in unethical practices or eliminate competitors (Ballard & Banks, 2003; Wegenast & Schneider, 2017). Tax and royalty revenues used by governments to develop infrastructure may be perceived as provocations to cut corners and reduce operational costs. Wegenast and Schneider (2017) show for example how international oil companies in Sub-Saharan Africa take advantage of insecure property rights to promote repression of local populations. Sweden's mining industry is quite different owing to the country's strong regulatory framework, commitment to environmental protection and sustainability, and emphasis on corporate responsibility and stakeholder engagement. Thus, while the concerns raised by Wegenast and Schneider (2017) regarding the exploitation of insecure property rights and the repression of local populations are valid, they seem not to apply to the Swedish context. Further research would be needed to identify whether there is any evidence of issues serve as provocations to the mining industry.

Environmental crime such as mining has also social implications. Since the early 1900s, the region has been significantly exploited by mining activities, including displacement and the disruption of traditional ways of life (DN, 2022). With the finding of new mining territories, the Sami (native population) have been progressively displaced from their lands and homes, making it impossible to use traditional reindeer migration paths according to the Swedish Sami Association and Gabna Sami Village (SVT, 2023). The intersection of environmental crime with social dimensions reveals the complex challenges facing new and historical mining territories. Addressing these multifaceted issues requires a holistic approach that considers both the ecological and social fabrics of the affected communities. Figure 26.3 illustrates protesters against iron ore mining in Northern Sweden.

Discussion of results

Applying Wortley's (2008) theoretical framework, this section considers the effectiveness of punitive measures versus community engagement and stricter regulations in addressing environmental crime in two different country contexts. In Sweden, the inadequacy of fines as deterrents is highlighted, and there ought to be more transparency in corporate practices and the need to consider both the ecological and social impact of mining industry. Moreover, contrasting approaches in wildlife conflict management in Namibia suggest a



Figure 26.3 Native population protesting against iron ore mine in northern Sweden

focus on community-based strategies and equitable benefit sharing to address non-compliance and reduce provocations.

Stassen and Ceccato (2020) suggest that persistent issues like ongoing mining activities in northern Sweden relying solely on punitive measures is inadequate to prevent repeated offending. Fines for environmental law violations in such cases are a small fraction of profits and are often seen as an acceptable ‘cost of doing business’. Addressing these elements in the context of illegal mining or environmental crimes in Sweden may involve enforcing strict environmental regulations with severe penalties for non-compliance to reduce the prompts for illegal activities. Perhaps more importantly, it can encourage transparency in corporate practices and requiring companies to disclose their environmental impact and adherence to ethical standards can help address prompts and pressures in the business.

Other researchers suggest that, given that mining often crosses national borders, international collaboration and agreements can help set global standards for ethical mining practices and discourage companies from engaging in environmentally harmful activities (Wegenast & Schneider, 2017). The competition for resources serves as a provocation and in Sweden or Namibia are no exceptions. Mining industries see the potential economic benefits and is motivated to secure exclusive rights to the valuable minerals engaging in unethical practices. Encouraging corporate social responsibility practices within the mining industry, including community engagement, can help address the provocations that may lead to illegal behaviour.

Contrasting the recommendations of strict enforcement approaches to compel compliance and address the situational precipitators of EWCs in northern Sweden, the case of carnivore conflicts in Namibia requires people-centred approaches with interventions aimed at reducing provocations and pressures for non-compliance (Kahler & Gore, 2015; Kahler et al., 2013). There is considerable literature on community-based conservation and human-wildlife conflict management that focuses on equitable benefit sharing and best practices in agriculture and animal husbandry. The analysis offered in this chapter would urge research and subsequent interventions aimed at better understanding the pressures and permissions that livestock owners are under to choose illicit coping mechanisms when faced with conflicts with carnivores. This would require a better understanding of the social networks and expectancies for compliance and cooperation among livestock owners and conservation practitioners.

Conclusions and recommendations

The aim of this chapter was to explore the role of prompts, pressures, permissions and provocations in creating criminal opportunities in both Global South and Global North contexts. Leveraging research in Namibia and Sweden, it has investigated potential similarities and differences in situational factors contributing to crime, examining instances in Namibia and the Swedish mining industry. It is found that EWCs were precipitated in both cases by a wide range of prompts, pressures, permissions and provocations, albeit the relative significance of each factor varied between them.

In the Swedish context, environmental inspectors are a factor of interest, because they are the main actors in the detection of the crime. Future studies should also assess how inspectors' professional profiles, skills and experience in the field impact EWC detection particularly in relation to crimes committed by large mining industry. The chapter calls for more transparency in mining corporate practices and the need to consider both the ecological and social impact of mining industry on local communities. In Namibia, securing environmental compliance will require engagement beyond rural, formal law enforcement. Increasing wildlife guardianship (Kahler et al., 2023) will require relevant government agencies, conservation organisations and livestock owners to collaboratively address environmental irritants, triggers and frustrations and the complexities of the socio-cultural pressures and permissions that further precipitate EWCs.

References

- Andersson, E. (2023). *Konflikten om marken: En kvantitativ och kvalitativ analys av nyhetsbevakningen kring gruvdriften i Kiruna mellan 2020–2023* [Student thesis, DiVA]. <http://urn.kb.se/resolve?urn=urn:nbn:se:sh:diva-51625>
- Ballard, C. & Banks, G. (2003). Resource wars: The anthropology of mining. *Annual Review of Anthropology*, 32(1), 287–313. <https://doi.org/10.1146/annurev.anthro.32.061002.093116>

- Barclay, E. & Donnermeyer, J.F. (2007). Farm victimisation: The quintessential rural crime. In E. Barclay, J.F. Donnermeyer, J. Scott & R. Hogg (Eds.). *Crime in rural Australia* (pp. 57–68). Sydney: The Federation Press.
- Björklund, S. (2013, 12 June). Gruva riskerar stora böter för miljöbrott. *Västerbotten Kurir*. Retrieved from <http://www.vk.se/892133/gruva-riskerar-stora-boter-for-miljobrott-2>
- Burlakovs, J., Kriipsalu, M., Arina, D., Kaczala, F., Shmarin, S., Denafas, G. & Hogland, W. (2013). Former dump sites and the landfill mining perspectives in Baltic countries and Sweden: The status. *Proceedings of the 13th SGEM GeoConference on Science and Technologies in Geology, Exploration and Mining* (vol. 1, 485–492).
- Ceccato, V. (2015). Farm crimes and environmental and wildlife offenses. In *Rural crime and community safety* (pp. 166–194). London & New York: Routledge.
- Ceccato, V.A. (2016). *Rural crime and community safety*. London: Routledge.
- Ceccato, V. & Uittenbogaard, A. (2013). Environmental and wildlife crime in Sweden. *International Journal of Rural Criminology*, 2, 25–52.
- Chiripanura, B. & Teweldemedhin, M. (Jan 2016). An analysis of the fishing industry in Namibia: The structure, performance, challenges, and prospects for growth and diversification. *African Growth & Development Policy (AGRODEP) Working Paper 0021*: https://www.agrodep.org/sites/default/files/AGRODEPW0021_0.pdf
- Clarke, R. (1995). Situational crime prevention. *Crime and Justice*, 19, 91–150.
- Clarke, R.V. (1997). *Situational crime prevention: Successful case studies* (2nd edn). Albany, NY: Harrow and Heston.
- Cohen, L.E. & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, 44(4), 588–608.
- Craig, C.A., Thomson, R.L., Girardello, M. & Santangeli, A. (2019). The drivers and extent of poison use by Namibia's communal farmers: Implications for averting the African vulture crisis. *Ambio*, 48, 913–922.
- Delpech, D., Borrión, H. & Johnson, S. (2021). Systematic review of situational prevention methods for crime against species. *Crime Science*, 10(1), 1–20.
- DN (Dagens Nyheter). (2022). Inför gruvbeslut: Samer och klimataktivister protesterade i Kallak. Retrieved from <https://www.dn.se/sverige/infor-gruvbeslut-samer-och-klimataktivister-manifesterar-i-kallak/>
- Edstedt, K.A.H. (2020). *Environmental justice of mining: a case-study of the copper extraction conflict in Laver, Sápmi*. Norwegian University of Life Sciences, Ås.
- Ihwagi, F.W., Thouless, C., Wang, T., Skidmore, A.K., Omondi, P. & Douglas-Hamilton, I. (2018). Night-day speed ratio of elephants as indicator of poaching levels. *Ecological Indicators*, 84, 38–44. <https://doi.org/10.1016/j.ecolind.2017.08.039>
- Johansson, E., & Johansson, H. (2019). *Rättsliga förutsättningar för gruvverksamhet: Tillståndsprövningen av gruvan i Kaunisvaara* [Student thesis, DiVA]. <http://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-74251>.
- Kahler, J.S. & Gore, M.L. (2012). Beyond the cooking pot and pocket book: Factors influencing noncompliance with wildlife poaching rules. *International Journal of Comparative and Applied Criminal Justice*, 36 (2), 103–120.
- Kahler, J.S. & Gore, M.L. (2015). Local perceptions of risk associated with poaching of wildlife implicated in human-wildlife conflicts in Namibia. *Biological Conservation*, 189, 49–58. <https://doi.org/10.1016/j.biocon.2015.02.001>
- Kahler, J.S., Reynald, D.M. & Gore, M.L. (2023). “I let it go:” Quantifying residential guardianship intentions when witnessing wildlife poaching. *Biological Conservation*, 277, 109829. <https://doi.org/10.1016/j.biocon.2022.109829>
- Kahler, J.S., Rivera, C., and Gore, M. (2022). Introducing IPOACHED: A conservation criminology-based framework to understand wildlife species targeted by poachers in protected areas. *Frontiers in Conservation Science*, 3, 992621

- Kahler, J.S., Roloff, G.J. & Gore, M.L. (2013). Poaching risks in community-based natural resource management. *Conservation Biology*, 27(1), 177–186.
- Karlsson, J. & Norinder, M. (2012). Påverkas antalet anmälda miljöbrott i Sverige av antalet miljöinspektörer? Retrieved from <https://gupea.ub.gu.se/handle/2077/31769?show=full>
- Klefbom, E. (2010, 12 July). Gruvor faller inte för miljöbrott. *Miljöaktuellt*. Retrieved from <https://www.aktuellhallbarhet.se/miljo/klimat/gruvor-falls-inte-for-miljobrott/>
- Kurland, J., Pires, S.F. & Marteache, N. (2018). The spatial pattern of redwood burl poaching and implications for prevention. *Forest Policy and Economics*, 94, 46–54.
- Kurland, J., Pires, S.F., McFann, S. & Moreto, W.D. (2017). Wildlife crime: A conceptual integration, literature review, and methodological critique. *Crime Science*, 6, 1–15.
- Kurland, J., Tilley, N. & Johnson, S.D. (2018). Football pollution: An investigation of spatial and temporal patterns of crime in and around stadia in England. *Security Journal*, 31, 665–684.
- Lawrence, R. & Moritz, S. (2019). Mining industry perspectives on indigenous rights: Corporate complacency and political uncertainty. *The Extractive Industries and Society*, 6(1), 41–49. <https://doi.org/10.1016/j.exis.2018.05.008>
- Lindqvist, J. (2005). Vägverkets avfallshantering ur juridisk synvinkel särskilt med avseende på hantering av jordmassor och tjärasfalt.
- Lindsey, P.A., Havemann, C.P., Lines, R., Palazy, L., Price, A.E., Retief, T.A., Rhebergen, T. & Van der Waal, A. (2013). Determinants of persistence and tolerance of carnivores on Namibian ranches: Implications for conservation on Southern African private lands. *PLoS ONE*, 8(1), e52458.
- Littlewood, D. (2014). ‘Cursed’ communities? Corporate Social Responsibility (CSR), company towns and the mining industry in Namibia. *Journal of Business Ethics*, 120, 39–63.
- Maes, T., & Preston-Whyte, F. (2022). E-waste it wisely: lessons from Africa. *SN Applied Sciences*, 4, 72.
- Müller, A. (2020). *Smutsiga miljarder*. Lindhardt og Ringhof.
- Nakwaya-Jacobus, D.N., Hipondoka, M., Agombe, S., Stringer, L.C. & Dougill, A.J. (2021). Evaluating the performance and procedural effectiveness of Namibia’s Environmental Impact Assessment system. *Environmental Impact Assessment Review*, 91, 106670.
- Nellemann, C., Henriksen, R., Kreilhuber, A., Stewart, D., Kotsovou, M., Raxter, P., ... & Barrat, S. (2016). The rise of environmental crime: a growing threat to natural resources, peace, development and security (p. 102).
- Raitio, K., Allard, C. & Lawrence, R. (2020). Mineral extraction in Swedish Sápmi: The regulatory gap between Sami rights and Sweden’s mining permitting practices. *Land Use Policy*, 99, 105001.
- Regeringskanslietsrättsdatabaser - Government office penal database. (2012). ‘Grovt miljöbrott’. Retrieved from <http://www.regeringen.se/>
- Rust, N.A. & Taylor, N. (2016). Carnivores, colonization, and conflicts: A qualitative case study on the intersectional persecution of predators and people in Namibia. *Anthrozoös*, 29(4), 653–667.
- Santangeli, A., Arkumarev, V., Rust, N. & Girardello, M. (2016). Understanding, quantifying and mapping the use of poison by commercial farmers in Namibia - Implications for scavengers’ conservation and ecosystem health. *Biological Conservation*, 204, 205–211.
- Schumann, B., Walls, J.L. & Harley, V. (2012). Attitudes towards carnivores: The views of emerging commercial farmers in Namibia. *Oryx*, 46(4), 604–613.
- Shikangalah, R. & Mapani, B. (2020). A review of bush encroachment in Namibia: From a problem to an opportunity? *Journal of Rangeland Science*, 10(3), 251–266.

- Söderholm, K., Söderholm, P., Helenius, H., Pettersson, M., Viklund, R., Masloboev, V., Mingaleva, T. & Petrov, V. (2015). Environmental regulation and competitiveness in the mining industry: Permitting processes with special focus on Finland, Sweden and Russia. *Resources Policy*, 43, 130–142.
- Stassen, R. & Ceccato, V. (2020). Environmental and wildlife crime in Sweden from 2000 to 2017. *Journal of Contemporary Criminal Justice*, 36(3), 403–427.
- SVT (Sveriges Television). (2023) Samiska protester mot gruvnäringen i Kiruna: ”Greenwashing på elitnivå”. Retrieved from <https://www.svt.se/nyheter/lokalt/norrbottnen/sameprotest-mot-gruvnaringen-i-kiruna-sveriges-jakt-pa-grona-metaller-ar-skamlos>
- Vildevik, C. (2013). Förorenad mark. En utredning av hur effektivt tre olika alternativ till avhjälpande uppfyller det miljöpolitiska målet giftfri miljö.
- Viollaz, J., Long, B., Trung, C.T. *et al.* (2021). Using crime script analysis to understand wildlife poaching in Vietnam. *Ambio*, 50, 1378–1393.
- Wegenast, T. & Schneider, G. (2017). Ownership matters: Natural resources property rights and social conflict in Sub-Saharan Africa. *Political Geography*, 61, 110–122. <https://doi.org/10.1016/j.polgeo.2017.07.007>
- White, R. (2014). What is to be done about environmental crime. In B. Arrigo & H. Bersot (Eds.). *Handbook of international crime and justice studies* (pp. 445–466). London: Routledge.
- Wortley, R. (2008 & 2016). Situational precipitators of crime. In *Environmental criminology and crime analysis*.
- Zeriapi, I. & Awofolu, O.R. (2022). Environmental, socio-economic, and human health impacts of illegal waste disposal in Katutura township of Namibia. *International Journal of Environment and Waste Management*, 29(2), 179–195.