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Understanding Wildlife Crimes through the Lens of Green Victimology in India

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Abstract

Wildlife crimes in India pose significant threats to biodiversity and socio-economic stability, necessitating a legal examination from the perspective of green victimology. This research explores the impacts of wildlife crimes such as poaching, illegal trade, and habitat destruction within India's Wildlife Protection Act 1972 and the Environmental Protection Act 1986. By employing green victimology, which highlights environmental harm and its broader implications, the study delves into the multifaceted dimensions of wildlife crime, exploring its causes, consequences, and the various strategies to combat it. The research emphasizes the role of organized crime in driving illegal wildlife trade and the consequent degradation of natural habitats. It advocates for recognizing wildlife as victims with inherent rights and calls for stronger legal protections, stringent enforcement mechanisms, and community-based conservation efforts. This study aims to elucidate the interconnectedness of ecological preservation and social justice through a comprehensive legal analysis, proposing sustainable solutions that address the root causes of wildlife crimes. By integrating green victimology into policy-making and conservation strategies, the research aspires to enhance the effectiveness of India's Wildlife Protection Act and Environmental Protection Act, ensuring the protection of biodiversity and the well-being of its people.

Keywords: *Biodiversity Conservation, Green Victimology, Organized Crime, Wildlife Crime, Wildlife Protection Act.*

1.0 Introduction

Wildlife crime, a branch of environmental offenses, pertains to the illegal use and trade of natural resources like the poaching of elephants, harvesting of endangered plants, and deforestation. This activity covers the manufacturing of products from wild animals, as well as their international trade, consumer sales, and possession. Several factors contribute to the rise of wildlife crime, including increasing inflation in India, the impacts of the COVID-19 pandemic, widespread job cuts, higher unemployment rates, traditional and cultural beliefs, use for alternative medicine, impatience, conflicts between humans and wildlife driven by population expansion, global economic inequalities, and thrill-seeking behavior. (Rana & Kumar, 2023a, 1473) Poaching, a major global issue of wildlife crime, is causing a significant threat to endangered species like African elephants, Asian elephants, Indian rhinos, Javan rhinos, tigers, and pangolins. The rising demand for ivory, rhino horns, tiger products, and pangolin scales is fuelling poaching in Asia and Africa. The annual trade value of this illicit trade is $7-23 billion, ranking fourth behind guns, narcotics, and people trafficking. Around 31,500 terrestrial species exist, with 24% being traded internationally, pushing them towards extinction. The lawful wildlife trade is far larger than the illegal market, with key sectors like commercial fishing, timber, and fashion contributing significantly. (Chawla et al., 2020, 154)

The population estimate of tigers in India is nearly rising to 3,000 in 2022 making them the largest population in the wild. (Roy & Kumar, 2022, 1210) Yet, tiger hunting continues to take place although it is banned, and the

states most affected include Maharashtra, Karnataka, Tamil Nadu, and Assam. However, the Wildlife Protection Act 1972 of India prohibits the sale of more than 1800 different species of wildlife animals and plants, products, and byproducts. Meanwhile, the live animals or body parts through trafficking are sold in Asia, Europe, and North America. India smuggles wildlife and products derived there and these include turtles/tortoises, pangolins, sea horses, tokay gecko, sea cucumber, parakeets/mynas/munias, wild boar, tiger/bear bones and ivory, deer/horn rhino horns, mongoose hair, snakeskin, bear bile, tiger bile, musk pod, sandalwood, sander timber and medicinal plants. (Bandyopadhyay & Bandyopadhyay, 2022a, 57)

Despite various efforts to protect wildlife in India, the crime organized as the complete business of wildlife trafficking requires urgent help and support from forest specialists and forensic investigation bureaus. Interactions between humans and wildlife have become more frequent and more violent, leading to the domination of wildlife and the further destruction of vegetation and animals all over the world.

2.0 Green Victimology: A Theoretical Framework

2.1 Ecological Victimization Theory

This theory acknowledges ecosystems and non-human species as direct victims of environmental crimes, including wildlife crimes. India faces threats from poaching, illegal logging, and habitat destruction, highlighting the harm caused by short-term gains over long-term ecological sustainability. Despite legal frameworks like the Wildlife Protection Act and Environmental Protection Act, enforcement challenges persist, causing ecosystem degradation.

2.2 Environmental Inequality Theory

Environmental Inequality Theory documented the plight of indigenous tribes and other rural dwellers in India who are always on the receiving end of wildlife crimes. They have been becoming more susceptible to erosion attributed to the illicit sale of wildlife and habitat destruction, which are critical to their culture and livelihood. Despite its chief concern being large-scale dam projects, the Narmada Bachao Andolan movement is not entirely bereft of environmental justice issues of displacement and destruction of ecosystems. This theory emphasizes the importance of increasing the number of policies concerning wildlife and the environment that would take into consideration the rights of these marginalized individuals. (Rana & Kumar, 2023b, 1473)

2.3 Environmental Trauma Theory

It explores the psychological and cultural impacts of environmental degradation and wildlife crime on communities. In India, the destruction of natural landscapes and the loss of wildlife can lead to profound trauma, particularly among indigenous and rural populations who have deep cultural ties to their environment. The trauma is not just physical but also emotional and spiritual, as communities witness the depletion of the very resources that have shaped their identities for generations. For instance, the deforestation of sacred groves in various parts of India has not only disrupted local ecosystems but also led to a loss of cultural and religious significance for the communities that protect them. This theory highlights the need for a holistic approach to environmental protection, one that goes beyond legal enforcement to address the emotional and psychological well-being of affected communities.

2.4 Restorative Justice Theory

Restorative Justice Theory in environmental crimes focuses on healing and restoring ecological and human victims through community involvement in conservation efforts and ecosystem rehabilitation. In India, the concept is gaining traction through community-based conservation initiatives like the Joint Forest Management program and the Wildlife Protection Act 1972. However, success depends on active community participation and effective enforcement of legal provisions. Integrating restorative justice into wildlife and environmental policies can lead to a more sustainable and inclusive approach to conservation.

3.0 Methodological Orientation of the Study

This research paper provides a descriptive analysis utilizing secondary data sources. It gathers information from various online databases, scholarly articles, and journals to highlight the significance of the study and to meet its

primary goals. The analysis incorporates materials from books, academic journals, articles, websites, and other digital resources. The research predominantly employs qualitative methods and depends largely on secondary data.

4.0 The Impact of Wildlife Crime in India

Wildlife crime in India poses a significant threat to the country's rich biodiversity, socio-economic stability, and national security. The illegal activities associated with wildlife crime, such as poaching, illegal trade, and habitat destruction, have far-reaching impacts that extend beyond the immediate loss of animal life. These crimes not only undermine conservation efforts but also disrupt the delicate balance of ecosystems, harm local economies, and fuel social and security issues.

4.1 Biodiversity Loss

Wildlife crime in India is causing a significant loss of biodiversity, particularly in endangered species like tigers, rhinos, elephants, and leopards. The Wildlife Protection Act 1972 imposes strict penalties for these activities, but enforcement challenges and high demand for wildlife products continue to drive illegal activities. The loss of key species can disrupt ecosystems, alter food chains, and alter habitats, leading to long-term consequences for biodiversity. For instance, the decline in tiger populations affects not only the species but also prey populations and forest ecosystem health. (Narreddy & Shashidhar, 2024, 1773)

4.2 Economic Impacts

Wildlife crime has severe economic consequences, especially for local communities that rely on wildlife for their livelihoods. Illegal wildlife trade undermines sustainable tourism, a significant source of income in India. (Malaviya, 2018, 217). The decline in tiger populations in regions like Ranthambore and Sundarbans has impacted tourism, directly affecting the local economy. The destruction of ecosystems weakens services like water purification, pollination, and soil fertility. Illegal wildlife trade diverts resources for legal economic activities, leading to monetary losses at both local and national levels. The Environmental Protection Act of 1986 indirectly protects these economic interests by promoting natural resource conservation.

4.3 Social Disruption

Wildlife crime has significant social implications, especially for Indigenous and local communities who often face conflict with poachers and law enforcement. The illegal wildlife trade can cause social unrest, disrupting cultural and subsistence activities. Organized crime in wildlife activities can lead to increased violence and corruption, weakening social cohesion. The Wildlife Protection Act of 1972 emphasizes community involvement in conservation efforts, but failure to do so can exacerbate social tensions and reduce conservation effectiveness.

4.4 Security Threats

The link between wildlife crime and national security is becoming increasingly evident, as illegal wildlife trade is often connected to organized crime and terrorism. In India, wildlife crime networks are known to use the profits from illegal activities to fund other illicit operations, including arms smuggling and drug trafficking. This connection poses a significant threat to national security, as it undermines law and order and fosters corruption. The WCCB plays a crucial role in coordinating efforts to combat these crimes, but challenges remain due to the transnational nature of the networks involved. Strengthening enforcement mechanisms under the Wildlife Protection Act 1972 and enhancing international cooperation are essential steps in addressing these security threats. (Vishnupriya et al., 2024, 173)

4.5 Organized Crime in Wildlife Trade: Exploitation, Habitat Destruction, and Transnational Challenges

Organized crime in the wildlife trade represents a grave and growing threat to India's rich biodiversity. These crime syndicates are highly sophisticated, operating transnationally with well-established networks that span across continents. The illegal wildlife trade in India, driven by demand for products such as tiger bones, rhino horns, and elephant ivory, is not only a local issue but also a significant component of the global black market. These networks exploit the weaknesses in law enforcement and

the socio-economic vulnerabilities of local communities, leading to the systematic exploitation of wildlife.

Illegal trade networks have capitalized on India's diverse ecosystems, which are home to a wide range of endangered species. These networks operate through complex supply chains involving poachers, mediators, and international buyers. A prime example of the scale and organization of these networks is the "Sansar Chand Case." Sansar Chand was one of India's most notorious wildlife traffickers, responsible for the poaching of over 200 tigers and thousands of leopards. His operations were not just limited to poaching; they extended to a well-organized network that included tanneries, traders, and international buyers. Chand's arrest and subsequent conviction under the Wildlife Protection Act 1972 brought to light the deep entrenchment of organized crime in wildlife trade and the challenges faced by Indian authorities in combating these networks. (Sahu & Sethi, 2024, 163)

The demand for wildlife products, particularly in international markets, is a major driver of habitat destruction in India. The illegal trade in wildlife products often leads to significant habitat destruction, as forests are cleared for poaching, illegal logging, and other activities that support the trade. For example, the increasing demand for sandalwood has led to extensive unlawful logging of the Western Ghats, a biodiversity hotspot. This not only threatens the survival of sandalwood trees but also disrupts the entire ecosystem, affecting various species that depend on these habitats.

Moreover, the poaching of keystone species like tigers and elephants has cascading effects on their habitats (Natarajan, 2024). These species play critical roles in maintaining the ecological balance, and their removal can lead to the degradation of entire ecosystems. The demand for tiger bones in traditional medicine markets in China and Southeast Asia has led to increased poaching in India's protected areas, further endangering the already vulnerable tiger population. The case of the poaching syndicate led by the notorious poacher Veerappan in the forests of Karnataka, Tamil Nadu, and Kerala exemplifies how organized crime can lead to widespread habitat destruction and the collapse of local ecosystems.

Transnational networks pose a unique set of challenges in combating wildlife crime in India. It is challenging for national law enforcement organisations to adequately combat this problem since these networks often operate across borders. When transnational criminal organisations like gangs become involved in illicit wildlife trade, it becomes harder to tell wildlife crime apart from other types of transnational crime like drug and weapons smuggling. This interconnectedness means that efforts to combat wildlife crime must be part of a broader strategy to address transnational organized crime. (Kumawat, 2023)

One of the major challenges in combating transnational wildlife crime is the lack of coordination between countries. While India has taken steps to collaborate with international agencies such as Interpol and the World Customs Organization, there are still significant gaps in information sharing and joint operations. The "South Asia Wildlife Enforcement Network" (SAWEN) is one initiative to enhance regional cooperation. Still, its effectiveness has been limited by varying levels of commitment and capacity among member countries. (Dey et al., 2024)

5.0 Legal Frameworks for Wildlife Protection In India

India has established a robust legal framework for wildlife protection, with key legislations such as the Wildlife Protection Act, 1972, and the Environmental Protection Act, 1986, playing a crucial role in preserving biodiversity and safeguarding endangered species. These laws, along with recent legal developments, form the backbone of India's efforts to combat wildlife crimes, conserve habitats, and promote sustainable conservation practices.

5.1 Wildlife Protection Act, 1972

The WPA, 1972 is the cornerstone of wildlife conservation in India. Enacted to protect endangered species and regulate human activities in and around wildlife habitats, the Act provides comprehensive legal provisions to prevent poaching, illegal wildlife trade, and habitat destruction. The WPA establishes various categories of protected areas such as national parks, wildlife sanctuaries, and conservation reserves, where human activities are strictly regulated or prohibited. (Rana, A. K., & Kumar, N. 2023).

Under the Act, hunting of animals listed in Schedule I and Schedule II, which includes endangered species such as tigers, rhinos, and elephants, is banned, and violators face severe penalties. The penalties under Section 51 of the

WPA include imprisonment of up to seven years, fines, or both, depending on the severity of the crime. The Act also empowers authorities to seize illegally obtained wildlife products and mandates the rehabilitation of captured animals. In addition, the WPA created Wildlife Advisory Boards in states, authorized to ensure enforcement and compliance with the law.

5.2 Environmental Protection Act, 1986

The EPA, 1986 complements the WPA by addressing broader ecological issues, such as safeguarding wildlife habitats. The EPA was enacted in response to the Bhopal Gas Tragedy of 1984 and provides a framework for the prevention, control, and abatement of environmental pollution. The Act empowers the central government to regulate and restrict activities that may harm the environment, including wildlife habitats. (Ramesh, M. K. 1999).

Section 3 of the EPA authorizes the government to take measures to protect natural resources, including forests and wetlands, which are critical habitats for wildlife. The Act also mandates Environmental Impact Assessments (EIAs) for projects that may impact the environment, ensuring that activities like mining, construction, and industrial development are assessed for their potential harm to wildlife habitats. (Choudhary, S. 2024)

5.3 Recent Legal Developments

In recent years, significant legal developments have been aimed at strengthening wildlife protection in India. The establishment of the "Wildlife Crime Control Bureau" (WCCB) in 2007 marked a pivotal step in enhancing enforcement mechanisms. The WCCB works with state governments and international agencies to combat wildlife crime by tracking poaching and illegal trade networks. Amendments to the WPA have introduced stricter penalties, improved monitoring mechanisms, and enhanced coordination among enforcement agencies to deter wildlife crimes. (Hughes *et al*., 2023)

Recent provisions also emphasize community involvement in wildlife conservation. Local communities, particularly those living near protected areas, are increasingly being engaged in conservation efforts, with programs aimed at providing alternative livelihoods to reduce their dependence on wildlife resources. This participatory approach not only strengthens enforcement but also fosters a sense of ownership and responsibility towards conservation.

6.0 Strengthening Legal Protection and Community Involvement

Addressing the complex issue of wildlife crime in India requires a multifaceted approach that includes strengthening legal protections, enhancing enforcement mechanisms, and engaging local communities in conservation efforts. The existing legal framework, primarily the Wildlife Protection Act 1972, provides the basis for wildlife conservation in India. However, the evolving nature of wildlife crime necessitates continuous updates and reforms to these laws.

One of the most critical aspects of strengthening legal protections is enhancing enforcement mechanisms. The WCCB has been at the forefront of efforts to combat wildlife crime in India. Established in 2007, the WCCB's mandate includes coordinating with state governments, other enforcement agencies, and international organizations to track and dismantle wildlife crime networks. However, despite its efforts, the WCCB faces several challenges, including a lack of resources, inadequate training, and corruption within local law enforcement agencies**.** (Dey et al., 2024)

To address these challenges, there is a need for stronger enforcement mechanisms that leverage technology and community involvement. The use of advanced technologies such as DNA forensics, remote sensing, and Geographic Information System (GIS) mapping can significantly improve the detection and prosecution of wildlife crimes. For example, DNA forensics can be used to trace the origin of seized wildlife products, helping to dismantle poaching networks. Similarly, remote sensing technology can monitor large forested areas for signs of illegal activities, allowing for quicker response times by enforcement agencies. (Pandey et al., 2024, 112)

Community-based conservation is another crucial component of strengthening legal protections for wildlife. Engaging local communities in conservation efforts can help reduce the incentives for poaching and illegal trade. Many communities living near protected areas depend on natural resources for their livelihoods, making them vulnerable to exploitation by wildlife traffickers. By providing alternative livelihoods, such as

eco-tourism, sustainable agriculture, and handicrafts, these communities can become active participants in wildlife conservation rather than passive victims of exploitation.

Community patrols, where local villagers are involved in monitoring wildlife populations and reporting illegal activities, have proven to be effective in several parts of India. These patrols not only assist law enforcement in preventing wildlife crimes but also foster a sense of ownership and responsibility among community members. The success of community-based initiatives such as the "Village Forest Protection Committees" in West Bengal and the "Joint Forest Management Committees" in Madhya Pradesh highlights the importance of local engagement in conservation efforts. (Pati, 2023, 1199)

Justice system reform is also essential to ensure that wildlife offenders are effectively prosecuted and punished. While the Wildlife Protection Act 1972, provides for penalties and punishments for wildlife crimes, the judicial process is often slow and fraught with challenges. Many cases of wildlife crime are delayed due to a lack of evidence, inadequate legal representation, and procedural issues (Saluja, 2022, 1). To address these challenges, there is a need for specialized wildlife courts that can expedite the prosecution of wildlife crimes and ensure that offenders are held accountable. In addition to specialized courts, training programs for law enforcement and judicial personnel are critical to improving the effectiveness of the justice system in wildlife crime cases. These programs should focus on the nuances of wildlife laws, the importance of preserving evidence, and the ethical considerations involved in wildlife crime prosecution. (Choudhary, 2024)

Finally, the role of legislation review cannot be overstated. The Wildlife Protection Act and other relevant laws require regular review to ensure they are effective and adaptable to the evolving nature of wildlife crime. Recent amendments to the Wildlife Protection Act, which increased penalties for wildlife offences and introduced new provisions for the protection of endangered species, are steps in the right direction. However, continuous legislative updates are necessary to address emerging threats such as cybercrime in wildlife trade, which has become increasingly prevalent with the rise of online marketplaces.

7.0 Recommendations for Future Legislation

7.1 Comprehensive Legal Approach

In India, the current legal framework for wildlife protection, while robust in certain aspects, lacks a truly comprehensive approach that addresses the multifaceted nature of wildlife crime. The Wildlife Protection Act 1972 and the Environmental Protection Act 1986 provide a foundation for protecting endangered species and their habitats. However, these laws primarily focus on direct offences such as poaching, hunting, and illegal trade, often neglecting the broader ecological and socio-economic factors contributing to wildlife crime. To effectively combat wildlife crime, India needs a more holistic legal approach that integrates environmental, economic, and social dimensions into its legislative framework. (Sekar & Srivastav, 2024, 281)

A comprehensive legal approach should encompass not only the protection of wildlife species but also the preservation of their habitats, regulation of land use, and control over industrial activities that threaten biodiversity (Sharma, 2015, 135). For instance, habitat destruction due to deforestation, mining, and infrastructure development often creates conditions conducive to wildlife crime by displacing species and disrupting ecosystems. Therefore, future legislation should aim to harmonize wildlife protection with sustainable development, ensuring that economic activities do not come at the expense of biodiversity.

Additionally, the legal framework should address the transnational nature of wildlife crime, which often involves cross-border smuggling and organized crime networks. Strengthening international cooperation, as well as enhancing the capacity of law enforcement agencies to tackle these crimes at both national and global levels, is crucial. The proposed legislation could include provisions for joint investigations, information sharing, and coordinated enforcement actions with other countries, particularly those that are major destinations for trafficked wildlife products.

7.2 Strengthened Penalties

One of the most pressing issues in the fight against wildlife crime in India is the inadequacy of penalties for offenders. The Wildlife Protection Act of 1972 prescribes

penalties for various offenses, including imprisonment and fines. However, these penalties are often insufficient to deter criminals, especially in cases involving endangered species, where the financial gains from illegal trade far outweigh the risks. Strengthening penalties is, therefore, a critical step toward enhancing the effectiveness of wildlife protection laws. Increasing the severity of penalties for wildlife crimes, particularly those involving endangered species such as tigers, rhinos, and elephants, would serve as a stronger deterrent. For instance, the Act currently stipulates a minimum imprisonment of three years, which may extend to seven years, along with a fine. Considering the seriousness of the crime and its long-term impact on biodiversity, these penalties should be revised to include longer prison terms and higher fines. In some cases, mandatory minimum sentences could be introduced to ensure that offenders receive appropriate punishment for their crimes. (Bhongale & Bhattacharya, 2023, 1)

Beyond imposing stricter penalties, the legal framework should also tackle repeat offenders and organized crime networks engaged in wildlife trafficking. Repeat offenders and organized crime syndicates involved in wildlife trafficking. Repeat offenders should face enhanced penalties, including longer imprisonment terms and the forfeiture of assets acquired through illegal activities. For organized crime networks, legislation should provide for the prosecution of entire criminal enterprises rather than just individual members and impose harsher penalties for those who lead or finance these operations.

7.3 Wildlife Forensics and Preservation

Investing in wildlife forensics and the preservation of seized wildlife products is another crucial aspect of enhancing wildlife protection in India. Wildlife forensics plays a key role in identifying species, determining the origin of seized products, and linking them to specific crimes. It also provides critical evidence in court, helping to secure convictions and deter future crimes. Despite its importance, wildlife forensics in India is still in its nascent stages and requires significant investment in terms of infrastructure, expertise, and technology. One of the key recommendations is to establish dedicated wildlife forensic laboratories across the country, particularly in regions with high incidences of wildlife crime. These laboratories should be equipped with advanced technology for DNA analysis, toxicology, and other forensic techniques. In addition, training programs should be developed to build a cadre of skilled wildlife forensic experts who can assist in investigations and provide expert testimony in court. (Singh, 2023, 1)

Preserving seized wildlife products is equally important, as it ensures that valuable evidence is not lost or compromised before it can be used in legal proceedings. Currently, many seized products, such as animal skins, bones, and ivory, are stored in inadequate facilities, leading to degradation and loss of evidence. To address this, the government should invest in secure, climate-controlled storage facilities designed specifically for wildlife products. These facilities should be managed by trained personnel who understand the importance of preserving evidence for legal cases. (Singh, 2023, 1)

8. Conclusion

The protection of wildlife in India requires a multifaceted approach that addresses the complexity and scope of wildlife crime. The need for a comprehensive legal strategy that integrates environmental, economic, and social considerations is evident. Such an approach would not only protect endangered species but also preserve their habitats, regulate industrial activities, and control transnational trafficking networks. The inclusion of green victimology in future legislation would further enhance the recognition of wildlife as victims of crime, promoting a shift toward eco-centric conservation efforts.

Strengthening penalties for wildlife crimes is another essential step. By increasing the severity of punishments, particularly for crimes involving endangered species, India can create a more effective deterrent against poaching, trafficking, and other illegal activities. Enhanced penalties for repeat offenders and organized crime networks, combined with better enforcement mechanisms, would further contribute to the protection of the country's biodiversity.

Investment in wildlife forensics and the preservation of seized wildlife products is crucial for the successful prosecution of wildlife crimes. Establishing dedicated forensic laboratories, training experts, and creating a national wildlife DNA database would significantly improve the ability of law enforcement agencies to investigate and prosecute offenders. Proper preservation of seized products would ensure that critical evidence is available for legal cases, leading to higher conviction rates and stronger deterrence.

Looking forward, future research should focus on the effectiveness of these recommendations in reducing wildlife crime and preserving biodiversity. Studies could

examine the impact of increased penalties on crime rates, the role of wildlife forensics in securing convictions, and the success of community-based conservation efforts in protecting endangered species. Additionally, the integration of green victimology into policy-making and conservation strategies should be explored further, with the aim of creating a more sustainable and ethical approach to wildlife protection in India.

Addressing wildlife crime in India requires a coordinated and comprehensive strategy that combines legal reform, enforcement, community engagement, and technological innovation. By adopting a holistic approach that recognizes the intrinsic value of wildlife and the interconnectedness of ecosystems, India can enhance the effectiveness of its legal framework, protect its rich biodiversity, and create a more sustainable future for all species.

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