

INTERNATIONAL JOURNAL OF LAW MANAGEMENT & HUMANITIES

[ISSN 2581-5369]

Volume 6 | Issue 1

2023

© 2023 *International Journal of Law Management & Humanities*

Follow this and additional works at: <https://www.ijlmh.com/>

Under the aegis of VidhiAagaz – Inking Your Brain (<https://www.vidhiaagaz.com/>)

This article is brought to you for “free” and “open access” by the International Journal of Law Management & Humanities at VidhiAagaz. It has been accepted for inclusion in the International Journal of Law Management & Humanities after due review.

In case of **any suggestions or complaints**, kindly contact Gyan@vidhiaagaz.com.

To submit your Manuscript for Publication in the **International Journal of Law Management & Humanities**, kindly email your Manuscript to submission@ijlmh.com.

Green Criminological Revolution and Restorative Environmental Justice

DR. N.L. SAJIKUMAR¹ AND DR. SANJU V.K.²

ABSTRACT

Despite the existence of scientific studies suggesting that the Earth has entered an era of global ecosystem collapse caused by adverse human activities, criminologists have failed to address 'green issues' properly and to take note of green harms more seriously. Within ecological justice discourse, there is a clarion call to address harm to the environment and non-human animals. But, apropos the definition of green crimes; the nature of the criminality involved; potential solutions; the content, priorities of policy, and opinions are divided. Against this backdrop, the present article attempts to analyse the definitions of green crimes, the major issues in Green Criminology (GC), and the scope of GC in restorative environmental justice. Employing a 'political economic' approach, some green criminologists assert that many environmental issues can be traced to economic, political and class interests and to the ability of the 'powerful' to manipulate and use the environment to preserve the basis of their power. GC also calls attention to the fact that many legal practices are harmful; and addresses State delinquency for breach of obligations. The lack of a precise definition of 'green crime' renders the establishment of the GC field's boundaries difficult. Measuring green crimes to ascertain their extent is another issue. GC's justice perspectives are trifold: ecological justice, species justice, and environmental justice. From an ecological justice perspective, besides human beings, "natural objects" and "non-human environmental entities" deserve protection and preservation in their own right. The intrinsic value and rights of sentient living creatures; and the duties owed to them form the basis of species justice. The environmental justice perspective primarily focuses on the unequal impact of environmental harm. Green criminologists have effectively explored environmental harms using a wide range of conceptual lenses, but a vast number of issues are still unaddressed. There is a need to hybridise or integrate restorative justice more holistically into daily regulatory environmental practice.

Keywords: *Green criminology, Revolution, Environmental Justice, Species justice, Ecological Justice, global ecosystem collapse.*

¹ Author is an Assistant Professor at Government Law College, Trivandrum, India.

² Author is an Assistant Professor at Government Law College, Trivandrum, India.

I. INTRODUCTION

What constitutes crime depends upon culture, place and time. Nevertheless, the traditional test-violation of public law – has been replaced by the modern approach that emphasises the functional aspect of law. In similar lines, beginning with the pre-classical demonological theory to the theories based on socio-economic factors, the criminological explanations provided to crime and criminal behaviour have also undergone changes. However, despite the existence of scientific studies suggesting that Earth has entered an era of global ecosystem collapse³ caused by adverse human activities,⁴ they have failed to address ‘green issues’ properly and to take note of green harms more seriously.⁵

Traditional criminology: (i) attributes a narrow definition to “green crime” as any activity in violation of environmental protection laws; (ii) views crimes as acts committed against the State; (iii) adopts an anthropocentric approach focussing only on human beings as perpetrators and victims; (iv) examines breaches of the law as the problem; and (v) ignores marginalization in perpetration and victimization of crime.

Within ecological justice discourse, there is clarion call to address harms to the environment and non-human animals.⁶ The Special Issue of *Theoretical Criminology* (1998) suggested “that the time is right for criminology to take a keen theoretical interest in green issues.”⁷ This expanded interest in green criminology (GC) exponentially,⁸ and GC emerged as a new ‘green field’ of study,⁹ offering ingenious theoretical and empirical developments regarding harms against non-human animals and the environment.¹⁰ But, apropos the definition of green crimes; the nature of the criminality involved; potential solutions; and the content and priorities of policy, opinions are divided.¹¹ Against this backdrop, the present article attempts to analyse the definitions of green crimes, the major issues in GC, and the scope of GC in restorative

* LL.M, Ph. D, Asst. Professor, Government Law College, Trivandrum : sajikumarnl@gmail.com

*LL.M, Ph. D, Asst. Professor, Government Law College, Trivandrum : sanjuasokan1973@gmail.com

³ Sato & Lindenmayer, “Meeting the Global Ecosystem Collapse Challenge” *Conservation Letters*, 11 (2018)

⁴ York R., Rosa E. A. & Dietz T., “A Rift in Modernity? Assessing the Anthropogenic Sources of Global Climate Change with the STIRPAT Model” *23 International Journal of Sociology and Social Policy*, 31–51 (2003)

⁵ Lynch & Stretesky, *Exploring Green Criminology: Toward a Green Criminological Revolution* (Ashgate, Farnham, 2014)

⁶ Benton T, “Rights and Justice on a Shared Planet: More Rights or New Relations? 2(2) *Theoretical Criminology*, 149–175 (1998)

⁷ South N and Beirne P, Editors’ introduction 2(2) *Theoretical Criminology* 147-148 (1998)

⁸ Lynch M.J., “Reflections on Green Criminology and Its Boundaries” in South N. & Brisman A. (eds.), *Routledge International Handbook of Green Criminology* (Abingdon: Routledge, 2013)

⁹ South N., “A Green Field for Criminology?: A Proposal for a Perspective” 2 (2) *Theoretical Criminology*, 211-233 (1998)

¹⁰ Tourangeau, “A Systems-Based Approach to Green Criminology” 30 *Critical Criminology*, 983–999 (2022)

¹¹ Nurse, A., *An Introduction to Green Criminology and Environmental Justice* (Sage, London, 2016)

environmental justice.

II. GREEN CRIMINOLOGY: HISTORY AND SCOPE

GC focusses on environmental crimes and *harms* and explores its prevalence, causes and consequences; the responses to them and its prevention by the legal system, non-governmental organizations (NGOs) and social movements; its meaning and mediated representations.¹²

Even though the term *green criminology* was first used by Michael J. Lynch in 1990, he himself has acknowledged the contributions of scientists, ecologists and philosophers who studied ecosystems;¹³ and sociologists and criminologists who brought corporate crimes, white-collar crimes and State crimes within the ambit of criminology.¹⁴ GC is also indebted to Rachel Carson, who described how DDT entered the food chain and caused genetic damage;¹⁵ and Truhaut, the founder of ecotoxicology, who cautioned the risks that the 19th century chemical industry brought with it.¹⁶ The laws relating to environmental harms emerged from public health research that preceded GC. The same is true for wildlife protection laws.¹⁷ Animal rights were first entertained outside of GC.¹⁸

Though the Western literature relating to ecological justice fails to duly recognize the fact that wildlife management formed a part of ancient Indian thought, the contributions cannot be overlooked. *Vedas* contain hymns in praise of animals. Right of animals to co-exist with man was recognized; and they were loved, nurtured and even worshiped.¹⁹ *Yajnavalkya Smriti* prohibited the cutting of trees by prescribing punishments.²⁰ The *Isha-Upanishads* (1500-600 BC) declares: “The universe along with its creatures belongs to the land. No creature is superior to any other. Human beings should not be above nature. Let no one species encroach over the rights and privileges of other species.”²¹ Hence, GC cannot be anchored to criminology as well

¹² Brisman, A., & South, N., “Green Criminology and Environmental Crimes and Harms” 13 (1) *Sociology Compass*, 1-12 (2019)

¹³ GC would be impossible without Marxist analysis, scientific risk assessment, environmental sociology, animal rights studies, environmental justice research, eco-philosophy, etc.

¹⁴ Michael J. Lynch, “Green Criminology and Environmental Crime: Criminology that Matters in the Age of Global Ecological Collapse” 1 (1) *Journal of White Collar and Corporate Crime* (2019)

¹⁵ Carson R., *Silent Spring* (Boston, MA: Houghtlin Mifflin, 1962)

¹⁶ Truhaut R., “Ecotoxicology: Objectives, Principles and Perspectives” 1, *Ecotoxicology and Environmental Safety*, 151–173 (1977)

¹⁷ Eliason S., From the King’s Deer to a Capitalist Commodity: A Social Historical Analysis of the Poaching Law” *International Journal of Comparative and Applied Criminal Justice*, 36, 133–148 (2012)

¹⁸ Youatt W. *The Obligation and Extent of Humanity to Brutes, Principally Considered With Reference to the Domesticated Animals* (London: Compton and Ritchie, 1839)

¹⁹ M. Velmurugan, “Historical Development of Wildlife Protection in India” 2 (2) *International Journal of Current Research and Modern Education* 386-390,386 (2017)

²⁰ Jyoti D. Patel, “Environmental Protection in Ancient India” 5 (11) *International Journal of Research in all Subjects in Multi Languages* 10-15, 10 (2017)

²¹ See, *Animal Welfare Board of India v. A. Nagaraja* (2014) 7 SCC 547, at para. 44; wherein the Supreme Court of India extended the ‘right to dignity and fair treatment’ to animals.

as to Western thought.

Green crimes produce more harm and victimization than street crimes. Hence, breaking the boundaries of traditional criminology, GC focuses more on *harm*: “green crime” is defined so as to include “all types of environmental harm, regardless of legislation.”²² Adopting an eco-centric zemiological approach, GC expands the concept of victimhood to include animals (plus beings like fish and insects sensitive in perception or feeling) and the environment; and focuses on injustices resulting from acts or omissions of corporations, governments, and individuals.

Employing the ‘political economic GC’ approach, Lynch asserted that, many issues including *environmentalism* can be traced to economic, political and class interests, and more specifically, to the ability of powerful groups to manipulate and use the *environment* to preserve the basis of their power.²³ The following Canadian practices illustrate the role that power plays in determining the laws: A statute prohibits ‘unnecessary’ pain, suffering or injury of animals.²⁴ The animal agriculture industry prepares the codes of practice through the National Council composed of various interest groups. The Inspecting Agency is also represented among the said Council members. In effect, the industry itself decides what is “necessary” pain and suffering; and the vested interests of the corporations,²⁵ triumph. Such lobbies resist the revision of cruelty provisions, fearing that a shift in law would make their “normal” animal husbandry practices illegal.²⁶ Another legislation criminalises undercover investigations of animal agriculture operations, limits whistleblowing, and prohibits the recording of animal agriculture activities. The industry supports this law as it silence and criminalise persons who oppose them and render the conditions of the production of meat and fur invisible.

Highlighting the loopholes that favour industries, Green criminologists point out how such silencing adversely affects both the animals and the employees.²⁷ GC questions the role of power, and explores who are the law breakers and how justice system responds. It also asks: Who determines what is harmful and what is criminal? Who resists definitions of harm? Who

²² In the absence of any penal law, dumping of a small plastic wrapper in the sea while on the beach may not be punishable (traditional criminology), but it will be a green crime if it affects fish (green criminology).

²³ Lynch M. J., “The Greening of Criminology: A Perspective for the 1990s” *The Critical Criminologist*, 1, 2, 3–4, 11–12 (1990)

²⁴ S. 445.1(1), the Canadian Criminal Code

²⁵ Gregory Simmons, Mark Vardy & Rochelle Stevenson, “Green Criminology” (Chapter 13) in Shereen Hassan & Dan Lett (eds.), *Introduction to Criminology* (Kwantlen Polytechnic University), p. 288. See also, Pamela D. Frasch, “Gaps in US Animal Welfare Law for Laboratory Animals: Perspectives from an Animal Law Attorney” 57 (3) *ILAR Journal*, 285–292 (2016)

²⁶ Verbora, A., “The Political Landscape Surrounding Anti-Cruelty Legislation in Canada” 23(1), *Society & Animals*, 45–67 (2015). Kramer, K., Meijboom, F. L. B., “Using Breeding Technologies to Improve Farm Animal Welfare: What is the Ethical Relevance of *Telos*?” 34 *J. Agri. Environ Ethics* 2 (2021)

²⁷ Fitzgerald, A. J., *Animals as Food: (Re) connecting Production, Processing, Consumption, and Impacts* (Michigan State University Press, 2015)

and what are the ultimate victims of these actions?

GC also calls attention to the fact that many legal practices are *harmful*. For instance, legal practice involving the use of chemicals within coal industry affects air, water, plants, animals, and humans;²⁸ and the normal practices within animal agriculture industry are harmful to animals and workers.²⁹ Thus, GC recognizes a host of victims- human, non-human and ecosystem- that traditional criminology abandons, making green victimization another area of concern. In addition to victims of pollutants deemed legally safe,³⁰ there may be victims of unequal distributions of pollution³¹ or unequal enforcement of environmental law.³² Some of them, like trees or children, having no voice, shall also be protected; and be represented by researchers, governments, and law.

GC also addresses State delinquency for breach of obligations. According to, Locke's *res nullius* notion, environmental and wildlife resources "belong to no one and are, therefore, free for the taking."³³ However, as observed by the apex court of India, "the State has to act as a trustee for the benefit of the general public in relation to the natural resources so that sustainable development can be achieved in the long term. Such role of the State is more relevant today, than, possibly, at any point of time in history with the threat of climate catastrophe resulting from global warming looming large."³⁴ Under this *public trust doctrine*, there is a responsibility to use such resources wisely in public interest.³⁵

However, even the State-owned water treatment facilities release large quantities of pollutants into waterways.³⁶ Further, history is replete with instances wherein States and corporations have commercialized water sources as mere commodities that can be owned, leased and subsequently exploited.³⁷ For instance, large area of the bank of river Beas (India) which is part of protected

²⁸ Long, M. A., Stretesky, P. B., Lynch, M. J., & Fenwick, E, "Crime in the Coal Industry: Implications for Green Criminology and Treadmill of Production" 25 (3) *Organization & Environment* 328–346 (2012)

²⁹ Sewell, C., "Removing the Meat Subsidy: Our Cognitive Dissonance around Animal Agriculture" 73(1) *Journal of International Affairs* 307–318 (2020)

³⁰ Wargo J., *Our Children's Toxic Legacy: How Science and Law fail to protect us from Pesticides* (New Haven, CT: Yale University Press, 1998)

³¹ Bullard R. D., *Dumping in Dixie: Race, Class, and Environmental Quality* (Boulder : Westview Press, 2008)

³² Spina, "Environmental Justice & Patterns of State Inspections" 96 *Social Sci. Quarterly*, 417–429 (2015)

³³ Weston B & Bollier D, *Green Governance: Ecological Survival, Human Rights and the Law of the Commons*, 127 (Cambridge University Press, New York, 2013)

³⁴ *M.C Mehta v. Kamal Nath*, (1997) 1 SCC 388

³⁵ Joseph L. Sax, "Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention" 68 (1) *Michigan Law Review* 471 (1970); Blumm & Wood, *Public Trust Doctrine in Environmental and Natural Resources Law* (Carolina Academic Press, 2013). The American law on the subject is primarily based on the decision of the US Supreme Court in *Illinois Central R.R. Company v. Illinois* 146 US 687 (1982)

³⁶ Lynch MJ, Stretesky PB & Long MA, "State and Green Crimes Related to Water Pollution and Ecological Disorganization: Water Pollution from Publicly Owned Treatment Works (POTW) Facilities across US States" (Palgrave Communications, 2017)

³⁷ Lynch & Stretesky, "The Distribution of Water-Monitoring Organizations Across States: Implications for

forest has been given by Himachal Pradesh Government on a lease purely for commercial purposes to the Motels. The construction work undertaken by the motel for channelizing the main course has divided the main stream into two.³⁸

This kind of unholy alliance may ultimately affect the fundamental right to water,³⁹ as testified by another case- *Coca-Cola case*⁴⁰- which epitomised a classic tug of war: –panchayat’s right to clean water for potable as well as agricultural purposes vs. MNC’s right to extract groundwater for manufacturing soft drinks. The case brought to centre stage the fundamental issues: who has the primary decision-making rights over water– the people, the elected panchayat, the State or the Central government? What are the primary use of water – domestic, irrigation, or industrial? Which is superior – water for survival or water for profit?⁴¹ Green criminologists note that the harms relating to water fall outside the sphere of criminal law; and modes of enforcement are limited to regulatory or administrative measures to rectify the problem and allow the operator to continue their business rather than imposing deterrent punishment.

III. MAJOR ISSUES IN GREEN CRIMINOLOGY

Lack of a precise definition of ‘green crime’ is a major issue in GC. It renders the establishment of the field’s boundaries difficult; and the researchers may not be able to logically infer theories, assumptions and hypotheses. White’s definition is restricted to harms that relate to wildlife conservation and wildlife harm.⁴² Lynch’s definition is dominated by political economic approach.⁴³ Beirne’s definition focusses on animal abuse⁴⁴ and there is no direct reference as to whether the harm in question is a violation of law. Numerous human behaviours cause harms to ‘non-human’ animals. Generally, crimes against animals are consumption-related.⁴⁵ Despite

Community Policing” 36 (1) *Policing*, 6–26 (2013)

³⁸ *M.C Mehta v. Kamal Nath*, (1997) 1 SCC 388. The apex court held that the Government committed patent breach of public trust.

³⁹ Johnson H, South N and Walters R, The Commodification and Exploitation of Fresh Water: Property, Human Rights and Green Criminology 44 *Int J Law Crime Justice* 146–162 (2016)

⁴⁰ *Perumatty Grama Panchayat v. State of Kerala*, 2004 (1) KLT 731 (Kerala High Court)

⁴¹ C.R. Bijoy, “Kerala’s Plachimada Struggle” 41(41) *E.P.W* (October, 2006)

⁴² He classifies environmental crimes into (i) brown crimes (harms in urban landscapes); (ii) white crimes (new technology related); and (iii) green crimes. White R., *Crimes against Nature: Environmental Criminology and Ecological Justice* (Cullompton, England: Willan, 2008)

⁴³ He defines it as: (i) harms caused to living beings through the creation of environmental hazards; (ii) existing at the local and global levels; (iii) outcomes tied to corporate and State crimes; and (iv) the subject matter of radical criminology and political economic theory, and its concern with class analysis. Lynch, “The Greening of Criminology: A Perspective for the 1990s” *The Critical Criminologist*, 11 (1990)

⁴⁴ He defines animal abuse as any act that contributes to pain, suffering, or death of an animal or that threatens its welfare. Abuse may be physical, psychological, or emotional; may involve active maltreatment or passive neglect or omission; and may be direct or indirect, intentional or unintentional. Beirne P., “For a Non-speciesist Criminology: Animal Abuse as an Object of Study” 37 *Criminology*, 121 (1999)

⁴⁵ Beirne P., “Theriodicide: Naming Animal Killing” *International Journal for Crime, Justice and Social*

this causal link, defining individual crimes against animals becomes inevitable. For instance, there is a need to examine crimes against companion animals, which include abuse or exploitation in the home, breeding or marketplace; and the “abduction” of wildlife for the companion animal market.⁴⁶

Further, while individuals pollute ecosystems, corporate pollution matters more; while individuals violate local pesticide laws, it is pesticide manufacturers that should draw attention; though individuals cut down trees, the bigger problem is economically driven deforestation; while individuals harm a companion or farm animal or member of a wildlife species, the bigger harms are caused by the animal treadmill of production, including pet industry, laboratory animal industry, clothing industry, and so on.⁴⁷ The US statistics provide a quantitative example.⁴⁸

Wildlife crimes, particularly trafficking in endangered species⁴⁹ have become significant GC issues.⁵⁰ In conservation criminology, wildlife crimes are defined as violations of law, and empirical studies are conducted mainly on poaching⁵¹ and illegal fishing.⁵² Harms against animals on factory farms⁵³ or the exploitation of animal labour in agricultural or industrial sector⁵⁴ are generally left unaddressed. Illegal killing of wildlife within farming and ranching areas, has caught the attention of scholars only recently. Killing of predators like wolves and lynx are often characterized as a form of resistance.⁵⁵ Thus, killing an animal can be legal in

Democracy, 3, 50–67. (2014)

⁴⁶ Sollund R. “Animal Trafficking and Trade: Abuse and Species Injustice” in Walters R., Westerhuis D. S., & Wyatt T. (eds.), *Emerging Issues in Green Criminology* 72–92 (London: Palgrave-Macmillan, 2013)

⁴⁷ Sollund R. “Animal Trafficking and Trade: Abuse and Species Injustice” in Walters R., Westerhuis D. S., & Wyatt T. (eds.), *Emerging Issues in Green Criminology* (London: Palgrave-Macmillan, 2013)

⁴⁸ About 2.6 million companion animals are euthanized annually, with individuals implicated as the offenders. But, 2.5 million wildlife are killed by U.S. Department of Agriculture, Animal Health and Plant Inspection Service (Lynch M. J., “To Protect and Kill: United States Fish and Wildlife Service’s Management of Human-Wildlife Conflict, 1996-2011” *Society & Animals*, 26, 174–196 (2018)) More than 820,000 animals *other than* mice, rats, birds, fish, and amphibians are killed in laboratories. <https://animalclock.org>

⁴⁹ Schneider JL, “Reducing the Illicit Trade in Endangered Wildlife: The Market Reduction Approach” 24(3) *Int J Law Crime Justice* 274–295 (2008)

⁵⁰ Goyes D. R. & Sollund R., “Contesting and Contextualising CITES: Wildlife Trafficking in Colombia and Brazil” *International Journal for Crime, Justice and Social Democracy*, 5, 87–102 (2016); Van Uhm D, *The Illegal Wildlife Trade: Inside the World of Poachers, Smugglers and Traders* (Springer, Rotterdam, 2016); Wyatt T, *Wildlife Trafficking: A Deconstruction of the Crime, the Victims and the Offenders* (Palgrave Macmillan, Basingstoke, 2013)

⁵¹ Pires S. F. & Clarke R. V., “Are Parrots CRAVED? An Analysis of Parrot Poaching in Mexico” *Journal of Research in Crime and Delinquency*, 49, 122–146 (2012)

⁵² Petrossian, Rolf & Clarke, “Illegal Long-line Fishing & Albatross Extinction Risk” 52, *Oryx*, 336–45 (2018)

⁵³ Wrock R. K., “Ignorance Is Bliss: Self-Regulation and Ag-Gag Laws in the American Meat Industry” *Contemporary Justice Review*, 19, 267–279 (2016)

⁵⁴ Stretesky P. B., Long M. A. & Lynch M. J., *The Treadmill of Crime: Political Economy and Green Criminology* (New York, NY: Routledge, 2013); Lynch M. J. & Genco L, “Animal Abuse Registries: Expanded Interest in Animal Protection Mimics Other Criminal Justice Policies, But Should Green Criminologists Hop on the Band-Wagon?” *Contemporary Justice Review* 21, 351–370 (2018)

⁵⁵ Von Essen & Allen, “Reconsidering Illegal Hunting as a Crime of Dissent: Implications for Justice and

one form but illegal in another. For instance, in Norway, a hunter who kills a wolf without a licence can be sentenced to up to five years' imprisonment; typically, offenders may receive up to one year in prison for such a crime. However, the government's nature 'management' policy which permits killing of half of the Norwegian wolf population, is not an environmental crime. Wolves and other large predators are criminalised simply for being alive and given the 'sentence' of the death penalty.⁵⁶ This illustrates "the conflict between conservation and animal protection ideologies and the needs of rural communities."⁵⁷ Similarly, killing of wildlife within hunting communities receives less attention from law enforcement agencies.

Thus, despite the fact that human kills animals in many ways, orthodox criminology defines none of these acts as similar to "homicide." It is mainly because animals are viewed "as mere appendages to humans or as property."⁵⁸ To address the issues discussed above, Beirne & South provide a broader conceptualization of green crime: "At the most abstract level," a green crime involves "the study of harms against humanity, the environment (including space) and nonhuman animals committed by both powerful institutions (e.g., governments, transnational corporations, military apparatuses) and ordinary people."⁵⁹ This broad definition should be appreciated for its scope as well as its attention to identifying specific behaviours that fit the green crime concept.

The following observations of the Indian Supreme Court is also worth mentioning in this context: "Pain and suffering are biological traits. Pain, in particular, informs an animal which specific stimuli, it needs to avoid and an animal has pain receptors and a memory that allows it to remember what caused the pain."⁶⁰ The court also quoted with approval, the statement of Professor Broom: "Behavioural responses to pain vary greatly from one species to another, but it is reasonable to suppose that the pain felt by all of these animals is similar to that felt by man."⁶¹

Counting or measuring green crimes to ascertain their extent is another issue in GC. There is no

Deliberative Uptake" 11 (2) *Crim Law Philos*, 213–228 (2015); Von Essen E, Hansen HP, Nordström H, Källström M, Peterson N and Peterson TR, "Illegal Hunting Between Social and Criminal Justice" in Donnermeyer J (ed) *Routledge International Handbook of Rural Criminology*, 319–329 (2016)

⁵⁶ Sollund, R.A., "Perceptions and Law Enforcement of Illegal and Legal Wolf Killing in Norway: Organized Crime or Folk Crime?" 3 *Palgrave Communications* 1–9 (2017)

⁵⁷ Nurse, A., "Green Criminology: Shining a Critical Lens on Environmental Harm" 3 *Palgrave Communications* 10 (2017); Sollund R, "Perceptions and Law Enforcement of Illegal and Legal Wolf Killing in Norway: Organized Crime or Folk Crime?" *Palgrave Communications* (2017)

⁵⁸ Beirne P., *Murdering Animals: Writings on Theriocide, Homicide and Nonspeciesist Criminology*, 54 (London, England: Palgrave-Macmillan, 2018)

⁵⁹ Beirne P. & South N. (eds.), *Issues in Green Criminology* (Oxford, England: Willan, 2007), pp. 55–86

⁶⁰ *Animal Welfare Board of India v. A. Nagaraja* (2014) 7 SCC 547. See also, *Narayan Dutt Bhatt v. Union of India*, (2018) SCC Online Utt 645

⁶¹ D.M. Broom, "Animal Welfare and the Law" (Cambridge University Press, 1989), Chapter XIV

single location where green crimes are gathered into a whole. The data has been collected from numerous sources. It is also necessary to define what is being counted and why. These factors make the process byzantine. Sometimes, measurements are based on conviction or penalty data, leaving open questions about the dark figures of green crime. Some of them cannot be counted. For instance, crime involving deforestation raises the question of how to “count” deforestation; number of human beings, animals, or ecosystems harmed. Further, even though climate change, anthropogenic species loss, damage to Planetary Boundaries (PBs),⁶² and the Ecological Footprint (EFs)⁶³ contributed by corporations and States are decisive in this regard, these scientific, quantitative and theoretical concepts have been minimally integrated into GC.⁶⁴

IV. JUSTICE PERSPECTIVES OF GREEN CRIMINOLOGY

If ‘harm’ and ‘power’ form the two sides of the ‘GC triangle,’ it is quite natural that ‘injustice’ would form the third one. GC’s justice perspectives are trifold:⁶⁵ (i) *ecological justice*; (ii) *species justice*; and (iii) *environmental justice*. Under *ecological justice* perspective, besides human beings, “natural objects”⁶⁶ (mountains, lakes, etc.) and “non-human environmental entities”⁶⁷ (ecosystems) deserve protection and preservation in their own right. The personhood of such entities has begun to be legally recognised. In 2017, the Whanganui River in New Zealand was granted its own legal identity, “with the rights, duties and liabilities of a legal person.”⁶⁸ Citing this example, Indian courts declared Ganges and Yamuna rivers, their tributaries, Himalayas, glaciers, air, meadows, dales, jungles, forests, wetlands, grasslands, springs and waterfalls, to be legal and living entities having the status of a legal person.⁶⁹

⁶² The PBs that measure the health of the global ecosystem are freshwater use, phosphorous/nitrogen flow, ocean acidification, biodiversity integrity, climate change, stratospheric ozone depletion, atmospheric aerosol loading, land-use change, and pollution. Rockstrom J., *et al.*, “Planetary Boundaries: Exploring the Safe Operating Space for Humanity” *Ecology and Society*, 14, 32–47 (2009)

⁶³ EFs measure whether human activities are environmentally sustainable. When the EF is 1.0 or less, human activities are ecologically sustainable and replaceable by Nature’s reproductive labour. According to the Global Footprint Network, the current global EF is 1.75, meaning that each year, humans consume more bio capacity (1.75 Earths) than Nature can replace.

⁶⁴ Lynch M. J., Barrett K. L., Stretesky P. B. & Long M. A., “The Neglect of Quantitative Research in Green Criminology and Its Consequences” *Critical Criminology*, 25, 183–198 (2017)

⁶⁵ Brisman, A., & South, N., “Green Criminology and Environmental Crimes and Harms” 13 (1) *Sociology Compass*, 1-12 (2019)

⁶⁶ Stone, C., “Should Trees Have Standing? Toward Legal Rights for Natural Objects” 45, *Southern California Law Review*, 450–487 (1972)

⁶⁷ Cormac Cullinan, *Wild Law: A Manifesto for Earth Justice* (White River Junction, VT: Chelsea Green Publishing, 2011); Cormac Cullinan, “Earth Jurisprudence: From Colonisation to Participation,” in *Worldwatch Institute, State of the World 2010* (New York: W. W. Norton & Company, 2010)

⁶⁸ Section 12 Whanganui River Claims Settlement Act, 2017. In 2008, Ecuador assigned rights to Pachamama (Nature) of existence, maintenance and regeneration. In 2016, Colombia recognised the legal rights of River Atrato to protection and the joint appointment of the Indigenous people and the government as custodians of the river. Clark, C., Emmanouil, N., Page, J. & Pelizzo, A., “Can You Hear the Rivers Sing? Legal Personhood, Ontology and the Nitty-Gritty of Governance” 45 *Ecology Law Quarterly* 787-844 (2019)

⁶⁹ See, *Lalit Miglani v. State of Uttarakhand* (2017) WPIL 140/2015; *Mohd. Salim v. State of Uttarakhand*, (2017)

The intrinsic value and rights of sentient living creatures; and the duties owed to them form the basis of *species justice*.⁷⁰ Adopting the ‘maximization of overall pleasure and minimization of overall pain’ approach, it focuses on well-being of animals used for different purposes including genetic modification *via* biotechnology, food production,⁷¹ experimentation⁷² and entertainment.⁷³ Based on the concept of speciesism which argues that some species are more important than others, humans maintain discriminatory relationships with animals: whilst pets are treated as beloved family members, farm animals are dealt short horrific lives, only to be slaughtered for meat, despite the fact that the latter are also intelligent social creatures that experience emotions and possess inner lives. Some conceptions of species justice also extend to plants, in regard to the impact of habitat degradation and biodiversity loss on their existence.⁷⁴

The *environmental justice* perspective primarily focusses on the unequal impact of environmental harms. The extent of exposure to environmental harms is not the same to everyone. In US, 56% percent of people living near toxic waste sites are people of colour.⁷⁵ In Canada, indigenous people living on reserve are 90 times more likely to have no access to running water compared to non-Indigenous people.⁷⁶ The indigenous population in India has also experienced the worst of the onslaughts of neoliberal economic growth.⁷⁷

GC is, thus a call for justice in a broad sense, with a wide understanding of perpetrators of harm as well as the victims of such harm. When human-induced ecocide that violates the principles of ecological justice, species justice and environmental justice occurs, many argue that a crime has occurred. However, ecocide has not yet been accepted as an international crime by the United Nations.⁷⁸

V. ENVIRONMENTAL HARM AND RESTORATIVE JUSTICE

SCC Online Utt 367; *Court on its own motion v. The Chandigarh Administration (Sukhna lake case)*, 2020 (1) RCR (Civil) 985; Paul, Sanu, “River as a Legal Entity: An Analysis in the Light of Mohammed Salim v. State of Uttarakhand (October 3, 2018)” VIII (4) *IUP Law Review*, 33-41 (2018).

⁷⁰ In India, the Prevention of Cruelty to Animals Act was enacted in 1960 to prevention the infliction of unnecessary pain or suffering on animals.

⁷¹ Cudworth, E., “Breeding and Rearing Farm Animals” in J. Maher., H. Pierpoint & P. Beirne (eds.), *The Palgrave International Handbook of Animal Abuse Studies* (Palgrave, 2017), pp. 159–179

⁷² Menache, A., “Animals in Scientific Research” in J. Maher., H. Pierpoint & P. Beirne (eds.), *The Palgrave International Handbook of Animal Abuse Studies* 389-413 (Palgrave, 2017)

⁷³ For a discussion on various forms of cruelties meted out to animals in the name of religious/cultural practices, see, *Animal Welfare Board of India (AWBI) v. A. Nagaraja*, AIR 2014 SCW 3327

⁷⁴ White, R., “Green Victimology and Non-human Victims” 24 (2) *Intl. Rev. of Victimology*, 239–255 (2018).

⁷⁵ Covert, B., “Race Best Predicts Whether You Live Near Pollution” *The Nation* (18th February, 2016): <https://www.thenation.com>

⁷⁶ Black, K., “Tip of the Iceberg: The True State of Drinking Water Advisories in First Nations” *The Conversation* (3rd May, 2021.). <http://theconversation.com>

⁷⁷ Kaveri Gill et al., *The Political Economy of Capitalism, ‘Development’ and Resistance: The State and Adivasis of India* (2015)

⁷⁸ White & Heckenberg, *Green Criminology: An Introduction to Study of Environmental Harm*, 45-59 (2014)

Restorative justice is a new movement in the fields of criminology and victimology. It refers to an approach that seeks to repair harm by providing an opportunity for those harmed and those who take responsibility for the harm to communicate about and address their needs in the aftermath of a crime.”⁷⁹ It enables the victim, the offender and affected members of the community to be directly involved in responding to the crime. Courts and regulators worldwide are trying to tie restorative justice to environmental regulation.⁸⁰ Recently, the Chief Justice of the Chinese Supreme Court stressed the need to adhere to the idea of restorative justice and resort to plural approaches to heal the environment.⁸¹

Miranda Forsyth, *et al* argue that there is a need to hybridise or integrate restorative justice more holistically into daily regulatory environmental practice. They pose the following questions for future debate: Who are the victims? Who should have the say in restorative processes and what process should be followed to decide this? What degree of offender acknowledgement of responsibility should be a pre-requisite? What approaches are best, given that environmental offences are typically perpetrated by corporate entities? Who can speak on behalf of future or past generations and the more-than-human (animals, plants, rivers, places, ecosystems, etc.)? How is harm measured, and what account can be made of future harm? Can irreversible environmental degradation be healed, and if so, how? Can restorative justice simultaneously safeguard communities and the environment?⁸²

Striking a balance between *human rights* and *animal rights*, such as satisfying human nutritional demands through animal slaughtering, is a major challenge faced by restorative environmental justice. Ecological justice may also conflict with social justice, as illustrated by the *Rio Tinto Alcan’s smelter closure* in England. A study reveals that the closure intended to reduce greenhouse gas emissions, culminated in unintentional victimization of local inhabitants causing unemployment and poverty.⁸³ The assessment of the voices of more-than-human animals, plants and ecosystems that must be represented through humans, and the relative impunity for crimes of the ‘powerful’ also remain as challenges. As seen earlier, the State actively contribute to environmental harm. These factors blur the boundaries between the role

⁷⁹ Federal-Provincial-Territorial Ministers Responsible for Justice and Public Safety, *Principles and Guidelines for Restorative Practice in the Criminal Matters* (Government of Canada, 2018)

⁸⁰ See for instance, *Garrett v. Williams* (2007) 151 LGERA 92, *Chief Executive, Office of Environment and Heritage v. Clarence Valley Council* [2018] NSWLEC 205. Al-Alosi, H. & Hamilton, M., “Australians Should Give Victims a Voice in Tackling Environmental Crimes” *The Conversation* (2019).

⁸¹ SPC, *White Paper on China’s Environmental Resource Trial* (2020) (Retrieved from the Supreme People’s Court (SPC) of the People’s Republic of China)

⁸² Miranda Forsyth, Deborah Cleland, Felicity Tepper et al, “A Future Agenda for Environmental Restorative Justice?” 1 *The International Journal of Restorative Justice*, 17- 40 (2021)

⁸³ Davies, P.A., *Green Crime and Victimization: Tensions between Social and Environmental Justice* 18 (3) *Theoretical Criminology* 300-316 (2014)

of victim, offender, community, regulator and facilitator.

VI. CONCLUSION

GC has become a unique area of research and operates as a tool for studying, analysing, and dealing with environmental crimes and wider environmental harms hitherto ignored by mainstream criminology. GC also explores State failure in environmental protection, corporate criminality and harmful business practices.

However, most green criminologists avoid empirical research. Consequently, most empirically related questions remain unaddressed. Most quantitative GC has been by American-based or trained criminologists. Since the US has the richest empirical environmental data, the majority of empirical GC studies are anchored to US data, leaving aside valuable data from other countries. The problems raised by the *dark web* market also remain unexplored. Similarly, little attention has been paid to the victimisation of indigenous people.

Green criminologists have effectively explored environmental harms using a wide range of conceptual lenses, including capitalism, speciesism and globalisation. But there is still more to learn. While most jurisdictions protect the environment, few recognise the environment as a legal entity able to prosecute its interests. As Wijdekop argues:

*Recognising the environment as a victim of environmental crime and representing it in the restorative justice process grants Earth a voice, validity, and respect. It contributes to transforming humanity's relationship with the Earth from one of exploitation towards a duty of care.*⁸⁴

⁸⁴ Wijdekop, Femke, *Restorative Justice Responses to Environmental Harm*, 48 (Eigen Publicaties, 2019)