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Cover: Oil painting of Humpback Whale *Megaptera novaeangliae*. © R. Mahesh.



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## Legislative and evidentiary challenges faced by the Indian law enforcement agencies in social media-enabled wildlife offences

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**Abstract:** Social media has become a popular platform for enabling wildlife offences in India. Protected species or their body parts are openly traded, displayed, and promoted on such platforms in violation of the law. When enforcement agencies detect such illegal activities on a larger scale, they aim to disrupt and prosecute the offenders. During this process, they face challenges while invoking the law, and issues concerning prosecution. This study aims to explore such challenges through the lens of enforcement agencies. While there is significant literature on wildlife offences taking place on social media, the challenge that unfolds after detection of such activity online from the law and prosecution perspective remains understudied. Hence, identifying and understanding them is necessary to implement and to effectively enforce the laws on the ground. This study primarily utilises a qualitative socio-legal framework by carrying out inductive thematic analysis on interview data collected from 25 experts using Atlas.ti software. The enforcement perspectives or themes were used as foundational empirical evidence for the doctrinal analysis. The key finding on the legislation side reveal that the Wild Life (Protection) Act, 1972, does not explicitly address electronic or social media-facilitated offences, and no express provision regulates the indirect and unintentional promotion of such content. In relation to digital evidence, there are gaps in maintaining the chain of custody and complying with authentication and admissibility criteria. These findings, combined with others, offer insights into both objective and subjective hurdles incurred while proceeding in such cases. They signal the need for long-pending legislative reforms, skill development training on digital evidence handling, and awareness for effective on-ground enforcement to cope up with the contemporary challenges.

**Keywords:** Conservation, digital evidence, endangered species, illegal wildlife trade, wildlife prosecution, wildlife trafficking, wildlife law.

**Abbreviations:** AI—Artificial Intelligence | BNS—The Bharatiya Nyaya Sanhita, 2023 | BSA—The Bharatiya Sakshya Adhinyam, 2023 | CITES—Convention on International Trade in Endangered Species of Wild Fauna and Flora | GI-TOC—Global Initiative Against Transnational Organized Crime | ICCWC—International Consortium on Combating Wildlife Crime | IFAW—International Fund for Animal Welfare | IT Act—Information Technology Act, 2000 | IT Rules—The Information Technology (Intermediary Guidelines and Digital Media Ethics Code), 2021 | LEA—Law Enforcement Agency | MoEFCC—Ministry of Environment, Forest and Climate Change | SOP—Standard Operating Procedure | TRAFFIC—Trade Records Analysis of Flora and Fauna in Commerce | UNODC—United Nations Office on Drugs and Crime | UT—Union Territory | WCCB—Wildlife Crime Control Bureau | WLP—Wild Life (Protection) Act, 1972 | WWF—World Wide Fund for Nature.

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**Author contribution:** PB designed the study, interviewed the participants, analysed the data, and wrote the manuscript. JSN contributed with the legal insights, doctrinal methodology, and supported the writing of the manuscript. HVG helped with interview questions, empirical data collection design, and reviewed the manuscript.

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## INTRODUCTION

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) defines 'wildlife crime linked to the Internet' as a crime facilitated or enabled by information and communication technology platforms, networks, or applications. It includes social networking and instant chat platforms within its ambit. The global trend report indicates that social media is a major player in online trade (Eco-solve 2024), and as of January 2025, there are 491 million active social media user identities in India (DataReportal 2025). To combat wildlife crimes, non-governmental organisations like the World Wildlife Fund (WWF), Trade Record Analysis of Flora and Fauna in Commerce (TRAFFIC), and the International Fund for Animal Welfare (IFAW) came together and launched the Coalition to End Wildlife Trafficking Online. According to its 2025 Progress Update, a total of 63.3 million illegal posts and listings on wildlife were blocked or removed from more than 50 online platforms between March 2018 and December 2025 (IFAW, TRAFFIC & WWF 2025). Operation Wildnet, an initiative by India's nodal agency, the Wildlife Crime Control Bureau (WCCB) under the Ministry of Environment, Forest and Climate Change (MoEFCC), also indicates that the internet has become an enabler of wildlife crime. Around eighty cases were booked between 2017 and 2021 based on intelligence developed through e-commerce websites, social media platforms, and other online portals (WCCB 2017, 2019, 2020 & 2021).

The advertisement of wildlife items online or on social media poses a threat to protected species (Roy & Kumar 2022). The global reach of such online posts is significant, considering active engagement and views (Gondhali et al. 2024). Hence, it is essential to understand and track the intensity and quantify the scale of such activity (Stringham et al. 2021) for proper enforcement action. To address this issue, a dedicated framework for online open-source monitoring of illegal wildlife activities is needed (Pragatheesh et al. 2022). However, the use of spurious names or terminology to advertise a wildlife item pose a challenge for enforcement agencies (Sharma et al. 2018). Additionally, difficulty in identifying species or distinguishing real from fake increases the complexity of detection (TRAFFIC 2020). It has also been observed that less attention is given to smaller and non-charismatic (Fukushima et al. 2021) or lesser-known species, like the pygmy hog and sea cucumbers. Another concern is that enforcement officials are not prepared to determine and ascertain the locations of illegal virtual activities operating across multiple jurisdictions (Wingard & Pascual 2018).

They also perceive that they have a smaller workforce, resource constraints, and insufficient funding to do their jobs efficiently (Ariffin 2015).

When it comes to the governing legislation, limited observations are made in the existing literature. It has been noted that the Indian Wild Life (Protection) Act, 1972 (WLPA) and the Information Technology Act, 2000 (IT Act) do not specifically cover cyber wildlife crime (TRAFFIC 2020). There is a need for stringent provisions to address the sophisticated challenge of wildlife crime taking place online (Rana & Kumar 2023). According to the best practices on legislative reforms, nations' domestic law should also keep up with the latest trends in cybercrime (Yang 2019). Even the CITES has encouraged its parties to review their national legislation concerning wildlife crime linked to the internet (CITES Notification to Parties 2020).

Digital evidence is a fundamental aspect in prosecuting social media-linked offences. Hence, it is essential to monitor social media for evidence on wildlife offences, as it provides valuable information (Haq et al. 2023). Social media posts on misconduct or anti-wildlife conservation activity can be used as evidence in the form of images, screenshots, and geo-tagged locations (Bergman et al. 2022). Such images of species or their body parts need to be verified through morphological examination, which is sometimes challenging even for the experts (Trail 2021). It is also hard for law enforcement agencies to obtain all the digital evidence by themselves (TRAFFIC 2019). Technological sophistication in cyberspace makes it difficult to attribute digital evidence to a user or an individual (Prasad et al. 2025). Additionally, improper investigation and the failure to gather reliable digital evidence in online wildlife offences result in the accused person's acquittal (Chaurasia 2023a).

There is considerable literature covering the themes of reporting, identification, detection, monitoring, and digital evidence. However, the topic remains underexplored from the viewpoint of the implementation or enforcement side of the legal framework in relation to wildlife offences on social media from an Indian lens. Therefore, this study employs a qualitative socio-legal framework (Pound 1910) to explore the law and prosecution challenges faced by the enforcement agencies from the perspective of the subject experts. This framework provides a conceptual basis for the study by exploring the gap between 'law in books' and 'law in action' while addressing a social media-enabled wildlife offence. Hence, this present study was taken up based on the following objectives:

- (1) To explore the concerns while invoking the legal provisions in wildlife offences on social media.
- (2) To explore the prosecution challenges faced by

enforcement agencies while addressing social media-enabled wildlife cases.

The present study provides an understanding of the enforcement challenges in combating social media-enabled wildlife offences in India from the perspective of legislative frameworks, which will also serve as the baseline for future research.

## METHODOLOGY

This study employed a semi-structured interview method to gather data on law and prosecution-linked challenges faced by Indian law enforcement agencies, based on their experiences and perspectives. While the result has been quantified to highlight the number of participants corresponding to each of the themes or challenges, a qualitative approach through a thematic analysis was adopted to gain a better understanding.

Participants were identified and selected through a purposive sampling technique, aiming at those directly or indirectly involved in combating social media-enabled wildlife offence cases or assisting enforcement agencies. A total of around 15 hours were spent collecting media reports and open-source information through keywords like 'cyber,' 'wildlife,' 'crime,' 'offence' and 'social media' for each of the Indian states and union territories using Google's Advanced Search feature. As a result, a total of 257 unique online open-source media links were gathered in a span of one month in December 2023. Experts quoted in these media reports, or those who authored literature, were identified and considered for the interview. Identified experts working in a similar landscape or organisation were excluded to ensure diversification of information and perspectives. More participants were recruited based on the suggestions or referrals given by the identified experts. Thereby, a total of 25 participants were finalised to ensure a broad representation of the expert group. These participants were from the central law enforcement agencies (LEAs) (20%), state or union territory (UT) LEAs (36%), non-governmental organizations (NGO) (12%), law professionals (8%), academia (12%), and forensic experts (12%), as indicated in Figure 1.

Participants from the central and state LEAs, forest and police departments, state tiger strike forces, and the WCCB were included to ensure sample heterogeneity. On achieving thematic saturation (Guest et al. 2006), no further participants were interviewed, as the focus was on rich and in-depth information rather than statistical representation.

It is pertinent to mention that this article is a specialised

component of a larger research work on law enforcement challenges. Hence, the participants were interviewed using semi-structured questions that were explicitly developed for the larger research. The representative sample of open-ended questions specific to this part of the research, in relation to the law and prosecution challenges are listed below to provide insights into the framework for inquiry:

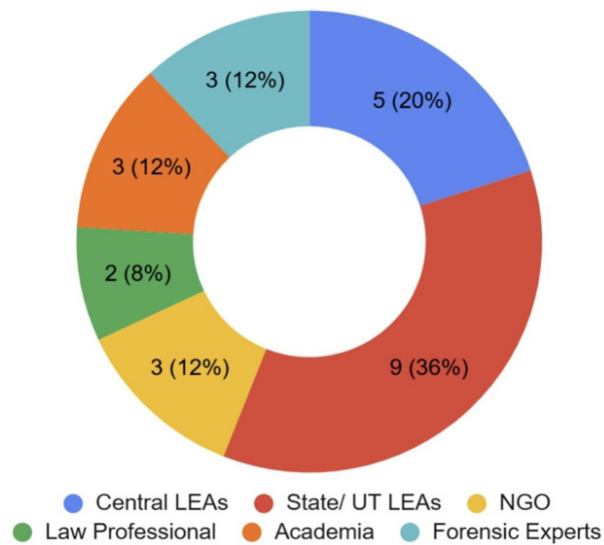
(1) In your view, are there any emerging issues while applying the existing legal framework to social media-enabled wildlife offences?

(2) Could you describe any specific concerns that are encountered in relation to digital evidence in relation to social media wildlife cases?

(3) From your perspective, what are the common frictions that emerge in the court of law in such cases?

The open-ended questions gave flexibility to the participants to share their experiences by elaborating on their responses. The online interview session was conducted for approximately one hour, which was recorded and transcribed using Google's features with the consent of the participants to ensure the accuracy of the data captured in English. Before the interview, the information sheet was shared with all the participants, outlining the objectives and other information about the study. Their consent was formally obtained, and they were also informed about the confidentiality measures, anonymity, and the right to withdraw at any stage without any consequences.

Transcripts of interviews were anonymised and imported into the qualitative analysis software tool Atlas.ti Web (version: v8.4.0-2024-08-06). The confidential and case-sensitive information that came up during the discussion was masked and excluded. An inductive thematic approach (Braun & Clarke 2006) was primarily used during the coding process. An initial round of familiarisation was carried out to identify recurring themes and patterns. With constant iteration, organisation, and comparison, refined themes were coded, developed, and structured to examine and interpret data. These themes served as foundational empirical evidence and were synthesised through a doctrinal analysis using the relevant legislative frameworks. The in-depth insights into the challenges highlighted by the subject domain experts were prioritised so that the data presented serves as an analytical and indicative function rather than a statistical generalisation. Additionally, there is also a likelihood of potential sampling bias due to the recruitment of publicly prominent and established experts with exposure to enforcement operations.



**Figure 1.** Number and percentage of the total participants (N = 25) under the expert groups.

## FINDINGS

The findings reveal diverse challenges from the perspective of the domain experts. The themes under the legislative framework were primarily associated with potential gaps in the legal provisions on tackling wildlife offences on social media. In relation to digital evidence, the emerging themes were primarily linked to knowledge, awareness, concerns and handling protocols. Regarding the broader aspect of prosecution, the data did not reveal any major challenges, as most participants believed that social-media cases have not yet proceeded to the trial phase. However, those participants who had the exposure beyond the pre-trial phase shared their insights on hurdles to the admissibility of digital evidence. Therefore, the identified themes on challenges were categorised under 'legislative' and 'evidentiary' challenges and are stated hereinafter.

### Legislative Challenges

Out of the total 25 participants, only 16 highlighted the legislative challenges faced by the enforcement agencies while implementing the law. Among the 16 participants, some shared more than one challenge based on their area of expertise and knowledge. Figure 2 indicates the list of legislative challenges coded in alphabetical order from 'A' to 'I', which were highlighted by the participants.

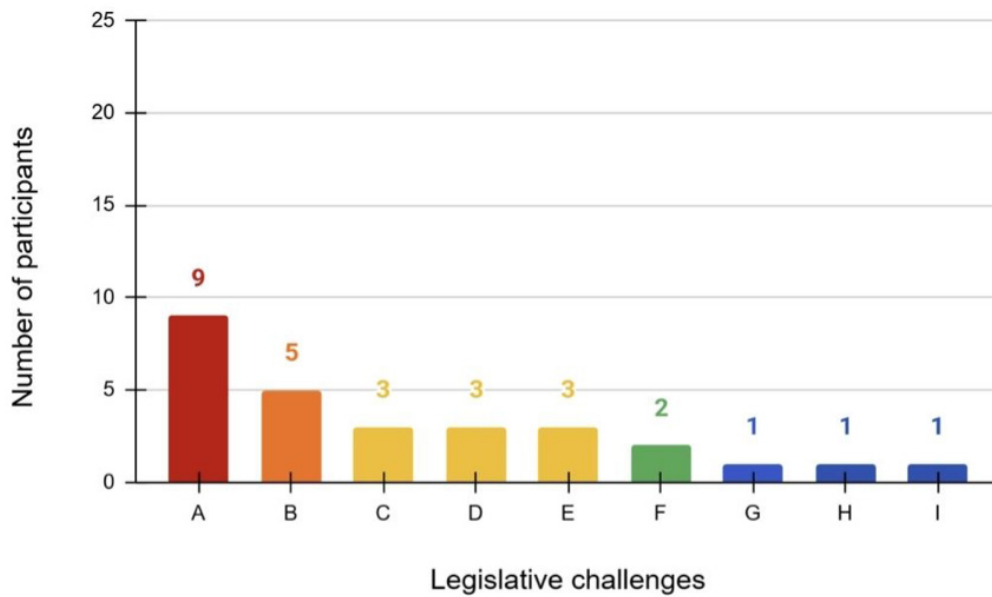
Nine participants (total N = 25) revealed that the WLPA is unclear or does not have explicit provisions regarding wildlife offences taking place on social media (indicated as 'A'). This was identified as the most prominent challenge,

as it was brought forth by the maximum number of participants. The second major challenge was that the state forest departments are not authorised under the IT Act ('B'), which was brought to the attention by five participants. Regarding this, one of the participants observed that the forest department does not have the power to directly access details of the suspect's social media handles from the platform service providers and has to go through the police.

Other challenges underlined by participants include the absence of an express provision banning promotional content on social media ('C'), dependency on the interpretation of indirect provisions of the WLPA ('D'), and, to invoke the offence of 'abetment' under WLPA, an offence has to occur ('E'). Each of these three challenges was expressed by three participants. Regarding promotional content, one of the participants expressed frustration, stating, "defense advocates ask us to show the provision where it is written that you should not advertise wildlife or its products". On the offence of 'abetment' under Section 52 of the WLPA, a participant believed that the offence must take place, and it has to be proved that the offender got motivated from a particular social media video. Another participant who has tried invoking abetment in at least three of the cases shared the experience that abetment cannot be merely instigation, but an actual act of abetment is required for the court to accept.

According to the two participants, there is no harmonization of the WLPA and the IT Act ('F') in the context of wildlife offences on social media. The participants specified that the WLPA is a special law and it must be read in conjunction with the IT Act.

It is noteworthy to mention that the other three challenges were highlighted by a minor set of experts (1 participant) out of the total (N = 25). Regarding the absence of substantive provisions under the IT Act ('G'), the participant, based on their extensive study, asserts, "There is no such provision under the IT Act that can be fully invoked if a cyber-enabled wildlife offence is happening". With respect to another challenge, the academican stressed the need for harmonization of the WLPA and social media policies ('H'). Concerning the last challenge, the WLPA does not specifically govern the spreading of wildlife-related fake or misinformation unless linked to offences('I'). The participant called it an emerging trend and shared an example of a video of lions entering a particular jurisdiction that went viral in the region, where it was never reported historically, and hence created panic in the public.



**Figure 2. Number of participants who highlighted each of the 'A' to 'I' legislative challenges.**

A—WLPA is unclear on social media offences | B—Forest department is not authorised under the IT Act | C—Absence of express provision banning promotional content | D—Dependency on the interpretation of indirect provisions of WLPA | E—To invoke abetment, an offence has to occur | F—No harmonization of WLPA and IT Act | G—Absence of substantive provisions under the IT Act | H—Gaps in harmonization between WLPA and social media policies | I—Spreading fake information is not an offence.

### Evidentiary Challenges

Among the total 25 participants, 24 highlighted the evidence-related challenges faced by the enforcement agencies. Out of these 24 participants, all of them shared at least more than one challenge based on their exposure and experience. Figure 3 provides the list of evidentiary challenges coded in alphabetical order from 'J' to 'R', as was highlighted by the participants.

When it comes to evidentiary challenges, 17 participants out of the total (N = 25) upfront felt that the forest and wildlife officials lack expertise in identification, collection, and handling of digital evidence (indicated as 'J'), hence, need capacity-building training. Although it does not come under the literal meaning of a challenge, it became indispensable to include this response, considering that it was bluntly highlighted by the maximum number of participants.

Concerning specific evidentiary challenges, the absence or gap in the chain of custody ('K') was brought into focus by 10 participants as a major concern. 'Chain of custody' is a legal term that implies sequential and complete documentation of the custody of the evidence that was seized in a case (Badiye et al. 2023).

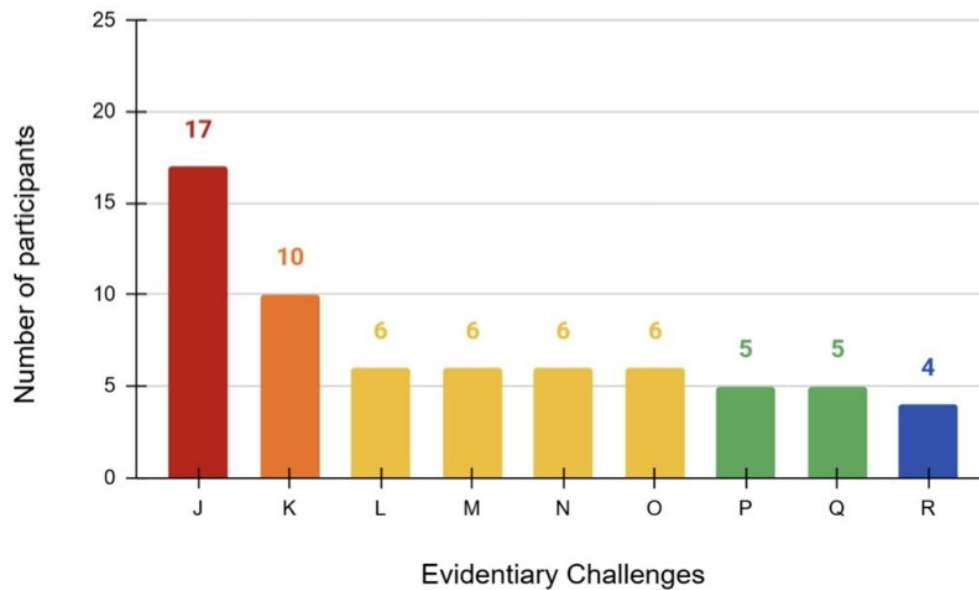
The subsequent three categories of challenges were interlinked and were brought forth by six participants. Under these categories, there were overlapping sets of participants, and they shared similar experiences and

observations. Based on their hands-on exposure, they stated that the focus of the enforcement agency is on the investigation or seizure of wildlife items or related biological evidence ('M'). Just having social media posts in the form of digital evidence is not sufficient for proving a case ('L'). Because such digital evidence is often produced or treated as corroborative evidence in a court of law ('O').

There is also another category of challenge, where six participants (N = 25) have either indicated the absence or need for a standard operating procedure (SOP) and knowledge to deal with digital evidence ('N'), apart from its related legal course of action during prosecution of a case.

Five participants mentioned that there is a lack of knowledge and awareness on the Section 65B Certificate ('P') under the Indian Evidence Act, 1872 (hereinafter referred to as the Section 63(4) Certificate as per the new Bharatiya Sakshya Adhinyam, 2023 (BSA)). Section 63(4) Certificate is a 'Certificate of Authentication' (Sonone et al. 2024) that is required to be produced before the court to ensure the admissibility of digital evidence. On this, one of the participants observed, "magistrates have refused to even consider the digital evidence in court, saying that unless you bring in 65B, we are not going to consider this".

Another challenge, that the enforcement agency does not proactively send digital evidence for digital forensics unless its authenticity is contested by the defence or



**Figure 3. Number of participants who highlighted each of the 'J' to 'R' evidentiary challenges.**

J—Forest Department needs training on digital evidence | K—Absence or gaps in the chain of custody |

L—Just a social media post as evidence is not sufficient | M—Focus is on the investigation or physical seizure | N—Absence or need for a standard operating procedure | O—Often treated as corroborative evidence | P—Lack of knowledge on the Section 63(4) Certificate | Q—Not sent for forensics, unless contested | R—Unaware of the need and generation of the hash value.

directed by the court ('Q'), was stated by five participants. Lastly, four participants who had more profound technical knowledge revealed that the enforcement agency is unaware of the need and lacks knowledge to generate the hash values ('R'). The 'hash value' is a string of numeric values that identifies data. It is an electronic fingerprint of digital data that helps to ensure that the integrity and authenticity of the digital evidence have not been compromised (Chaurasia 2023b; Supreme Today AI nd).

## DISCUSSION

The themes show a list of diverse and interlinked legislative and evidentiary challenges that are experienced by the enforcement agencies while implementing the law in social media-enabled wildlife offences. These findings are discussed below in relation to the relevant provisions of the law under various heads.

### Online Offences

The wildlife offence taking place by 'online' means includes social media within its ambit. The key finding that the WLPA has no specific provisions relating to social media offence is also consistent with the legal lacuna that Dr. Karnika Seth highlighted (TRAFFIC 2020). She stressed the need to bring in amendments due to the absence of online or cybercrime provisions for wildlife offences.

However, despite the latest parliamentary debates (Lok Sabha Debates 2022) on the WLPA amendment in 2022 relating to cyber-enabled offences, nothing in line with the same was included in the final version of the Act. According to the Wildlife Legislative Guide by the United Nations Office on Drugs and Crime (UNODC), a national law should keep up with the dynamic nature of wildlife crime online (UNODC 2018). It may be done by either automatically including electronic or distance selling within the meaning of trade or by introducing specific provisions on trade by electronic means, like the Chinese Wildlife Law (Wang & Chen 2019). Under the WLPA, the term 'trade' is not defined in terms of native species (listed under the Schedule I, II, and III). The nearest definition that exists is of a 'dealer' as the one who carries out the business of buying and selling; however, it does not elaborate on the 'means' of carrying out deals. Even though it can be interpreted to infer that it includes even by means of online or social media platforms, at present, in its current form, it is not explicit, unless a precedent is set by the court through a landmark judgment. Hence, it can be said that the law is unclear or not explicit on this aspect. Precisely, it falls short of the current realities, as the framers of the WLPA legislation in 1972 did not foresee and expect the world of the Internet revolution and the unfolding of contemporary cyber-enabled wildlife offences.

### Promotion or Advertising

The insights shared by the participants that the WLPA does not expressly regulate or restrict the act of promotion or advertisement of wild animals on social media align with our assessment. Even though the enforcement can invoke the offence of attempting to sell under Section 52 read with 44 and 49B of the WLPA for advertisement or promotional content, the advertiser has room to defend that they were just sharing information about the species and do not even possess or own them. Such instances make the investigation and establishment of the legal basis more difficult in the courts (Wingard & Pascual 2018). Hence, it's important to prove that the particular act of promotion was reasonably 'proximate' and the user had 'clear intention' to commit such an illegal act. These requirements for proving the offence of 'attempt' were held in the case of *State of Maharashtra vs Mohd. Yakub & Ors.* (1980 AIR 1111). According to the analytical toolkit published by the International Consortium on Combating Wildlife Crime (ICCWC), ideally, the existing laws of the countries should prohibit promotional wildlife advertisements by electronic means (ICCWC 2022). Indian laws do not expressly prohibit advertising of wildlife (Bhardwaj et al. 2024), and hence, it does not extend to such acts by electronic means. To put this into perspective, it is noteworthy to mention that Article 32 of the Chinese Wildlife Law 2022 prohibits the publication of advertisements in relation to the purchase, sale, and use of wildlife as an offence.

### Offence of Abetment

When it comes to the promotional content on social media, assessing the offence of 'abetment' is also relevant. Samir Sinha, in his *Handbook on Wildlife Law Enforcement in India*, gave an indication towards using the offence of 'abetment' under Section 52 of the WLPA to address the challenge of illegal advertising of wildlife crime in India (Sinha 2010). The meaning of 'abetment' as prescribed under Section 45 of the BNS includes, by means of (a) 'instigation', (b) 'engagement', and (c) 'aiding'.

Mens rea: 'Instigation' must be 'wilful' or 'voluntary' as per Explanation 1 of Section 45 of the BNS. The act of 'engagement' is associated with conspiracy and hence implies agreeable terms or shared intention. Finally, in terms of 'aiding', it must be 'intentional.' Hence, mens rea (guilt state of mind) is an essential element for the offence of abetment. It is pertinent to note that the act of promotion may also be unintentional in nature. Especially, the instances where people are unaware of the legal protection given to lesser-known species like stag beetles and share such information, which has the potential to

stimulate their indirect and unintentional demand in the market. In such a case, establishing or proving guilt intent may become challenging in the court of law while invoking Section 52 of the WLPA for abetment.

Commission of an abetted act: The participants believed that, to invoke the abetment clause against any person, an offence has to occur. However, this finding reveals a partial misconception, as Explanation 2 of Section 46 of the BNS clearly states that, in order to constitute abetment, it is not a necessary prerequisite for the offence to occur. Even the Supreme Court in the case of *CBI vs. VC Shukla and others* (1998) 3 SCC has held that abetment by means of 'instigation' and 'engagement' does not necessitate that the offence should have been committed. However, abetment through 'intentional aiding' requires the actual commission of the aided act or offence as per the Explanation 2 of Section 45 of the BNS. Therefore, in the social media-enabled wildlife offences, when there is no proof of the actual offence taking place on the ground, abetment either through 'instigation' or 'engagement' can be invoked and has to be backed by guilty intention.

Active instigation and proximity: In social media-enabled wildlife offences, the prosecution needs to prove that there is a direct link between the act committed and the act abetted. Abetment through 'instigation' is not merely tempting to do a forbidden thing, but also 'actively stimulating' a person to do it (Ratanlal & Dhirajlal 2010). The court in the case of *Abhinav Mohan Delkar vs. State of Maharashtra & Ors.* (2025 INSC 990) mentioned about the 'proximate-trigger' doctrine according to which there must be a 'live link' and 'proximity' to a temporal and causal connection between the offender and the act of abetment.

Hence, to sum it up, while abetment may be applied in the instances of illegal wildlife posts on social media, in certain instances, it may pose a challenge in proving before the court of law. Therefore, based on the facts of the case, it is important to assess the means of abetment as an act of instigation, engagement, or aiding through social media to strengthen the prosecution's arguments.

### Fake or Misinformation

Although the emerging trend of sharing fake or misinformation on wildlife prima facie may appear harmless, it impacts the attitude and mindset of the people who consume such content on social media (Tandon 2020). The bare reading of the WLPA shows that it does not cover anything related to fake or misinformation unless it is linked to other offences. In relation to the *Bharatiya Nyaya Sanhita* (BNS), 2023,

Section 353(1)(b) prohibits the circulation and publication of false information by electronic means, but its scope is limited to the extent when it is used to create fear or alarm among the public and hence, may be applied to a certain extent in cases relating to wildlife, too. Recently, in February 2026, the IT Rules 2021 were amended to include 'synthetically generated information' to regulate deepfakes or artificial intelligence (AI) content in India. The main aim is to move beyond the 'safe harbour' and have proactive compliance requirements in place to hold social media accountable and responsible. It deals with 'made using AI' kind of disclosure on the part of users, prominent labelling on the part of social media, and the removal of such content within three hours of being notified, except for the routine, good faith, or educational content. Since the amendment is fairly new, its implementation and effectiveness are yet to be seen.

### Information Technology Law

Wildlife offences on social media are cyber-enabled in nature as they are facilitated by means of online platforms. The IT Act predominantly lays down provisions for cyber-linked offences such as phishing, hacking, and identity theft in India. In relation to cyber-enabled or online content-based offences, it provides for a definite list, such as the prohibition of offensive messages, obscene material, and sexually explicit material under its Chapter XI. As this list does not include violations under other laws, it fails to prohibit violations under the WLPA as a predicate offence unless there is a violation of other offences under the IT Act. From a global perspective, a similar pattern has also been identified (Wingard & Pascual 2018). It is pertinent to mention the provisions of Section 46 of Kenya's 'Computer Misuse and Cybercrimes Act 2018' and Section 6 of the Philippines' Cybercrime Prevention Act of 2012 prescribes for additional or aggravated penalties if illegal acts are facilitated by means of the Internet or digital platforms.

On the procedural aspect, the observation made by participants that the forest department personnel are not authorised under the IT Act, was accurate. The forest department believes that they need power to investigate offences when it is related to social media or internet platforms. While they are authorised to investigate and compel the discovery of documents and objects under Section 50(8) of the WLPA, their power might appear limited on the ground. This may be arising from Section 78 of the IT Act, as it authorises only police not below the rank of inspector to investigate the offences under the Act. If any other officer apart from a police officer arrest under the IT Act, they are supposed to hand over

the offender to the officer-in-charge of the nearest police station or to the magistrate having the jurisdiction as per Section 80(2) of the IT Act. Therefore, owing to these legal mandates and also access to operational infrastructure such as cyber cells in police stations, even in social media-enabled wildlife offences, the forest department is expected or bound to work with the police.

### Harmonisation of Laws and Policies

The need for harmonisation was cited in the context that the laws should complement each other, and the social media platform policies should also align with such laws. When it comes to the WLPA and the IT Act, the general review of both laws suggests that there is no direct convergence between the two. Under Section 56 of the WLPA, the operation of other laws is not barred, which means the IT Act can be invoked in wildlife cases. Section 81 of the IT Act is also enabling because it provides for an overriding effect over other laws. However, the setback is that the IT Act does not extend to cover the violation of any other laws for the time being in force, even though it is cyber-enabled, as noted in the earlier paragraph. As a result, the harmonisation of the two laws becomes fundamentally at odds. The only way the IT Act links to social media-enabled wildlife offences is by mandating due diligence compliance requirements on intermediaries through its 2021 Rules on digital media ethics code. Regarding the policies of the social media companies, it is important to note that they have a global presence, and most of the significant ones are headquartered in the United States. These platforms mainly prioritise legal compliance in their home countries. As a result, it may or may not match the expectations of the rules and regulations of the countries where it's being used by the people (Gillespie 2018). Therefore, it is obvious that a potential gap exists between the social media policies framed by foreign-owned companies and the domestic legislation of India.

### Interpretation of the Laws

The findings pointed out that there is a dependency on interpreting indirect legislative language as a challenge. This may be stemming from a lack of training, expertise, and technical legal support. According to the report, only 40% of rangers surveyed from Asia's Tiger landscapes received law and regulation training in the past twelve months (WWF 2022). Another study that was carried out in the Mudumalai Tiger Reserve revealed that 48% of forest officers are unaware that the institutional training has content on handling wildlife crime investigation, and 33% have never received such training (Prakash 2022). An

author who carried out a study on Indian legal texts found that the average length of a legal sentence is 70 words, with a maximum of 404 (Verma 2016). Her findings indicate that, along with the legal concepts, sentence structure also increases the complexity of understanding or interpreting legal texts. Therefore, it is a valid concern that interpreting technical legal provisions is a perplexing task without receiving proper skill sets through consistent training sessions and exposure to enforcement activities.

### Nature of Digital Evidence

**Corroborative and Direct Evidence:** The findings revealed that the focus of the enforcement officials' is on 'physical seizure' of wildlife items and investigation of the offence. The social media posts are mostly treated as corroborative evidence in the court of law. This practice may be emerging from the language of Section 50(1)(c) under the WLP. As it mandates the seizure of "any captive animal, wild animal, animal article, meat, trophy or uncured trophy, or any specified plant or part or derivative thereof, in respect of which an offence against this Act appears to have been committed, in the possession of any person together with any trap, tool, vehicle, vessel or weapon used for committing any such offence". The literal scope of this provision is limited and does not extend beyond other types of evidence, which would have the potential to encapsulate even electronic or digital records. The wildlife crime investigation handbook also states that the digital evidence is strong, 'circumstantial' or 'supporting' evidence for proving the guilt of the suspect (WCCB 2013). It has been observed that the focus of the wildlife protection laws is often on real-world offences rather than on online activities. As it is very easy for online offenders to isolate themselves from liability, thus, the enforcement agency faces difficulty in establishing a legal basis in the court of law (Wingard & Pascual 2018). Whereas, the general practice in criminal law cases does not bar enforcement from filing a case based on social media posts as direct evidence due to their evidentiary value (Sowndharyaa 2024), and also because they are facts all by themselves. This was also seen in the successful conviction case of S.Ve. Shekher vs. State (2025 SCC Online Mad 6) regarding the derogatory comments made on social media against women journalists.

**Primary and Secondary Evidence:** In social media-enabled wildlife offences, digital evidence can be of a primary or secondary nature. They can either be in the form of devices that were used for posting content online or copies of broadcasted posts. Earlier, most of the digital records were considered secondary evidence. However, the new legislation, BSA, has expanded the scope of

primary evidence under Section 57 and clarified the ambit of secondary evidence under Section 58. Primary digital or electronic evidence now includes those obtained from: multiple files (Explanation 4), proper custody (Explanation 5), video recording and broadcasts (Explanation 6), and storage locations (Explanation 7), in addition to the original devices. On the other hand, secondary electronic or digital evidence includes certified copies, produced from mechanical machines, compared copies, oral or written accounts or descriptions, counterparts, and expert testimony.

### Admissibility of Digital Records

**63(4) Certificate:** Previously, there was a lack of clarity in the interpretation of the older 65B Certificate due to jurisprudential ambiguity (Sonone et al. 2024). However, the Supreme Court in the landmark case of Arjun Panditrao Khotkar vs. Kailash Kushanrao Gorantyal (AIR 2020 SC 4908) settled the stance that the Certificate is mandatory for the admissibility of secondary electronic records. This judicial clarification has now transitioned to a codified, stringent mandate under Section 63(4) of the new BSA. This new version has also introduced a mandatory hash value requirement and signature of both the person-in-charge and an expert in the standardised certificate format. The provision also mandates submission of the Certificate at the time of admission, as compared to the earlier flexible provision that allowed for the submission of the same even during the trial phase. Even in the latest case of ABS Tour & Travels vs. SNV Aviation Pvt Ltd (CS (COMM) 322/2024), the relevance of new 63(4) was reiterated. As the court noted that the Akasa airline lapsed in filing the mandatory 63(4) Certificate for the electronic PNR data, an adverse inference was drawn against them. It is important to understand here that even though the PNR data stored in a server was primary evidence, the entire airline server cannot be brought to the courtroom. Hence, to ensure its admissibility while producing its copy, Certificate 63(4) is mandatory as it serves more like a fitness test or integrity report, even for producing primary evidence.

**Hash Value:** The findings on the unawareness of the need for hash values and the lack of knowledge to generate them for the digital records are a valid concern, as it plays a significant role in ensuring the integrity of such evidence. In the case of Ram Kishan Fauji vs. State of Haryana and Ors. (CWP No.4554 of 2014), the court has emphasized the importance of hash value details to confirm that the digital evidence submitted is an accurate and true representation of the original. It is of such great significance that even minor alterations in electronic data

can bring a change in the hash value (Kumar et al. 2012). If a wildlife law enforcement officer is accused by the defence lawyer of planting incriminating evidence against the suspect, then the hash value can be recalculated and compared with the original one, and if both match, it would indicate that no tampering has been done by the enforcement officer (Chaurasia 2023b). With the latest developments, even the 63(4)(c) Certificate template under BSA has a mandatory section on attaching a hash report with the values and the algorithm (SHA1, SHA256, or MD5) through which it was obtained.

**Chain of Custody:** The gaps in the chain of custody, as noted by the participants in terms of digital evidence, are a genuine concern and pose a significant challenge in admissibility. It is important to establish and maintain a chain of custody as it assures the court that the evidence is authentic, credible, untampered, and has been accessed only by authorised personnel (Badiye et al. 2023). Electronic or digital data is more vulnerable and prone to tampering at all stages of handling, considering the pace of technological advancement (Kumar 2023). Hence, in a criminal case, the defence would always tend to challenge or point out a broken chain of custody to create doubts in the mind of the judge relating to the integrity of evidence. In the case of Mahesh Kariman Tirki and Others Vs. State of Maharashtra, With G.N. Saibaba Vs. State of Maharashtra (2024 SCC OnLine Bom 3353: (2024) 2 AIR Bom R (Cri) 389), which solely rested upon the electronic evidence, the defence argued that there were gaps in establishing the chain of custody of the seized items. According to them, the confiscated items that were kept in the malkhana were taken out from time to time and handled by multiple hands without any documented record of endorsement and re-sealing in the registry, signalling tampering. Hence, due to the lack of credibility of the digital evidence, it eventually led to an acquittal of the suspect. Although this case relates to tangible digital evidence like laptops and mobile phones, it highlights the significance and role of the chain of custody in the admissibility of evidence. Similarly, intangible digital evidence like photos or social media posts requires a separate logging protocol for documenting capture, preservation, transfer, and production, along with a hash value report and 63(4) Certificate, which was observed to be generally lacking.

**Opinion of Experts:** As was seen previously, under the BSA, submission of the 63(4) Certificate is mandatory for the admissibility of digital records. If this Certificate is presented with the expert signature, the court shall presume under Section 79 that the evidence record was duly taken by the authorised officer. Opinion of the

examiner of electronic evidence as experts under Section 39 can be sought if, during the proceedings, the court has to form an opinion on the information that was transmitted or stored. Therefore, the approach of the participants not to send digital records for forensic examination unless contested or directed by the judge in the court is legally sustainable when such evidences are corroborative. In the instances wherein these digital records are the sole ground for investigations, there will be a higher burden to obtain opinions of experts beforehand.

### Standard Operating Procedures and Trainings

The participants were of the view that there is no SOP for handling digital evidence for wildlife law enforcement agencies and that there is a need for one. A study also observed that there are no uniform procedures followed across India (Gupta & Das 2023). The Supreme Court in the case of Arjun Panditrao Khotkar vs. Kailash Kushanrao Gorantyal (AIR 2020 SC 4908) stressed that there is a need to frame rules, guidelines, and directions regarding data retention, segregation, chain of custody, preservation, stamping, and record maintenance relating to digital evidence. At a state level, some enforcement agencies like the police (Kerala Police 2021) and the Orissa Forest Department (Maharana 2024) have certain manuals or guidelines in place. However, not all the states and departments likely have access to such handbooks. In December 2023, the Supreme Court, in the petition Foundation for Media Professionals vs. Union of India (W.P. (Cri.) No. 395/2022), on model guidelines for the search and seizure of digital devices, passed an interim order directing the enforcement agencies to follow CBI's 2020 Manual. In light of this petition and the new BSA frameworks, new model guidelines or SOP at the central and state levels are mandatory and likely underway.

### RECOMMENDATIONS

The study shows that the barriers in combating social media-enabled wildlife crime go beyond the detection and investigation of such cases. Most of them cannot proceed to the trial phase. Even if they proceed, there is no successful conviction because of the weak prosecution. This shows that even if there is a law that prohibits wildlife offences in India, its enforcement or implementation in relation to social media-enabled cases remains ineffective due to various legislative and evidentiary challenges.

At the legislation level, there is a struggle to identify, interpret, and apply the accurate legal provisions on such social media-linked wildlife offences. Absence of express

prohibition on social media or online wildlife offences, coupled with higher reliance on the interpretation of the technical legal provisions are valid impediment. Even if the provisions are rightly invoked, the battle lies in successfully proving it before the court of law, which requires a specialised skill set.

Most of the evidentiary challenges primarily signalled knowledge gaps, unawareness and expertise requirements. The admissibility of the social media-related digital evidence was assessed to be a major catalyst for ensuring the success of such cases. However, there are insufficient procedural guidance protocols and trainings are also sidelined and remain under-prioritized. Therefore, in line with these, the following are some of the recommendations that may help address the challenges identified in this study.

For the lawmakers, it is recommended that under the WLPA, wildlife offences which take place by 'any means', whether 'direct' or indirect, should also be expressly prohibited to counter social media or online facilitated activities. Even the act of 'advertising', 'display', 'usage', 'utility', and sharing of 'unscientific or misinformation' that stimulates the demand for protected species should also be regulated, with an exception to educational content disseminated from authorised sources. The scope of Section 50(1)(c) WLPA may also be broadened to facilitate the seizure of all kinds of evidence, including digital, to effectively authorise the power to enforcement agencies.

At the policy level, there needs to be a dedicated enforcement division across all the states within the forest and wildlife department, whose capacity could be strategically developed in relation to the legal and technological skill sets. Such a division can collaborate and liaise with cyber cells of the state police department and local prosecutors in social media wildlife cases. A uniform SOP either directed by the centre or at a state level will act as a guiding manual for the enforcement agencies as well as for the court considering the new amendments.

The training component on the law should include modules on the WLPA, IT Act, IT Rules 2021, and the BSA. These should not be limited only to the extent of 'what the law is' but should also be supplemented by the practical realities of 'how to prove' with insights on the court procedure. Training may be backed by the subject matter experts and NGOs. It would be best to have a focused and interagency approach to the training with the involvement of the identified officers from the forest and police departments.

As the digital landscape evolves, complex challenges will continue to emerge. Social media-enabled

wildlife offences are no longer 'small scale' given their unprecedented reach. Considering its magnified gravity and cross-border impact, an interdisciplinary approach from the perspective of law, enforcement, and prosecution is a necessity to protect the endangered species.

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