

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS



Open Access, Refereed Journal Multi Disciplinary
Peer Reviewed

www.ijlra.com

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FROM CONSERVATION TO CONVICTION: THE ROLE OF CRIMINAL JUSTICE IN THE INVESTIGATION AND PROSECUTION OF ENVIRONMENTAL AND WILDLIFE CRIMES.

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Abstract

The evolution of environmental crime as a regulatory issue has now reached a stage where it represents a significant challenge to the international rule of law and global security. Criminal activity in relation to the environment has reached unprecedented levels, primarily due to the unlawful use of natural resources and most significantly through illegal trafficking of wildlife. Illegal wildlife trafficking has become a substantial performed highly organized enterprise based on the illicit exploitation of natural resources, rivaling other organized crime in both economic and social costs. The purpose of this paper is to evaluate how effectively the system investigates, prosecutes, and punishes environmental crimes in light of this increasingly complex transnational and transnational legal framework.

Using a doctrinal analysis of a number of different international legal instruments, including: the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); the United Nations Convention Against Transnational Organized Crime (UNTOC); and relevant national legislation, this analysis of the wildlife crime statutes will examine whether or not the current law enforcement responses to wildlife-related crime and the prosecution of wildlife-related crime are adequate, particularly with regard to issues relating to collecting, securing and preparing evidence, jurisdictional limitations upon prosecutions, prosecutorial discretion with respect to initiating and concluding prosecutions, cooperation among agencies involved in wildlife law enforcement, and the changing role of the judiciary with respect to providing effective means for enforcing environmental accountability.

This paper claims that regulatory sanctions should no longer be merely applied to civil or administrative enforcement but must include criminal sanctions for those who violate environmental laws and argues that the current definition of environmental crime must be

expanded to encompass all violations of the law that cause damage to the environment. As this paper demonstrates, existing environmental laws have provided the necessary foundation for addressing the impacts of environmental crimes on both the criminal justice system and the environment itself.

Keywords: Environmental Criminality; Wildlife Trafficking; Transnational Organized Crime; Criminal Accountability; Environmental Justice.

Introduction

The unprecedented increase in the amount of environmental degradation and wildlife crimes has significantly changed the nature of legal discussions on the topic of environmental governance. There has been a growing number of illegal activities (such as trafficking in wildlife; logging illegally; mining illegally; dumping hazardous waste; and polluting at large scale) that fall into the category of organized, profitable criminal enterprises and occur across national borders, creating threats to biodiversity, ecological security, public health, and sustainable development.¹ These activities no longer constitute isolated violations of regulatory obligations, but instead constitute serious criminal conduct that demands a coordinated approach to investigation, effective prosecution, and appropriately punitive response. The increased participation of organized criminal networks in the illegal exploitation of natural resources underscores the limitations of traditional conservation-based approaches that rely mainly upon administering regulations and applying civil sanctions to promote compliance.

As a result of this growing acceptance that environmental harm is an issue for consideration within the context of criminal justice, we are beginning to witness the emergence of a shift in governance from one that is focused upon conservation to one that places great emphasis on ensuring accountability through the legal system. This transition signifies an overarching recognition that real environmental protection cannot occur solely through legislative efforts to prevent harm from occurring, unless accompanied by proper investigative procedures, scientifically-based evidence, efficient prosecution, and penalties imposed through the judicial system. The criminal justice system's role in investigating and prosecuting environmental crime & crimes against animals will be discussed in this paper. International instruments, the

¹. United Nations Office on Drugs and Crime (UNODC), *World Wildlife Crime Report 2024: Trafficking in Protected Species* (United Nations 2024).

Indian legal system, and current enforcement challenges will all be analyzed. The conclusion reached is that successful conservation depends on ensuring criminal liability for acts committed against the environment rather than merely having regulations relating to environmental crime.

Environmental and Wildlife Crimes: Conceptual and Legal Dimensions

There are two definitions used to define “Environmental Crime.” Environmental crime is typically understood as any act or failure to act that violates environmental law, which results in significant harm to ecosystems, biodiversity, the environment, and the well-being of all living things.² Unlike other “traditional” crimes, environmental crime often has cumulative and long-term consequences that cannot often be traced back to a specific victim and instead affect vast areas and/or future generations. The complex nature of many environmental crimes creates a significantly more difficult environment for law enforcement officials conducting investigations into these types of crimes and as a result, creates a much more difficult environment for enforcing criminal liability in environmental crime situations as compared to traditional criminal activity.

Wildlife crime is considered a part of environmental crime and is one of the most serious forms of international environmental crime, which encompasses the illegal hunting, capturing of, possessing, transporting, trading in, or commercially exploiting all species of flora and fauna that are protected under both national and international laws.³ Organized crime groups benefit financially from the illegal trade in endangered species as a result of the globalization of international markets, the rise of new technologies, and the ability for criminals to create sophisticated methods to smuggle animals across borders. Consequently, many species have become endangered by the illegal trade of ivory, rhino horn, pangolin scales, exotic birds, reptiles, and timber; and this has resulted in a loss of biodiversity and an increase in corruption (e.g. bribery, laundering money, and falsifying documents) due to the involvement of organized crimes.⁴

Environmental and wildlife crime is legally distinct from other types of regulatory violations. In addition to not being limited to the political boundaries of where the crime occurred, the

² Rob White, *Crimes Against Nature: Environmental Criminology and Ecological Justice* (Willan Publishing 2008).

³ Convention on International Trade in Endangered Species of Wild Fauna and Flora (adopted 3 March 1973, entered into force 1 July 1975) 993 UNTS 243 (CITES).

⁴ United Nations Environment Programme (UNEP) and INTERPOL, *The Rise of Environmental Crime: A Growing Threat to Natural Resources, Peace, Development and Security* (UNEP 2016).

environmental damage caused by such crimes can be irreversible. As a result, the growing body of law on environmental crime increasingly views ecological integrity as a legally protected interest that should be subject to criminal sanctions as opposed to merely administrative penalties. This legal evolution has also led to the recognition of the close connection between environmental protection, constitutional governance, sustainable development, and the rule of law. Therefore, environmental criminal law is increasingly being used to provide comprehensive investigations, prosecutions, and judicial scrutiny of severe ecological harm, moving beyond regulatory enforcement.⁵

The changes to the definition of environmental and wildlife crime has been key to understanding why criminal justice systems have become more central to overseeing environmental governance. As environmental crime became more organized, spread globally, and profitable, legal jurisdictions worldwide altered their conceptualization of environmental crimes from simply a regulation violation to true criminal violations requiring a more specialized criminal justice response.

Evolution of Criminal Justice Responses to Environmental and Wildlife Crimes

There has been an extraordinary evolution of the legal framework for responding to the degradation of the environment over the last 50 years. Environmental protection was initially viewed mainly as an administrative issue and the reliance of governments on licensing, inspections and fines to ensure compliance with environmental laws worked for most basic regulatory offences. However, these methods were insufficient in combating organized environmental crimes motivated by significant financial incentives. The rapid increase of illegal wildlife smuggling, illegal lumber trade, illegal mining and illegal cross-border disposal of waste demonstrated that systemic limitations exist in solely treating environmental violations as regulatory violations and established the need to use criminal law as a deterrent to major environmental offenses.⁶

The transition to this state of international environmental governance has been greatly assisted by recognizing that environmental crimes constitute not only ecological issues, but also represent an impediment to Sustainable Development, International Security and the Rule of Law. Legal obligations created under International instruments such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) create a legal

⁵. Michael Faure and Gunter Heine (eds), *Criminal Enforcement of Environmental Law in the European Union* (Kluwer Law International 2005).

⁶. Rob White, *Environmental Crime: A Reader* (Willan Publishing 2009).

framework for States to regulate and criminalise Illegal Wildlife Trade; whereas, the Convention on Biological Diversity (CBD), reinforces the need to conserve Biological Resources through effective domestic legislation.⁷ Recently, as an example of the growing support at the International level, International organisations such as the United Nations Office on Drugs and Crime (UNODC), INTERPOL and the International Consortium on Combating Wildlife Crime (ICCWC), have all advocated for treating Serious Environmental Offences, as a form of Organised Transnational Crime necessitating the coordination of Criminal Investigation, Intelligence Sharing, Financial Tracking, and Specialized Prosecution.⁸ This emerging, International consensus acknowledges that Conservation Objectives will not be fulfilled without Effective Criminal Accountability.

In India, the evolution of responses by the Criminal Justice System has developed in a similar manner, moving from a primarily conservation based response to a focus on improving enforcement and Criminal Sanctions. Statutory laws like the Wildlife (Protection) Act, 1972 and the Environment (Protection) Act, 1986 imposed criminal penalties for illegal acts against the environment indicating that Parliament wished to see the ecology as harmful to societal good rather than to classify these types of activities as administrative mistakes alone.⁹ Judicial construction has built upon this framework by interpreting and continuing to build the constitutional basis of environmental protection found within Article 21 of the Constitution of India to include the right to a clean and healthy environment as part of one's right to life. The Supreme Court has continuously stated that environmental governance through the effort of enforcing the specific laws and holding individuals responsible for degrading the ecology to be effective.¹⁰

Despite this application of the law as well as a long-standing historical reasoning behind criminal laws against the environment, there still are many practical problems that arise in terms of dealing with the criminal justice response to environmental offences. Environmental offences typically involve a high level of scientific sophistication, international transactions, electronic communications, fraudulent documents, and complex financial transactions and are very long to investigate. The successful prosecution of these types of offences may at times be reliant upon the existence of specialists in forensic science, interagency collaboration, witness

⁷. Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79; CITES (n 3).

⁸. International Consortium on Combating Wildlife Crime (ICCWC), *Strategic Vision 2030* (ICCWC 2022); UNODC, *World Wildlife Crime Report 2024* (n 1).

⁹. Wildlife (Protection) Act 1972; Environment (Protection) Act 1986.

¹⁰. *M C Mehta v Union of India* (1987) 1 SCC 395; *T N Godavarman Thirumulpad v Union of India* (1997) 2 SCC 267.

protection, and judicial understanding of technical evidence. Given the limitations on capacity of institutions and the long time it takes to conduct investigations as well as the low conviction rates and the lack of coherence among the various enforcement mechanisms, the deterrent effects of environmental crime laws are not as effective, especially in developing countries.¹¹ Thus, the development of criminal justice systems constitutes an entire change in our philosophy about law, and not just a new way of viewing legislation. More and more, contemporary environmental governance understands conservation actions as working together with criminal justice systems rather than opposing each other. Preventive regulations continue to be essential to protect our natural resources. However, how effective those preventive regulations are will depend on whether there exists a criminal justice system capable of investigating environmental crimes in a timely manner, prosecuting the perpetrators with a high level of rigor and imposing adequate penalties on those individuals based on the severity of the damage to the environment that they have caused. The shift away from a conservation approach to one of having prisons filled with convicted criminals reflects the creation of a new paradigm for enforcement of environmental protection through judicial accountability and adherence to, and commitment to, environmental policies.

Investigation of Environmental and Wildlife Crimes

Nature and Complexity of Environmental Investigations:

Conducting investigations into wildlife and environmental crime poses a number of unique challenges that differentiate it from the investigation of traditional criminal activity. Unlike traditional crimes which usually target individual or property / victims who can be directly connected to both the crime and its aftermath, environmental crime can have victims that are dispersed across geographical areas and have the potential for delayed impacts around the environment. In addition, environmental crimes often rely on complex scientific evidence and are carried out across multiple jurisdictions by organized crime groups. Therefore, it is necessary for investigators to not only prove there is evidence that a crime was committed (and/or an illegal act was committed) but also to show how the suspect's criminal conduct caused direct environmental harm. The fact that there are many elements to an environmental investigation drives the need for specialized investigative techniques, scientific expertise and collaboration between law enforcement agencies, making conducting environmental investigations one of the most technically challenging areas of modern

¹¹. United Nations Office on Drugs and Crime (UNODC), *World Wildlife Crime Report 2024* (n 1); Financial Action Task Force (FATF), *Money Laundering from Environmental Crime* (FATF 2021) .

criminal justice systems.¹² Wildlife crime has become a sophisticated form of transnational organized criminal activity. Criminal organizations involved in the trafficking of endangered species use high-tech communication systems, fake permits, front companies, encrypted transactions and various smuggling routes to elude law enforcement.¹³ In addition to requiring investigators to work with customs, immigration, financial intelligence, and international organizations to carry out successful investigations of wildlife crime, investigators are increasingly reliant on intelligence-driven operations, financial investigations using cyber-surveillance techniques, and international cooperation through legal processes.

Environmental crimes often take a long time before they are discovered because the extent of ecological damage may not be known until there has already been irreversible damage done. Ecological crimes, such as illegal logging, toxic waste management, groundwater contamination and poaching in protected areas are usually perpetrated in relatively isolated areas, with minimal regulatory oversight. Because of the length of time it takes for these crimes to be discovered, collecting and preserving evidence significantly complicates the prosecution of these crimes. Because of these inherent characteristics, an active investigative framework is necessary, one that can create early detection of crimes while also maintaining the integrity of both scientific and documentary evidence.¹⁴

Investigative Framework and Institutional Mechanisms :

India has developed an enforcement framework that uses multiple agencies to enforce environmental crimes because of the specialised nature of environmental offences. International cooperation is also used as part of this framework. The WCCB (Wildlife Crime Control Bureau), which was created by the Wildlife (Protection) Act 1972, is the principal national agency for collecting intelligence and coordinating enforcement action in investigating organized wildlife crime.¹⁵ In carrying out its duties, the WCCB works closely with State Forest Departments, Customs, the Directorate of Revenue Intelligence (DRI), police and international organizations in preventing the illegal trafficking of wildlife and dismantling criminal organizations involved with wildlife. Forest Officers are responsible for enforcing laws regarding protected areas like national parks and wildlife refuges. This includes searching for

¹². Rob White, *Environmental Crime: A Reader* (Willan Publishing 2009).

¹³. United Nations Office on Drugs and Crime (UNODC), *World Wildlife Crime Report 2024: Trafficking in Protected Species* (United Nations 2024).

¹⁴. United Nations Environment Programme (UNEP) and INTERPOL, *The Rise of Environmental Crime: A Growing Threat to Natural Resources, Peace, Development and Security* (UNEP 2016).

¹⁵. Wildlife (Protection) Act 1972, ss 38Y–38Z.

wildlife in violations of Federal laws, seizing illegally possessed wildlife, arresting individuals for crimes against wildlife, collecting evidence for court purposes, and prosecuting violators of wildlife laws. Forest Officers have primarily operational responsibilities of enforcing the law in protected populations; however, due to the increasing involvement of organized crime in violations of environmental laws, cooperation with conventional law enforcement agencies, which have wider investigative powers under criminal procedure, is necessary for effective investigations.¹⁶

Additionally, there has been an increase in the need for international cooperation in the investigation of crimes against wildlife. Interpol and the International Consortium on Combating Wildlife Crime (ICWC) are institutions that facilitate information sharing, joint international operations, building capacity, and providing technical assistance among enforcement agencies across jurisdictions. Large-scale coordinated international operations have resulted in a significant increase in the identification of transnational wildlife trafficking networks as a result of investigators being able to share information regarding smuggling methods and routes, financial records, false documents, and organized criminal groups. The need for international cooperation demonstrates that collective institutional action will increasingly be the foundation for effective investigations than isolated domestic enforcement measures.¹⁷

The ability of these investigative mechanisms to collect legally admissible evidence that can withstand legal processes is the ultimate test of the effectiveness of these mechanisms. To investigate environmental crimes, law enforcement must use a combination of traditional police methods and scientific methods, such as wildlife forensics, digital evidence analysis, geospatial technology, and financial investigations. Forensic and evidentiary aspects of investigation of environmental crimes are foundational to successful prosecution; this topic will be discussed in a further section of this paper.

Evidentiary and Forensic Challenges in Environmental Investigations:

The success of environmental wildlife prosecutions is linked to the quality and admissibility of the evidence gathered during an investigation. Unlike regular criminal offences (which rely heavily on eyewitness testimony), environmental crimes rely primarily on scientific,

¹⁶. Wildlife (Protection) Act 1972, ch VI; see also Wildlife Crime Control Bureau, *Wildlife Crime Control Bureau: Functions and Responsibilities* (Government of India).

¹⁷. International Consortium on Combating Wildlife Crime (ICWC), *Strategic Vision 2030* (ICWC 2022); INTERPOL, *Environmental Security Programme* (INTERPOL).

documentary, or circumstantial evidence. An investigator must also develop evidence; not only establishing the commission of an environmental crime but also identifying the species of wildlife and determining the amount of environmental harm caused by the accused person's actions.¹⁸ If any procedural errors are made in the gathering or preservation of evidence collected during an environmental investigation, the chances of a successful prosecution will greatly diminish; thus, even if a serious environmental crime has been committed, the abuser could be acquitted due to errors made by the investigator.

Scientific and forensic methods are thus necessary tools for investigating environmental and wildlife crimes. Wildlife forensics labs use a variety of methods to identify where seized wildlife came from and its link or not with protected species. These methods include DNA testing, identifying the species, ballistic testing, toxicology, veterinary pathology, and morphological analysis. In addition, technology such as satellite imagery, Geographic Information Systems (GIS), data from drones, and remote sensing can be used to find out if illegal mining, deforestation, encroachment of protected areas, and habitat destruction are happening in places that are hard to access. These are all examples of how new technology is enabling enforcement agencies to find out about large-scale environmental crimes and to create objective evidence which can be used in court.¹⁹

Digital evidence has become increasingly important in modern investigations. Mobile phones, electronic communications, financial records, GPS data, video surveillance, and online marketplace records often provide evidence of how wildlife traffickers and illegal resource exploiters operate. Electronic evidence must meet the strict requirements of procedural safeguards when it comes to collecting, storing, and authenticating this type of evidence before it can be considered admissible. As important as these procedures are is maintaining an unbroken chain of custody for all physical and electronic evidence so that they are safe from tampering or other alterations throughout the investigative process, as any breaks in these chains of custody may affect the credibility of the prosecution and thus deter future environmental crimes.²⁰

¹⁸. Michael Faure and Gunter Heine (eds), *Criminal Enforcement of Environmental Law in the European Union* (Kluwer Law International 2005).

¹⁹. United Nations Office on Drugs and Crime (UNODC), *World Wildlife Crime Report 2024: Trafficking in Protected Species* (United Nations 2024).

²⁰. Bharatiya Sakshya Adhiniyam, 2023; see also *Arjun Panditrao Khotkar v Kailash Kushanrao Gorantyal* (2020) 7 SCC 1.

Institutional Challenges and the Need for Investigative Reform:

Although there have been many legislative and institutional advances, the investigation of environmental and wildlife crime remains an area with many practical barriers. Many enforcement agencies have limited resources to operate with, lack adequate forensic infrastructure and have employees who are poorly trained. Investigative work in the area of the environment can often require inter-disciplinary expertise in law, ecology, veterinary science, forensic biology, and digital investigation but there is very little of this level of expertise available within the mainstream policing entities. For this reason, investigators often have difficulty documenting crime scenes, properly collecting scientific evidence, and presenting, accurate, complicated scientific information to courts.²¹

Another ongoing problem for investigators is that there is excessive fragmentation of institutional responsibility across numerous agencies, including: Forest Departments, Law Enforcement; Customs; Revenue Intelligence; Environmental Regulatory bodies, and many others. Each of these agency types operates under differing legal authorities and focus on different operational priorities. The lack of effective means to share information across the relevant agencies can result in duplicating effort; conflicting jurisdictions and can also slow the response time for enforcement action. This is especially problematic in the area of trans-national trafficking of wildlife, where criminal organizations take advantage of differing domestic laws and a lack of co-operation between countries to escape prosecution. In addition, corruption, political interference, and poor witness protection affect the efficiency of environmental investigation. In many cases, illegal mining, illegal timber trade, and illegal trade in animals involve organized crime groups having enough financial means to impact the processes of investigation and prosecution locally. Thus, delayed reporting, long-term investigations, and flawed procedures negatively affect the rates of convictions and people's trust in environmental management. Therefore, enhancing independence of institutions, increasing the level of professional training, developing infrastructure of forensic facilities, and using intelligence-led investigation are crucial for the enhancement of effectiveness of criminal justice response to environmental crime.²²

Finally, the quality of investigation defines the success of prosecution. However, even the most perfect environmental legislation will not ensure conviction unless there is a timely

²¹. Wildlife Crime Control Bureau, *Wildlife Crime Control Bureau: Functions and Responsibilities* (Government of India); ICCWC, *Wildlife and Forest Crime Analytic Toolkit* (2nd edn, ICCWC 2022).

²². Financial Action Task Force (FATF), *Money Laundering from Environmental Crime* (FATF 2021); UNEP and INTERPOL, *The Rise of Environmental Crime* (UNEP 2016).

collection of evidence, proper investigation, and coordinated actions of the institution. Transition from conservation to conviction is thus based on an investigation that can provide legally admissible evidence that will meet strict requirements of criminal procedure. Naturally, it brings us to the next stage of the criminal justice process – the prosecution of environmental and wildlife crimes.

Prosecution of Environmental and Wildlife Crimes

The success of environmental crime law is ultimately assessed not in terms of the number of crimes discovered but rather through the conviction and punishment of wrongdoers. The investigation only establishes the factual basis of the crime while prosecution converts the available evidence into a legally valid case which is presentable in court.²³ The prosecution stage is of utmost importance in the case of environmental crimes and wildlife crimes because of the involvement of scientific evidence and due to a number of criminals involved in transnational crime as well as the complexity of laws governing such cases. Therefore, the prosecutor shall establish not only the fact of the crime being committed beyond a reasonable doubt but also that all legal procedures required for investigation of the crime were correctly followed.²⁴

Environmental crime prosecutors have to apply both legal reasoning and scientific knowledge. In establishing the liability for commission of environmental crimes, the prosecutors make use of various forensic, laboratory, and scientific documents. Consequently, the successful execution of an environmental crime prosecution depends on teamwork between the different stakeholders involved in the investigation and prosecution, including investigating officials, forensic professionals, environmental specialists and prosecuting agencies.

Apart from this, the entire process is also hampered by the peculiarities of environmental legislations in India. For instance, the Wildlife (Protection) Act and the Environment (Protection) Act come with a set of specific requirements regarding the cognizance of offences, eligibility of complainants, and seizure of wildlife items and establishment of evidence. The prosecutors should therefore ensure the observance of these provisions otherwise the procedural lapses may lead to the rejection of existing crucial evidence.²⁵

²³. Michael Faure and Gunter Heine (eds), *Criminal Enforcement of Environmental Law in the European Union* (Kluwer Law International 2005).

²⁴. United Nations Office on Drugs and Crime (UNODC), *World Wildlife Crime Report 2024: Trafficking in Protected Species* (United Nations 2024).

²⁵. Wildlife (Protection) Act 1972, ss 50–55; Environment (Protection) Act 1986, s 19.

In addition to that, the prosecution of environmental crimes involves dealing with crimes committed over long periods, requiring the proof of continuous criminal activities using documents, electronic records and other scientific forms of evidence as opposed to relying on eyewitness testimonies. For this reason, it has become necessary for the courts to resort to circumstantial evidence as well as expert evidence and scientific probabilities in addition to the normal rules of evidence. This has led to a more practical approach of the judiciary which acknowledges the complications of the field of environmental law but does not forget the essence of criminal law.²⁶

The courts have contributed significantly toward the advancement of environmental law because they have interpreted different laws governing the subject in a purposive manner while understanding the concept of environmental law as part of constitutional law. Through various decisions, courts of law in India have recognized environmental pollution as violating the right to life guaranteed under Article 21 of the country's constitution. It implies that the court must use a higher standard of scrutiny in evidentiary evaluation in cases of environmental offences. Among the principles that have been used in the application of the law include sustainable development, public trust doctrine as well as the principle of precautionary measure.²⁷

Yet, the conviction rates in environmental and wildlife crimes are still low because of the delays in investigation, absence of prosecutors' familiarities with the offences, shortage of professional forensic laboratories, the presence of hostile witnesses and slow justice. In most cases, it is the procedural error that takes the form of acquittal and serves as reason of the ineffective environmental criminal law. This situation requires special prosecutors, judicial training and institutions to deal with the complications of legal and scientific kinds of environmental crimes. Thus, processing of environmental criminals is not the final step in the criminal justice system but rather the point that connects the original idea with the crime itself.

International and Indian Legal Framework: Strengthening Criminal Accountability

The implementation of environmental laws in criminal justice sphere depends on the legal basis under which prosecution and investigation authorities operate. To comprehend that environmental and wildlife crimes are transnational essentially, the international organizations

²⁶. Rob White, *Environmental Crime: A Reader* (Willan Publishing 2009).

²⁷. *Vellore Citizens' Welfare Forum v Union of India* (1996) 5 SCC 647; *Centre for Environmental Law, WWF-India v Union of India* (2013) 8 SCC 234.

made a lot of legal instruments that represent all states the necessity to criminalize the wildlife crime. Although they do not create the uniform regulation of crimes against the environment, they provide one international legal structure that unites the national regimes.²⁸

Among these instruments, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) continues to be the key treaty governing international trade in endangered species utilizing a system of permits and restrictions. Although CITES mainly acts as a regulatory convention, for it to be successful and effective, member States need to utilize effective penal arrangements which dissuade all forms of illegal wildlife trade. The same applies for the Convention on Biological Diversity (CBD) which supports the duty of States to take action on biodiversity conservation and laws relating to sustainability of biological resources. In addition to CITES and CBD, the United Nations Convention against Transnational Organized Crime (UNTOC) provides the structure necessary for international cooperation in efforts directed against organized crime groups involved in trafficking activities and illegal logging. The establishment of the International Consortium on Combating Wildlife Crime (ICWC) confirms the reality that fighting environmental crimes requires an approach that involves investigation, intelligence sharing and prosecution rather than merely regulatory interventions in an isolated manner²⁹.

India has integrated the obligations as outlined in these international treaties in its domestic laws. The Wildlife (Protection) Act, 1972 is the main piece of legislation in India that deals with the protection of wildlife by banning hunting, managing the trade of wildlife products, and also providing for the establishment of reserved areas where hunting and other forms of exploitation are not allowed. The establishment of the Wildlife Crime Control Bureau is an important step in increasing coordination and supporting activities of intelligence, communication between different law enforcement agencies, as well as conducting investigations into organized wildlife crimes. Similarly, the Environment (Protection) Act, 1986, which was adopted right after the Bhopal Gas Tragedy has empowered the Central Government to regulate practices that affect environmental quality and hold violators liable for the breaches of the Act. Thus, in combination with the Biological Diversity Act, 2002 and the Forest (Conservation) Act, 1980, this law provides for a comprehensive legal framework in the

²⁸. United Nations Convention against Transnational Organized Crime (adopted 15 November 2000, entered into force 29 September 2003) 2225 UNTS 209; Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79.

²⁹. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (n 3); International Consortium on Combating Wildlife Crime (ICWC), Strategic Vision 2030 (ICWC 2022).

field of environmental protection in India.³⁰

The doctrine has also been supported by judicial interpretation, which has made environmental criminal law more efficient. In fact, the Supreme Court has already acknowledged the right to a pollution-free environment as part of the fundamental right to life enshrined in Article 21 of the Constitution. Cases like *M.C. Mehta v Union of India*, *T.N. Godavarman Thirumulpad v Union of India*, and *Centre for Environmental Law, WWF-India v Union of India* have consistently created an emphasis on strict enforceability of environmental laws, protecting threatened species, and the duty of government actors to conserve the environment. The Court has also incorporated other international principles like sustainable development, precautionary principle, and the public trust doctrine into Indian environmental law, thus ensuring that those who cause environmental damage are held accountable in terms of their actions.³¹

Despite the strong legal architecture, however, serious implementation deficiencies hinder effective criminal justice results. Law provisions are frequently undermined by lack of capacity for implementation, irregular enforcement processes, slow investigation, and the low rate of conviction of offenders. Often, even with strong legal safeguards, they do not work because investigative institutions do not have specialisation training, forensic facilities, and essential prosecution support. Thus, the main problem of environmental management in India is no longer that there is no legal framework; however, the issue now is that there are effective laws but they are not implemented.

Challenges in Investigation and Prosecution of Environmental and Wildlife Crimes

The existence of a number of legislations is not an assurance that environmental and wildlife laws can be enforced in a proper manner. The most serious problem is that there is no specialized expertise in investigating environmental crimes. These offences involve a lot of scientific knowledge and evidence, records, and connection to crime organizations, but enforcement agencies do not have enough knowledge and resources to investigate them properly.³² Weak coordination among institutions such as the Forest Department, Police, Wildlife Crime Control Bureau (WCCB), Customs, and other regulatory authorities often leads to inefficient investigations, duplication of efforts, and inconsistency in enforcement. In

³⁰. Wildlife (Protection) Act 1972; Environment (Protection) Act 1986; Biological Diversity Act 2002; Forest (Conservation) Act 1980.

³¹. *M C Mehta v Union of India* (1987) 1 SCC 395; *T N Godavarman Thirumulpad v Union of India* (1997) 2 SCC 267; *Centre for Environmental Law, WWF-India v Union of India* (2013) 8 SCC 234.

addition, the problem of low prosecution rates should be mentioned. Because of lack of knowledge during the investigation, evidence is not preserved properly, scientific evidence is not examined timely, and judicial process takes a lot of time, the prosecution cannot prove the guilt of an offender. The criminals dealing with wildlife smuggling and other corrupt activities take advantage of differences in jurisdictions and use them for their benefit.³³

Recommendations for Strengthening Criminal Justice Responses

To enhance the effectiveness of the criminal justice system in responding to environmental and wildlife crimes, it is necessary to apply some reforms at institutional and legal levels. The investigative agencies should receive special training in wildlife forensics, environmental science, digital evidence, and financial investigations to enhance evidence collection processes. In terms of technology, the introduction of modern technologies in environmental law enforcement will help to improve the quality of investigations as well.

The enforcement of environmental laws and regulations will require the establishment of better cooperation within the country and with INTERPOL, UNODC, and ICCWC. The cooperation among these organizations is essential for the fight against international environmental crime because lack of coordination leads to low effectiveness of the investigation. Further, the introduction of specialist prosecutors and special courts dealing with serious environmental crimes would ensure faster and more efficient trials as well as higher conviction rates.

Conclusion

Environmental and wildlife offenses have transformed from being mere instances of noncompliance with regulations to manifestations of sophisticated organized crime that jeopardize the existence of the fauna and flora on earth, ecological safety, and sustainable development. The study presented in this paper has shown that the change in the focus of environmental governance from conservation to criminal justice is a significant change in the contemporary legal realities of the world at both international and domestic levels. The effectiveness of environmental protection is determined not only by having comprehensive regulatory measures but also by the ability of the criminal justice system to conduct thorough

³². International Consortium on Combating Wildlife Crime (ICCWC), *Wildlife and Forest Crime Analytic Toolkit* (2nd edn, ICCWC 2022).

³³. United Nations Environment Programme (UNEP) and INTERPOL, *The Rise of Environmental Crime: A Growing Threat to Natural Resources, Peace, Development and Security* (UNEP 2016); Financial Action Task Force (FATF), *Money Laundering from Environmental Crime* (FATF 2021).

investigations and prosecute offenders effectively.

India has developed a powerful framework of law and institutions based on two legislative acts, namely, the Wildlife (Protection) Act of 1972 and the Environment (Protection) Act of 1986, as well as supported by the doctrine of progressive constitutional law and international commitments. However, the lack of investigative skills, forensic facilities, inter-institutional cooperation, and delays in judicial processes inhibit the enforcement of law.

The phrase "From Conservation to Conviction" thus signifies more than a mere thematic phrase; it signifies future course of environmental governance. Conservation goals can only be attained in case environmental legislation is enforced through a solid Criminal Justice system that guarantees certainty in detection, fairness in prosecution, and proportionality in punishment. It will not only raise convictions but also strengthen the rule of law in environmental governance if institutions are built up, international cooperation is sought, and scientific progress is put into effect. In final analysis, environmental protection is incomprehensive since it involves guarding the ecological justice against the unjust coordination of users of natural resources.

