

Green Crime Governance: Psychological Drivers of Corporate Environmental Crime and Legal Frameworks for Sustainable Development Compliance

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Abstract

Corporate environmental crime is one of the most important yet largely unexplored challenges to global sustainability. This review article provides an in-depth analysis of what could be the psychological factors that push corporations to environmental crime, how environmental crime can be enabled or prevented through a governance design and what legal instruments do exist to stop it. The article proposes an integrated approach to explaining the mechanism of the decisions to engage in corporate misconduct, drawing on criminological, behavioural psychological, organizational and environmental law concepts and literature. The review brings together the ongoing literature on green crime classification, behavioral decision models (the Fraud Triangle and Theory of Planned Behaviour), and the new concept of artificial intelligence in environmental governance. The article contrasts the main corporate environmental tragedies, such as the BP Deepwater Horizon, Volkswagen Dieselgate and the Bhopal Gas Disaster, and finds commonalities in the psychological lapses, governance failures and legal shortcomings. The Integrated Green Crime Governance Model provides a new conceptual paper that connects psychological dimensions, organisational culture, decision-making process, legal enforcement and sustainable development results. Research gaps which exist are identified, especially the lack of behavioral psychology and its integration into research on environmental crime, and the lack of models in environmental crime research based on a multidisciplinary approach between criminology, governance and sustainability. Policy recommendations include training in behavioral ethics, risk assessment based on psychological factors, separate ESG auditing and harmonization of the global rules

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Introduction

Environmental crime has become one of the critical issues that the world faces in the twenty-first century, and this has implications beyond conventional perceptions of criminality. Environmental crimes are different from traditional offenses against identifiable victim(s) in that they cause damage to human health, biodiversity, ecosystem, climate system and all life. Green crime is incredibly profitable, and the economic costs of such crimes is estimated to be around \$110-\$281 billion per year, making it one of the most profitable criminal activities in the world (Risso et al., 2025). Despite these staggering financial stakes, such acts often evade traditional criminal justice responses, as environmental enforcement frequently remains relegated to administrative or regulatory channels rather than direct penal oversight (Nurse, 2020).

Corporate environmental crime is a unique space in this. Environmental crimes are potentially committed by individuals, States, but also organized criminal networks – the corporate entities carry specific abilities to cause large scale environmental damage. Organizational structures and financial resources make it possible to cause environmental degradation on a scale impossible to achieve through the activities of individual players, while their supply chains can span the globe. A critical difference between corporate environmental crime and conventional white-collar crime is that the former is frequently associated with diffuse harms, leading to more complex causation and delayed consequences, which can make it more difficult to establish legal liability and enforce the law (Gottschalk, 2021). Furthermore, the current regulatory landscape often lacks a unified doctrine to determine when criminal responsibility should be attributed to the management, the entity itself, or both, which significantly impedes effective law enforcement (Ali et al., 2020). Importance of combining psychological aspects with environmental governance has been growing more evident. Conventional strategies for prevention of environmental crimes have focused on deterrence through legal instruments, regulatory by-laws and economic incentives. But this does not seem to be enough, as corporate environmental offences continue to occur. To prevent and combat

environmental crime effectively, psychological and organisational motivations for such crime, including the cognitive biases, moral disengagement and culture of deviance, must be known (Simpson et al., 2013; Singh, 2026). Moreover, existing deterrence-based frameworks often operate on the assumption of rational choice, yet they frequently overlook the socioeconomic pressures and administrative inadequacies that facilitate systemic environmental exploitation (Lirëza & Koçi, 2023; Shetty & Saxena, 2025).

The main aim of this review article is to achieve a few related goals. It is valuable and innovative, as it traces the contours of this broad and abstract phenomenon, green crime and corporate environmental crime, and provides a sense of what constitutes a corporate offence and how to classify it, thereby allowing a systematic approach to analysis. Second, it considers the development of corporate environmental crime over the course of the Industrial Revolution and in the modern era of environmental, social and governance (ESG), tracing the historical trends and future directions. Third and most importantly, it is a new investigation into the individual and organizational psychology of corporate environmental crime. Fourth, the article puts in perspective an integrated decision-making framework that integrates psychological aspects, organizational culture and legal enforcement with sustainable development outcomes. Fifth, it examines the governance and legal processes that are in place for the purpose of combating corporate environmental offences. Finally, the article outlines the gaps in existing research and the policy recommendations to improve environmental compliance.

Understanding Green Crime

❖ Definitions

Green criminology was first coined in 1990 by Michael J. Lynch which paved the way for the new concept of green crime. Generally, Green criminology is the criminological approach of crimes, harms, and injustices that concern the environment and non-human species. Green crime itself may be interpreted as acts of environmental harm which are directly committed and are considered as a crime under legal statutes; these are generally referred to as "crimes against the environment" (White, 2022). Environmental crimes are crimes committed against the environment and include a wide variety of activities including illegal pollution, wildlife trafficking etc. It is sometimes referred to as 'green crime' but some scholars draw a distinction between environmental crimes as laid down in law and environmental damage, which may not be prohibited by law. In an ecological crime

perspective, the concept is extended to cover activities which cause damage to the environment, even if legal, and are not based on legality but on harm (Shetty & Saxena, 2025; White, 2022). Corporate environmental crime fits into this category of environmental crimes, and it's a specific niche. It is legally mandated way of doing business of a company or its agents on behalf of the company. This definition includes conduct which benefits a company by reducing costs, making their product more profitable, or enjoying a greater market share, and which violates environmental laws. These range from dumping toxic waste illegally, polluting the environment, non-disclosure and systematic non-compliance (Gore et al., 2019).

❖ Classification

Green crime is a diverse category of activities, which can be analyzed on a variety of dimensions. There is an important distinction between offences which are specifically banned by environmental laws and more general kinds of injury that could be non-criminal. The activity-based approach classifies environmental offences as:

Illegal pollution is the unlawful discharge of pollutants into the air, water or soil. This covers any deliberate discharges and any carelessness in terms of complying with the emissions standards. Usual sources include industrial establishments, manufacturing processes and farming practices [11]. Illegal waste disposal includes the improper handling, transport, treatment, storage or disposal of hazardous waste and non-hazardous waste. This type of offense refers to illegal dumping, hazardous waste management and hazardous waste treatment and disposal violations (Hossain et al., 2025). Wildlife trafficking is an illegal trade in protected species of flora and fauna, animal products and plant materials. This practice is frequently linked to transnational organized crime networks and can have a serious impact on the conservation of biodiversity (Ege & Howe, 2020). Carbon fraud is a new area of environmental crime that encompasses carbon market manipulation, false carbon emission reporting and false claims of carbon offset. These are crimes which directly affect measures designed to mitigate climate change and detract from the confidence in carbon trading mechanisms (Sibanda & Dlamini, 2026).

Illegal mining involves the mining of minerals, precious metals, other forms of natural resources without authorization. The activity often includes environmental degradation, violations of human rights and financing of armed conflict (Siqueira-

Gay & Sánchez, 2021). Deforestation is the illegal removal of forests (evasion of sustainable forest management requirements, encroachment on protected areas, and violations of logging restrictions) (Garzón et al., 2025). Greenwashing is environmental deception conducted by companies; making false claims about their environmental footprint. This involves deceptive sustainability representations, selective disclosure of good environmental data and development of deceptive green certifications (Alevizou & Henninger, 2025). Environmental negligence is a failure to manage the environment correctly, maintain the pollution control equipment properly, train employees to ensure they are compliant with the environment, or even as simple as failing to monitor the environment properly (Sanchez, 2005).



Figure 1.0 Green Crime Classification and its impacts on policy

Evolution of Corporate Environmental Crime

Corporate environmental crime has evolved over time both as a response to changes in industrial organization, regulating institutions, and environmental awareness. To see this change is key to understanding the nature of today's environmental crime and the difficulties of good governance (Shover & Routhe, 2005). With the Industrial Revolution came industrial pollution on a large scale and corporations that could cause a lot of damage to the environment. The demands for natural resources, which were unprecedented, were fueled by rapid industrialization, while the waste streams resulted in environmental systems that were unable to cope. Environmental damage was not well controlled during this time, nor was corporate accountability for environmental damages very strong. Limited options for affected people through the legal doctrine of nuisance, but no significant environmental restrictions for industrial expansion (Attenborough, 2016).

Globalization was an era in which corporations expanded their activities beyond national frontier and new possibilities emerged for environmental offences by means of the highest form of competition, known as jurisdictional arbitrage. Multinational corporations were delocalizing pollution-intensive activities to the places where environmental laws were not strong, which was sometimes called "Pollution Haven. Global supply chains made it easy to shift responsibility for environmental damage, with corporations being able to push the environmental impacts of their suppliers' activities out of sight. Transnational corporate structures made legal enforcement difficult, and allowed transnational corporations to evade environmental responsibilities (Österblom et al., 2022).

During the Climate Change era, business environmental conduct is playing for higher stakes than ever. With the recognition of anthropogenic climate change, the eyes have turned towards greenhouse gas emissions and the obligations of the big emitters. Fossil fuel, manufacturing, transportation and agricultural companies are under growing pressure over their climate impacts. Climate harm is difficult to attribute and enforce because the harm is long term and diffuse, and the links between corporate emissions and climate harm are long and complicated (Beaulieu et al., 2026). Environmental, social, and governance (ESG) have moved to the heart of the corporate governance debate in the ESG era. The growing expectations of investors, consumers and regulators are for corporations to have shown environmental responsibility and commitment to sustainability. This has caused new reasons and motivations to act for the environment and also opened new opportunities for green washing and selective disclosure to the detriment of the environment (Heikkurinen, 2010).

The Digital economy does not only create new environmental challenges, but also new governance opportunities. Digital technologies facilitate more efficient monitoring of environmental compliance using satellites, sensor networks and data analytics. But the digital economy itself produces its own environmental impact due to the use of energy, e-waste and raw materials for the production of technology (Rathee et al., 2024). It is likely that a mix of factors will influence future trends in corporate environmental crime – the increased nature and regulatory responses to climate impacts, ongoing improvements in monitoring and enforcement technologies, increasing investor and consumer environmental accountability demands, and changing international legal frameworks. Environmental harms may

be coming more under the umbrella of criminality, perhaps even being considered an international crime, which would change the enforcement landscape (Idrees et al., 2022).

Psychological Drivers Behind Corporate Environmental Crime

❖ Individual-Level Drivers

Decision makers within organizations, and therefore corporate environmental crimes, are at the end of the day, persons. It is important to know the psychology behind these decisions so that effective prevention is proposed. Individual level psychological variables work at the cognitive, affective, and personality level and influence the individual's perception of environmental risks, appraisal of compliance options, and rationalization of their own behavior.

Greed is one of the most basic motivations of environmental offenses. Individuals can be motivated to place a priority on the short-term profit over environmental compliance to advance their careers, profit, or earn a bonus based on cost savings. Greed is working with opportunity structures within organizations that can lead to the violation of the environment and that can be rewarded or tolerated at least (Islam et al., 2021). Moral disengagement refers to a psychological mechanism in which people selectively disengage their moral self-sanctions from environmentally hurtful actions. Mechanisms like moral justification, euphemistic labelling and diffusion of responsibility allow people to have positive self-concept and still commit environmental offences. Moral disengagement is a phenomenon that allows people to engage in environmentally harmful behaviours while allowing them to avoid the accompanying moral feelings of guilt or embarrassment (Bandura, 2007). How people perceive the risk affects their judgement of the chances and impact of detection and enforcement. Evidence shows that people are likely to rationalize environmental offenses, especially where violations are normal in their organization or industry. On the other hand, if you overestimate risks you can see overcompliance, where corporations go beyond the regulations (Shimshack & Ward, 2007).

Short-term reward bias is a bias related to discounting future outcomes for short-term benefits. The benefits of environmental crimes are often immediate, either in cost savings or performance gains, and the harmful effects of the crime are either long-term or unknown. Such temporal discounting can result in systematic underweighting of long-term environmental risks (Simons & Burt, 2011). Diffusion

of responsibility is a strategy that enables people to reduce or eliminate their own responsibility for and their own involvement in committing an environmental offence by pointing to a process of organisation, to bosses, hierarchy or collective action. If multiple stages are represented by different actors, there is a risk of individuals feeling less responsible for and wanting to engage in environmental harms (Peeters et al., 2019). Normalization of deviance is a term used to refer to the process whereby successive minor deviations are tolerated and accepted as a way of life.” In a setting in which eco-infringements go unpunished and are frequented by many, the tipping point for transgression slowly moves and behaviours are normalised. This may result in an increase in environmental misdeeds that at the time were unimaginable for the act to have been initiated (Brar et al., 2021).

Narcissism, Machiavellianism, and psychopathy (also known as Dark Triad personality traits) have been linked to unethical decision-making within organizational settings. Those with this trait are likely to be more likely to commit environmental offences, less likely to care about the repercussions of others and more skilled at manipulating information and perceptions. Cognitive dissonance is the disalignment between one's behaviors and conceptions of self or values. These uncomfortable feelings can be mitigated through rationalisation of environmental harm; downplaying the nature and/or severity of the harm; or overindividuation and blaming the effects of the harm onto others. In this psychological process, people are able to sustain a favorable self-concept despite their actions that are detrimental to the environment (Bandura, 2007).



Figure 2.0 Psychological Drivers Behind Corporate Environmental Crime

❖ Organizational-Level Drivers

Individual-level motives, determinants and enablers of corporate environmental crime cannot be independent from one another, but can be strongly influenced by contexts of the organization, which can either be binding or enabling of the individual's offending. A profit maximisation culture is at the centre of this dynamic, valuing economic returns over all other factors, and seeing its environmental obligations as a cost to be minimised. This orientation puts pressure on systematically cutting corners, on not spending money on compliance, and on placing costs on society and ecosystems (Schneider & Murray, 2024). The presence of competitors exacerbates all of this: companies are forced to find ways to use regulatory loopholes to find an unfair edge – then to become noncompliant – or to become nonviable. Toxic leadership also has a critical role in setting the bar for organization ethics and tolerating environmental offenses as leaders who act unethically, encourage noncompliance, and shame environmental conscientious play a pivotal role in suppression of dissent and the creation of a culture of fear. Financial rewards or bonuses, promotions, and job security for meeting targets or targets in terms of cost reduction provide a strong incentive to break the law, because gains in jobs, promotions and bonuses are related to the target. All these structural and cultural elements, coupled with individual psychological predispositions, make it an environment in which environmental crimes could occur, and indeed is likely to occur (Simpson et al., 2013).

Environmental offences are facilitated by organizational arrangements, which can be expected to be reinforced by means of corporate silence, normalization of deviance, lack of ethical climate and fear of whistleblowing. The silence of the corporations is a reluctance of workers and employees to report environmental issues, for fear of retribution, for the knowledge that problems will be brushed aside, and because working conditions will not allow it because of the corporate culture and norms in place, the silence that means that the problem is not going to be addressed, and that violations continue to go unnoticed (Uhl-Bien & Carsten, 2007). Unethical practices can become part of the environment, social learning processes pass this behaviour on to new colleagues and the regulation of the environment is seen not as necessary but as optional and violation as acceptable. These practices over time become entrenched in the culture of the organization and difficult to change because of the consistency in their repetition. Poor ethical climate may be characterized by a lack of ethics standards, insufficient tools to comply with them,

and failure to hold people to account for environmental performance—which can make people feel like it is OK to not comply. After whistle blowing lies the fear of whistle blowing, and perpetuation of environmental crimes goes unchecked, unnoticed and unaddressed as employees affected by environmental violations are too afraid to come forward due to legitimate concerns about retaliation, damage to their career, or social ostracism. Together, these organizational drivers forge conditions that engage and solidify psychological predispositions toward committing offenses, fostering a setting for corporate environmental crime to thrive (McKendall & Wagner, 1997).

❖ Behavioral Decision Models

There are a number of theoretical explanations for corporate environmental criminal decision-making processes which incorporate psychological, economic and organisational aspects to shed light on the way in which individuals and organisations decide to engage in environmental crime. According to the Theory of Planned Behavior, intentions to act are influenced by attitudes toward the behavior, subjective norms and perceived behavioral control; indicating that intentions to comply with regulations on the environment are determined by one's attitude towards compliance, the perception of social pressure to comply, and the perception of ability to comply. Where institutions have positive attitudes towards the environment, environmental compliance norms are strong and there is adequate provision for compliance, rates of environmental offending should be low (Ramírez & Palos-Sánchez, 2018; Winter & May, 2001). Behavioral Economics introduces alternative assumptions to the traditional model of rational choice such as bounded rationality, cognitive biases and social preferences, explaining that systematic deviations from rational decision-making can lead to offending against the environment as a result of cognitive biases that can make people underestimate risk and/or overestimate benefits. Bounded Rationality assumes that people have limited knowledge, cognitive abilities, and time to make decisions and that this can result in systematic errors in taking environmental aspects into account, especially when the environmental risks are complex, uncertain, and distant in time. Prospect Theory also gives one indication how people make decisions in situations of risk and uncertainty: the over-weighting of potential losses in comparison to potential gains, which in the context of the environment may cause risk-taking decisions when compliance may negatively impact financial outcomes, but compliance failures may not seem to have as significant an impact on the finances (Bellè et al., 2025).

The Fraud Triangle (and the expanded Fraud Diamond) offer strong models that are tailored for understanding fraudulent and criminal acts in an organizational context. The Fraud Triangle identifies three conditions that allow fraud to occur: pressure to meet financial goals, opportunity to commit the fraud without detection, and rationalization of their actions, usually through moral disengagement and/or neutralization techniques, which are ways of justifying the offense. Strategic measures for prevention, on the basis of this framework, should be designed to deal with all these conditions in terms of reducing the pressures to perform, improving oversight and monitoring mechanisms, and strengthening ethical cultures, lessening the incentives for rationalization of misconduct (Masdar et al., 2023). The Fraud Diamond builds upon this analysis by adding capability, because the individual needs to have the skills, expertise, and access to resources to commit the environmental offence, so the offence may be restricted to people with particular skills and access to organisational resources and knowledge of gaps in the regulation. This broader approach emphasizes the need to include in prevention the organizational structure and knowledge system that make environmental crime possible, as much as its motivational and opportunity dimensions; it means the necessity of keeping sensitive environmental information off the internet and making sure that strong internal controls are in place and that expertise is not used in ways that facilitate evasion, but rather in compliance (Andreisová, 2016).

General Deterrence Theory and Routine Activity Theory complementarily provide perspectives on situational and enforcement aspects of environmental crime. Routine Activity Theory holds that crime is a function of the presence of motivated criminals, suitable targets, and the absence of capable guardians, implying that environmental crimes can be environmental offences when corporations find the conditions are ripe – that is, when they have the opportunity and the motivation to commit a crime, and capable guardians are not in place to stop them. This is a view that highlights the need for guardianship to be applied more effectively via more effective regulatory measures, community monitoring and technological surveillance, thereby hindering the circumstances to which environmental crime is possible (White, 2022). General Deterrence Theory assumes that the ability to deter people from committing crime is a function of three factors: certainty, severity and speed of punishment, which explains regulatory strategies of enforcement and sanctions. Research also has shown that the threat of detection is a more powerful deterrent of environmental offenses than the threat of punishment, and the public perception of the likelihood of detection more reliably deters offending than the

magnitude of the penalty. This implies that, in the interest of deterring environmental offense, more attention should be paid to enhancing, rather than strengthening, the threat of detection through improved monitoring, inspection procedures and effective whistleblower programs, than to increasing penalties (Murphy et al., 2015).

Corporate Green Crime Decision-Making Framework

Based on the aforementioned psychological and organizational aspects, this article aims to develop an integrated framework understanding the decision-making process of green crimes in the company which relates psychological aspects to organizational culture, decision making processes, environmental misconduct, law enforcement and corporate behavior changes. Psychological Factors include individual cognitive biases, moral disengagement and personality traits that can either trigger (e.g. through profit maximisation focus, tolerance of non-environmental ethics, and suppression of dissent) or inhibit (e.g. through environmental responsible focus, supportive environment for environmental ethics, stimulated focus and dissent on environmental infraction) environmental offending, and Organizational Culture includes the contexts in which such traits are either activated or inhibited, such as a context that provides the priority to maximize profit, a context that tolerates environmental ethics violations, or a context that suppresses dissent; likewise, a context that provides the priority to reduce environmental cost and protect the environment, that supports environmental ethics evaluations, and stimulates focus and dissent for environmental ethics infringements (Flannery & May, 2000; Schuler et al., 2017). Decision Making is the nexus of psychological dispositions and organizational factors, which, under constraints of bounded rationality, organizational pressures and available rationalizations, result in Environmental Misconduct that spans a spectrum of environmental noncompliance and/or violation from relatively minor to significant criminal offenses, the severity and frequency of which are determined by the coming together of psychological, organizational and situational factors (McKendall & Wagner, 1997). Legal Enforcement acts on the evidence of environmental misconduct in the form of investigation, prosecution and sanctions, the effectiveness of which depends on detection capacity, existence of laws, and institutional capacity; these signals can be deterring and encourage compliance, but the ultimate goal of governance and enforcement efforts is to achieve Corporate Behavioral Change, which means that sustained changes in corporate

environmental behavior are required that address the psychological and organizational factors that can drive offending, rather than just the individual incidents of detection. This provides an overall picture of how psychological factors impact environmental decision-making and how governance mechanisms can break the pathways to environmental crime, which is the conceptual underpinning for the Integrated Green Crime Governance Model presented later in this article (Brar et al., 2021).



Figure 3.0 Corporate Green Crime Decision-Making Framework

Corporate Governance and Green Crime

❖ Board-Level Oversight Mechanisms

An effective Corporate Governance system is important to keep environmental crime out or to make it possible, as it provides accountability processes, sets ethical rules and ensures environmental aspects are incorporated into corporate decision making. Board oversight is the top tier of governance due to the fiduciary duty of a board of directors to supervise corporate behaviour, including environmental compliance – so that when the board engages with the environment, it sends a message that environmental compliance is important for the whole organisation.

Independent Directors can offer different viewpoints and hold management to account and may be better positioned to question management on environmental matters and ensure environmental risks are taken into account when making strategic decisions (Aguilera et al., 2021). The audit committees undertake oversight of financial reporting, internal controls and compliance, and good audit committees should oversee environmental compliance systems to ensure that environmental risks are covered. Environmental committees can be set up with the purpose of giving dedicated environment attention to board discussions and governance mechanisms, and ensure environmental needs are met and environmental accountability becomes a part of the top leadership of an organization (Walls & Hoffman, 2012).

❖ **Operational Governance Systems and Culture**

In addition to the board level structures, operational governance systems and organisational culture also plays a key role in prevention of environmental crime with focus on internal controls, leadership commitment, transparency and compliance functions. Internal control creates a mechanism of surveillance and adherence to the environmental rules, such as environmental management systems, monitoring programmes, and also through effective reporting systems that allow for quick identification of non-compliance and corrective actions (Final Draft, 2021). Senior executives' ethical leadership has a profound impact on the organizational culture: When leaders are committed to environmental compliance they set the tone for ethical behaviour in the company and they role model the values needed for sustainable compliance. Corporate transparency has been achieved by the disclosure of environmental performance; thus, external accountability has been achieved, where the citizens, investors and regulators are able to monitor corporate environmental behavior and hold the corporations responsible for environmental impacts. ESG Governance is the incorporation of environmental, social, and governance (ESG) principles into corporate governance frameworks, where environment is in fact part of corporate sustainability and long-term value creation, and compliance officers must have the right resources, independence, and authority to effectively enforce requirements for environmental compliance in their programs (Reis et al., 2025).

❖ **Legal Frameworks Governing Corporate Environmental Crime**

A system of international conventions, national laws and administrative regulations govern environmental crime, creating environmental standards, defining the offences and giving means of enforcement at various levels of jurisdiction. Internationally, there are a number of key conventions that shape corporate environmental accountability: the Paris Agreement sets out national climate action targets, which inspire national legislation with repercussions for corporate environmental emissions management; the Stockholm Convention sets out international commitments to eliminate or restrict the use of hazardous substances, having an impact on national chemical laws and regulations; the Basel Convention governs the transboundary movement of hazardous wastes, setting notification and consent requirements for the movement of hazardous wastes and addressing illegal waste trafficking; Convention on Biological Diversity sets out commitments for the conservation of biological diversity and for the sustainable use of its components, shaping the frameworks for national biodiversity protection; the UN Convention against Corruption sets out international commitments to fight against corruption that facilitates environmental crime, including bribery of regulators and money laundering of environmental offences; and the OECD Guidelines for Multinational Enterprises provide recommendations concerning responsible business conduct, which includes environmental protection, although they are not binding (Moghaddam & Zare, 2017; OECD, 2018; Weldon & Epstein, 2019).

National environmental legislation provides the overarching legal context for environmental crime enforcement within jurisdictions, permitting, emissions limits and prohibited activity, and enforcement mechanisms. Corporate Criminal Liability provides for the prosecution of corporations for environmental offences, with theories of liability that differ between jurisdictions, with some jurisdictions requiring specific acts or omissions on the part of an individual, and others seeing corporate liability in the defects of the internal compliance and oversight structures (Kidd, 2003). Civil liability mechanisms offer material and non-material remedies for environmental damage via private enforcement, such as damage claims, injunctions and restitution, in addition to criminal enforcement, and can also provide for compensation for ecological damage where it cannot be achieved through criminal sanctions. Administrative sanctions offer regulatory agencies ways to punish environmental offenses without resorting to criminal sanctions, such as fines, permit cancellations, or compliance orders and the administrative sanctions, which offer a more flexible enforcement mechanism for penalties for environmental violations where a criminal penalty is not necessary (Smith, 2024).

❖ **Greenwashing: The Psychological and Legal Dimensions**

Greenwashing has already become a major issue in the ESG era, with companies increasingly claiming to be 'green' in order to build a better brand image and draw in investors, which is why it is imperative to gain insight into the psychological and legal aspects to inform governance reactions. Psychology of greenwashing is a systematic deception of the environment's performance toward stakeholders like investors, consumers, and regulators, and corporations' use of environmental issues for gaining competitive advantage through false or misleading claims (Aji & Adiwijaya, 2025). This behavior is sustained by the corporate image management which try to appear as companies who care about the environment, selectively sharing good news, asserting false “environmental achievements” and developing misleading environmental certifications that provide an opportunity to appear “environmental” but do not truly act in favor. ESG manipulation refers to the strategic presentation of ESG data by selective reporting, by aggregating positive and negative information in inappropriate ways, and by manipulation of the seemingly messages about the environmental performance communicated through ESG ratings (Kathan et al., 2025). False sustainability reporting is one dimension of particular concern, including misrepresenting environmental performance, false claims of emissions reductions, misleading reporting of environmental impacts, and deliberate withholding of negative environmental information, with consumer perception being an important target as companies try to mislead their investors by reporting stronger environmental performance, which helps boost their cost of capital and attract the ESG-oriented investors (Ghitti et al., 2023).

This is the law enforcement around the world against greenwashing claims that is getting more severe in different parts of the world, including criminal investigations and enforcement actions in the Asia-Pacific region, directives in EU to create pathways for environmental offenses, including greenwashing, and financial regulators' investigations in Australia against pension funds for misleading climate-related disclosure that resulted in multi-million-dollar penalties and potential fraud charges (Li, 2025). The increasing shift toward enforceable ESG obligations from soft law guidance is starting to bring attention to prosecutors that failures to monitor or implement ESG principles and values may give rise to prosecution, especially when such conduct impacts people or the environment, and that prosecutors are increasingly relying on non-traditional sources of evidence such as corporate ESG

disclosures, supplier audit trails, and sustainability ratings to support enforcement actions (Sun, 2025).

Artificial Intelligence and Green Crime Governance

AI and AI-driven technologies have revolutionized the way of environmental governance allowing unprecedented monitoring, detection, and enforcement capabilities on multiple dimensions of environmental compliance. AI-powered monitoring of environmental compliance can also detect illegal deforestation, mining activities, pollution levels, and other non-compliant activities, as satellite imagery provides high resolution, and AI algorithms can analyze environmental changes to identify patterns of non-compliance that would have been missed by traditional monitoring methods (Alotaibi & Nassif, 2024). Blockchain technology also provides an opportunity for secure and transparent recordkeeping for environmental compliance through its supply chain tracking, environmental claim validation, and data integrity features, ensuring that environmental information is unalterable and fostering greater trust and accountability in environmental reporting (Adelakun et al., 2024). IoT sensors can detect environmental conditions in real-time within industrial sites, across waterways, and in other environmental use cases to provide continuous monitoring of pollution and emissions, leading to early detection and prevention. Drones and aerial surveys are examples of remote sensing techniques that allow monitoring of environmental conditions in places where this is difficult or even out of the question, such as forests, oceans, etc. To support enforcement, machine learning algorithms can be used to teach computers to recognize characteristics of environmental violations such as unusual environmental data, irregularities in the supply chain and reporting inconsistencies to identify priorities for inspection and to spot potential environmental violations before they have a chance to get out of hand (Galaz et al., 2021). Environmental compliance analytics applies advanced data tools to inform compliance outcomes and assessment, recognize compliance risks, and enable enforcement decisions by determining facilities with a strong likelihood of violations, compliance trends over time and the effectiveness of enforcement actions. Predictive policing of environmental violations involves using AI to anticipate the probability of violations happening in various locations and times, which can help redirect scarce enforcement resources more effectively and, in turn, more effectively deter violations. AI and monitoring systems, such as satellite imagery, sensors and electronic records, offer objective, verifiable evidence of environmental violations,

which is important for underpinning enforcement actions and giving greater assurance that, as research shows, is more effective in deterring environmental offending than the severity of punishment (Thornton et al., 2015).

ESG Ratings and Corporate Crime Prevention

ESG ratings are emerging as one of the most powerful drivers of shaping corporate environmental behaviour and are a way of assessing corporate action in environmental, social and governance aspects that can inform investors, consumers and others' decision making and can hold companies to account for environmental impacts. ESG metrics measure environmental performance in several key areas such as emissions, resource utilization, waste management and environmental compliance and provide standardized metrics that can make comparisons between companies and industries easier, with governance indicators focused on how the governance systems and processes are likely to prevent environmental offenses, as measured by board monitoring, transparency, accountability, etc. (Syahrudin et al., 2025). Environmental performance metrics measure actual improvements in the environment, such as pollution reduction, emission reduction and environmental management effectiveness, offering a direct evaluation of the company's environmental behavior, rather than simply relying on self-reporting environmental claims. Investor pressure from investors that are concerned about ESG coming up as a very strong force for encouraging environmental compliance and disincentivizing environmental offences, as through its ESG raters, investors can make investment choices, engage companies on environmental issues, vote on shareholder proposals that address environmental issues and so, responsible finance includes environmental issues in financial decision making through the green bonds, sustainable lending and strategy based on environment as a key driver of investment. Green bonds as an investment product have since expanded significantly, with a growing number of green bonds being issued to finance green (environmental) projects, such as renewable energy, pollution control and sustainable infrastructure, offering investors financial incentives to green projects alongside returns (Goenka et al., 2025). Many big companies now report on sustainability and how they do so reflect their commitment to environmental performance and compliance; the Global Reporting Initiative has set up standards for environmental disclosure and integrated reporting brings sustainability and financial information together, seeing the links between environment and business and the need to consider environmental issues in business strategy and decision-

making. These ESG mechanisms combine to form a systems approach to rating, disclosure, investment, and corporate governance, encouraging companies to take action to be environmentally responsible, with effectiveness hinging on the credibility of the underlying data, the rigor of the rating methodologies and investors' and stakeholders' willingness to use the disclosed data for investment decisions (Aguilera et al., 2021).



Challenges in Global Environmental Crime Governance

Global governance of environmental crime has a lot of interconnected and complex challenges, which hamper the effectiveness of legal frameworks and enforcement mechanisms across jurisdictions significantly. Despite the presence of good legislation in some places, weak enforcement is pervasive as a result of limited resources, competing priorities and insufficient technical capacity, as well as the complicate considerations of cross-border jurisdiction, which makes investigation and prosecution of trans-border environmental crimes difficult in view of the varying legal systems, enforcement capacities, and diplomatic interests (Spapens & Mehlbaum, 2019). Key examples of corruption issues in environmental enforcement are where regulators are bribed, turn a blind eye to violations, or otherwise favor

offenders, providing opportunities to evade regulation, and where regulators become "captured" by the interests they are supposed to regulate, resulting in insufficient enforcement and lax standards. Political interference and corporate lobbying add to these difficulties; for example, political actors prevent investigations, shield industries of interest and favor enforcement action, and corporate lobbying feeds into regulation to lower standards, decrease enforcement action or establish regulatory exemptions. Developing countries are especially vulnerable to environmental crime because of a lack of resources, competing development priorities, and environmental performance in general is less well monitored, making it harder to detect violations and assess enforcement effectiveness, which can lead to a lack of prosecution of environmental crime, either because of legal obstacles, or because of limited capacity of investigators to investigate environmental crime or a reluctance to investigate complex cases (van Houten-Peschier, 2023).

Green crime governance is an emerging and quickly developing field, and new approaches are incorporating behavioural science, technologies and international collaboration to tackle these challenges. Behavioral compliance approaches draw on behavioural science and behavioural economics concepts to leverage the use of nudging, behaviour messaging, and interventions that target cognitive biases and social norms that underlie environmental offences; and environmental psychology offers frameworks to understand how social actors and systems engage with the environment, which can support environmental behavioural interventions that encourage stewardship and compliance. On the other hand, the exploration of the neural foundations of ethical decision-making, as covered in the field of Neuroethics, may be relevant to understanding the mechanisms of cognitive processing in environmental decision making, while the governance of AI for environmental monitoring and enforcement poses ethical and regulatory issues and thus forms a new research stream. ESG regulation is taking shape, with mandatory reporting requirements, standardized metrics and enforcement mechanisms, and climate litigation has emerged as a tool to bring corporations to account through lawsuits for climate damages, human rights cases or legal challenges to regulations, all of which open up new ways for corporate accountability (Wetzer et al., 2024).

Integrated Green Crime Governance Model

Building on the analysis presented in this article, the proposed Integrated Green Crime Governance Model represents a novel conceptual contribution that connects psychological factors, organizational culture, decision-making processes, legal enforcement, and sustainable development outcomes (Ratanabanangkoon & Kantabutra, 2025).

The model can be represented as follows:

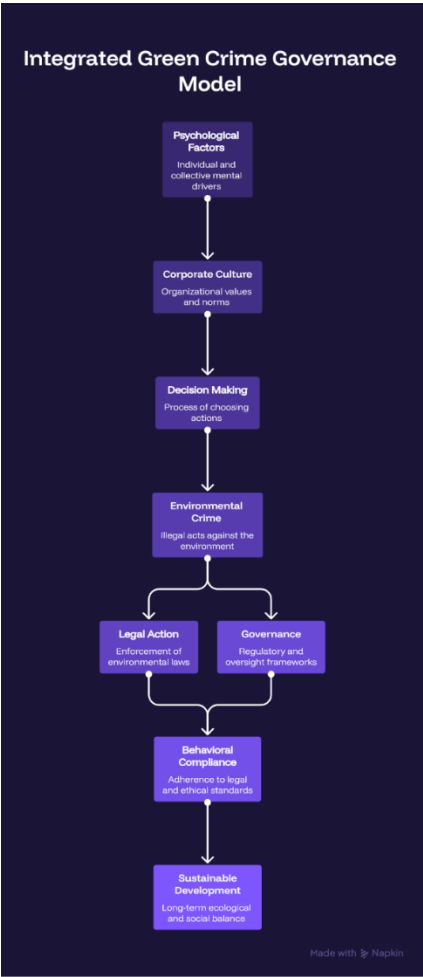


Figure 5.0 Integrated Green Crime Governance Model

Policy Recommendations

Based on the analysis presented in this review, several policy recommendations can be offered for addressing corporate environmental crime and promoting sustainable compliance, spanning behavioral interventions, governance reforms, technological deployment, and legal strengthening. Behavioral ethics training for corporate executives and employees should address cognitive biases, moral disengagement, and ethical decision-making by incorporating insights from behavioral psychology to promote recognition of psychological risk factors and development of ethical reasoning skills, while psychological risk assessment should be integrated into corporate governance and regulatory oversight to evaluate individual and organizational factors associated with environmental offending including decision-making patterns, ethical climate, and compliance culture (Langevoort, 2018). Independent ESG auditing should provide objective assessment of environmental performance and compliance, with auditors possessing appropriate expertise, independence, and authority to evaluate not only systems and processes but also behavioral and cultural factors that influence compliance outcomes. AI-assisted compliance monitoring should be deployed to enhance detection of environmental violations and support enforcement, with AI systems designed to be transparent, accountable, and subject to appropriate oversight to ensure their reliability and fairness (Atamewan, 2024). Executive accountability for environmental compliance should be strengthened through clear legal duties, enforcement mechanisms, and penalties for violations, with accountability extending to senior leadership and board members to ensure that environmental responsibility is embedded at the highest levels of organizational decision-making. Whistleblower protection should be strengthened through comprehensive legal protections, anti-retaliation enforcement, and confidential reporting mechanisms, with consideration given to reward programs for environmental whistleblowers while maintaining appropriate safeguards for internal reporting processes. Behavioral compliance metrics should be developed to assess psychological and organizational factors associated with compliance, enabling targeted interventions and systematic evaluation of compliance program effectiveness (Rick & Jasny, 2022). Global legal harmonization should address the challenges of cross-border environmental crime by establishing consistent standards, enforcement mechanisms, and cooperation arrangements, with international conventions strengthened and implemented effectively to create a unified global framework for environmental crime governance. Corporate transparency requirements should be strengthened through mandatory

environmental reporting, verification standards, and enforcement mechanisms, ensuring that transparency extends to ESG performance and environmental compliance in ways that enable stakeholders to hold corporations accountable for their environmental impacts. Collectively, these policy recommendations represent a comprehensive approach that integrates behavioral science, governance reform, technological innovation, and legal strengthening to create more effective systems for preventing corporate environmental crime and promoting sustainable compliance (Kusumo et al., 2025).

Conclusion

Corporate environmental crime poses one of the greatest threats to global sustainability and has severe implications on the ecosystems, our health and climate systems that need to be urgently addressed in full. Traditional environmental crime prevention strategies have focused on deterring environmental crime with legal sanctions and regulatory monitoring, but the increasing rate of environmental offending shows that these strategies are not enough to deter the complex process of psychological and organizational decision making that lead corporations to commit environmental offenses. In this review, the drivers have been thoroughly examined in an integrated way, considering findings from criminology, behavioural psychology, organizational theory and environmental law, and a new conceptual model, the Integrated Green Crime Governance Model, has been proposed as a new effort to bring psychology and organisational culture, decision making and legal enforcement, and sustainable development outcomes together. The analysis has pointed out important research gaps, including a lack of multidisciplinary research models that combine criminology, governance and sustainability, the need for a more comprehensive incorporation of models from behavioural psychology in the study of environmental crime, and the absence of standardized frameworks relating the ESG performance to environmental crime prevention, which should all be addressed in future research.

This trend towards more comprehensive enforcement models, with the convergence of civil and criminal enforcement in ESG issues, marks an important evolution in environmental governance as conduct that previously would only warrant civil penalties is now subject to parallel criminal investigations, and behaviour that did not trigger civil penalties may be subject to criminal investigations as a form of fraud, negligence, or abuse of power. The criminal liability of companies is now

being increasingly brought into the focus of ESG, so that criminal liability for failing to implement or monitor ESG policies ought to be taken into consideration, especially, but not exclusively, if doing so harms people or the environment, and legal advisors are increasingly expected to counsel businesses as to the potential criminal liability in addition to advising on ESG strategy. Policy recommendations, such as training on behavioural ethics, psychological risk assessment, independent ESG auditing, AI-assistance for compliance monitoring, whistleblower protection and harmonisation of laws internationally, need to be aligned with corporations, regulators and international bodies to ensure that these are implemented meaningfully. The roadmap towards future environmental governance lies in the capacity to understand and tackle the psychological and organizational underlying motives behind corporate environmental crimes, as well as the ability to learn from and combine the insights of various disciplines and establish comprehensive governance frameworks, allowing environmental compliance to become not merely a legal requirement, but a governance norm and business imperative that ensures the protection of humans and the environment for generations to come.

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