Green Criminology in International Perspectives

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Summary

Green criminology is now an established subfield of criminology. Having emerged in the 1990s, green criminology has rapidly grown, particularly in the last 10 years. Scholarship remains rooted in the critical and radical traditions that inspired its creation and challenge the orthodoxy of most criminological scholarship. This means that research in green criminology does not stick within the confines of only what is deemed criminal by the state but also uncovers harmful and injurious behaviors, particularly of the powerful, such as states and corporations. These once-hidden harms are approached from an environmental justice perspective that exposes the injury and suffering of marginalized people and also to the environment itself (ecological justice) and to nonhumans (species justice). More recent iterations of green criminology feature culture in addition to political economic explanations of crimes and harms against the environment and other species. Both theories of green crimes criticize capitalist societies and the ongoing problems of commodification and excessive consumption. In addition, new contributions, particularly from the Global South, are challenging the hegemony of Western criminological and environmental discourses, offering new (to the West) insights into relationships with nature and with other people. These studies have the potential to shape new prevention strategies and intervention mechanisms to disrupt green crimes and harms. This is urgent as the magnitude of environmental degradation is increasing—ranging from the threat of climate change, the possible extinction of a million species in the near future, and the ubiquity of plastic pollution, to name just a few forms of environmental destruction that humans have been, and are, perpetrating against the Earth.

Keywords

green criminology, environmental criminology, environmental harm, critical criminology, Global South, international criminology

Introduction

Environmental sustainability and degradation are arguably the greatest challenges and threats of the 21st century. Despite this, criminological attention has traditionally focused within the realm of currently established criminal law, leaving environmental issues on the sidelines. Recognizing the need to bring the natural world under criminological attention, green criminology has emerged as a timely and necessary sub-discipline to explore the causes and consequences of environmental and wildlife harms and crimes (see Beirne & South, 2013; Lynch, 2006; Lynch & Stretesky, 2016; Pires & Moreto, 2017; South & Brisman, 2013). The term "green criminology" appeared in the English-speaking world in the 1990s, in an attempt to systematize the study of environmental crime (Lynch, 1990; South, 1998). However, this was not the first attempt to raise awareness of the environment; social science scholars in both the Global North and Global South had been advocating for the environment before this terminology was used (Goyes & South, 2017). The appearance of the green criminological perspective was reinforced in 1998, when a special issue dedicated to green criminology was published (Beirne & South, 1998). In it, South (1998,) argued for increasing environmental awareness in the field of criminology as well as the development of a specific green perspective. Green criminology has continued its development since then, with some of the

notable anthologies being *Environmental Crime: A Reader* (White, 2009) and the first edition of the *Routledge International Handbook of Green Criminology* (Brisman & South, 2013), which presented the concept to the international audience. According to the second edition's editors, green criminology has exploded since then (Brisman & South, 2020), resulting in two new book series, Green Criminology from Routledge and Palgrave Studies in Green Criminology; special journal issues on green criminology; and prolific green criminological research.

Green criminology, in its current form (and before it was recognized as a distinct sub-discipline), endeavors to expand the concept of justice in relation to environmental frames. In doing so, it aims to re-examine the definition of crime, to include acts that are environmentally harmful, but legally permitted, and to shift the criminological focus to natural environments (Lynch & Stretesky, 2016.)

Green criminology is not, however, uniform in its definitions or perspectives. Nor is green criminology accepted or visible in different parts of the world. For these reasons, "Defining Green Crime" first details the ongoing "harm versus crime" debate of definitions of environmental or green crime. This is followed by "Green Criminology Around the World," an exploration of where and in what form green criminology is found in some different regions of the world. An in-depth look at Russia is provided as a more detailed example. In "Varieties in Manifestations of Green Crime," the article then looks at what types of harms and crimes are taking place. This is then followed by "Explanatory Perspectives" detailing what explanations green criminologists have applied to the causes of harms and crimes. We end with a "Conclusion" section.

Defining Green Crime

Emerging from the framework of critical criminology, green criminology is often less constrained by the traditional positivistic confines of orthodox criminology. These include the move away from solely examining the injury and degradation of the environment and other species that is deemed criminal, as well as moving beyond historic anthropocentric definitions of crime that do not recognize the victimization of both the environment and nonhuman animals (Beirne, 2011; Cazaux, 2013; Lynch & Stretesky, 2016). However, there are proponents of green criminology who stick within the confines of orthodox criminology, which only focuses on actions deemed criminal by the state and only acknowledges human victims (see Clifford & Edwards, 1998; Situ & Emmons, 2000). "Defining Crime in Green Criminology" begins by exploring this legalistic or positivistic approach to green crimes, where only what is defined by the law is referred to and considered a "crime." Following this, "Harm in Green Criminology" details green criminological approaches, adopting a harm-based lens.

Defining "Crime" in Green Criminology

In this section, the focus is on environmental crimes—in the strict legal sense—and the challenges for the criminal justice system. In addition, this section introduces why the orthodox criminological approach of only looking at what is legally criminal leaves injustices and suffering unaddressed.

In comparison to "conventional" types of crime (i.e., assault, theft, burglary, etc.), environmental crime is a relatively new phenomenon for the criminal justice system. One of the earliest instances of criminal enforcement of environmental regulations dates back to 1899 in the United States, when the Refuse Act criminalized the discharge of waste into navigable waters. Such a legal-procedural approach in green criminology is premised on the superiority of criminal law and subsequently defines harms by drawing on the practices proscribed by the law (Brisman, 2007). Violations of the laws protecting the environment and health of the

people, therefore, are (all that is) seen as environmental crimes. Using the legal-procedural lens, Situ and Emmons (2000, p. 3) conceptualize environmental crime as "an unauthorized act or omission that violates the law and is therefore subject to criminal prosecution and criminal sanction."

Also considering environmental crime from a legal-procedural approach, Brack (2002) defines environmental crime as the process of flouting environmental laws and regulations for profit or power. Similarly, Clifford and Edwards (1998) refer to green crime as an intentional act that causes damage to ecological systems to ensure business or personal profit. Furthermore, Passas (1999, p. 401) looks beyond the national contours of environmental crime. He defines it as "cross-border misconduct, which entails avoidable and unnecessary harm to society, which is serious enough to warrant state intervention and similar to other kinds of acts criminalized in the countries concerned or by international law."

This legalist approach to addressing environmental crimes is not without its challenges, and it has proved difficult to develop robust criminal law to cover the breadth and variance of environmentally destructive activity. Although civil regulations can provide additional scope to respond to environmental harms, they are not always best suited for the prevention of harm (Hall, 2014). White (2017, p. 118) describes how legal systems both "facilitate(s) and reinforce(s) the legitimacy of [environmental harms]" with penalties and sanctions part and parcel of everyday commercial practice. Criminal-based restitution and restorative responses provide a further mechanism to address environmental crime (Hall, 2017).

It is worth noting that the merits of the legalist approach in general have long been the subject of contention in criminology. As Sutherland (1940) offered a definition of white-collar crime that challenged the existing notions of the characteristics of crime and criminals and its causes, legal scholars objected to it (Tappan, 1947). Considering the green criminological attention to the role of the powerful in environmental disruption, the potency of the legalist

approach to environmental crime is also open to scrutiny, as some claim that it has never been an appropriate measurement for establishing which environmental harms deserve recognition.

First, it is important to consider the role of criminalization in prevention of environmental crimes. According to Lane (1998), criminalization obscures the social, political, and cultural contexts behind harm. Furthermore, the criminal law focuses on harms "committed by individuals and suffered by individuals rather than harms produced collectively and experienced collectively" (Barton, Corteen, Scott, & White, 2007, p. 202). Hence, allocation of responsibility in criminal law is mired in bias against structural forces. Criminal responsibility is an individual responsibility and implies that the responsible body is the only one rendered accountable for the problem. Criminal responsibility decontextualizes social, political, and economic factors behind the offense. This issue arises in relation to environmental crimes committed by corporations; although the above-mentioned research developed by Sutherland (1940) was groundbreaking in nature, it nevertheless maintained that corporate crime was a result of the actions of individual offenders. However, since then it has been argued that the criminal justice system is not viable for tackling corporate crime because its foundational concepts, though suitable for dealing with individual offenses, cannot be applied to a corporation (Gobert & Punch, 2003). The corporate "person" obscures individual responsibility and protects those individuals responsible from the legal ramifications of the crimes committed (Bakan, 2005).

In addition, habitualization of harm also makes criminalization even more unlikely. According to Ruggiero (2015), "convention" influences one's conduct more than legal enforcement instruments. Drawing on Weber's analysis of law, Ruggiero (2015, p. 88) concludes that habits are "impervious to normative adjustment." Habitualization is closely linked with the political economy of capitalism, whereby individual experiences and habits of daily life, which ultimately contribute to environmental degradation, are normalized and even

encouraged (Agnew, <u>2014</u>; White, <u>2018</u>). Without questioning the behavior of individuals or corporations, there is little chance of the harmful behavior being criminalized.

The efficiency of criminalization is also suspect in that environmental crimes are only defined as such in certain nation-states. In an increasingly globalized world, where offenders can pick and choose targets for committing crimes, national laws and jurisdictions are limited (Aas, 2007; Passas, 1999; South, 2010). As the notion of space is being reconfigured, and state-centered systems are being challenged by newly emerging mobilities and flows, nation-focused concepts of law and justice seem inadequate in responding to modern-day problems. Ultimately, "if we are to grasp and challenge the major sources of social injustice we need to move beyond the state-territorial principle" (Aas, 2007, p. 297).

Second, besides criminalization, the process of making laws brings up another controversy in terms of only looking at state definitions of environmental crime. Ruggiero (2015, p. 85) asserts that environmental law is straitjacketed by the entrenched concerns of the existing legal system; it "suffers the legacy of legal reasoning that is geared to the protection of socioeconomic systems that are heavily orientated toward unfettered industrial growth, production and consumption." As such, laws become infused with the aim for economic growth while remaining unconcerned with the effects of this growth on both the society and the environment. Environmentally harmful acts remain legally permissible, safeguarded by economic and politically driven regulation (Michalowski, 2012; Passas, 2005; Ruggiero, 2013b).

Moreover, power imbalances within the legal system result in a skewed understanding of what is harmful (Stretesky, Long, & Lynch, 2013). The process of attaching criminal labels depends on who has the power to label, and is related to "the political economy of marginalization" (Hauck, 2008, p. 639). Boekhout van Solinge (2010) rightly suggests that there is not always a congruent relationship between the degree of harm and the degree of

criminalization. Elites, predominantly in the Global North, controlling the means of production, ensure that not all environmental harms can be punished through law in order to maintain profits. Trade in toxic waste from the Global North to the Global South is an unfortunate example of this. International agreements (namely, the Basel and Bamako Conventions) have been labeled inadequate in combating and ending the transboundary movement of hazardous wastes (Agbor, 2016), and loopholes within it have been identified (Pratt, 2011). Another example is that methamphetamine and cocaine production can result in severe ecological damage that is not reflected in the criminalization of drug consumption (Rosi-Marshall, Snow, Bartelt-Hunt, Paspalof, & Tank, 2015). Although the recent EU Drug Markets Report recognizes the damage to the environment caused by dumping of waste materials from drug production (European Monitoring Centre for Drugs and Drug Addiction and Europol, 2016), environmental degradation in relation to illicit drug production is not the dominant rationale for criminalization.

Actors in the capitalist system, again largely situated in the Global North, may manipulate the law to prioritize their economic ambitions over the interests of ecology, which sees the law chasing the economy rather than vice versa (Ruggiero, 2013b). Ultimately, environmental law becomes "a trade-off between public and environmental health, and economic development and expansion" (Stretesky et al., 2013, p. 72) and is economically rather than ecologically effective (Halsey, 1997). A supposed bridge between economics and environment is the sustainable development agenda, but as Heydon (2019) has found, this, too, prioritizes economics over ecology at the behest of the powerful actors in the Global North. Particularly noticeable in the Global South, power interests safeguard the doctrine of sustainable development, with economically efficient use and management of resources at its core. This technocratic foundation means that "the level of acceptable damage depends on scientific expertise linked to notions of sustainability" (Walters, 2013, p. 141), with "sustainability"

being a human-centered development concept. Ruggiero (2013a, p. 139) states that "some harm knowingly caused to others is even essential for the preservation of spontaneous order." This focus on sustainability and the instrumental use of natural environments is related to another criticism of only viewing environmental crimes from a legal-procedural approach.

Environmental law in a vast majority of Western legal systems is anthropocentric, meaning humans are at the center of concern (Lane, 1998; Murray, 2015). Because environmental law is human-centered, the environment is not sufficiently recognized or protected (Gibbs, Gore, McGarrell, & Rivers, 2010). Moreover, environmental law is grounded in the natural sciences and economics. These approaches take an instrumental view of the environment (what its value is to humans) and thus disregard the intrinsic value of natural environments. As a result, environmental law is not able to recognize harmful activities as environmental crimes. Instead, harmful activities are seen as risks that need to be minimized (not stopped) in order to continue the exploitation for profit without interruption (Halsey, 1997).

The necessity to change society's idea of law, including its role, and the manner in which it is conceived, has been frequently broached (Murray, 2015). As conveyed above, environmental law is influenced by both capitalist and anthropocentric ideals and suffers from indecisive and unequal definitions on a global scale. However, the law is only one way of conceptualizing environmental crime (Natali, 2013); as this conceptualization is converted into definitions of environmental crime, one's perception of what is criminal in relation to the environment is distorted. For many green criminologists, a reconceptualization is needed that fundamentally overhauls the consideration of harm and turns attention to routine activities positioned beyond the realm of criminal law, which are just as harmful as any criminalized activity (Brisman & South, 2014). This reconceptualization has allowed green criminological attention to shift, to include studies of harm, which are introduced in "Harm in Green Criminology" (Sollund, 2015).

Harm in Green Criminology

Recognizing that many environmentally harmful behaviors are not criminalized, or socially constructed as harmful (Lynch & Stretesky, 2016), most green criminological scholarship attempts to push the boundaries of criminality by exploring harmful, yet not necessarily criminalized, behaviors (Hall, 2015; Lynch & Stretesky, 2016; South & Brisman, 2013). Passas's (2005) concept of "lawful but awful" summarizes this line of thinking. Although harm is a practice that is firmly rooted in the dominant social paradigm, it is nonetheless environmentally damaging (Brisman, 2007).

The greatest benefit of a harm-based analysis is that it develops a much more accurate and diverse picture of what is most likely to affect both people and the nonhuman, as it captures the full range of injury and injustices. For example, harms resulting from imperfect operation (an oil spill) are rendered "accidents," and systemic harms are normalized by social practices (clear-felling of Brazilian forests) (White, 2008). Other examples of the latter include using animals in lab experiments, driving sport utility vehicles, conflict and war, the policies leading up to and the responses to Hurricane Katrina (Brisman, 2007) (and presumably other natural disasters), constructing dams, implementing mass irrigation programs, and building highways (Halsey, 1997), to name only a few.

This emphasis on harm also facilitates a focus on harms caused by chronic conditions or states of affairs, as opposed to discrete events, which tend to provide the fuel for criminology and the criminal law (Hillyard & Tombs, 2007, p. 18). A harm-based perspective is also more suitable for fostering change—it does not regard regulation as a goal in itself, but as a means of reweaving the social fabric to prioritize ecologically sustainable means of production (Halsey, 1997). This perspective might also support capacity building and other approaches that reduce harm rather than turning to criminalization, which may be limited in avoiding harm.

In an attempt to unify both a crime- and a harm-based approach, Walters (2010, p. 180) suggests the term "eco-crime" to encompass both the legal definitions of environmental crime and the harms beyond the legal apparatus, such as those "lawful acts of ecological degradation committed by states and corporations." In a similar vein, Lynch, Long, Stretetsky, and Barrett's (2017, p. 3) vision of environmental crimes centers on the role of global capitalism in ecological destruction. They define environmental crime as an act "that regardless of its legality cause(s) significant identifiable harm to ecological systems—what we call ecological destruction and disorganization—for the purposes of promoting capital accumulation." Moreover, a harm-based approach is not only grounded in economic motivations of crime; Agnew (2013) includes within green crime recognition and discussion of everyday socially acceptable harms and "ordinary acts that contribute to ecocide."

Conceptualizations of harm then, in green criminology, focus on justice rather than on a legality or illegality dualism (Larsen, 2012). Green criminological understandings of justice are underpinned by harm, conveyed through three ideological perspectives: environmental justice, ecological justice, and species justice (White, 2008). An environmental justice perspective conceptualizes environmental crime as environmental racism or classism, asserting that environmental harms tend to be concentrated in areas with economically marginalized communities (Gaarder, 2013; Gibbs et al., 2010). Environmental justice proponents argue that the deprived and disadvantaged suffer from those harms most, and their capacity to respond to harms is limited. Yet, with its focus on humans, the environmental justice perspective has been subject to criticism for its anthropocentrism (White, 2008).

The ecological justice approach is grounded in ecocentrism, or the philosophical notion that the environment is an interconnected system with value beyond that ascribed to it by humans (White, 2008). In this approach, a balance must be struck concerning the criminalization of human activity and the preservation of the environment (Gaarder, 2013;

Gibbs et al., 2010). Ecocentrism sees the environment and humans as inseparable in their susceptibility to exploitation, and solutions to the exploitation are buried in the social, not the biological, world (White, 2008). That is why ecocentrism also concerns itself with social and participatory justice and redistribution of power (O'Riordan, 1989).

The third approach to justice in green criminology is a species justice perspective. In this view, the issue of speciesism within criminal law and the anthropocentric nature of constructing and defining environmental crimes is highlighted. Refining this focus on the natural environment, species justice further confronts issues of animal abuse, often adopting a biocentric, or "deep-green" eco-philosophical position, open to considering any harms that influence the biotic or abiotic natural system (White, 2010). Under this framework, all other beings are considered equal to humans (White, 2013), and "non-human organisms are morally considerable" (Baxter, 2005, p. 8). Beirne (1999) highlights the importance of recognizing speciesism within criminological attention and advocates for greater recognition of the severity of nonhuman animal–related crimes. From a species justice perspective, nonhuman animals are deserving of a right to their own lives independent of what humans think their lives should be (Ash, 2005; Sollund, 2013a). Current legal perspectives on wildlife view wildlife as "property." However, when adopting a species justice approach, which emphasizes nonhuman animals' right to respect, this necessitates a move away from viewing them as such (Nurse, 2016a, 2016b; Nurse & Wyatt, 2020).

These three justice perspectives should not be seen as prescriptive. Gibbs et al. (2010), along with White (2008), alert against treating any of these frames rigidly. Instead, they advocate for closely considered analysis of specific situations. As such, this article now explores whether and how green criminology and the debate between "crime" versus "harm" is taking place in the various regions of the world.

Green Criminology Around the World

As mentioned, green criminology was coined in the English-speaking world in the early 1990s, but it was not the social sciences or criminology's first interest in the environment. From the 1990s onward, much of the visible scholarship in green criminology was published in English from scholars in Australia, various countries in Europe (Belgium, the Netherlands, Slovenia, and the United Kingdom), and the United States (see "References" section). Since then, there has been a proliferation of English-language publications by scholars from all over the world about various green crimes and harms. A vast majority of these seem to be grounded in the Western criminological discourse (Goyes, 2016), even when they focus on the Global South, but that has begun to change.

A significant portion of current green criminological scholarship crosses sub-disciplinary boundaries by engaging with the Southern criminology project. Southern criminology draws its inspiration from Connell's (2007) Southern Theory, which highlights the lack of voices from scholars in the Global South within the social sciences. This Global North—South divide, reminiscent of the former colonial practices of the Global North, separates North America and Europe (Global North) from Latin America, Africa, Oceania, and Asia (Global South), and reflects a global imbalance in economic and political power, with knowledge generation typically centered on scholars in the Global North (Carrington, Hogg, & Sozzo, 2016; Goyes, 2016; White, 2017). This Westernization of criminological thought mistakenly assumes that criminological theories have universal truths, despite embedded Northern viewpoints (Goyes, 2016). Much as green criminology recognizes the influence of those in power in creating and defining crimes, Southern criminology highlights that criminological knowledge production is shaped by power constructs influenced by political and geographical divisions (Goyes, 2016).

Southern criminology recognizes that criminological epistemologies are predominantly grounded in the metropolitan North, which are orientated toward anthropocentric, capitalist

and colonialist ideologies (Goyes, 2016, 2019). By contrast, Southern epistemologies are diverse and varied, aligned with the marginalized and oppressed, and unified by their shared oppression from the North (Santos, 2015). These Southern epistemologies, then, hold promise for addressing global environmental degradation grounded in Northern notions of neoliberalism and consumption. As Goyes (2016, p. 515) describes, Southern criminology attempts to "create an ecology of diverse and even rival knowledges, where its validity is determined not by where the knowledge is produced but by how helpful it is in diminishing harm." Of particular relevance to this article is research at the nexus of green and Southern criminology that discusses and raises awareness of the disproportionate environmental injustices experienced in the Global South (Boekhout van Solinge, 2014; Carrington et al., 2016; Goyes, Mol, Brisman, & South, 2017).

In the last few years, there has been a proliferation of scholarship from outside the Global North (i.e., China, South Africa, Viet Nam, etc.).

As such, there are too many to analyze here, but some suggestions for further reading are given here. Environmental degradation:

- McClanhan, Parra, and Brisman (2019), Colombia
- Karimi, Mashhadi, and Barani (2019), Iran
- Ribeiro and Correa (2019), Brazil
- Gladkikh, Konovalova, Mosechkin, and Redikultseva (2019), Russia
- Vinelli (2018), Ecuador
- Lambrechts and Hector (2016), South Africa

Climate change:

Biopiracy:

Sollund, Maldonado, and Rico (2019), Norway and Colombia

- Goyes and South (2016), Colombia
- Walters (2004), Australia

Nonhuman animal exploitation:

- van Uhm and Wong (2019), China
- Arroyo-Quiroz and Wyatt (2019), Mexico
- Sukhodolov et al. (2019), Russia
- Goyes and Sollund (2018), Colombia
- Wong (<u>2018</u>), Hong Kong
- Cao and Wyatt (2013), Viet Nam

The green criminological research from Latin America in particular is worthy of mention. Latin American scholars, like David Rodriguez Goyes, have actively engaged with scholars throughout South America to have their voices heard (see Goyes, Mol, Brisman, & South, 2017, and Goyes, Sollund, & South, 2019). A majority of this scholarship adopts a harm-based approach, thus challenging legal definitions of environmental crime. Furthermore, as mentioned earlier, the approach to justice advocated is not confined to environmental, ecological, or species justice, but often takes on elements of each. For instance, Goyes (2019) highlights the disproportionate effect of environmental degradation of Colombia's indigenous populations, but also draws attention to species injustice that stems from the same environmental degradation.

Emergence of green criminology is not confined to Southern locations or English publications. These two aspects clearly combine in much of the recent scholarship, but again are too numerous to recount all of them. One such example is a recent edition of *Déviance et Société*, which is a special edition about environmental crimes and harms by French editors in the French language (Mucchielli & Salle, 2019). In order to provide a more concrete example

of how green criminology has manifested beyond the more well-known scholars and English publications, "Russia and Green Criminology" provides an analysis of the equivalent of green criminology in Russia.

Russia and Green Criminology

Environmental problems cross boundaries and become a matter of international regulation (Pankratova, 2016)—this statement has found recognition in the Russian criminological academy. Pankratova (2016) notes that in the Russian academic discourse, the subject of green criminology overlaps with research on the crimes against the environment—what is labeled as "ecological criminology." The term "green criminology" is not favored by Russian academics, as they suggest that the term "ecological criminology" reflects the research subject matter best (Kvashis & Sluchevskaya, 2018).

Sluchevskaya (2018) asserts that "ecological criminology" is not a widely used term in the Russian criminological discourse, and openly states that its formation has been influenced by Anglo-American scholarship. Ecological criminology is defined as "a study of ecological crime, its causes and outcomes, personalities of eco-criminals and eco-criminality" (Tangiev, 2011, p. 31). It is identified to have appeared at the nexus of criminology, criminal law, environmental law, sociology, ecology, biology, psychology, and philosophy (Tangiev, 2007, 2011). Eco-criminality has been conceptualized differently (Zhevlakov, 2002; Kletneva, 2007; Zyablikova, 2013), and one of its definitions is "a set of environmental crimes that violate environmental laws and harm the environment and human health" (Dolgova, 2003). Eco-criminality possesses a set of unique traits that distinguish it from other crime types. First, it poses a significant, and often under-estimated, threat to society in general. It frequently can have an irreversible nature, for example, in the case of loss of endangered species, and the consequences of an eco-crime may not appear immediately or may take some time to emerge

and have a negative impact. Additionally, many eco-crimes do not become an object of criminal justice, and they are dynamic and geographically contingent (Kuznetsova, 2017). Among the examples of eco-crimes in Russia, there is illegal logging, illegal fishing, forest crime, wildlife trafficking, and illegal hunting (Kuznetsova, 2017).

Tangiev (2005) provides a comprehensive analysis of ecological criminology, highlighting that the appearance of ecological criminology is timely and urgent and outlining its future directions. The Russian context is identified as particularly suitable for eco-criminological research, considering the country's irresponsible treatment of its natural resources. The damage caused by eco-crimes is even compared to global terrorism (Tangiev, 2005). Tangiev (2005) analyzes the environmental situation in Russia and provides an analysis of the causes of ecocrimes. He outlines the factors such as lack of environmental protection regulation and legislation in Russia, lenient court sentences for environmental crimes, unfavorable socioeconomic climate, Russian ideology and its political and economic development as a fossil fuel state, its technological underdevelopment, insufficient border control, and lack of public awareness on the subject of environmental crime. Furthermore, the role of organized crime is pertinent in the Russian context, as some authors point out the links between the latter and ecocrime in the country (Dubovik, 2010; Rednikova, 2018). Corruption is also brought up as part of the fabric of Russian eco-crime as some authors note the robust links between corrupt government bodies and business entities (Ditsevich, 2008; Dubovik, 2010; Kovaleva, 2019). Zakharov (2012) notes that corruption and the subsequent eco-crime reflect a clash between environmental and economic interests. Furthermore, he notes that economic interests are intertwined with the interests of the state; as a result, lobbying is a frequent and successful tactic. Zakharov (2012) highlights the importance of so-called "corrupt lobbying" whereby a secret deal is made between a government official or civil servant and an economic entity, where the former may benefit from either material or other goods. Such an arrangement may

also take place in the realm of law enforcement. In addition to corruption, some authors also point at the structural flaws of the legal system, for instance, the legal loopholes that enable eco-crimes in Russia: Sverdiukov (2013) states that the Criminal Code does not set criminal liability for legal entities and only individuals (i.e., public officials and private individuals) may be held liable. This is problematic for regulating certain eco-crimes, especially in the oil industry, as oil corporations may only be held liable under the civil law.

While Russia presents an ideal landscape for investigating eco-crimes perpetrated by the powerful—exemplifying the links between power and organized crime (Ruggiero & South, 2010), demonstrating how possibilities of control are decreased (Ruggiero, 2015) and revealing the interrelationship between political and economic actors (Kramer, Michalowski, & Kauzlarich, 2002)—Russian green criminology scholars tend to focus on the legal frameworks, with less attention being paid to the social, economic and political causes and implications associated with eco-crime. Passas (2000) illustrates how neoliberalism and globalization contribute to processes leading to anomie and, ultimately, economic misconduct in the post-Soviet Russia. His conclusions are also relevant in relation to eco-criminality. Thus, it appears that the existing criminological perspectives on crimes of the powerful may be employed to enhance one's understanding of the unique context of eco-crime in Russia.

The solutions to tackle eco-crimes in the Russian scholarship emphasize the primary responsibility of the state for environmental protection, as it is suggested that constitutional norms should be "ecologized" and constitutional environmental rights should be ensured (Tangiev, 2007). Additionally, addressing both organized crime and corruption are seen as essential for tackling eco-crimes in Russia (Dubovik, 2010; Kovaleva, 2019; Zakharov, 2012). In terms of methodological developments of ecological criminology in Russia, Sluchevskaya (2018) suggests that, although the term is circulated in research, its methodological foundations are not developed. She demonstrates that Russian studies of ecological criminology mostly use

quantitative methodology, yet she suggests that qualitative methodology should become more significant in this field. Moreover, Sluchevskaya (2018) proposes that the studies of ecological criminology are unique in their adaptation of methodologies mostly used in the scientific domain. One such example is Tangiev's (2005) proposition to use geo-information technology as a methodology to identify, control, assess and predict eco-crimes. This methodology to understand eco-crimes in Russia is developed further as Tangiev (2011) urges the establishment of an environmental safety management system, which will include what he himself labels as "criminalistics to guard the environment" (which in its formulation is close to environmental forensics) and "ecological deviantology." The importance of environmental forensics for addressing eco-crimes is also mentioned in his previous work (Tangiev, 2007), along with what is labelled as "ecocriminological forecast" (forecasting future eco-crimes) and "ecocriminological planning" (addressing eco-crimes based on the results of the ecocriminological forecast). Another quantitative method proposed by Russian green criminology scholars includes ecocriminological monitoring, which will result in a creation of a database documenting the state of regional ecosystems and the factors that impact them (Tangiev, <u>2006</u>).

Overall, Russian green criminological research appears to favor a legal-procedural approach, both in the focus of its research (ecological crimes, rather than harms) and in the solutions proposed. Yet, environmental harms receive more coverage in Tangiev's (2011) later work. He notes that in 2004, unfavorable environmental conditions led to the premature death of 493,000 individuals; 85% of the population are exposed to air pollution that exceeds air quality standards and every second a Russian individual drinks water that does not meet safety standards. Popov (2014) suggests that 15% of the Russian land mass is a so-called "ecologically disadvantaged zone." This land mass is home to 60% of the population. Moreover, soil erosion and degradation are observed in nearly all Russian regions (Kuznetsova, 2017).

Some Russian authors also emphasize the fact that ecological criminology is distinct in its approach toward the concept of victimization and includes "victimless" crimes and so-called "invisible" victims (Kvashis & Sluchevskaya, 2018), thus referring to the works of Skinnider (2011) and Spapens (2014). Moreover, Kvashis and Sluchevskaya (2018) and Sluchevskaya (2018) also suggest reconsidering criminalization and decriminalization of environmental harms, thus challenging a well-established legal-procedural approach and arguing in favor of a harm-based lens.

As is evident, the "crime" versus "harm" debate within green criminology has seemingly shifted firmly toward inclusion of harm. This may not be the case for everyone, as was demonstrated by some scholarship in Russia adopting a legal-procedural approach. With clarity as to what is included in research on green crime, the "Varieties in Manifestations of Green Crime" and "Explanatory Perspectives" analyze in more detail the manifestations of green crime, utilizing a harm-based approach.

Varieties in Manifestations of Green Crime

Green criminology is purposefully open in nature to recognize the victimization of both the environment and animals (including humans). As such, green crimes encompass the exploitation of the environment, the abuse of nonhuman animals, the effects of toxic contamination on humans, and natural resource exploitation, among others. This broad focus is equally attentive to both ordinary and large-scale harms (Gaarder, 2013), which can be considered as either primary, secondary, or tertiary green crimes. Further distinctions can also be made between crimes of the powerful and intersections with organized crime, and crimes

that are every day and inadvertent. The article now unpacks these themes, with examples of the environmental crimes they represent.

Carrabine, Cox, Plummer, and South's (2009, p. 394) concept of primary green crimes covers "direct damage and destruction caused to environment and species" and includes crimes of air pollution, crimes of deforestation, crimes of species decline and animal rights, and crimes of water pollution. Secondary green crimes emerge when environmental crisis conditions are exploited or when rules around environmental harm regulation are breached (Carrabine et al., 2009). Normally, secondary green crimes refer to illegal or negligent government or corporate activity (for instance, in hazardous toxic waste disposal) (Lynch & Stretesky, 2001).

Spapens (2014) expands the spectrum of secondary green crimes. He adds trafficking of products subject to environmental legislation, crimes of repression against oppositional groups, and crimes of protest in response to enforcement of environmental protection laws that lead to threats of violence and acts of environmental destruction. One of the examples of secondary green crimes includes strategic lawsuits against public participation (SLAPP suits) used by private companies against environmentalists (White, 2003). White (2003), for instance, highlights an unfortunate instance of South African demonstrators campaigning against water commodification and the punitive measures directed against them.

Spapens (2014) also introduces a new category of tertiary green crimes that includes crimes perpetrated as a response to environmental harms or as a result of environmental victimization. For example, because of Shell's damaging oil extraction activities in Nigeria, the local population responded violently to the lack of accountability (Williams, 1996).

The reality of secondary green crimes opens a new trajectory for state-corporate environmental crimes (Michalowski, 2012; Ruggiero, 2013b; Tombs & Whyte, 2009). The complicity of the state in pillaging the environment has been largely ignored by mainstream legal scholars, but it features in green criminology (Fichtelberg, 2015). State-corporate

environmental crimes occur as a result of collusion between forces wielding political power and forces wielding the power of economic production and distribution (Chambliss, Michalowski, & Kramer, 2010). Such crimes can either be state initiated or state facilitated, but inevitably result in environmentally and socially injurious actions. Moreover, "pathologies of power" created by the melding of the state and the corporate amplify the possibilities for harm while decreasing the likelihood of rigorous control (Kramer et al., 2002). To demonstrate this, Katz (2010) uses the state-corporate crime framework to investigate safety crimes of Dow Chemical. She links economic and political hegemony with environmental pollution and increased cancer mortality rates. As Dow masqueraded its environmentally hazardous operations as part of national security and development assistance, the issue of accountability was not raised.

Ruggiero (2013b) expands the spectrum of such "power crimes" beyond state and corporations to financial institutions and other powerful organizations and individuals. He suggests that three factors serve as enablers of environmental crimes of the powerful: mobility, invisibility, and lack of regulation. In these contexts of opacity, powerful actors inflict harm in various forms. Moreover, environmental crimes also exist at the intersection of power crime and organized crime. Ruggiero and South (2010) show how the problem of waste motivates or instigates crime in Naples. As organized crime enters the legitimate economy and collaborates with business, both benefit from the crisis of their own making while the law is powerless to prevent environmentally hazardous outcomes.

Ruggiero and South (2013) continue the analysis of environmental crimes of the powerful in the oil, chemical, and asbestos industries, opening an avenue for research on crimes of the economy. Gross domestic product (GDP) rates, a single (increasingly flawed) benchmark of global development success, are the crux of the crimes of the economy. Moreover, the current economic organization encourages incessant consumption, thus turning consumers into

inadvertent harm perpetrators, which is not only economic but also social and cultural in nature (Brisman & South, 2014). Environmental and social harms originate from the production and disposal of consumer products. This idea is synonymous with Agnew's (2013) concept of ordinary harms that permeate the fabric of our daily lives. He argues that such harms have been neglected by both orthodox and green criminologists. Such commonplace activities include car use, consumer products purchase, and meat consumption, among others. According to Agnew (2013), despite being regularly performed and deemed acceptable, such acts have a cumulative impact on the environment (through inadvertent increase in air, water, and soil pollution, and contribution to climate change). Moreover, such harms are also frequently integrated into ordinary commercial practices (White, 2016).

Globalization of all aspects of contemporary life, where "trade across borders and boundaries flourishes, extends and mutates" (South, 2010, p. 230) also becomes a factor that aggravates environmental harms. Heckenberg and White (2013) differentiate between local (lobster poaching in Nova Scotia, Canada), national (nitrate pollution in New Zealand), and regional (ivory trade in African countries) environmental harms. However, the scope of green crimes can also transcend national frontiers, turning into international or transnational transgressions.

Climate change has all the attributes of a primary, secondary, and tertiary green crime as well as encompassing everyday activities and the local, national, regional, and transnational possibilities of green crimes. White (2012, p. 5) lists specific criminal and environmental offenses linked to climate change. These include those contributing to climate change (pollution and forest clearance), resulting from climate change (water theft and illegal fishing), associated with climate change (migration and eco-terrorism), and stemming from climate change policy response (misreporting of carbon offsets and fraud in carbon trading). The lack of action around tackling the effects of global warming today pose grave dangers for future

generations. Yet, the main causes of climate change do not seem to be decreasing; on the contrary, "growth fetishism" and state-supported cultures of consumption and production (Kramer & Michalowski, 2012, p. 80) remain the pillars of the global political economy.

With such a diverse group of crimes, and perpetration from an equally diverse group of actors, the article now turns to a discussion of explanations of green crimes.

Explanatory Perspectives

Green criminology is not a theory in itself, but draws on traditional criminological theory as well as other disciplines to try to explain why green crimes happen. Studying environmental harms and crimes involves contextualizing them and unraveling the complexity of political economic, cultural, and social factors that produce harm in the first place; each of these is considered in turn.

Political Economic Explanations

Political economic analysis is a comprehensive framework for explaining contexts behind green crimes. One approach to political economic analysis entails deconstructing the influence of GDP as a paragon of successful development and examining the implications of such development for planetary health (Ruggiero & South, 2013). Capitalist ideology constructs nature in the image of capital (Foster, 2000), thus creating environmental degradation. Green crimes can be seen as crimes resulting from ecological withdrawals and additions occurring in the process of production. Stretesky et al. (2013) propose a political economic analysis through the treadmill of production theory, which highlights interlinkages between the economy and the ecology and asserts that understanding the latter cannot be complete without understanding

the former. Certain patterns of production necessitate environmental harms (Halsey, 1997). For instance, Long, Stretsky, and Lynch (2014) demonstrate how the production of fossil fuels boosted economic growth but intensified social and ecological disorganization, of which climate change is the prime example.

Walters (2013, 2014) also engages in political economic investigation of environmental harms and analyzes the politics of power, harm, and justice in relation to air pollution. Walters notices how state policies conceal information and knowledge about the magnitude of the problem, thus making air pollution an invisible crime both literally and figuratively. He concludes that this "invisible crime" must be seen as an act of violence, similar to Zizek's (2009, p. 1) conceptualizations of "systemic violence" or "the often catastrophic consequences of the smooth functioning of our economic and political systems." Crimes of air pollution are habitualized and presented as accidents rather than crimes, to downplay the accountability of perpetrators.

Similarly to the treadmill of production theorists, Ruggiero and South (2013) make a link between the global hunger for natural resources and their associated environmental consequences. While discussing the power of perpetrators, they draw attention to the power and hegemony of neoliberalism, whose avaricious tendencies keep the wheel of production running. Ruggiero (2013b) emphasizes the inevitability of (environmental) harm as a centerpiece of the neoliberal ideology, as necessity overpowers freedom. Ultimately, such a strategy focuses not on the negative consequences of insatiable growth on the environment, but rather on the effects of environmental degradation on growth (Escobar, 1996).

Yet, some authors point out that holding the prevailing economic ideology as a culprit of environmental harm may come across as short-sighted. Such theorizing fails in "providing a guide to who, precisely, is doing what within the overarching parameters of global capitalism" (White, 2011, p. 92). The capitalist system might be at fault, but it cannot be held responsible

as such. There are inextricable links to other elements of society, such as culture, which is explored in "Cultural Explanations."

Cultural Explanations

Green cultural criminology is another prolific sub-discipline; it scrutinizes environmental harm and its underpinnings in culture. Ferrell (2013, p. 351) perceives capitalism as a "cultural enterprise, one 'whose economic and political viability, and its crimes and transgressions, rest precisely on its cultural accomplishments." This cultural enterprise produces both social and environmental harms at a neck-breaking speed. The latter refers to environmental transgressions that punctuate processes of production of consumerist products and waste left after consumption. Green cultural criminologists argue that these transgressions are facilitated by the "planetary built-in obsolescence" mentality (Brisman & South, 2013, p. 410); just like other consumer products, the planet can be discarded and replaced with a new one once it is no longer of use for humans (Brisman & South, 2014).

Yet, bridging the gap between environmental crimes and the causes behind them is by no means a straightforward process. White (2011) looks at humans, technology, population, capitalism, and corporate actors as perpetrators of harm, concluding that assigning responsibility for harm is a complex process, considering the choice between systemic and situational causes. Ultimately, looking at environmental crimes as consequences of a particular practice, rather than trying to pin down their direct causes, might alleviate the tension of proving causation.

Social and Psychological Explanations

The roots of environmental harm can be dissected further by drawing from both sociological and psychological frameworks. The way in which society(s) view the natural world

fundamentally influences how harms are perceived and enacted. Moving beyond cultural explanations, Mol (2013) introduces a compelling lens of colonial studies that resonates with the green criminological focus (local–global/center–periphery), providing asocial context to environmental harms. Clearly, this links to Southern criminology discussed in "Green Criminology Around the World," but here the focus is not on how knowledge is produced, but why green crimes happen. In her study of palm oil production in Colombia's South Pacific region, Mol places power relations at the center of the research, drawing parallels between colonial forms of power and human power over the natural world. Mol argues that orderings of the natural world are infused with the colonial spirit of domination and "othering."

In a similar vein, studies of psychoanalysis also contribute to untangling the complexities of environmental harm. Svard (2012) turns to harms stemming from speciesism and the role of animal welfare discourse in protecting animals. He asserts that animal welfare discourse serves as a veil for masking the reality of everyday speciesist society. Drawing on Lacanian psychoanalysis and his idea of fantasy, Svard discerns the pitfalls of animal welfarism. Instead of admitting that animal cruelty has its roots in modern social functioning, animal welfare discourse is propped up by the fantasy enemy. This figure of an "animal abuser" allows shifting the culpability from individuals who contribute to the plight of farm animals on a daily basis: "transferring responsibility to the state and bringing in animal protection legislation as a proxy for individual responsibility thus appears as a clever solution that allows the consumer to love animals and eat them too" (Svard, 2012, p. 125).

In an attempt to combine both the social and environmental, (recognizing the anthropocentric causes and implications of environmental exploitation), Gibbs et al. (2010) offer an innovative multidisciplinary fusion of three theoretical domains for the examination of green crimes, which they call conservation criminology. Here, natural resources management and conservation studies would contribute the tools for understanding ecosystems

and human interaction with them, and criminology would provide an analysis of the criminal actors. Finally, the fusion benefits from risk and decision sciences that provide risk assessment and risk perception understanding. The notion of risk, premised on both technical assessments and public opinion, is incorporated into their definition of environmental crime. Gibbs et al. (2010) demonstrate how such a framework can sharpen one's understanding of e-waste, to include long-term ecological impacts as well as the social implications of environmental degradation, and incorporate this issue into environmental policy and crime prevention.

Conclusion

Environmental crime's coming to prominence is attributed to a changed "environmental sensitivity" connected to experiences of harm from human mishandling of the environment (Natali, 2013, p. 77). The prominence is not confined to one area, but is evident across the world. Global differences in the relationship between people and nature have created tension, particularly between the Global North and Global South on best practices for nature conservation and in terms of green criminology, resulting in a multitude of approaches to justice and explanations for environmental destruction. Countries in the West have historically held utilitarian attitudes toward nature conservation and view nature as something that is separate from humans and must be preserved in a separate state (Loreau, 2014). Although these attitudes are changing among society, becoming more naturalistic and recognizing the intrinsic value of nature (Kellert, 1993), these changing social attitudes are not equally implemented and reflected in political will or environmental regulation, which is strongly influenced by the powerful's hegemonic economic (and utilitarian) principles.

Countries in the Global South have historically had a closer relationship with nature, recognizing the need for human engagement and integration in conserving the natural world

(Adams & Mulligan, 2003; Breidlid, 2013; Greenough & Tsing, 2003). Conservation, in particular, is often criticized for being neocolonial in nature, with countries in the West imposing utilitarian Western values (such as wanting to create areas of idealized wilderness separate from human influence), where these values are not shared, applicable, or culturally relevant (Garland, 2008). With the emergence of green criminology in all parts of the world, there is a clear movement of scholarship to challenge such neoliberal ideology from the critical criminologists in the Global North and now a visible and vocal group in the Global South. Even with this increase, the need remains to intensify the visibility and voice of green criminology within the discipline of criminology itself so that prevention mechanisms and detection strategies can be crafted and implemented, and thus the planet and its species saved from destruction.

A Brief Guide to the Literature

Even as a relatively new subfield, there are numerous sources, many of them contemporary, that have particular threads out of the varied types of green crimes and harms. A few of these main threads are climate change, pollution, and nonhuman animals. Rob White's book *Climate Change From a Criminological Perspsective* (2018) lays out the many ways that crime and climate change can and will intersect. Not only do harm and crime contribute to climate change, but climate change will create criminogenic conditions that force people to illegally migrate, loot, steal, and so forth. Not everyone will be affected in the same way, which raises the issue of environmental justice. Pollution has been the focus of much of the work of Lynch, Long, and Stretesky (2019), who have explored air pollution, lead poisoning, and the locations of toxic waste sites in the United States, just to name a few of their many collaborations. The research on nonhuman animals and wildlife is perhaps the most extensive. Sollund (2019), van Uhm (2016), and Wyatt (2013) have all published books about the illegal wildlife trade.

Scholars such as Beirne (2018) and Nurse and Wyatt (2020) have focused on nonhuman animal abuse and wildlife crime (i.e., blood sports, etc.). A newer edited collection, the *Palgrave International Handbook of Animal Abuse Studies*, edited by Maher, Pierpont, and Beirne (2017), has contributions covering the range of harms and crime committed against nonhuman animals. Boekhout van Solinge (2014) is the key author on the criminological aspects of timber trafficking.

In addition, there are several older edited collections and handbooks that provide overviews of the theoretical and methodological foundations as well as new developments. Beirne's and South's 2007 Issues in Green Criminology: Confronting Harms Against Environments, Humanity and Other Animals has chapters by the main contributors to the subfield and across the range of threads. So, too, does White's 2009 Environmental Crime: A Reader. As mentioned, the newer contributions are led by scholars from outside Western criminology, such as Goyes, who collaborated with Mol, Brisman, and South to edit Environmental Crime in Latin America: The Theft of Nature and the Poisoning of the Land (2017), which was published in both English and Spanish. Possibly the most in-depth and comprehensive collection is South's and Brisman's Routledge International Handbook of Green Criminology (2020), a second edition (the first was in 2013 in hardback).

Lastly, there are several textbooks designed to support the teaching of green criminology to undergraduate students. Hall's (2015) Exploring Green Crime: Introducing the Legal, Social and Criminological Contexts of Environmental Harm provides a foundation, particularly for those who wish to better understand the legal—administrative, civil, and criminal—underpinnings of environmental harm and crime. Heckenberg and White's (2014) Green Criminology: An Introduction to the Study of Environmental Harm is grounded in the contributions of White. He has greatly advanced the conceptual underpinnings of the subfield with his writings on approaches to justice and defining green crime. In 2016, Nurse wrote An

Introduction to Green Criminology and Environmental Justice (2016c). Similarly to Hall's textbook, there is a solid basis in the legal principles of harm and crime.

The scholarship in green criminology is continually expanding, and Ashgate, Emerald, and Palgrave publishers all have dedicated series to the subfield. This means that there is much more out there to read than is covered in this article.

Further Reading

Bisschop, L. (2015). Governance of the illegal trade of e-waste and tropical timber: Case studies on transnational environmental crime. London, UK: Routledge.

Gibney, E., & Wyatt, T. (2020). Rebuilding the harm principle: Using an evolutionary perspective to provide a new foundation for justice. *International Journal for Crime, Justice and Social Democracy*, 9(3), XX–XX.

Lynch, M., & Pires, S. (2019). Quantitative studies in green and conservation criminology: The measurement of environmental harm and crime. Oxon, UK: Routledge.

Digital Resources

Green Criminology Specialist Group[https://www.iucn.org/commissions/commission-environmental-economic-and-social-policy/our-work/green-criminology-specialist-group]

*Green Criminology Research Network,

BSC[https://www.britsoccrim.org/networks/greencrime/]*

References

Aas, K. (2007). Analysing a world in motion: Global flow meets "criminology of the other." *Theoretical Criminology*, 11(2), 283–303.

Adams, W. M., & Mulligan, M. (2003). *Decolonizing nature: Strategies for conservation in a post-colonial era*. Sterling, VA: Earthscan.

Agbor, A. (2016). The Ineffectiveness and Inadequacies of International Instruments in Combatting and Ending the Transboundary Movement of Hazardous Wastes and Environmental Degradation in Africa. *African Journal of Legal Studies*, 9(4), 235-267.

Agnew, R. (2013). The ordinary acts that contribute to ecocide: A criminological analysis. In N. South & A. Brisman (Eds.), *Routledge international handbook of green criminology* (pp. 74–88). Abingdon, UK: Routledge.

Arroyo-Quiroz, I., & Wyatt, T. (2019). Wildlife trafficking between the European Union and Mexico. *International Journal for Crime, Justice and Social Democracy*, 8(3), 23–37.

Ash, K. (2005). International animal rights: Speciesism and exclusionary human dignity. *Animal Law*, 1(11), 195–213.

Bakan, J. (2005). *The corporation: The pathological pursuit of profit and power*. London, UK: Robinson.

Barton, A. Corteen, K., Scott, D., & Whyte, D. (2007). *Expanding the criminological imagination*. Devon, UK: Willan.

Baxter, B. (2005). A theory of ecological justice. Abingdon, UK: Routledge.

Beirne, P. (1999). For a nonspeciesist criminology: Animal abuse as an object of study. *Criminology*, 37(1), 117–148.

Beirne, P. (2011). Animal abuse and criminology: Introduction to a special issue. *Crime, Law and Social Change*, 55(5), 349–357.

Beirne, P. (2018). Murdering animals. London, UK: Palgrave Macmillan.

Beirne, P., & South, N. (Eds.). (1998). For a green criminology. Theoretical Criminology, 2(2), 147-148.

Beirne, P., & South, N. (Eds.). (2013). *Issues in green criminology: Confronting harms against environments, humanity, and other animals*. London, UK: Willan. (First published in 2007).

Boekhout van Solinge, T. (2010). Deforestation crimes and conflicts in the Amazon. *Critical Criminology*, 18, 263–277.

Boekhout van Solinge, T. (2014). Researching illegal logging and deforestation. *Journal of Crime*, *Criminal Law and Criminal Justice*, 3(2), 35–48.

Brack, D. (2002). Combating international environmental crime. *Global Environmental Change*, 12(2), 143–147.

Breidlid, A. (2013). Education, indigenous knowledges, and development in the global South: Contesting knowledges for a sustainable future. Abingdon, UK: Routledge.

Brisman, A. (2007). Crime-environment relationships and environmental justice. Seattle *Journal for Social Justice*, 6(2), 727–817.

Brisman, A., & South, N. (2013). *The planned obsolescence of planet Earth? How green criminology can help us learn from experience and contribute to our future*. In N. South & A. Brisman (Eds.), Routledge international handbook of green criminology (pp. 409–418). London, UK: Routledge.

Brisman, A., & South, N. (2014). *Green cultural criminology: Constructions of environmental harm,* consumerism and resistance to ecocide. London, UK: Routledge.

Brisman, A. and South, N. (eds.) (2020). *Routledge international handbook of green criminology*. Second edition. London, UK: Routledge.

Cao, A. N., & Wyatt, T. (2013). A green criminological exploration of illegal wildlife trade in Vietnam. Asian Journal of Criminology, 8(2), 129–142.

Carrabine, E., Cox, P., Lee, M., Plummer, K., & South, N. (2009). *Criminology: A sociological introduction* (2nd ed.). Oxford, UK: Routledge.

Carrington, K., Hogg, R., & Sozzo, M. (2016). Southern criminology. *British Journal of Criminology*, 56(1), 1–20.

Cazaux, G. (2013). Labelling animals: *Non-speciesist criminology and techniques to identify other animals*. In P. Beinre & N. South (Eds.), Issues in green criminology (pp. 109–135). London, UK: Willan.

Chambliss, W., Michalowski, R., & Kramer, R. (2010). *State crime in the global age*. London, UK: Willan.

Clifford, M., & Edwards, T. D. (1998). *Defining environmental crime*. In M. Clifford (Ed.), Environmental crime: Enforcement, policy, and social responsibility (pp. 5–30). Gaithersburg, MD: Aspen.

Connell, R. (2007). Southern theory: The global dynamics of knowledge in social science. Globalisation, Societies and Education, 7(4), 505–509.

Ditsevich, Y. (2008). O nekotorikh factorakh determiniruyushikh ekologicheskuyu prestupnost. Vserossiiski Kriminologicheski Zhurnal, 3(5), 30–39.

Dolgova, A. (2003). Kriminologiya. Moscow, Russia: Norma.

Dubovik, O. (2010). Ekologicheskaya prestupnost' v Rossiiskoy Federatsii: Sostoyanie, tendentsii y svyazi s transnatsionalnoy, koruptsionnoy y organizovannoy prestupnost'yu. Vserossiiski Kriminologicheski Zhurnal, 1(11), 18–29.

Escobar, A. (1996). *Constructing nature: Elements for poststructural political ecology*. In R. Peet & M. Watts (Eds.), Liberation ecologies: Environment, development, social movements (pp. 46–68). London, UK: Routledge.

European Monitoring Centre for Drugs and Drug Addiction and Europol. (2016). *EU drug markets report: In-depth analysis*. EMCDDA–Europol Joint publications. Luxembourg: Publications Office of the European Union.

Ferrell, J. (2014). *Tangled up in green: Cultural criminology and green criminology*. In N. South & A. Brisman (Eds.), Routledge international handbook of green criminology (pp. 349–364). London, UK: Routledge.

Fichtelberg, A. (2015). Resource wars, environmental crime, and the laws of war: Updating war crimes in a resource scarce world. In A. Brisman, N. South, & R. White (Eds.), Environmental crime and social conflict: Contemporary and emerging issues (pp. 177–196). Farnham, UK: Ashgate.

Foster, J. (2000). *The ecological tyranny of the bottom line: The environmental and social consequences of economic reductionism*. In R. Hofrichter (Ed.), Reclaiming the environmental debate: The politics of health in a toxic culture (pp. 135–154). Cambridge, MA: MIT Press.

Gaarder, E. (2013). Evading responsibility for green harm. State-corporate exploitation of race, class and gender inequality. In N. South & A. Brisman (Eds.), Routledge international handbook of green criminology (pp. 272–281). London, UK: Routledge.

Garland, E. (2008). The elephant in the room: Confronting the colonial character of wildlife conservation in Africa. *African Studies Review*, 51(3), 51–74.

Gibbs, C., Gore, M., McGarrell, E., & Rivers, L. (2010). Introducing conservation criminology. *British Journal of Criminology*, 50(1), 124–144.

Gladkikh, V., Konovalova, A., Mosechkin, I., & Redikultseva, E. (2019). On improving criminal law norms that establish liability for the pollution of marine environment (Article 252 of the Criminal Code of the Russian Federation). *Russian Journal of Criminology*, 13(3), 489–497.

Gobert, J., & Punch, M. (2003). Rethinking corporate crime. London, UK: Butterworths.

Goyes, D. R. (2016). Green activist criminology and the epistemologies of the South. *Critical Criminology*, 24, 503–518.

Goyes, D. R. (2019). Southern green criminology: A science to end ecological discrimination. London, UK: Emerald.

- Goyes, D. R., Mol, H., Brisman, A., & South, N. (Eds.). (2017). *Environmental crime in Latin America:*The theft of nature and the poisoning of the land. New York, NY: Springer.
- Goyes, D. R., & Sollund, R. (2018). Animal abuse, biotechnology and species justice. Theoretical Criminology, 22(3), 363–383.
- Goyes, D. R., Sollund, R., & South, N. (Eds.). (2019). *Towards global green criminological dialogues: Voices from the Americas and Europe[https://www.crimejusticejournal.com/issue/view/84]*. International Journal of Crime Justice and Social Democracy, 8(3).
- Goyes, D. R., & South, N. (2016). Land-grabs, biopiracy and the inversion of justice in Colombia. *British Journal of Criminology*, 56(3), 558–577.
- Goyes, D. R., & South, N. (2017). Green criminology before green criminology: Amnesia and absences. *Critical Criminology*, 25(2), 165–181.
- Greenough, P. R., & Tsing, A. L. (Eds.). (2003). *Nature in the global south: Environmental projects in South and Southeast Asia*. Durham, NC: Duke University Press.
- Hall, M. (2014). The roles and use of law in green criminology. *International Journal for Crime, Justice and Social Democracy*, 3(2), 96–109.
- Hall, M. (2015). Exploring green crime: Introducing the legal, social and criminological contexts of environmental harm. London, UK: Macmillan.
- Hall, M. (2017). Exploring the cultural dimensions of environmental victimization. Palgrave Communications, 3(1), 1–10.
- Halsey, M. (1997). Environmental crime: Towards an eco-human rights approach. *Current Issues in Criminal Justice*, 8(3), 217–242.
 - Hauck, M. (2008). Rethinking small-scale fisheries compliance. Marine Policy, 32(4), 635-642.
- Heckenberg, D., & White, R. (2013). *Innovative approaches to researching environmental crime*. In N. South & A. Brisman (Eds.), Routledge international handbook of green criminology (pp. 85–103). London, UK: Routledge.
- Heckenberg, D., & White, R. (2014). *Green criminology: An introduction to the study of environmental harm.* New York, NY: Routledge.
- Heydon, J. (2019). Sustainable development as environmental harm: Rights, regulation, and injustice in the Canadian oil sands. London, UK: Routledge.
 - Hillyard, P., & Tombs, S. (2007). From crime to social harm? Crime, Law and Social Change, 48(1), 9-25.

Karimi, M., Mashhadi, A., & Barani, M. (2019). Política criminal de la República Islámica de Irán para abordar la contaminación del aire. Dilemas Contemporáneos: Educación, Política y Valores, 6(64).

Katz, R. (2010). The corporate crimes of Dow Chemical and the failure to regulate environmental pollution. *Critical Criminology*, 18(4), 295–306.

Kellert, S. R. (1993). Attitudes, knowledge, and behavior toward wildlife among the industrial superpowers: United States, Japan, and Germany. *Journal of Social Issues*, 49(1), 53–69.

Kletneva, E. (2007). Ekologicheskaya prestupnost' v Rossiiskoy Federatsii: Ponyatie, prichini, usloviya y preduprezhdeniye. (doctoraldissertation). Kazan State University Kazan, Russia.

Kovaleva, O. (2019). Korruptsionnie riski v ekologii y preduprezhdenie ikh vozniknoveniyz v ekologicheskikh pravootnosheniyakh. Voprosy Rossiiskogo i Mezhdunarodnogo Prava, 9(8), 144–152.

Kramer, R. C., & Michalowski, R. J. (2012). *Is global warming a state-corporate crime?* In R. White (Ed.), Climate change from a criminological perspective (pp. 71–88). New York, NY: Springer.

Kramer, R., Michalowski, R., & Kauzlarich, D. (2002). The origins and development of the concept and theory of state-corporate crime. *Crime & Delinquency*, 48(2), 263–282.

Kuznetsova, N. (2017). Kriminologicheskaya harakteristika ekologicheskoy prestupnosti. Vestnik, 2(74), 97–100.

Kvashis, V., & Sluchevskaya, Y. (2018). Viktimologichesky aspekt ekologicheskoy kriminologii. Viktimologiya, 4(18), 6–13.

Lambrechts, D., & Hector, M. (2016). Environmental organised crime: The dirty business of hazardous waste disposal and limited state capacity in Africa. *Politikon*, 43(2), 251–268.

Lane, P. (1998). Ecofeminism meets criminology. *Theoretical Criminology*, 2(2), 235–248.

Larsen, G. (2012). The most serious crime: *Eco-genocide concepts and perspectives in eco-global criminology*. In R. Ellefsen, R. Sollund, & G. Larsen (Eds.), Eco-global crimes: Contemporary problems and future challenges (pp. 33–56). Farnham, UK: Ashgate.

Long, M., Stretesky, P., & Lynch, M. (2014). *The treadmill of production, planetary boundaries and green criminology*. In T. Spapens, R. White, & M. Kluin (Eds.), Environmental crime and its victims: Perspectives within green criminology (pp. 263–276). London, UK: Ashgate.

Loreau, M. (2014). Reconciling utilitarian and non-utilitarian approaches to biodiversity conservation. *Ethics in Science and Environmental Politics*, 14, 27-32.

Lynch, M. (1990.) The greening of criminology: A perspective on the 1990s. The *Critical Criminologist*, 2(3), 1–4.

Lynch, M. (2006). *The greening of criminology: A perspective on the 1990s*. In N. South & P. Beirne (Eds.), Green criminology (pp. 165–170). Abingdon, UK: Routledge.

Lynch, M., Long, M., & Stretesky, P. (2019). *Green criminology and green theories of justice*. London, UK: Palgrave.

Lynch, M., Long, M., Stretesky, P., & Barrett, K. (2017). *Green criminology: Crime, justice, and the environment*. Oakland: University of California Press.

Lynch, M., & Stretesky, P. (2001). Toxic crimes: Examining corporate victimization of the general public employing medical and epidemiological evidence. *Critical Criminology*, 10(3), 153–172.

Lynch, M. J., & Stretesky, P. B. (2016). *Exploring green criminology: Toward a green criminological revolution*. Abingdon, UK: Routledge.

Maher, J., Pierpoint, H., & Beirne, P. (2017). (Eds.). *The Palgrave international handbook of animal abuse studies*. London, UK: Palgrave Macmillan.

McClanahan, B., Parra, T. S., & Brisman, A. (2019). Conflict, environment and transition: Colombia, ecology and tourism after demobilisation. *International Journal for Crime, Justice and Social Democracy*, 8(3), 74.

Michalowski, R. (2012). *The master's tools: Can supranational law confront crimes of powerful states?* In E. Stanley & J. McCulloch (Eds.), State crime and resistance (pp. 210–224). London, UK: Taylor & Francis.

Mol, H. (2013). "A gift from the tropics to the world": Power, harm, and palm oil. In R. Walters, D. Westerhuis, & T. Wyatt (Eds.), Emerging issues in green criminology (pp. 242–260). Basingstoke, UK: Palgrave.

Mucchielle, L., & Salle, G. (Eds.). (2019). Environmental crimes and harms. *Deviance et Societe*, 43(4), 469–479.

Murray, J. (2015). Earth jurisprudence, wild law, emergent law: The emerging field of ecology and law—part 2. *Liverpool Law Review*, 36, 105–122.

Natali, L. (2013). *The contemporary horizon of green criminology*. In N. South & A. Brisman (Eds.), *Routledge international handbook of green criminology* (pp. 73–84). London, UK: Routledge.

Nurse, A. (2016a). *Animal harm perspectives on why people harm and kill animals*. Abingdon, UK: Routledge.

Nurse, A. (2016b). Beyond the property debate: Animal welfare as a public good. *Contemporary Justice Review*, 19(2), 174–187.

Nurse, A. (2016c). *An introduction to green criminology and environmental justice*. London, UK: SAGE. Nurse, A., & Wyatt, T. (2020). *Wildlife criminology*. London, UK: Bristol University Press.

O'Riordan, T. (1989). *The challenge for environmentalism*. In R. Peet & N. Thrift (Eds.), New models in geography (vol. 1, pp. 77–104). London. UK: Unwin Hyman.

Pankratova, L. (2016). Zelenaya kriminologiya: Sotsialnie aspekti ekologicheskikh konfliktov. *Mezhdunarodnye Protsessi*, 14(4), 176–179.

Passas, N. (1999). Globalization, criminogenic asymmetries and economic crime. *European Journal of Law Reform*, 399, 399–424.

Passas, N. (2000). Global Anomie, Dysnomie, and Economic Crime: Hidden Consequences of Neoliberalism and Globalization in Russia and Around the World. *Social Justice* 27(2), 16-44.

Passas, N. (2005). Lawful but awful: "Legal corporate crimes." *Journal of Socio-Economics*, 34(6), 771–786.

Pires, S. F., & Moreto, W. D. (2017). Preventing wildlife crimes: Solutions that can overcome the "tragedy of the commons." In R. White (Ed.), Transnational environmental crime (pp. 419–442). Abingdon, UK: Routledge.

Popov, I. (2014). Prestupleniya protiv prirodnoy sredi: Teoreticheskiye osnovi y praktika primeneniya (doctoraldissertation). Omsk Academy of MVD Yekaterinburg, Russia.

Pratt, L. A. (2011). Decreasing dirty dumping? A reevaluation of toxic waste colonialism and the global management of transboundary hazardous waste. William & Mary *Environmental Law and Policy Review*, 35(2), 581.

Rednikova, T. (2018). Organizovannya ekologicheskaya prestupnost' v Rosii I za rubezhom: Kriminologicheskaya kharakteristika y mery protivodeystviya. Lex Russica, 9(142), 98–111.

Ribeiro, R. E., & Corrêa, R. S. (2019). Influence of socioeconomic factors on environmental crimes in the Brazilian Federal District. *Desenvolvimento e Meio Ambiente*, 50, 290–305.

Rosi-Marshall, E., Snow, D., Bartelt-Hunt, S., Paspalof, A., & Tank, J. (2015, January 23). A review of ecological effects and environmental fate of illicit drugs in aquatic ecosystems. *Journal of Hazardous Materials*, 282, 18–25.

Ruggiero, V. (2013a). *The crimes of the economy: A criminological analysis of economic thought*. London, UK: Routledge.

Ruggiero, V. (2013b). *The environment and the crimes of the economy*. In N. South & A. Brisman (Eds.), Routledge international handbook of green criminology (pp. 261–270). London, UK: Routledge.

Ruggiero, V. (2015). "Creative destruction" and the economy of waste. In R. Sollund (Ed.), Green harms and crimes: Critical criminological perspectives (pp. 79–96). London, UK: Palgrave Macmillan.

Ruggiero, V., & South, N. (2010). Green criminology and dirty collar crime. *Critical Criminology*, 18(4), 251–262.

Ruggiero, V., & South, N. (2013). Green criminology and crimes of the economy: Theory, research and praxis. *Critical Criminology*, 21(3), 359–373.

Santos, B. D. S. (2015). *Epistemologies of the South: Justice against epistemicide*. Abingdon, UK: Routledge.

Situ, Y., & Emmons, D. (2000). *Environmental crime: The criminal justice system's role in protecting the environment.* Thousand Oaks, CA: SAGE.

Skinnider, E. (2011). Victims of environmental crime: Mapping the issues. Vancouver, BC: University of British Columbia, International Centre for Criminal Law Reform and *Criminal Justice Policy*.

Sluchevskaya, Y. (2018). Metodologicheskie aspekti ekologicheskoy kriminologii. Pravovedeniye, 62(4), 735–750.

Sollund, R. (2013a). *Animal trafficking and trade: Abuse and species injustice*. In R. Walters, D. S. Westerhuis, & T. Wyatt (Eds.), Emerging issues in green criminology (pp. 72–92). London, UK: Palgrave Macmillan.

Sollund, R. (Ed.). (2015). *Green harms and crimes: Critical criminological perspectives*. London, UK: Palgrave Macmillan.

Sollund, R. (2019). *The crimes of wildlife trafficking: Issues of justice, legality and morality.* Abingdon, UK: Routledge.

Sollund, R., Maldonado, A. M., & Rico, C. B. (2019). The Norway–Colombia agreement to protect rainforest and reduce global warming: Success or failure? *International Journal for Crime, Justice and Social Democracy*, 8(3), 56–73.

South, N. (1998). A green field for criminology? A proposal for a perspective. *Theoretical Criminology*, 2(2), 211–233.

South, N. (2010). The ecocidal tendencies of late modernity: Transnational crime, social exclusion, victims and rights. In R. White (Ed.), Global environmental harm: Criminological perspectives (pp. 228–248).

Cullompton, UK: Willan.

South, N., & Brisman, A. (Eds.). (2020). *Routledge international handbook of green criminology* (2nd ed.). Abingdon, UK: Routledge.

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Spapens, T. (2014). *Invisible victims: The problems of policing environmental crime*. In T. Spapens, R. White, & M. Kluin (Eds.), Environmental crime and its victims: Perspectives within green criminology (pp. 221–236). London, UK: Ashgate.

Stretesky, P., Long, M., & Lynch, M. (2013). *The treadmill of crime: Political economy and green criminology*. London, UK: Routledge.

Sukhodolov, A. P., Fedotov, A. P., Makarov, M. M., Anoshko, P. N., Gubiy, E. V., Zorkaltsev, V. I., . . . Lebedeva, A. V. (2019). Mathematical modeling of the assessment of the abundance of Baikal omul in the system of socio-economic and legal aspects of environmental infringement. *All-Russian Criminological Journal*, 13(5), 757–771.

Sutherland, E. (1940). White-collar criminality. *American Sociological Review*, 5(1), 1–12.

Svard, P. (2012). *The ideological fantasy of animal welfare: A Lacanian perspective on the reproduction of speciesism.* In R. Ellefsen, R. Sollund, & G. Larsen (Eds.), Eco-global crimes: Contemporary problems and future challenges (pp. 115–132). Farnham, UK: Ashgate.

Sverdiukov, N. (2013). Ekologicheskie pravonarusheniya v neftegazovoy promishlennosti. Probeli v Rossiiskom Zakonodatelstve. Yuridichesky zhurnal, 5, 1–5.

Tangiev, B. (2005). Ekokriminologiya. St. Petersburg, Russia: Yuridichesky Center Press.

Tangiev, B. (2006). Kriminologiya. Kontrol' y protivodeystviye ekologicheskoy prestupnosti. St. Petersburg, Russia: Yuridicheskii Center Press.

Tangiev, B. (2007). Ekologicheskaya kriminologiya y yee kotseptsiya protivodeistviya ekologicheskoy prestupnosti. Yurist, 3, 44–48.

Tangiev, B. (2011). Ekologicheskaya kriminologiya: Voprosi metodologii. Kriminologicheskiye Otrasli, 3(22), 29–35.

Tappan, P. (1947). Who is the criminal? American Sociological Review, 12(10), 96–102.

Tombs, S., and Whyte, D. (2009). *The State and Corporate Crime*. In R. Coleman, J. Sim, S. Tombs, & D. Whyte. (Eds.). State, crime, power (pp. 103–115). London, UK: SAGE.

van Uhm, D. (2016). *Illegal wildlife trade: Inside the world of poachers, smugglers and traders*. New York, NY: Springer.

van Uhm, D. P., & Wong, R. W. (2019). Establishing trust in the illegal wildlife trade in China. *Asian Journal of Criminology*, 14(1), 23–40.

Vinelli, C. D. S. (2018). Green criminology and water: Applied study of the case of Zaruma Ecuador. *M+A Revista Electronica de Medio Ambiente*, 19(2), 238–256.

Walters, R. (2004). Criminology and genetically modified food. *British Journal of Criminology*, 44(2), 151–167.

Walters, R. (2010). *Eco crime*. In J. Muncie, D. Talbot, & R. Walters (Eds.), Crime: Local and global (pp. 173–208). Cullompton, UK: Willan.

Walters, R. (2013). *Air crimes and atmospheric justice*. In N. South & A. Brisman (Eds.), Routledge international handbook of green criminology (pp. 134–150). London, UK: Routledge.

Walters, R. (2014). *Air pollution and invisible violence*. In P. Davies, P. Francis, & T. Wyatt, (Eds.), Invisible crimes and social harms (pp. 142–160). London, UK: Palgrave Macmillan.

White, R. (2003). Environmental issues and the criminological imagination. *Theoretical Criminology*, 7(4), 483–506.

White, R. (2008). *Crimes against nature: Environmental criminology and ecological justice*. New York, NY: Willan.

White, R. (Ed.). (2009). Environmental crime: A reader. London, UK: Routledge.

White, R. (2010). *A green criminology perspective*. In E. McLaughlin, T. Newburn (Eds.), The SAGE handbook of criminological theory (pp. 410–426). London, UK: SAGE.

White, R. (2011). *Transnational environmental crime: Towards an eco-global criminology*. Abingdon, UK: Routledge.

White, R. (2012). Climate change from a criminological perspective. New York: Springer.

White, R. (2013). *Crimes against nature: Environmental criminology and ecological justice*. Cullompton, UK: Willan.

White, R. (2016). Reparative justice, environmental crime and penalties for the powerful. *Crime, Law and Social Change*, 67(2), 117–132.

White, R. (2017). The four ways of eco-global criminology. *International Journal for Crime, Justice and Social Democracy*, 6(1), 8–22.

White, R. (2018). Climate change criminology. London, UK: Policy Press.

Williams, C. (1996). An environmental victimology. Social Justice, 23(4), 16-40.

Wong, R. W. (2018). "Do you know where I can buy ivory?": The illegal sale of worked ivory products in Hong Kong. *Australian & New Zealand Journal of Criminology*, 51(2), 204–220.

Wyatt, T. (2013). Wildlife trafficking: *A deconstruction of the crime, the victims and the offenders*. London, UK: Palgrave Macmillan.

Zakharov, A. (2012). Bor'ba s ekologicheskoy prestupnost'yu y korruptsiei v kontekste sushestvovaniya sovremennikh globalnikh ekologicheskikh vizovov chelovechestvu. Vestnik TGU, 11(115), 367–371.

Zhevlakov, E. (2002). Ekologicheskiye prestupleniya. Moscow, Russian: URAO.

Zizek, S. (2009). Violence: Six sideways reflections. London, UK: Profile Books.

Zyablikova, M. (2013). Regionalniye osobennosti ekologicheskoy prestupnosti na severo vostokye Rossii (doctoraldissertation). Kutafin Moscow State Law Academy Moscow, Russia.

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