

## E-evidence, new criminal law, its implementation

**T**he three newly-enacted criminal laws, the Bharatiya Nyay Sanhita (to replace the Indian Penal Code), the Bharatiya Nagarik Suraksha Sanhita (to replace the Code of Criminal Procedure) and the Bharatiya Sakshya Adhiniyam (to replace the Indian Evidence Act) are to come into force on July 1, 2024. At the same time, Section 106(2) of the Bharatiya Nyay Sanhita (BNS), which prescribes 10 years imprisonment for fatal accidents if they are not immediately reported to the police, has been put on hold, as notified by the Central government.

The Ministry of Home Affairs (MHA) and State governments are preparing for a smooth transition. While some changes have been made in the Bharatiya Nagarik Suraksha Sanhita (BNSS) in connection with investigation and police functioning, a few new offences and some changes introduced in the BNS, the contents of the Indian Evidence Act, 1872 have changed little as far as the Bharatiya Sakshya Adhiniyam (BSA) is concerned. The scope of secondary evidence has been slightly broadened and some changes have been made in the provisions relating to electronic evidence in the BSA.

### Clarity on electronic record

There is some precision in the definitions section. An illustration to the definition of "document" (which includes electronic and digital records) says that an electronic record on emails, server logs, documents on computers, laptop or smartphone, messages, websites, locational evidence (should have used the term information in place of evidence), and voice mail messages stored on digital devices are documents.

Similarly, there is clarity in the provision dealing with primary (electronic) evidence (Section 57) in the form of Explanations. One of such four explanations says that where a video recording is simultaneously stored in electronic form and transmitted or broadcast or transferred to another, each of the stored recordings shall be primary evidence. This may help the investigating agencies in fixing culpability of a cyber-criminal even if he destroys his original electronic record to deny the allegations as it may be collected from other sources without its value getting diminished.

Section 63, which deals with admissibility of electronic records, includes terms such as 'semi-conductor memory' and 'any communication device' for better visibility. However, this does not change the impact of the provision because the definition of 'electronic form' given in the Information Technology (IT) Act, 2000 includes information generated, sent, received or stored in 'computer memory'. Similarly, the definition of 'computer network' in the IT Act is comprehensive and includes



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Some changes have been made in the provisions relating to electronic evidence in the Bharatiya Sakshya Adhiniyam, which is to replace the Indian Evidence Act

'communication device'.

It is relevant to mention that the computer (primary) memory, that is; random access memory (RAM) and cache memory, is nothing but semi-conductor memory which is essential for the quicker working of a computer. Though it is volatile in nature, this memory may reveal very important information if electronic devices are recovered and seized in 'power-on' condition.

### Admissibility of electronic records

The law on the admissibility of electronic records is settled. Though there are some changes in Section 63 of the BSA (which is equivalent to 65-B of the Indian Evidence Act), the ratio of the Supreme Court judgment in *Arjun Panditrao Khotkar vs Kailash Kushanrao Gorantyal & Ors.* (2020) will still equally apply to the new provisions. In this case, the Court held that the required certificate under Section 65-B(4) – now Section 63(4) of the BSA – is sine qua non for the admissibility of electronic record. The other provisions with regard to admissibility of secondary evidence will not apply to electronic records as Section 65-B of the IE Act starts with a non-obstante clause (i.e., notwithstanding anything contained in this Act) and Section 65-A and Section 65-B are a complete code by themselves. The non-obstante clause of the Indian Evidence Act is retained in the BSA.

The Court had said that if the required certificate could not be secured from the person in possession of an electronic device, an application could always be made to a judge for the production of such a certificate from the person concerned in cases where such a person refuses to give it.

The Court held that though such a certificate should generally be submitted with all other documents at the time of filing the police report and latest before commencement of the trial, non-submission of such certificate in time is a curable defect. Since Section 65-B (and Section 63 of the BSA now) does not speak of the stage at which such a certificate must be furnished to the court, the court may in appropriate cases allow the prosecution to produce such a certificate at a later point of time without causing any prejudice to the accused in trial. The Court also held that when it is impossible to obey the law, the alleged disobedience of the law is excused. In other words, if it is impossible to produce the required certificate, the court can exempt the mandatory production of the certificate.

Section 63(4) of the Bharatiya Sakshya Adhiniyam requires the certificate to be signed by two persons instead of one as required under the Indian Evidence Act – the first by the person in charge of the computer or communication device or the management of the relevant activities, and the second, by an expert. A standard format of

the certificate is also prescribed in the Schedule to the BSA. The expert has to verify the certificate by stating that a particular hash value is obtained by applying a particular hash algorithm. A hash function means an algorithm mapping or translation of one sequence of bits into another, generally smaller, set known as "hash result" such that an electronic record yields the same result every time the algorithm is executed with the same electronic record as its input making it computationally infeasible to reconstruct the original electronic record from the hash result produced by the algorithm. Though no notification has been issued by the Central Government under the IT Act with regard to hash algorithms for encryption for the secure use of electronic medium, the standard format of certificate lists 'SHA1, SHA256, MD5 and Other (legally acceptable standard)' as applicable hash algorithms.

Whereas MD5 (Message Digest5) and SHA1 (Secure Hash Algorithm1) are known to have some vulnerabilities, SHA256 is considered more secure and, therefore, be used by the agencies to ensure integrity of the data.

### Preparedness to adopt new format

While expert certification may help the court in admission of electronic records, it is going to increase the workload of cyber laboratories. There is hardly any crime that does not use a smartphone nowadays. Many crimes are also solved with the help of call records and location information. However, if every certificate is to be signed by an expert, the workload will suddenly increase as many cyberlabs may not be equipped with sufficient manpower. Some cyberlabs (such as in Chhattisgarh) are not even notified under the IT Act to give expert opinion on electronic records.

It would have been reasonable had expert opinion been called for only when the integrity of the seized electronic record is disputed by the opposing party during trial. The courts may, in such cases, always ask for expert opinion. It could have been sufficient had the investigating officer ensured that one of the hash algorithms was applied and the message digest was attached with the certificate before it was collected.

There needs to be a general awareness drive now about the modes and methods of encryption, particularly for private agencies which install closed-circuit televisions on their premises or use other electronic devices for security purposes. Simultaneously, the time before July, must be used by the enforcement agencies to ensure that the required infrastructure is in place to take on the added responsibilities.

*The views expressed are personal*

## Understanding the world of the informal waste picker

On March 1, International Waste Pickers Day, waste pickers across the world will pay homage to fellow pickers who were murdered in Colombia in 1992. The world of the informal waste picker, who is an often-forgotten, hyper-marginalised worker cohort in the waste value chain ecosystem, and an indispensable but invisible part of waste management systems in India – needs to be understood.

The International Labour Organization defines the informal sector in waste management as ‘individuals or small and micro-enterprises that intervene in waste management without being registered and without being formally charged with providing waste management services’. These workers are the primary collectors of recyclable waste, playing a critical role in waste management and resource efficiency by collecting, sorting, trading and sometimes even reinserting discarded waste back into the economy. Yet, they face systemic marginalisation due to non-recognition, non-representation, and exclusion from social security schemes and legal protection frameworks.

### What data shows

While reliable estimates of informal waste pickers are difficult to come by, the Centre for Science and Environment reported that the informal waste economy employs about 0.5%-2% of the urban population globally. Many are women, children and the elderly, who are often disabled, are the poorest of the urban poor, and face violence and sexual harassment often. The Periodic Labour Force Survey 2017-18 indicates that there are nearly 1.5 million waste pickers within India's urban workforce, with half a million being women.

On average, an individual waste picker collects between 60 kg to 90kg of waste a day in an eight to 10 hour span of time, often undertaking hazardous work without safety equipment. Their poor health, irregular work, low income, and regular harassment are compounded by their



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Despite their key role in the waste value chain ecosystem, waste pickers face systemic marginalisation, severe health hazards and exclusion from legal protection

subordinate position in the caste hierarchy. Their health issues include dermatological and respiratory health issues apart from regular injuries. Waste pickers suffer existential precarity. Private sector participation in municipal solid waste management, by design, alienates them, aggravating their vulnerability and loss of rights over waste picking. As noted by the Alliance of Indian Waste Pickers (AIW) 2023 report, private actors employ expensive machinery, offering competitive rates to waste generators such as households and businesses, which marginalises informal pickers and forces them into hazardous waste picking, such as scavenging from dump sites. This worsens their health risks, compromises income, and lowers social status. Private players and municipal authorities often cordon off dump sites, pushing them into further vulnerability.

### Extended Producer Responsibility

Extended Producer Responsibility (EPR) has gained traction in India as a means to enhance plastic waste management. It transfers the responsibility of waste management from municipal authorities and holds commercial waste producers accountable. EPR appears seemingly promising, with potential for social inclusion for waste pickers and other informal grassroots actors. In practice, however, as noted by Women in Informal Employment: Globalizing and Organizing (WIEGO), EPR redirects waste away from the informal sector, threatening large-scale displacement of informal waste pickers.

The AIW has observed that EPR guidelines in India identify several stakeholders including the Central Pollution Control Board (CPCB), producers, brand owners, industry, industry associations, civil society organisations, and, of course, citizens themselves. But it is unclear whether these stakeholders include informal waste pickers, or their representing organisations. Although the Solid Waste Management Rules 2016 mandate the inclusion of waste pickers in municipal solid waste

management systems, they are evidently missing in the prioritisation. The EPR Guidelines 2022 published by the Ministry of Environment, Forest, and Climate Change have blatantly ignored the role of informal waste pickers in waste management and recycling.

### Plastic Treaty and a just transition

Globally, waste pickers collect and recover up to 60% of all plastic which is then recycled, as in the 2022 World Economic Forum report. Despite their crucial role in sustainable recycling, their work is rarely valued and they struggle to earn a decent living. The United Nations Development Programme (UNDP) and Pew reports state that in 2016 alone, informal waste pickers collected 27 million metric tonnes of plastic waste (59% of all plastic material collected for recycling), preventing it from ending up in landfills or the ocean. But they also have to bear burning plastic fumes and consume water and air tainted by microplastics. When we endorse the UN resolution to end plastic pollution, to create a legally binding agreement by 2024, the treaty must ensure a just transition for these workers.

The role of waste pickers in successful plastic management has emerged as a critical factor as India's per capita plastic waste generation rises. As mentioned in a recent CPCB report, January 6 is plastic overshoot day for India – a country that is already among the 12 countries responsible for 52% of the world's mismanaged waste. The EPR mechanism holds producers responsible for plastic pollution, but only involves large recycling units, bypassing an entire workforce responsible for transformation of waste to recyclable material.

Waste pickers possess traditional knowledge around handling waste, which could strengthen the EPR system and its implementation. In this context, we need to rethink the formulation of EPR norms, while also addressing how to integrate millions of informal waste pickers into the new legal framework.

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