



RESEARCH PAPER ON ILLEGAL WILDLIFE TRADE IN DIGITAL AGE: CHALLENGES FOR LAW ENFORCEMENT (A SOCIO- LEGAL STUDY)

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ABSTRACT:

Illegal wildlife trade has emerged as a significant threat to biodiversity conservation in India, further intensified by the rapid growth of digital technologies. With the widespread use of social media platforms, encrypted messaging applications, and e-commerce websites, wildlife traffickers have increasingly shifted from traditional physical markets to online networks, making detection and enforcement more complex. India, being a biodiversity-rich country and a transit hub, faces severe challenges in controlling the trade of endangered species and their derivatives, including ivory, pangolin scales, exotic birds, and reptiles. The anonymity, speed, and global reach of digital platforms facilitate covert transactions and enable organized criminal networks to operate across borders with minimal risk.

Despite the existence of stringent legal frameworks such as the Wildlife (Protection) Act, 1972, enforcement agencies struggle with issues like lack of cyber expertise, jurisdictional limitations, and inadequate technological infrastructure. Moreover, gaps in monitoring online content and the absence of specific regulations targeting digital wildlife crimes further aggravate the problem. This paper critically examines the intersection of wildlife crime and digitalization in India, highlighting emerging trends, legal challenges, and enforcement gaps. It also emphasizes the need for strengthening cyber surveillance, inter-agency coordination, and international cooperation, along with updating legal mechanisms to address evolving digital threats. The study concludes by advocating for a multidisciplinary approach combining law, technology, and public awareness to effectively combat illegal wildlife trade in the digital era.

INTRODUCTION:

Illegal wildlife trade has emerged as one of the most organized and lucrative forms of transnational environmental crime, posing a serious threat to biodiversity, ecological balance, and national security. Traditionally conducted through physical markets and clandestine networks, wildlife trafficking has increasingly shifted to digital platforms in recent years. The advent of the internet, social media, encrypted messaging services, and e-commerce platforms has transformed the nature, scale, and complexity of wildlife crime.

In India, a country recognized as one of the world's mega-biodiverse nations, the illegal wildlife trade poses a significant threat to endangered species such as tigers, elephants, pangolins, and exotic birds. The digital age has amplified these threats by enabling traffickers to operate anonymously, reach wider markets, and evade traditional law enforcement mechanisms. Platforms such as social media marketplaces, messaging applications, and dark web forums have become hotspots for illegal wildlife transactions.

From a legal perspective, India has enacted robust legislation such as the Wildlife (Protection) Act, 1972, which provides for the protection of wildlife and prescribes penalties for illegal trade. The legal provisions which governs wildlife protections are Section 9 which deals with prohibition of hunting, Section 39 which deals government ownership of wildlife, Section 49 & 49B deals with Regulation of trade in wildlife, Section 51 deals with Penalties. Additionally, provisions under the Information Technology Act, 2000 such as Section 66 deals with Computer-related offences, Section 67 deals with Publishing or transmitting obscene content (in some wildlife trade cases involving animal cruelty visuals) Intermediary Guidelines Rules, 2021 and the Indian Penal Code, 1860 such as Section 420 deals with Cheating and Section 120B deals with Criminal conspiracy may be invoked in cases involving cyber-facilitated wildlife crimes.

Despite these legal frameworks, enforcement agencies face significant challenges in adapting to the digitalization of wildlife crime. Issues such as lack of technical expertise, jurisdictional complexities, evidentiary challenges, and inadequate inter-agency coordination hinder effective enforcement.

This study adopts a socio-legal approach to examine the intersection between law, society, and technology in the context of illegal wildlife trade in India. It seeks to analyze the adequacy of existing legal frameworks and the challenges faced by law enforcement agencies in combating digitally enabled wildlife crimes.

NEED FOR THE STUDY:

The need for this study arises from the increasing use of digital platforms for illegal wildlife trade in India. Traditional enforcement mechanisms are often ill-equipped to address cyber-enabled crimes.

There is a growing gap between legal provisions and technological realities. While laws such as the Wildlife (Protection) Act, 1972, were designed for conventional forms of wildlife crime, they do not adequately address online trade.

Furthermore, the lack of coordination between cybercrime units and wildlife enforcement agencies exacerbates the problem. The study is necessary to identify these gaps and suggest reforms.

CHALLENGES AND RECOMMENDATIONS FOR LAW ENFORCEMENT:

SYNTHESIS OF LEGAL AND JUDICIAL DEVELOPMENTS IN THE DIGITAL AGE:

The trajectory of wildlife protection jurisprudence in India reveals a transformation from a statutory conservation framework to a constitutional ecological regime, wherein illegal wildlife trade is no longer treated as an isolated criminal activity but as a multidimensional threat involving biodiversity loss, organized crime, and technological misuse. The evolution of the Wild Life (Protection) Act, 1972, particularly through amendments and judicial interpretation, reflects a gradual recognition of wildlife as part of the public trust doctrine and intergenerational equity.

Judicial pronouncements have consistently reinforced that wildlife protection is intrinsically linked to the right to life under Article 21 of the Constitution. In *In Re: T.N. Godavarman Thirumulpad v Union of India*, the Supreme Court reiterated that environmental protection, including wildlife conservation, constitutes an essential component of constitutional governance and cannot be compromised for administrative convenience. This doctrinal approach has enabled courts to expand the scope of statutory provisions, ensuring that wildlife crimes are interpreted within a broader ecological context.

The recent judgment in *In Re: Saranda Wildlife Sanctuary (2025)* marks a significant advancement in judicial intervention, where the Supreme Court held the State accountable for failing to notify ecologically sensitive areas as protected zones. The Court emphasized that statutory obligations under Sections 18 and 26A of the Act are not

discretionary but mandatory, thereby reinforcing the enforceability of conservation duties. This judgment is particularly relevant in the context of illegal wildlife trade, as habitat degradation often facilitates poaching and trafficking networks.

Furthermore, the decision in *M.K. Ranjitsinh v Union of India (2025)* reflects a shift towards ecocentric jurisprudence, wherein the intrinsic value of wildlife is recognized independently of human interests. The Court's direction to adopt technological measures such as underground cabling and bird diverters to protect endangered species demonstrates an acknowledgment of the intersection between technology and conservation.

At the same time, recent enforcement actions, including the 2026 conviction by a CBI court for large-scale wildlife smuggling involving tiger and leopard parts, highlight the continuing prevalence of organized wildlife crime in India. These developments underscore the need for a more robust and technologically adaptive legal framework.

JUDICIAL TRENDS AND THEIR IMPLICATIONS FOR LAW ENFORCEMENT:

An analysis of judicial trends reveals three dominant patterns: strict interpretation of penal provisions, expansion of evidentiary standards, and increased judicial activism through continuing mandamus. Courts have consistently treated offences under Sections 9, 39, 49B, and 51 of the Wild Life (Protection) Act as serious crimes warranting stringent punishment.

The judiciary has also recognized the limitations of traditional evidence in wildlife cases. The reliance on circumstantial evidence, expert testimony, and digital records has been increasingly accepted, particularly in cases involving online wildlife trade. This shift is critical in addressing the challenges posed by encrypted communication platforms and anonymous online transactions.

The role of Public Interest Litigation has further strengthened judicial oversight. Courts have intervened to address systemic failures, such as the operation of illegal wildlife markets and the lack of enforcement against online trade. The Bombay High Court's directive to shut down an illegal animal market promoted through digital platforms exemplifies judicial responsiveness to emerging challenges.

However, despite these advancements, inconsistencies remain in the application of legal principles, particularly in balancing conservation with developmental and livelihood concerns. Judicial decisions have occasionally reflected a tension between ecological preservation and socio-economic considerations, highlighting the need for a more coherent doctrinal framework.

STRUCTURAL CHALLENGES IN ADDRESSING DIGITAL WILDLIFE TRADE:

The digitalization of wildlife trade has fundamentally altered the nature of the offence, transforming it into a network-based, transnational, and technologically mediated activity. The existing legal framework, primarily designed for physical markets, struggles to address the complexities of online platforms.

One of the primary challenges is the absence of explicit provisions dealing with digital wildlife trade under the Wild Life (Protection) Act, 1972. While Sections 49B and 49C regulate trade and commerce, they do not specifically address online transactions, creating interpretative ambiguities. Courts have attempted to bridge this gap through purposive interpretation, but legislative intervention remains necessary.

Another significant challenge is the lack of coordination between wildlife enforcement agencies and cybercrime units. The investigation of digital wildlife trade requires expertise in digital forensics, data analytics, and cross-border cooperation, which is currently inadequate.

The problem is further compounded by the use of social media and encrypted messaging applications, which facilitate anonymous transactions and hinder traceability. Judicial recognition of these challenges is evident in recent cases, but the absence of standardized protocols for digital evidence collection and admissibility continues to impede effective prosecution.

RECOMMENDATIONS FOR STRENGTHENING LEGAL AND INSTITUTIONAL FRAMEWORKS:

A comprehensive response to illegal wildlife trade in the digital age requires a multi-dimensional strategy integrating legal reform, institutional strengthening, technological adoption, and judicial innovation.

Firstly, there is a need to amend the Wild Life (Protection) Act, 1972 to explicitly address digital wildlife trade. This could include the introduction of provisions defining online wildlife offences, regulating digital marketplaces, and imposing liability on intermediaries facilitating such trade. The incorporation of provisions similar to those in cyber laws would enhance the effectiveness of enforcement.

Secondly, the establishment of specialized wildlife cybercrime units within enforcement agencies is essential. These units should be equipped with advanced technological tools and trained personnel capable of investigating online wildlife trade. The integration of artificial intelligence and data analytics can significantly improve detection and prevention mechanisms.

Thirdly, there is a need for greater inter-agency coordination, both at the national and international levels. Wildlife crime is inherently transnational, and effective enforcement requires collaboration with international organizations and foreign governments.

Fourthly, judicial capacity building is crucial. Judges must be trained in the nuances of digital evidence and emerging technologies to ensure informed decision-making. The development of specialized environmental courts or benches could further enhance judicial efficiency.

Fifthly, public awareness and community participation must be strengthened. Local communities play a critical role in wildlife conservation, and their involvement can significantly reduce the incidence of wildlife crime. At the same time, alternative livelihood opportunities must be provided to reduce dependence on illegal activities.

DOCTRINAL CONSOLIDATION AND FUTURE JUDICIAL DIRECTIONS:

The future of wildlife protection jurisprudence in India lies in the consolidation of an integrated eco-digital legal doctrine, which recognizes the interconnectedness of environmental conservation, technological advancement, and socio-economic realities. Courts must continue to expand the scope of constitutional principles to address emerging challenges, while also ensuring consistency in legal interpretation.

The adoption of the precautionary principle, public trust doctrine, and intergenerational equity must be harmonized with technological considerations, creating a comprehensive framework for addressing digital wildlife trade. Judicial innovation in areas such as digital evidence, algorithmic monitoring, and cross-border enforcement will be critical in this regard.

At the same time, the judiciary must ensure that conservation efforts do not disproportionately affect marginalized communities. A balanced approach that integrates environmental justice with ecological sustainability is essential for the long-term success of wildlife protection measures.

NORMATIVE AND POLICY-ORIENTED CONCLUSIONS:

The analysis undertaken in this study demonstrates that illegal wildlife trade in the digital age represents a complex socio-legal challenge that transcends traditional regulatory frameworks. While the Indian judiciary has played a pivotal role in strengthening wildlife protection, the rapidly evolving nature of digital technologies necessitates continuous adaptation.

The effectiveness of legal responses depends not only on the strength of statutory provisions but also on the capacity of enforcement agencies, the awareness of stakeholders, and the commitment of the judiciary to uphold ecological values. The integration of technology into legal and enforcement mechanisms offers both opportunities and challenges, requiring a nuanced and forward-looking approach.

Ultimately, the success of wildlife protection efforts in India will depend on the ability to create a holistic and adaptive legal framework that addresses the root causes of wildlife crime while ensuring effective enforcement in the digital age.

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