

Law in Society: The Impact of Green Criminology on the Security and Stability of Society and the relevant legislation in China and Canada

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Abstract. In response to rapid social development and substantial economic restructuring, there are further exacerbated by the heightened global focus on the Paris Agreement, the urgency of addressing global environmental challenges has significantly increased. Consequently, the field of green criminology has increasingly entered public discourse, reflecting a growing concern for environmental justice. This study aims to examine the effectiveness of legislation related to green criminology in Canada and China. It primarily analyzes the existing legal frameworks within these countries using a document analysis approach, supplemented by comparative and qualitative research methodologies. The findings indicate that Canada has developed a relatively sophisticated system of fines, while China places a greater emphasis on penal sanctions. Both countries have tailored their green criminology penalties to fit their specific social contexts and unique legal systems. However, a comparative analysis between the two still reveals that the penalties maintain significant flaws in both countries, suggesting an ongoing need for legal refinement and adaptation to more effectively address environmental crimes.

Keywords: Green Criminology, Social Stability, Social Security, Law in Society, Forms of Punishment.

1. Introduction

The recently concluded United Nations' Environment Assembly, in which the world's environment ministers collectively and strongly acknowledged the dire needs for addressing such environmental concerns as climate change, biodiversity loss, pollution, desertification, and land and soil degradation, as well as drought and deforestation. These environmental challenges create very high vulnerabilities for sustainable development and are detrimental to human health and ecological stability, which they have come forward to declare through their official statement. The ministers underlined the urgent need to adopt integrated approaches, underpinned by the best available science and informed by the traditional knowledge of indigenous peoples and local communities. These strategies aim at increasing the resilience of the country concerned against both present and future environmental challenges and promote the spirit of international solidarity. In line with the vision outlined above, they also demanded "effective, inclusive, and sustainable multilateral action" [1]. This lofty ideal can be achieved only by examining the social effects brought about by environmental crimes and the regulations so far.

As a theoretical framework, green criminology has considerably evolved and diversified. Indeed, its development has entailed continuous debate over the best ways to conceptualize, define, examine, and address environmental harms [2]. This study will first examine the Legal Basis and Influence of green criminology. Then, it will conduct a critical comparison review of existing legislation between China and Canada. Finally, discussion about the future development of legislation in green criminology will be made.

2. The Legal Basis and Influence of Green Criminology

2.1. Basic Concepts and Definitions

In 1990, the concept of green criminology first was outlined by J. Michael Lynch as "a spectrum of class-related injustices perpetuating an unequal power distribution, devastating human life, inducing hunger, displacing populations, and contaminating the environments of various classes, communities, and species" [3]. Lynch and Stretesky provided further development to these ideas, labeling it "a green revolution, arguing that environmental harms represent the most serious threats to the planet and human survival but are largely ignored by mainstream criminology" [4]. This indicates that green criminology serves as a tool to bridge the gap between mainstream criminology and the new societal trends concerning environmental issues, which "might not fall within strict socio-legal definitions of crime, and are marginalized within criminal justice responses and scholarship" [5]. Gacek asserted that the impacts of environmental crimes and damages are "profound and permanent, with the severity of green crime repercussions significantly surpassing those linked to conventional street and property offenses" [6]. Nurse highlighted that green criminology "also considers non-traditional offenders, such as corporations and states, who are often guilty of non-compliance with international environmental and human rights law" [5]. Over time, the domain of green criminology has broadened to include "an analysis of the origins, impacts, and extent of environmental crimes and damages, the legal and non-governmental responses aimed at addressing and mitigating these offenses, and the interpretations and portrayals of environmental transgressions in media and public discourse" [7].

2.2. The Security and Stability of Society Influenced by Green Criminology

Green criminology is grounded on three justice-based frameworks: environmental justice, species justice, and ecological justice. Environmental justice calls for a just and fair distribution between the benefits and burdens of economic, social, and scientific activity within a given area. The second is species justice, wherein non-human species have values and rights. Ecological justice, the third, emphasizes interdependence among all life—that interdependence would create environmental issues intrinsically transboundary [7]. Green criminology is grounded on three justice-based frameworks: environmental justice, species justice, and ecological justice. Environmental justice calls for a just and fair distribution between the benefits and burdens of economic, social, and scientific activity within a given area. The second is species justice, wherein non-human species have values and rights. Ecological justice, the third, emphasizes interdependence among all life—that interdependence would create environmental issues intrinsically transboundary [7]. Green criminology employs these frameworks to mediate conflicting interests within society and promote enduring social values.

Green criminology follows the work laid out in the five conservation principles of the UN General Assembly's World Charter for Nature of 1982. First among these is the respect for nature and its preservation of its vital processes. Second, the population levels of all species, both wild and domesticated, shall be at least sufficient to ensure their survival, described as a need for the protection of their habitats. It involves affording special protection to ecosystems harboring rare and endangered species, as well as extending such conservation applications in equivalent ways to all terrestrial and marine environments. Fourthly, it requires human utilization of the catchments of terrestrial and aquatic resources to be done in a manner that can be sustained without impairment in survival or integrity of other species. Fifth, nature shall be protected against damage in consequence of war or other forms of hostility [6]. By the application of the green criminology theory, the desired protection of society is pursued regarding five specific dangers: the destruction of nature, the exploitation of wild and domestic species, the endangering of species, the non-sustainable exploitation of land and sea areas, and the destroying of the environment due to military or hostile activity. These theories provide a framework from which NGOs can engage in direct actions intended to stop harm to animals [6]. Furthermore, the Prevention of crime is one of the principal areas of research in green criminology.

Green criminology exceeds the mere task of accomplishing goals set up by different environmental directives, instead it goes one step ahead. In essence, it is intrinsically related to overcoming main weaknesses of the current environmental law. This is the 'sustainable use' notion deeply embedded in both environmental and wildlife legislation worldwide. Generally speaking, international legislation on wildlife tends to regulate rather than punish the overexploitation of wildlife [8]. Ruhl postulates that based on the discussion of environmental law and formulation are imbued with: libertarianism through free contract and market forces; limited acceptance of regulatory constraints; effective regulation balancing market forces with a reduced environmental deterioration; general environmental legislation anchored on the basic precepts of sustainability and precautionary maxims; environmental justice with an equitable distribution of costs and benefit within the population; and a deep ecologism that places biotic concerns above human interest [9]. The primary aim of environmental legislation is to equitably moderate resource utilization to safeguard the environment while accommodating market demands. Nonetheless, the omission of legal penalties for specific actions diminishes the regulatory system's capacity to preemptively thwart criminal activities within the nascent phases of green criminology.

3. Comparison of Current Legislation between China and Canada

3.1. Current Legislation in Canada

In Canada, the scope of the Environmental Enforcement Act (EEA) specifies the fines that courts are authorized to impose following convictions under any of the nine environmental statutes revised by the EEA [10]. This act has enhanced and unified enforcement frameworks among these statutes, which outline Canada's environmental protection scope: the Antarctic Environmental Protection Act (AEPA); the Canada National Marine Conservation Areas Act (CNMCAA); the Canada National Parks Act (CNPA); the Canada Wildlife Act (CWA); the Canadian Environmental Protection Act, 1999 (CEPA); the International River Improvements Act (IRIA); the Migratory Birds Convention Act, 1994 (MBCA); the Saguenay-St. Lawrence Marine Park Act (SSLMPA); and the Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (WAPPRIITA) [11].

Environment and Climate Change Canada along with Parks Canada conducted an evaluation of the environmental fines and sentencing guidelines under ten federal environmental statutes (the Review) to determine if the imposed fines and sentencing guidelines were consistent with the objectives of the regime, public values, and other pertinent economic and situational factors. This Review ascertained that the imposed fines and sentencing guidelines robustly promote the sentencing regime's objectives, including deterrence and the polluter pays principle, and align with public values and economic realities [12]. While there is a broad variance in fine amounts, the peak fines levied by courts under the Review statutes are considerably greater (amounting to several millions) when compared to the maximum fine levied under these statutes prior to the adoption of these provisions (\$100,000) [13]. Canada maintains a stringent fine regime for environmental crimes. The following tables demonstrate the various fine ranges applicable to different types of offenses. As indicated in Table 1, for individuals, the fine range of summary convictions and indictments ranges from \$5000 to \$1 M and from \$15000 to & 1M, respectively. Table 2 shows that for small revenue corporations and ships under 7500 tonnes, the fine range for summary convictions and indictments is from \$25000 to \$2M and from \$75000 to & 4M, respectively. Table 3 reveals that for corporations and ships of 7500 tonnes or more, the fine ranges for summary convictions and indictments are from \$100000 to \$4M and from \$500000 to & 6M, respectively [12].

Table 1. Fines range of summary conviction and indictment for individual offenders [12]

Individuals				
Category of Offence	Minimum amount of Fine (Summary Conviction)	Maximum amount of Fine (Summary Conviction)	Minimum amount of Fine (Indictment)	Maximum amount of Fine (Indictment)
Designation of offences	\$5,000	\$300,000	\$15,000	\$1M
Other forms of offences	Not applicable (N/A)	\$25,000	N/A	\$100,000

Table 2. Fines range of summary conviction and indictment for small revenue corporations and ships under 7500 tonnes [12]

Small Revenue (under \$5,000,000 within one year) Corporations and Ships under 7500 tonnes				
Category of Offence	Minimum amount of Fine (Summary Conviction)	Maximum amount of Fine (Summary Conviction)	Minimum amount of Fine (Indictment)	Maximum amount of Fine (Indictment)
Designation of offences	\$25,000	\$2M	\$75,000	\$1M
Other forms of offences	N/A	\$50,000	N/A	\$250,000

Table 3. Fines range of summary conviction and indictment for corporations and ships of 7500 tonnes or more [12]

Corporations and Ships of 7500 tonnes or more				
Category of Offence	Minimum amount of Fine (Summary Conviction)	Maximum amount of Fine (Summary Conviction)	Minimum amount of Fine (Indictment)	Maximum amount of Fine (Indictment)
Designation of offences	\$100,000	\$4M	\$500,000	\$6M
Other forms of offences	N/A	\$250,000	N/A	\$500,000

Canadian penalty legislation lacks stringent rigor. The integration of sentencing guidelines into this legislation was inspired by the 1987 Canadian Sentencing Commission report and corresponds with recognized case law, including *R. vs United Keno Mines*. These provisions serve only as guidelines, leaving courts unbound by the act to follow the CEPA sentencing principles. Typically, following a conviction, Crown prosecutors, in collaboration with enforcement officers, recommend sentences tailored to each case based on the CEPA-defined criteria. These criteria encompass the harm or potential harm inflicted; the overall costs of remediation; any corrective or preventive actions undertaken; the nature of the offence, whether intentional, reckless, or accidental; any evident negligence or apathy; and the financial gain or advantage derived by the perpetrator. Furthermore, enforcement officers suggest penalties and/or court orders designed to prevent similar or additional breaches of the legislation [14]. Thus, Canadian courts possess significant discretion in determining whether to impose a prison sentence and its duration, with a preference for fines if they provide punitive and deterrent effects.

3.2. Current Legislation in China

By the end of 2023, China had incorporated ecological protection compensation into over 20 environmental and resource protection laws. These laws encompass diverse areas including forests, grasslands, wetlands, deserts, oceans, water bodies, arable land, and critical ecological and

environmental components such as aquatic biological resources and terrestrial wildlife and plant resources. They also cover key ecological functional areas, nature reserves, and other regions [15].

Although still in development, China's legislation for the ecological protection compensation system recognizes the need for the state to establish and enhance this system. However, the primary obstacle to its progress is the complex nature of ecological protection compensation, which varies widely across different periods due to divergent central and local policies. Moreover, the areas, extents, and criteria for ecological protection compensation also exhibit significant regional disparities [15].

Chinese legislation rigorously enforces penalties for environmental violations, reflecting the intensity of sanctions through primary penalty structures. The legal framework categorizes penalties for environmental crimes into three tiers: The initial tier is the basic penalty range, encompassing penalties of "less than three years of imprisonment" and "less than five years of imprisonment." The subsequent tier, the aggravated sentencing range, spans "more than three years and less than seven years of fixed-term imprisonment" and "more than five years and less than ten years of fixed-term imprisonment," aligning with the baseline sentencing framework. The final tier, the maximum sentencing range, includes "more than seven years of fixed-term imprisonment" and "more than ten years of fixed-term imprisonment." The minimal statutory penalty is three years' imprisonment, targeting offenses such as illegal aquatic product fishing and unauthorized hunting. Conversely, the most severe penalty reaches up to 15 years of imprisonment for actions like the illicit disposal of imported solid wastes, unlawful hunting and extermination of precious and endangered species, illegal procurement, transport, and sales of such wildlife and their derivatives, and unauthorized felling of forest trees. Additionally, the Criminal Code's statutory maximum penalties for a comprehensive array of environmental crimes, including arson, explosions, drowning, hazardous substance release, endangering public security via perilous methods, and unlawful handling, trading, or storage of dangerous materials, exceed those specified in section 6 of chapter VI, extending to capital punishment for numerous offenses [16].

3.3. Comparative Analysis

The scope of environmental protection in Canada and China is similar, with both nations prioritizing wildlife and resource protection. However, when discussing enforcement, the current legislation in China exhibits a distinct approach compared to Canada. Canada primarily focuses on fines, whereas China emphasizes harsher penalties. This divergence likely stems from differences in social environments and legal systems. In China, establishing a comprehensive compensation system is challenging due to the significant disparity between affluent and impoverished regions and high population density. It is particularly difficult to standardize compensation scope, responsible parties, financial input, compensation standards, methods, performance evaluation, and accountability mechanisms, not to mention balancing the various aspects of ecological compensation across different regions [15]. Consequently, under the present legislative conditions, China finds it challenging to develop extensive regulations on fines quickly, which partly explains its greater reliance on penalties.

The current legislation in Canada does not enforce a strict penal code and prefers to use fines when they serve punitive and deterrent purposes. This approach may be influenced by the different legal system. Canada, with its common law system, places considerable emphasis on case analysis and precedents for sentencing, whereas China's legal framework mandates statutory penalties to ensure legal predictability. Canada supports a regime of criminal rehabilitation, which does not exist in China, making the fine system potentially more effective for deterring and preventing offenses.

Although significant differences exist between the legislative approaches to environmental crimes in Canada and China, both countries strive to enhance the prevention and punishment of environmental crimes, tailored to their unique social structures and national circumstances.

4. The Development Direction of Green Criminology Law

4.1. The Achievements Made by the Current Relevant Law and the Drawbacks of Current Relevant Law or Punishment

Contemporary environmental governance is primarily concerned with the legitimization of damage to natural resources. Across various statutory frameworks, regulatory bodies hold the authority or discretion to authorize pollution or degradation of land, activities that these laws initially aimed to curb. Instead of safeguarding essential resources, these entities frequently exercise their legal powers to endorse the exploitation of these resources by private enterprises [6].

Research has revealed that the underlying systemic causal chains responsible for considerable environmental damage are rooted at the level of the global political economy, where transnational corporations play a pivotal role [17]. Notably, a large extent of environmental degradation is linked to activities that are legally permissible, and a substantial amount of environmental crime operates across national borders. These circumstances pose significant challenges to the efficacy of judicial systems in managing environmental violators and the repercussions of their actions. To be effective, environmental enforcement strategies must transcend the simple penalization of offenders to also encompass the restoration of environmental damages. Absent such comprehensive strategies, judicial systems are at risk of failing to fulfill the tenets of green criminology's ecological justice approach, focused on the protection and restitution for non-human entities [6].

4.2. Suggestions for Future

Green criminology must continue to explore new perspectives on what constitutes environmental harms, how these are experienced, who is responsible, and the appropriate responses [18]. The spectrum of penalties must evolve in line with the rapid societal changes. For China, it is imperative to establish national-level regulations concerning common issues and general compensation rules for ecological protection promptly [15]. Despite the challenges of regulating compensation at the national level due to large population sizes, complex social structures, and significant economic disparities, establishing such regulations remains crucial to enhance the crime prevention capabilities of the law and to ensure its predictability, ultimately aiming to safeguard societal security and stability.

5. Conclusion

To effectively meet the ambitious objectives outlined in the Paris Agreement and the vision presented at the latest United Nations Environment Assembly, it is both necessary and urgent to implement a comprehensive overhaul of the penalty systems in place for environmental crimes. This overhaul is crucial for maintaining societal security and stability in the face of increasingly complex environmental challenges. Moreover, as environmental crimes increasingly cross-national borders, it becomes vital to conduct a thorough analysis and comparison of the various countermeasures that nations have implemented. This analysis should aim to assess the impact of such disparate legislation on the criminalization of future transnational or international environmental offenses. Undoubtedly, the research and legislative frameworks surrounding environmental crimes are in a state of continuous evolution. Therefore, it is imperative for the public to maintain patience and for legislators to redouble their efforts towards creating more robust laws. We all eagerly anticipate further advances in the field of green criminology, hoping these efforts will lead to a more stable and secure society globally.

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