

CONSTITUTIONAL DIMENSIONS OF DIGITAL LAND RECORDS: LEGAL AND ETHICAL IMPLICATIONS FOR PROPERTY RIGHTS IN INDIA

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Abstract:

The digitalization of land records in India marks a significant transformation in property administration, aimed at enhancing transparency, minimizing land disputes, and ensuring record management in light of fundamental rights, such as the right to property (Article 300A), the right to equality (Article 14), and the right to privacy (Article 21). It critically examines the legal framework surrounding digital land governance, including the Digital India Land Records Modernization Programme (DILRMP), and assesses the role of the state in ensuring due process and procedural fairness in land titling. The article further investigates ethical concerns related to data security, digital exclusion, and misuse of state power in a technologically evolving land record system. Case laws such as *Rajiv Sarin v. State of Uttarakhand* and *K.S. Puttaswamy v. Union of India* are analyzed to contextualize judicial interpretation of property and data rights. The study emphasizes the need for robust legislative safeguards and inclusive digital policies to uphold constitutional guarantees while modernizing land record systems in India.

Keywords:

Digital Land Records, Constitutional Law, Property Rights, Article 300A, Right to Privacy, Article 21, Article 14, Digital Exclusion, Data Security, *Rajiv Sarin Case*, *Puttaswamy Judgement*, E- Governance, Digital India.

Introduction:

India's land ownership and administration system has historically been marked by opacity, overlapping claims, inadequate documentation, and corruption. Land is a critical asset in India, both economically and socially, but disputes over land ownership continue to constitute over 66% of all civil litigation in the country. These conflicts often stem from poor land records, lack of standardized titling, and inefficient land management practices, particularly at the state level. In rural areas, where most land is inherited and not formally transacted, the absence of verifiable and accessible records has led to dispossession and marginalization of

vulnerable communities, including Dalits, tribals, and women.

Recognizing these deep-rooted issues, the Indian government launched the Digital India Land Records Modernization Programme (DILRMP) in 2008 (originally as NLRMP), which was later subsumed under the broader Digital India initiative. The objective is to create a comprehensive, transparent, and tamper-proof digital database of land ownership and transactions. The DILRMP aims to computerize all land records, integrate textual and spatial data, and link revenue and registration processes to create a unified land information management system (LIMS).

However, while digitization can potentially reduce fraud, enhance land market efficiency, and improve access to credit and welfare schemes, it also introduces new challenges with serious constitutional implications:

Legal concerns related to the right to property (Article 300A), including risks of dispossession due to data errors or unauthorized changes.

Ethical and procedural questions regarding data privacy and consent under Article 21 (Right to Life and Personal Liberty).

Equity and access concerns under Article 14 (Right to Equality), particularly affecting socio-economically disadvantaged groups with limited access to digital platforms or legal remedies.

In this constitutional context, digitization is not just a technological transformation—it is a legal process that must align with the rights and protections guaranteed by the Constitution of India. The absence of conclusive land titling, the challenges of digital exclusion, and the vulnerabilities of centralized databases to manipulation or breach necessitate a more nuanced, rights-based approach to digital land governance. This article proceeds to unpack these challenges in the light of constitutional provisions, analyze judicial responses, and offer policy recommendations to ensure that digitization upholds, rather than undermines, property rights and democratic values in India.

Constitutional Framework of Property Rights in India

Land is not only an economic asset but also a source of identity, livelihood, and social status in India. Consequently, the constitutional protections surrounding property rights have a profound impact on the lives of millions. With the shift to digital land records, these protections must evolve to address new challenges—ranging from digital exclusion to data privacy and algorithmic dispossession. Three key constitutional provisions are especially relevant in this context: Article 300A

(Right to Property), Article 14 (Right to Equality), and Article 21 (Right to Life and Privacy).

Right to Property under Article 300A

Although the right to property was removed as a fundamental right by the 44th Constitutional Amendment Act, 1978, it still retains the status of a constitutional legal right under Article 300A, which reads:

“No person shall be deprived of his property save by authority of law.”

This means that any act of dispossession must be supported by valid legislation and due process. With digital land records now being treated as primary evidence of ownership and possession, even minor errors—such as wrongful entries, deletions, or fraudulent changes—can lead to illegal dispossession.

Key Concerns:

Absence of clear procedures for challenging erroneous digital entries.

Displacement without notice or opportunity to be heard.

Algorithmic decisions in mutation and registration with little human oversight.

Relevant Case Law:

Rajiv Sarin v. State of Uttarakhand, (2011) 8 SCC 708

The Court held that even when acquisition is not formalized, the state is bound to provide just, fair, and reasonable compensation. The ruling underscores that land cannot be taken without legal authority and procedural fairness.

Bishandas v. State of Himachal Pradesh, 2011 SCC OnLine HP 475

This case held that removal of names from land records without notice was a violation of natural justice, reinforcing the need for due process in digital systems.

Thus, the digitization of land records must comply with the constitutional mandate that no one can be deprived of their property arbitrarily, whether through manual or digital means.

Right to Equality under Article 14

Article 14 of the Constitution guarantees:

“Equality before the law and equal protection of the laws within the territory of India.”

While digital land reforms aim to eliminate human discretion and corruption, they risk introducing digital inequality—especially affecting women, Dalits, tribal communities, and the elderly, who often lack the resources or literacy to access digital systems.

Key Concerns:

Rural areas often have limited or no internet access.

Tribal customary land rights may not be mapped or acknowledged in formal records.

Women may be left out of records due to historical and cultural biases.

Relevant Case Law:

State of Maharashtra v. Indian Hotel and Restaurants Association, (2013) 8 SCC 519

The Court reaffirmed that classification under law must be reasonable and non-arbitrary. A digital framework that benefits only the digitally literate, while excluding the poor and marginalized, could be considered arbitrary and violative of Article 14.

Joseph Shine v. Union of India, (2019) 3 SCC 39

Though unrelated to land law directly, the case emphasized the importance of removing systemic discrimination through law reform—a principle that can apply to digital land titling.

Without equitable access and affirmative digital inclusion policies, digital land systems risk reproducing and even amplifying historical inequalities.

Right to Privacy under Article 21

Article 21 states:

“No person shall be deprived of his life or personal liberty except according to procedure established by law.”

In K.S. Puttaswamy v. Union of India (2017) 10 SCC 1, a nine-judge bench of the Supreme Court held that the right to privacy is a fundamental right implicit in Article 21. The verdict laid down the test of legality, necessity, and proportionality for any state action that interferes with personal data.

Digitized land records now store:

- Aadhaar-linked identity information,

- Biometric authentication details,

- GPS-based land parcel information,

- Historical ownership and transaction data.

Yet, India still lacks a comprehensive data protection law, and unauthorized access or breach of these databases could lead to profiling, identity theft, or misuse by private entities or the state.

Key Concerns:

- Who owns and controls the land data?

- Are there legal remedies for data breaches?

- Are there safeguards against surveillance?

Relevant Case Law:

Puttaswamy v. Union of India (2018) – Aadhaar case

The Court upheld Aadhaar’s use but restricted it to welfare delivery, emphasizing limited data sharing. This principle applies equally to land databases being linked with Aadhaar or other personal identifiers.

Selvi v. State of Karnataka, (2010) 7 SCC 263

Though involving narco-analysis, the Court discussed the inviolability of mental and bodily privacy, reinforcing that any intrusion—physical or digital—requires compelling justification.

Hence, digital land reforms must include robust encryption, consent frameworks, and independent oversight to be constitutionally compliant with the right to privacy.

2) Legal Framework Governing Digital Land Records

The digitization of land records in India is governed primarily through administrative programs and state laws, with no single national statute providing a comprehensive framework for land ownership and titling. This has led to significant legal fragmentation, administrative opacity, and uneven application across states. While the Digital India Land Records Modernization Programme (DILRMP) is a flagship initiative for reform, several institutional, legal, and constitutional issues persist.

2.1. The Digital India Land Records Modernization Programme (DILRMP)

The DILRMP, launched in 2008 by merging the Computerization of Land Records (CLR) and the Strengthening of Revenue Administration and Updating of Land Records (SRA & ULR) schemes, was integrated with the broader Digital India initiative in 2015. It seeks to create a unified, transparent, and accessible digital land record system nationwide.

Key Components:

- 1) Computerization of Land Records (RoR): Digital entry of Record of Rights, mutation records, and ownership details.
- 2) Survey/Re-Survey Using Modern Technology: Use of GIS, satellite imagery, and drones to create accurate cadastral maps.
- 3) Integration of Textual and Spatial Data: Synchronization of ownership data with mapped land parcels.
- 4) Establishment of State-Level Data Centers (SLDCs): Creation of secure digital infrastructure to store land data
- 5) Training and Capacity Building: For revenue officers, surveyors, and public awareness.

Challenges:

- 1) Lack of legislative backing for many processes carried out under DILRMP.

- 2) Absence of standardization across states due to land being a State subject under Entry 18, List II of the Seventh Schedule of the Constitution.
- 3) Fragmented databases across departments—registration, survey, mutation—leading to inconsistencies.

Relevant Observation:

The NITI Aayog Report on Land Titling (2021) emphasized that without legal reforms, DILRMP's technological advances might be superficial, resulting in a "digitization of chaos."

2.2 Lack of Conclusive Titling

India follows the "presumptive titling system", under which:

- 1) Land records are not final or conclusive proof of ownership.
- 2) They serve only as a prima facie evidence.
- 3) Actual ownership can still be challenged in court through adverse possession or other claims.

In contrast, many developed jurisdictions (e.g., Torrens system in Australia) follow a "conclusive titling" regime where the state guarantees the title and compensates for any loss.

Implications in a Digital Era:

- 1) Digital records, once created, appear authoritative, which may mislead courts or buyers into assuming correctness.
- 2) Marginalized or illiterate populations may fail to contest errors due to lack of awareness or resources.
- 3) In the absence of clear adjudicatory mechanisms, people wrongfully excluded from records may be dispossessed without due process.

Case Law:

Suraj Lamp & Industries Pvt. Ltd. v. State of Haryana, (2012) 1 SCC 656

The Supreme Court emphasized that only registered sale deeds are valid legal proof of ownership—not power of attorney or unregistered documents. This highlights the

disconnect between possession and digital title records.

Ravindra Ramchandra Waghmare v. Indore Municipal Corporation, (2017) 1 SCC 667

The Court observed that land records do not confer title, reinforcing the principle that mere digitization cannot substitute substantive legal rights.

Ajit Jogi v. State of Chhattisgarh, 2021 SCC Online Chh 330

The High Court held that official records, even if digitally updated, must be scrutinized for procedural regularity, underlining the need for checks and balances.

Current Status:

Although some states like Madhya Pradesh, Rajasthan, and Andhra Pradesh have proposed or implemented conclusive land titling pilot projects, there is no uniform national law providing a statutory guarantee of title.

3. Ethical and Practical Concerns

While digitization of land records holds the promise of enhancing efficiency and reducing corruption, it simultaneously gives rise to profound ethical and practical concerns. These issues strike at the heart of constitutional rights such as access to justice, equality, and protection of personal data. In the absence of adequate safeguards, digitization can reproduce and even intensify historical injustices, particularly for rural, tribal, and economically weaker populations.

3.1 Data Security and Consent

The digitization of land records entails collecting and storing highly sensitive personal data: identity details, biometric identifiers, property holdings, and transaction histories. However, India currently lacks a comprehensive data protection law, as the Digital Personal Data Protection Act, 2023 remains in the early stages of implementation and enforcement.

Concerns:

- 1) Unauthorized Access: Land records are often linked to Aadhaar, PAN, and other databases, which increases the vulnerability of data to hacking, leaks, or unauthorized commercial exploitation.
- 2) Absence of Consent Frameworks: Citizens are not routinely asked for informed consent before their data is digitized or shared across government databases.
- 3) Profiling and Surveillance Risks: There is potential for the misuse of land ownership patterns for political targeting, displacement planning, or surveillance of dissident populations.

Relevant Case Law:

K.S. Puttaswamy v. Union of India, (2017) 10 SCC 1

The Supreme Court emphasized the necessity of a data protection regime that ensures purpose limitation, necessity, proportionality, and informed consent when dealing with personal data.

Ethical Imperative:

Any land digitization program must adhere to data minimization, obtain explicit consent, and provide opt-out mechanisms along with independent oversight authorities to investigate breaches.

3.2 Digital Exclusion and Access to Justice

The benefits of digitization presuppose universal digital access and literacy. However, India's digital divide continues to reflect deep economic, social, and geographical inequalities

Ground-Level Realities:

- 1) Limited internet access in many tribal belts and rural hinterlands.
- 2) Lack of digital literacy among older populations, women, and marginalized communities.
- 3) Inaccessibility of grievance redress portals due to language barriers or absence of vernacular support.

Consequences:

- 1) Erroneous or malicious digital entries can go unchallenged due to users' inability to verify or correct their records.
- 2) Tribal lands may be usurped or reassigned through digital manipulation, leading to dispossession without physical notice.
- 3) Self-help legal remedies become ineffective when access to digital proof is restricted.

Relevant Cases & Reports:

Samatha v. State of Andhra Pradesh, (1997) 8 SCC 191

The Court upheld the protection of tribal land rights and emphasized procedural safeguards. Digital exclusion can undermine such protections unless tailored mechanisms are developed.

Report of the Committee on Digital Inclusion (MeitY, 2020)

Stressed the urgent need to build inclusive digital infrastructure, especially for government-to-citizen services.

3.3 State Accountability and Transparency

Digitization often creates an aura of neutrality, but automated systems can conceal systemic flaws and bureaucratic negligence. Errors in data entry, omission of rightful owners, or wrongful inclusion of fraudulent claimants may go unnoticed or unrectified, especially in the absence of transparent audit trails.

Key Issues:

- 1) Opacity in updating records and mutation processes.
- 2) Lack of easily accessible redressal mechanisms for people affected by erroneous digital entries.
- 3) Inadequate training of local revenue officials in handling digital systems.

Need for Institutional Reforms:

- 1) A statutory grievance redressal system should accompany digitization, with

time-bound correction mandates and appeal rights.

- 2) Decentralized review bodies (e.g., Gram Panchayat Committees or Lok Adalats) can provide localized and accessible forums for correction of digital records.

Relevant Case:

Rajiv Sarin v. State of Uttarakhand, (2011) 8 SCC 708

Reinforced that deprivation of property without following due process, even when under a digital system or policy reform, violates Article 300A.

Transparency Measures:

- a) Public access kiosks, citizen data dashboards, and community validation of records can ensure democratic oversight.
- b) Blockchain technology can provide auditability and tamper-proof entries if implemented with public safeguards.

4. Judicial Interpretation and Case Law

The Indian judiciary has played a pivotal role in interpreting constitutional provisions related to property rights, privacy, and state accountability. As land record digitization increasingly affects individual rights, case law provides crucial guidance on ensuring that technological processes remain constitutionally compliant and ethically sound.

4.1. Rajiv Sarin v. State of Uttarakhand, (2011) 8 SCC 708

Facts of the Case:

The petitioners were owners of private forests that were taken over by the State of Uttarakhand under the Kumaun and Uttarakhand Zamindari Abolition and Land Reforms Act, 1960. The State refused to pay compensation on the grounds that the petitioners had not been deriving income from the land for a specified number of years prior to the takeover.

Issue:

Whether the denial of compensation on such a ground, despite the State taking over the property, violated Article 300A of the Constitution.

Judgment:

The Supreme Court held that Article 300A, although no longer a fundamental right, still guarantees that a person cannot be deprived of property except by authority of law, which necessarily includes just, fair, and reasonable compensation.

The Court ruled:

- 1) Deprivation of property without fair compensation amounts to a violation of constitutional rights under Article 300A.
- 2) Income from land should not be the only determinant for compensation.
- 3) The state is duty-bound to ensure that even administrative acts involving property rights respect the principles of due process and fairness

Relevance to Digital Land Records:

In a digitized system:

- a) Wrongful omission or incorrect digital entry could result in a de facto deprivation of land without any formal acquisition or legal remedy.
- b) If land records are altered or wrongly updated in government databases, affected individuals might face dispossession without notice or compensation.

This judgment reinforces the state's constitutional obligation to ensure legal safeguards and procedural fairness when exercising authority over property—even in a digital context. It also signals that technological upgrades cannot override constitutional guarantees.

4.2. K.S. Puttaswamy v. Union of India, (2017) 10 SCC 1

Facts of the Case:

The case challenged the constitutional validity of the Aadhaar scheme on the grounds that it violated the right to privacy

Issue:

Whether the right to privacy is a fundamental right under the Indian Constitution and whether state collection and storage of personal data without safeguards infringes this right.

Judgment:

A nine-judge constitutional bench held that:

- 1) The right to privacy is a fundamental right protected under Article 21 (Right to Life and Personal Liberty).
- 2) Privacy includes informational privacy, autonomy, and the right to control one's personal data.
- 3) State surveillance, profiling, or data collection must be backed by law, follow the test of necessity, proportionality, and legitimate purpose, and ensure procedural safeguards.

Relevance to Digital Land Records:

Land records today are increasingly integrated with:

- a) Biometric data (Aadhaar)
- b) Personal identity information
- c) Geo-tagged property coordinate
- d) Transactional histories

The Puttaswamy judgment mandates that:

- 1) Such sensitive information must be protected by data security laws and consent-based collection
- 2) Any digital land governance system must incorporate privacy-by-design principles and strict access controls.
- 3) Public authorities should be subject to judicial oversight in cases where land records are misused for surveillance, political targeting, or mass profiling.

Future Implications:

- 1) State-led digitization projects involving land ownership data will need to align with the evolving data protection jurisprudence.
- 2) The upcoming Digital Personal Data Protection Act will be tested against these constitutional benchmarks.

Synthesis:

Both Rajiv Sarin and K.S. Puttaswamy emphasize the dual dimensions of property rights and informational autonomy in the digital age. Together, they form a robust constitutional framework against which any digital land record policy must be measured. Dispossession without process and data misuse without safeguards are not only administrative errors—they are constitutional violations.

5. Recommendations and Conclusion

The digitization of land records in India represents a historic shift in property administration. However, this transformation must be rooted in constitutional values and guided by legal, ethical, and social considerations to ensure that technological progress does not come at the cost of justice and inclusion. The following recommendations aim to align the digitization process with constitutional mandates and ground realities:

5.1 Need for a National Land Titling Law

One of the most critical gaps in India's land governance framework is the absence of a uniform, national legislation on conclusive land titling. While the current system is presumptive, where land records serve only as prima facie evidence of ownership, digitization can misleadingly give an impression of finality. This can result in wrongful dispossession, disputes, and administrative overreach.

A national land titling law must:

- 1) Establish conclusive titles backed by a guarantee of state compensation in case of errors.

- 2) Define the legal sanctity and evidentiary value of digital land records.
- 3) Incorporate mandatory public notification and objection procedures before finalizing digital entries.
- 4) Create centralized legal standards to harmonize state-level differences in land record formats and rules.

Such a law would not only provide certainty to landowners but also prevent judicial backlogs by reducing disputes arising from erroneous or outdated records.

5.2 Inclusive Digitization

The promise of digitization must not exclude India's most vulnerable. A rights-based approach to digital governance necessitates that every citizen, irrespective of digital literacy, caste, gender, or geography, can access and benefit from digital records.

To this end, the government should implement:

- a) Mobile land service vans in remote and tribal areas to offer on-the-spot registration, corrections, and record access.
- b) Digital help centers at village and block levels with trained personnel to assist citizens.
- c) Legal aid clinics and paralegal volunteers to guide marginalized communities in navigating digital grievances and appeals.
- d) Multilingual and accessible interfaces in digital portals, ensuring inclusion across linguistic and literacy barriers.

Without these, the shift to digital could inadvertently result in digital dispossession—a silent form of exclusion where those without access lose out on legal recognition and protection of their land rights.

5.3 Data Protection Framework

The K.S. Puttaswamy judgment has laid the foundation for informational privacy as a constitutional right. However, land records often involve highly sensitive data including location,

financial details, caste-based entitlements, and biometric information.

To protect against misuse, India urgently needs a data protection law tailored to property and land data, featuring:

- 1) Consent-based collection and use of data in land record systems.
- 2) Clear data retention and erasure protocols, ensuring outdated or irrelevant data is not misused.
- 3) Strict encryption standards and restricted access to sensitive information.
- 4) A grievance redress mechanism for those whose data is leaked, manipulated, or misused.
- 5) Provisions for independent oversight, possibly by a Data Protection Authority.

This framework must balance state interest in efficient land administration with the individual's right to autonomy and dignity over personal data.

5.4 Judicial Oversight

The courts play a critical role in preserving constitutional guarantees amidst technological transitions. As land record disputes increasingly involve digital evidence, judicial oversight is essential to ensure due process, transparency, and fairness.

Recommendations for the judiciary include:

- 1) Fast-track benches or special tribunals for disputes arising from digital land records.
- 2) Guidelines for judicial review of digital entries, especially when it results in deprivation of property without hearing.
- 3) Encouraging suo motu cognizance in cases of systemic errors or exclusionary practices in digitized records.
- 4) Leveraging technology-driven evidence management (e.g., blockchain validation, timestamping) in land litigation.

Ensuring that courts remain accessible and responsive to those affected by digital errors or

exclusion will uphold the rule of law in the face of technological change.

Conclusion:

The digital transformation of land records has the potential to streamline governance, reduce corruption, and protect property rights. However, its success ultimately depends on the constitutional integrity of the process. The state must recognize that technology is not neutral—it can reinforce or dismantle existing inequalities depending on how it is designed and deployed.

A constitutionally grounded approach to digital land governance requires:

- a) Legal certainty through national titling laws,
- b) Social inclusion through public support systems,
- c) Ethical data handling practices, and
- d) Robust judicial checks.

In the absence of these safeguards, digitization may not only fail to resolve historical land injustices but could deepen them. Therefore, India's move toward digital land records must be not just a technological leap, but a democratic and rights-based reform, ensuring that the land beneath our feet remains firmly within the reach of constitutional justice.

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