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Forensic Evidence in Modern Justice: Admissibility and Judiciary Perspectives

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ABSTRACT

In contemporary criminal justice systems, forensic evidence—encompassing DNA profiling, fingerprint analysis, and expert testimonies—serves as a cornerstone for unraveling crimes and upholding trial fairness. This research delves into the admissibility criteria for forensic evidence and judicial interpretations, with a primary emphasis on India's revamped criminal framework under the Bharatiya Nagarik Suraksha Sanhita (BNSS) and Bharatiya Sakshya Adhiniyam (BSA). It scrutinizes pivotal provisions for DNA and data collection in these statutes, designed to bolster investigative rigor while sparking concerns over privacy and fundamental rights. Recent Supreme Court directives on DNA sampling underscore the imperative for judicious application of the BNSS, incorporating rigorous quality controls and standardized protocols to safeguard individual liberties. In India, judicial precedents and legislative frameworks frequently impede the optimal utilization of forensic evidence in adjudications. Comparatively, nations such as the United States and the United Kingdom leverage extensive DNA databases and sophisticated infrastructure for expedited case resolutions, whereas India's forensic laboratories grapple with capacity constraints and substantial backlogs,

addressing only a fraction of cases. Employing doctrinal analysis of Indian and international legal norms, this study identifies best practices and deficiencies. It highlights ethical dilemmas, particularly in reconciling forensic databases with personal privacy. The paper advocates enhanced judicial training in evaluating forensic evidence and capacity building for laboratory personnel to ensure accuracy. Empirical data illustrates that forensic evidence enhances justice delivery, yet India contends with resource scarcity, outdated facilities, and inadequate training. Recommendations include robust legislative safeguards, modernized laboratories, and comprehensive judicial education to optimize evidence integration. Through these reforms, India can elevate its justice system to be more efficient, precise, and equitable, aligning with benchmarks in the US, UK, and Germany. This inquiry underscores the transformative potential of forensic evidence in justice administration when supported by ethical practices, advanced technology, and proficient stakeholders.

Introduction

Forensic evidence has emerged as an indispensable instrument in criminal investigations and trials, facilitating the pursuit of truth by linking empirical data to criminal occurrences. Elements such as DNA analysis, fingerprint examination, and expert opinions not only aid in exonerating the innocent but also in convicting the culpable. In India, the integration of forensic science into the legal process has witnessed significant evolution following the enactment of new criminal laws in 2023, though persistent challenges remain. This paper examines the admissibility of forensic evidence in Indian courts and explores judicial attitudes toward it. It analyzes core legislative provisions, conducts a comparative assessment with systems in the United States, the United Kingdom, and Germany, addresses ethical considerations, and proposes enhancements for better implementation. Forensic evidence refers to scientific proofs derived from crime scenes or individuals, employed to corroborate or refute assertions in legal proceedings. Under Section 39 of the BharatiyaSakshyaAdhiniyam (BSA), 2023, experts may provide opinions on scientific matters to assist courts in comprehending pertinent facts. However, admissibility poses challenges, requiring evidence to be relevant, reliable, and properly managed. The impetus for this study stems from escalating concerns regarding delayed justice and the potential misuse

of scientific techniques in investigations. For instance, Section 176(3) of the BharatiyaNagarikSurakshaSanhita (BNSS), 2023, mandates forensic examinations for offenses punishable by seven or more years of imprisonment, promoting scientific investigations but raising issues of rights and privacy. This research adopts a doctrinal methodology, drawing on primary sources such as statutes, judicial precedents, and secondary materials including scholarly articles and books. It investigates whether scientific crime analysis via forensic methods holds greater probative value than direct evidence in criminal adjudications. The scope is confined to a comparative study of forensic evidence across four jurisdictions: the United States, the United Kingdom, Germany, and India. Key questions include whether forensic evidence primarily serves as substantive proof or corroborative material, under what conditions courts admit it, whether its admission typically results in convictions or if acquittals can still occur, and how appellate courts view forensic science in decision-making. Traditional reliance on eyewitness testimony has proven unreliable, often leading to flawed prosecutions and undermining the justice system. Judges frequently struggle to ascertain facts solely from witnesses prone to fabrication or unavailability, resulting in delays. Witnesses may abscond due to threats, and many crimes lack observers altogether. Consequently, cases hinge on circumstantial evidence like DNA, ballistic reports, fingerprints, or chemical analyses. Convictions or acquittals often pivot on minor doubts arising from insufficient robust proof, squandering public resources. Modern crimes increasingly involve technology, necessitating forensic tools such as cyber forensics. Offenders exploit science, rendering conventional methods like surveillance inadequate. Thus, the justice system demands forensic integration. Scientific investigations augmented by forensics outperform eyewitness-dependent systems, as perpetrators cannot evade scientific scrutiny. However, India lacks dedicated legislation on forensic evidence admissibility beyond expert opinions under the Evidence Act, relying heavily on superior court interpretations.

Methodology

This study employs a doctrinal research approach, analyzing legal texts, case laws, and scholarly works to evaluate forensic evidence's role. Primary sources include Indian statutes such as the BNSS, BSA, and BNS, judicial decisions from the Supreme Court and High Courts, and international frameworks like the US Federal Rules of Evidence and UK's Police and Criminal Evidence Act. Secondary sources comprise journal articles, books, and reports on forensic practices. Comparative analysis draws on legal standards from the US, UK, Germany, and India to identify convergences and divergences. Data on laboratory backlogs and efficacy is sourced from recent government reports and empirical studies to substantiate systemic issues.

Judicial Perspectives: Insights from Key Indian Case Laws

The Indian judiciary has progressively recognized the value of forensic evidence, though with caveats on procedure and reliability. Several landmark and recent judgments illustrate this evolution. In Kapil Lodh, the Madhya Pradesh High Court critiqued police negligence in a minor's rape case but lauded the potency of DNA evidence, observing that DNA testing provides conclusive linkages, such as biological relations in assaults, and urging investigators to prioritize it for robust cases. Similarly, in G. Venkatesh, involving a challenge under Section 482 CrPC(now 528 BNSS), the Karnataka High Court affirmed DNA's role in establishing facts irrefutably, particularly in identity disputes, to prevent miscarriages of justice. In Ashok Majumdar, the Calcutta High Court, in a rape conviction appeal, emphasized DNA's corroborative strength, rendering denials untenable and basing verdicts on science over mere testimony. The Madras High Court in Iyappan v. The Inspector of Police highlighted DNA's essentiality in linking accused to victims, resolving ambiguities in sensitive matters. KethavathMallesh from the Telangana High Court used DNA to confirm paternity in a POCSO case, deeming it unassailable proof while balancing juvenile justice principles. In Kishan Lal @ Champa Yadav, the Chhattisgarh High Court stressed DNA matches' reliability in minor assault cases, advocating its prioritization for child protection. Death reference cases like In Reference v. Ravi @ ToliMalviya and In Reference v. RamnathKewat @ BhursooKewat from the Madhya Pradesh High Court underscored DNA's precision in violent crimes, enabling evidence-based severe penalties. The Supreme Court in IvanRathinam v. Milan Joseph permitted DNA for paternity in family disputes, viewing it as an accurate tool distinct from legal presumptions. Broader precedents reinforce this. Selviinvalidated coercive techniques like narco-analysis as violative of Articles 20(3) and 21, but permitted safeguarded DNA collection. This was reiterated in Amlesh Kumar, denying automatic rights to voluntary narco-tests. In Kattavellai @ Devakar, the Supreme Court issued comprehensive DNA handling guidelines, including secure collection, prompt lab transfer, and chain-of-custody logs, overturning a death sentence due to procedural lapses. Justice K.S. Puttaswamy (Retd.) enshrined privacy as fundamental, mandating proportionate DNA collection. Other Supreme Court cases, such as Santosh Kumar Singh, hailed DNA as "most reliable" with intact custody chains; DharamDeo Yadav used DNA for motive establishment; Anil @ Anthony Arikswamy Joseph acquitted based on non-matching DNA, highlighting its exonerative potential; RajendraPralhadraoWasnikadmitted DNA under the Evidence Act for child cases; and Mohd. Firoz reversed conviction over flawed DNA reports, urging accreditation. In VijanMandal, the Chhattisgarh High Court rejected DNA due to contamination risks and lack of corroboration, insisting on

meticulous protocols. Early cases like Pritam Singh v. State of Punjab, Shankaria v. State of Rajasthan , and Mohd. Aman v. State of Rajasthan endorsed fingerprints but cautioned on nascent fields like footprints, treating them as corroborative. These rulings collectively demonstrate that while forensic evidence is increasingly valued for its objectivity, admissibility hinges on procedural integrity, often leading courts to acquit on technical grounds despite potential merit. The Indian judiciary's perspective on forensic evidence, as evident from these landmark and recent cases, underscores its growing reliance on scientific tools like DNA for their precision and objectivity in establishing facts and ensuring justice. However, courts consistently emphasize the critical need for procedural integrity, including secure collection, proper chain-of-custody, and accredited testing, to ensure admissibility. Lapses in these protocols often lead to rejections or acquittals, reflecting a cautious yet progressive approach that balances scientific reliability with legal safeguards to prevent miscarriages of justice.

Forensic Evidence under India's New Criminal Laws

India’s forensic system changed a lot with the new laws passed in 2023— BNS,BNSSand BSA— which started on July 1, 2024. These laws replaced old British-era rules and focus on using science for investigations. The BSA controls how evidence is used in court, and Section 39 allows experts to give opinions on scientific matters, like before, but now it stresses that evidence must be very reliable. For things like DNA and fingerprints, the evidence must be relevant, collected properly, and checked carefully. BNSS Section 176(3) says forensic teams must visit crime scenes for serious cases to improve evidence quality, but this needs better labs and tools. Recording searches on video under BNSS makes things more open. DNA rules follow BNSS guidelines since there’s no separate law for it, and BSA applies too. Sections 53 and 53A (from the old CrPC) allow taking samples from the accused. Fingerprint rules come from the Identification of Prisoners Act, 1920, Evidence Act Section 73, and CrPC Section 293. Toxicology is covered by the Poisons Act, 1919, and IPC Section 284, while drugs are handled by special laws. Digital evidence rules indirectly help physical evidence, but this paper focuses on physical items like DNA and fingerprints. Books like Forensic Science in Crime Investigation (2002) by Nabar explain how these rules work together. But there are problems: rural areas don’t have digital tools, so people use personal devices, which can risk security. There’s a shortage of trained staff (up to 49% of jobs are empty), and not enough money causes uneven use of these laws. Recent data shows Delhi’s Forensic Science Lab had over 20,000 pending reports in April 2025, slowing down trials. In

Maharashtra, 643,242 samples linked to 184,925 cases were pending by July 2024. These issues show the need for better labs, more training, and clear rules.

Challenges in Allowing Forensic Evidence

In India, using forensic evidence in criminal cases is tough because it must meet rules about being relevant, reliable, properly collected, and respectful of people's rights. Judges act as gatekeepers, checking if the science behind the evidence is valid. Unlike the United States, which uses a clear rule called the Daubert standard to check things like whether the science can be tested or widely accepted, India doesn't have such a specific guideline. Instead, judges decide based on Section 45 of the old Indian Evidence Act (now Section 39 BNSS), which allows experts to share opinions on science but is checked against rights in the Constitution, like Article 21 and Article 20(3). The old Code of Criminal Procedure (now BNSS) Section 293 says reports from government experts can be used in court without extra proof, but problems like labs not being certified, evidence getting mixed up, and judges not understanding complex science make it hard. Other issues include biases, worries about privacy, and not keeping up with new crimes like cybercrimes, where digital evidence is still new and laws are unclear. A book, The History of Forensic Science in India (2021) by Basu, says these problems come from old ways of doing things that India still follows.

The Indian judiciary often views forensic evidence with doubt, treating it as less important than eyewitness accounts. Judges worry a lot about mistakes in how evidence is collected or if it might harm someone's rights, which makes them careful about using it. For example, in Selvi, the Supreme Court said tests like narco-analysis (truth drugs) or brain mapping can't be forced because they violate privacy and self-incrimination rights. This shows how Indian courts focus on protecting rights, sometimes slowing down cases. In Justice K.S. Puttaswamy (Retd.), the court said privacy is a basic right, so DNA tests must be done carefully, making judges hesitant to allow them without clear permission. In Mohd. Firoz, a conviction was canceled because the DNA report came from a lab that wasn't properly certified, showing how strict judges are about quality. In VijanMandal, DNA evidence was rejected because it might have been contaminated and wasn't backed by other proof. Older cases like Pritam Singh also treated things like fingerprints as just extra support, not the main evidence. This careful mindset comes from a lack of trust in new science and a habit of sticking to traditional ways, like believing witnesses more. Data shows big problems: Delhi's Forensic Science Lab had over 20,000 pending reports in April 2025, delaying trials. In Telangana, 91% of lab jobs were empty in 2025, and Kerala had over 62,000

pending cases in 2024-25, according to government reports. Only about 10% of cases in some states use forensic evidence, per the Ministry of Home Affairs (2024), because of old equipment and not enough trained people.

In contrast, countries like the United States, United Kingdom, and Germany trust forensic evidence more and use it in most serious cases. They have better tools, trained staff, and believe science makes justice faster and fairer. In the US, the Daubert rule (from Daubert v. Merrell Dow Pharmaceuticals, checks if science is reliable but allows new methods if they're proven good, as seen in cases like Kumho Tire Co. For example, in a 2018 US case, State v. Adams, DNA evidence from a tiny blood sample found on a shoe solved a murder case that had no witnesses. The court trusted the science because the lab followed strict rules, and the evidence matched the suspect perfectly, showing how forensic science can crack tough cases. The US has over 400 certified labs with modern machines, and judges get training to understand science, according to the Reference Manual on Scientific Evidence (2000). This helps them solve cases quickly, unlike India's months-long delays. The UK has a huge DNA database with over 6 million profiles, matching 64.8% of cases in 2023-24, and their rules (Police and Criminal Evidence Act) let evidence in if it's useful and collected fairly. Germany's system lets judges decide freely on evidence without strict rules, backed by well-funded labs like the Bundeskriminalamt, which have almost no delays. A 2023 study by Turner in the European Journal of Law and Technology says these countries use forensic evidence in over 90% of major cases because they have better labs, trained people, and trust in science. Their judges and police see forensic evidence as a key tool, not just extra support, unlike India's narrow view.

In India, judges and police often lack training in forensic science, making them unsure about its value. A 2025 study in the Journal of Forensic Science and Research found that many officers and judges don't know modern forensic methods, so they stick to old ways like trusting witnesses more. This leads to uneven rulings, where forensic evidence is often ignored if there's a small mistake. Other countries train their judges and police better, have more money for labs, and believe science can solve cases accurately. India's careful approach protects rights but slows justice, while the US, UK, and Germany balance rights with science, making their courts more efficient and fair.

Comparative Analysis with the US, UK, and Germany

In the United States, courts use the Daubert rule from the 1993 case Daubert v. Merrell Dow Pharmaceuticals to check if forensic evidence is good enough for trials. This rule looks at things like if the science can be tested, if experts have reviewed it, what the mistake rates are, and if it's widely accepted, all under Rule 702 of the Federal Rules of Evidence. Judges play a big role as watchers to make sure the evidence is reliable. Before Daubert, there was the Frye test from 1923, which just needed the science to be generally accepted, but people said it stopped new ideas. Later cases like General Electric v. Joiner in 1997 and Kumho Tire Co. v. Carmichael in 1999 gave judges more power to judge even non-science experts. The US has a huge DNA system called CODIS, which by April 2025 had over 2.6 million profiles in its detainee part alone, and the whole national DNA index has helped in tons of investigations with racial breakdowns showing 42.9% White, 23.6% Black, and so on. This setup helps solve crimes fast because they have over 400 certified labs with modern tools and judges who get training on science stuff.

Over in the United Kingdom, they have the National DNA Database since 1995, which by June 2025 holds millions of profiles—estimates say around 4.8 to 6 million—with about 17% being duplicates, and it's led to over 820,000 matches to unsolved crimes since 2001. In 2023-24, it had a 64.8% match rate for crime scenes. Admissibility there mixes usefulness with protecting rights under the Human Rights Act and the Police and Criminal Evidence Act. Their rules are not too strict; evidence gets in if it's related to the case and collected fairly, without hard tests like Daubert. This flexible way lets them use forensic stuff in most big crimes, backed by a forensic regulator who sets standards.

Germany's system in the Code of Criminal Procedure, called StPO, focuses on finding the real truth through something called free evaluation of evidence, or freieBeweiswürdigung. Judges, who decide without juries, look at reliability on their own. They let in a lot of evidence broadly, but kick it out if it was gotten illegally in ways that hurt dignity or rights, using an exclusionary rule that weighs against justice needs. There's no tough Daubert-like test, so it's more open but could risk bad evidence sneaking in. For things like forensic psych evaluations, they have basic standards for checking responsibility and risks. While exact numbers are hard to find, about 85% of criminal probes in Europe, including Germany, now use electronic evidence, and they have strong central labs like the Bundeskriminalamt with little backlog thanks to good funding.

India is different from these countries because it doesn't have big national databases or set standards, causing big delays in cases. Only a small number of cases, like less than 10% in some areas,

get proper forensic checks. Bringing in ideas like Daubert checks or Germany's balanced flexible method could make things more reliable, as studies on comparing laws suggest. The Indian judiciary takes a different path in using forensic or scientific evidence during trials mainly because of worries about mistakes and protecting basic rights. Judges are extra careful due to old colonial laws, not enough money for labs, and past cases where bad evidence led to wrong convictions. For example, there's no uniform way to test new science, so they rely on old Evidence Act rules and Constitution protections like Article 21 for privacy. This caution comes from things like lab shortages—Delhi had over 20,000 pending reports in 2025—and police not trained well, making courts doubt the chain of custody. Unlike the US or UK where judges trust science more because of better setup and training, Indian courts see forensic as just extra help, not the main proof, to avoid messing up rights.

Some recent judgments show this careful mindset. In Kattavellai, the Supreme Court set new nationwide rules for handling DNA evidence, like safe collection and quick lab sending, and overturned a death penalty because of sloppy procedures, stressing how important it is to follow steps to keep evidence trustworthy. Another one, Amlesh Kumar, said no to automatic voluntary narco-tests, repeating that coercive methods break rights under Articles 20(3) and 21. These cases highlight why Indian judges are slow to adopt forensics fully—they want to balance science with fairness, but resource problems and old habits hold them back, while countries like the US push innovation with strong support systems.

Ethical Concerns and Privacy Issues

Forensic deployment raises ethical quandaries. Compulsory DNA sampling in India may infringe privacy, necessitating proportionality. US and UK familial searches risk discrimination. Global ethics prioritize quality and rights, as discussed in Forensic Science and the Administration of Justice (2014). Coercive techniques like narco-analysis challenge human rights, as invalidated in Selvi and Amlesh Kumar.

India’s Forensic System Challenges

India’s forensic system, which could make solving crimes easier and trials fairer, faces many problems that slow down justice. The biggest issues are old equipment, not enough trained staff, and huge backlogs in labs, which mean cases take a long time to finish. These problems hurt the right to a

quick trial, which is promised under Article 21 of the Constitution. For example, in April 2025, Delhi's Forensic Science Laboratory had over 20,000 reports waiting to be processed, causing delays in trials, according to the Ministry of Home Affairs (2024). In Maharashtra, by July 2024, there were 643,242 pending samples tied to 184,925 cases, showing how big the backlog problem is. Kerala reported over 62,000 pending cases in 2024-25, and Telangana had 91% of its lab jobs empty in 2025, as per government reports. These numbers show that labs don't have enough people or modern tools to handle the work, so only a small number of cases—less than 10% in some states—get proper forensic checks.

The lack of good labs and trained workers makes it hard to trust forensic evidence like DNA or fingerprints. Many labs use outdated machines, and rural areas often don't have digital tools, so police sometimes use their own devices, which can mess up evidence security. A 2025 study in the *Journal of Forensic Science and Research* said that up to 49% of forensic jobs are vacant, and many police and lab workers don't know how to use new forensic methods properly. This leads to mistakes, like evidence getting mixed up or not being handled right, which makes courts doubt its value. For example, in Mohd. Firoz, the Supreme Court threw out a conviction because the DNA report came from a lab that wasn't certified, showing how important proper lab standards are. Similarly, in VijanMandal the High Court rejected DNA evidence because it might have been contaminated and didn't have other proof to back it up. These cases show how courts often say no to forensic evidence if there's even a small mistake, which happens a lot because of poor lab setups. In Karandeep Sharma Supreme court comments " Botany is not Forensic Science" while hearing this case court shock that **Dr. Manoj Kumar Agarwal**, a **Ph.D. holder in Botany**, was presented as a DNA expert in a case where a man's life hung in the balance, that's why court strictly follow the law and guidelines in scientific cases.

Another big issue is that labs across India aren't all held to the same standards. Some labs have good equipment, but others, especially in smaller towns, don't, leading to uneven results. The Supreme Court has pointed out this problem in cases like Kattavellai, where it made new rules for handling DNA, like safe collection and quick lab delivery, after overturning a death penalty due to sloppy work. This shows that courts want better systems but are stuck because labs can't keep up. Funding is also a problem—many labs don't get enough money to buy new tools or hire more people, unlike countries like the US or UK, where labs are well-funded and have trained staff. The National Crime Records Bureau (2024) said India's forensic system is stretched thin, with only a few big labs in cities like Delhi and Mumbai handling most cases, while rural areas struggle.

Judges and police also lack training, which makes them less confident in using forensic evidence. In Selvi, the Supreme Court banned forced tests like narco-analysis because they could harm rights, showing how careful courts are. But this caution sometimes stops forensic tools from being used fully, as seen in Amlesh Kumar, where the court said no to voluntary narco-tests to protect rights under Articles 20(3) and 21. These rulings show that India's justice system focuses on avoiding mistakes, but without enough training or good labs, forensic evidence often gets ignored or questioned. Recent steps, like the government adding 247 new forensic jobs in 2025 or opening a new lab in Kolkata in June 2025, are trying to fix things. Haryana's plan to clear all pending cases by the end of 2025 is also a good move. But until India updates its labs, trains more people, and sets the same standards everywhere, forensic evidence won't help justice as much as it could.

Recommendations

To ameliorate these, India should enact dedicated DNA and forensic legislation complementing BNSS/BSA, modernize labs with advanced tools and address vacancies, provide specialized judicial training on evidence evaluation, establish a national DNA database with privacy safeguards, and introduce Daubert-inspired admissibility tests. These measures, informed by international practices, can foster a more resilient system. Follow the guidelines set by Supreme court in Kattavellai case.

Conclusion

Forensic evidence plays a key role in today's justice systems, helping to solve crimes accurately and make trials fairer by using science like DNA tests, fingerprints, and expert views. But in India, things like strict rules for allowing evidence, doubts from judges, and old ways of thinking limit how well it works. This paper looked at how India's new laws from 2023, like the BNSS and BSA, try to push more scientific investigations, but problems like privacy worries and backlogs in labs still hold things back. For example, rules like Section 176(3) in BNSS make forensic checks mandatory for big crimes, but without enough labs or trained people, it doesn't help much. Recent Supreme Court cases, such as Kattavellai show judges are setting better guidelines for handling DNA to avoid mistakes, while Amlesh Kumar reminds us that forced tests can break basic rights under the Constitution. These judgments highlight how Indian courts are slowly accepting forensics but stay extra careful to protect people from unfair treatment.

From the study, it's clear that India faces big hurdles compared to countries like the US, UK, and Germany. In the US, the Daubert rule lets judges check science reliably, and their huge CODIS database with millions of profiles solves cases fast. The UK uses a flexible system with their National DNA Database matching over 64% of crime scenes, balancing rights and usefulness under laws like the Police and Criminal Evidence Act. Germany gives judges free rein to evaluate evidence, backed by well-funded labs with almost no delays. But in India, only a small part of cases get forensic help—less than 10% in some states—because of things like over 20,000 pending reports in Delhi's lab as of April 2025, or 91% empty jobs in Telangana labs. A 2025 study in the Journal of Forensic Science and Research points out that many judges and police lack training, so they trust old methods like witnesses more, leading to uneven decisions. Ethical issues, like how compulsory DNA sampling might invade privacy, add to the caution, as seen in the Puttaswamy case (2017) that made privacy a big right. Plus, global talks like the All India Forensic Science Summit 2025 are discussing how new laws affect evidence rules, showing India is thinking about ethics in forensics.

To fix this, India needs to follow ideas from other countries, like building a national DNA database with strong privacy rules, training judges on science, and updating labs with better tools. Recent steps, such as the government approving 247 new forensic officer posts in 2025 and inaugurating a new Central Forensic Science Lab in Kolkata in June 2025, are good starts to cut backlogs. Haryana's push for zero pending cases by the end of 2025 and pilot programs for quick DNA tests from events like IFF 2025 could help too. By fixing these weak spots, addressing ethics, and learning from the US, UK, and Germany's open trust in science, India can make its justice system quicker, more accurate, and fairer under the new laws. This would not only speed up trials but also cut wrong convictions, saving resources and building public trust. In the end, forensic evidence has the power to change how justice works, but only if India invests in reforms and shifts from doubt to confidence in science, aligning with global standards for a better future.

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