



ROLE OF FORENSIC SCIENCE IN CRIMINAL INVESTIGATION UNDER BHARATIYA NAGARIK SURAKSHA SANHITA (BNSS), 2023

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ABSTRACT

The enactment of the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023, marks a transformative departure from the colonial-era Code of Criminal Procedure (CrPC), 1973. Central to this legislative overhaul is the formal integration of forensic science into the mandatory procedural framework of criminal investigations. This article examines the pivotal role of forensics under BNSS, specifically focusing on Section 176(3), which mandates forensic examination for offenses punishable by seven years or more. It further explores the implications of digitized evidence, the expanded scope of medical examinations, and the systemic challenges regarding forensic infrastructure. By analyzing these provisions, the article assesses how BNSS seeks to enhance evidentiary integrity and expedite the delivery of justice while balancing the constitutional rights of the accused.

KEYWORDS : Bharatiya Nagarik Suraksha Sanhita (BNSS), Forensic Science, Criminal Investigation, Section 176(3), DNA Testing, Digital Evidence, Medico-legal, Criminal Justice Reform.

INTRODUCTION

Forensic science has long been the "silent witness" in the Indian courtroom. However, under the previous regime of the CrPC, its application was often discretionary, leading to inconsistent investigation standards and reliance on ocular testimony, which is prone to human error and hostility. The Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023, which came into effect on July 1, 2024, seeks to rectify this by elevating forensic science from a corroborative tool to a statutory requirement in heinous crimes.

The transition from the Code of Criminal Procedure (CrPC) to the BNSS signifies more than a mere change in nomenclature; it represents a fundamental shift in the onus of proof and the methodology of truth-seeking. Historically, Indian criminal jurisprudence leaned heavily on oral testimony, often resulting in high acquittal rates due to witnesses turning hostile or memory fading over long trial periods. By enshrining forensic procedures as a statutory obligation, the BNSS acknowledges that while "men may lie, circumstances do not." This legislative evolution seeks to institutionalize a culture of scientific precision, ensuring that the first response to a crime scene is governed by technical expertise rather than just administrative routine, thereby aligning Indian investigative standards with international benchmarks like those of the FBI or Scotland Yard.

Mandatory Forensic Examination: Section 176(3)

The most significant advancement under BNSS is Section 176(3). This provision stipulates that for any offense punishable by seven years or more, the Investigating Officer (IO) must ensure that a forensic expert visits the crime scene to collect evidence and record the process through mobile or electronic means. This shift aims to:

- **Prevent Evidence Tampering:** By involving experts early, the risk of contamination is minimized.
- **Enhance Conviction Rates:** Scientifically backed evidence reduces the "benefit of doubt" often granted due to shoddy manual investigations.
- **Standardize Procedures:** It moves the Indian police force toward a "forensics-first" approach similar to global investigative models.

Digital Evidence and Technology Integration

- BNSS introduces a tech-centric approach to evidence management. The definition of "evidence" has been expanded to include digital footprints and electronic records.
- **Electronic Recording:** Section 176(3) also mandates the audio-visual recording of the crime scene and evidence collection. This ensures transparency and provides a verifiable trail for the judiciary.
- **Cyber Forensics:** With the rise of digital crimes, BNSS acknowledges the role of cyber forensic labs in analyzing encrypted data and digital communications as primary proof (IJSAT, 2025).

Expanding the Scope of Medico-Legal and DNA Evidence

The new code refines the procedures for medical examinations and biological evidence collection.

- **DNA Analysis:** Under BNSS, the collection of DNA samples from

the accused is facilitated, particularly in cases of sexual offenses where biological evidence is often the only objective link to the perpetrator (Dube, 2014; NLUO, 2025).

- **Section 52 of BNSS:** This section allows investigating authorities to seek the assistance of medical practitioners for collecting biological samples, including DNA, provided the constitutional safeguards of Article 20(3) (protection against self-incrimination) and Article 21 (right to life and privacy) are respected (NLUO, 2025).
- **Forensic Psychiatry:** The Bharatiya Nyaya Sanhita (BNS) and BNSS together create new intersections for forensic psychiatry, especially in evaluating "unsoundness of mind" or the mental state in cases of attempted suicide under specific circumstances (Hegde et al., 2024).

PROCEDURAL EFFICIENCY AND TIMELINES

- A core objective of the BNSS is "speedy justice." The lack of timely forensic reports has historically been a primary cause of trial delays (International Annals of Criminology, 2025).
- **Time-Bound Reports:** The BNSS emphasizes strict timelines for the submission of investigation reports and the conduct of trials.
- **Forensic Infrastructure:** To meet these mandates, the government is tasked with expanding the network of forensic science laboratories (FSLs) across the country to prevent backlogs that currently plague the system.
- Challenges and Ethical Considerations

While the legislative intent is progressive, several hurdles remain:

- **Infrastructure Deficit:** Mandatory forensics for all offenses over seven years requires a massive increase in the number of forensic experts and mobile forensic units.
- **Right to Privacy:** Compulsory DNA testing or digital device searches raise significant concerns regarding the right to privacy. The judiciary will need to balance the "public interest" in solving crimes with the "individual rights" of the accused.
- **Standardization:** There is a critical need for uniform protocols across different state FSLs to ensure the scientific validity of the evidence produced in court (ResearchGate, 2025).

CONCLUSION

The Bharatiya Nagarik Suraksha Sanhita, 2023, represents a paradigm shift from an ocular-heavy investigation system to a scientific one. By mandating forensic participation in serious crimes and embracing digital evidence, the BNSS addresses long-standing inefficiencies. However, the success of this reform hinges not just on the letter of the law, but on the robust development of forensic infrastructure and the specialized training of law enforcement personnel.

Ultimately, the success of the BNSS forensic mandate will be measured by the "Rule of Best Evidence" in the courtroom. While the law provides a robust skeletal framework, the "flesh and blood" of this reform will be the investment in human capital—training thousands of police officers in chain-of-custody protocols and certifying a new generation of forensic experts. If implemented with precision, the BNSS has the potential to drastically reduce the pendency of cases and restore public faith in the judiciary. However, the state must remain

vigilant to ensure that in the pursuit of scientific certainty, the fundamental rights of the accused are not reduced to mere technicalities. The BNSS is a bold step forward, but its legacy will depend on whether the system can balance the cold hard facts of science with the warm heart of constitutional justice.

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