



Original Research Paper

Agricultural Land Acquisition for Infrastructure Development: Effects on Land Use, Livestock Dependent Livelihoods and Environmental Sustainability in India

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Abstract

Infrastructure development in India requires land for roads, railways, urban transit, irrigation, energy systems, pipelines and public facilities. Acquisition is legally justified through public purpose, but its validity depends on statutory authority, fair procedure, compensation and rehabilitation. This descriptive paper examines the Indian legal framework and landmark Supreme Court judgments governing compulsory acquisition for infrastructure. It reviews Article 300A of the Constitution, the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, and selected sector statutes. Judicial decisions are organised around seven principles: authority of law, notice, hearing, reasoned decision, public purpose, fair compensation, and timely completion of proceedings. The paper then discusses how acquisition affects agricultural continuity, parcel configuration, irrigation, fodder supply, livestock dependent livelihoods and land use change. The review shows that compensation for titled land does not necessarily restore the productive relationships sustained by the acquired landscape. It argues that legal compliance and environmental sustainability should be connected at the planning stage through early identification of owners and users, assessment of residual land, protection of access and water systems, recognition of livestock dependencies, and monitoring of livelihood restoration. The paper offers an integrated interpretation of acquisition law for responsible infrastructure planning.

Keywords: land acquisition; infrastructure development; agricultural land; Article 300A; livelihood restoration; India

1. Introduction

Infrastructure occupies a central position in national development. Roads, railways, public transport, irrigation networks, power systems, pipelines and public facilities improve mobility, market access, water security, energy supply and regional productivity. These benefits frequently depend on the compulsory acquisition of private land or the creation of a statutory right over land. The resulting legal relationship is unequal. The State or an authorised body exercises a power grounded in public purpose, while the affected person faces the loss or restriction of property, residence, occupation or livelihood. Indian law therefore treats acquisition as more than a transfer of title. It requires authority, procedure, compensation and, under the current statutory framework, rehabilitation and resettlement. The conflict becomes more complex when infrastructure enters agricultural landscapes.

Agricultural land is not merely an immovable asset with an exchange value. It supports cultivation, crop residues, fodder production, grazing, irrigation, livestock shelter, dairy activity, employment and informal arrangements among owners, tenants and labourers. Acquisition may remove an entire holding, divide it into uneconomic parcels, interrupt access, alter drainage or separate a livestock household from fodder and water. The direct area acquired may consequently differ from the area whose productive use is impaired.

The environmental dimensions of land and infrastructure have appeared across earlier work by the authors on landscape based passive cooling, vertical farming, porous pavement and water quality, climate related ecological change, product life cycle assessment and resource efficient construction materials (Saxena, 2014a; Saxena, 2014b; Saxena, 2014c; Saxena, 2014d; Kumar et al., 2017; Batra et al., 2017). These publications do not examine

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compulsory acquisition. They establish the broader concern that land, materials, water and environmental performance should be understood through connected systems rather than isolated physical quantities.

A separate programme of work by the authors examined construction delay in India, the identification of factors that can be managed by project participants, and measures for delay mitigation (Saxena et al., 2023a; Saxena et al., 2023b; Saxena et al., 2026). Land acquisition belongs to a different institutional field because project teams cannot create title, exercise sovereign acquisition powers or decide legal compensation. Nevertheless, incomplete land records, delayed possession, disputed valuation and inadequate consultation can affect infrastructure delivery. A legally sound acquisition process is therefore relevant to both rights protection and project planning.

This paper has three purposes. First, it describes the constitutional and statutory framework for land acquisition in Indian infrastructure projects. Second, it examines landmark Supreme Court judgments and identifies the principles that they establish. Third, it discusses the implications of those principles for agricultural land, livestock dependent livelihoods, land use and environmental sustainability. Its contribution lies in connecting legal doctrine with the physical and livelihood consequences of infrastructure land assembly.

2. Scope and approach

The paper adopts a descriptive legal and policy review. Primary legal materials comprise the Constitution of India, the central land acquisition statute, selected sector statutes and reported judgments of the Supreme Court of India. Secondary sources are used to explain displacement, livelihood reconstruction and social impact assessment. The review concentrates on acquisition for infrastructure and does not attempt an exhaustive account of every State amendment, municipal statute, town planning mechanism, land pooling scheme or negotiated purchase policy. The wider literature treats compulsory acquisition as an interaction among eminent domain, land governance, involuntary displacement, compensation and livelihood reconstruction. Comparative work shows that legal title, market value and physical relocation do not capture every social cost of development (Parasuraman, 1999; Cernea, 2000; Scudder, 2005; Oliver Smith, 2009). International safeguard systems consequently require avoidance or minimisation of displacement, consultation, compensation at replacement cost, livelihood restoration and monitoring (Asian Development Bank, 2009; International Finance Corporation, 2012; World Bank, 2017).

The legal discussion follows a hierarchy. Constitutional protection under Article 300A is considered first. The general acquisition framework under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 is then examined. Sector statutes are discussed where they create a distinct route for highways, railways, pipelines or electricity infrastructure. Judgments are selected for their statement of general principle or their direct relevance to roads and national highways. The later discussion applies these principles to agricultural land and livelihood without claiming that the reviewed judgments contain uniform findings on agriculture or livestock. The review also considers how control over land is shaped by exclusion, tenure institutions and changing land values (Deininger, 2003; Hall et al., 2011; FAO, 2012). Scholarship on large land transactions warns that aggregate development claims can conceal unequal distribution of costs and benefits (Zoomers, 2010; Borras et al., 2011). These insights are used to interpret the agricultural consequences of infrastructure acquisition, while Indian statutes and judgments remain the controlling legal sources.

This method has two limits. Judicial decisions arise from particular facts and cannot be reduced to broad propositions without attention to the governing statute. Further, State amendments can change procedure and entitlement. Every infrastructure project must therefore verify the law applicable to its location, sector, notification date and acquisition route. The paper provides an analytical account, not legal advice for a particular dispute.

3. Constitutional foundation of compulsory acquisition

3.1 Article 300A and authority of law

Article 300A states that no person shall be deprived of property except by authority of law. The right to property is no longer a fundamental right, but it remains a constitutional right and has also been recognised by the Supreme Court as a human right. Executive action, administrative convenience or completion of a public work cannot replace legal authority. The expression authority of law requires an enacted basis for deprivation and compliance with the procedure established by that law.

Acquisition and requisition of property fall within Entry 42 of the Concurrent List. Parliament and State legislatures may enact laws within their constitutional competence. The existence of legislative power does not remove constitutional scrutiny. Acquisition must serve a public purpose, follow a fair process and provide compensation in accordance with the governing law. Article 14 may also become relevant where similarly situated landholders receive unequal

treatment without a valid basis, as demonstrated in the national highway compensation litigation.

3.2 Public purpose and proportional exercise of power

Infrastructure normally satisfies the broad requirement of public purpose, but the label does not determine every legal issue. The acquiring authority must identify the land required, follow notification and objection procedures, consider alternatives where the statute requires such consideration, determine compensation and complete possession lawfully. The requirement of public purpose cannot validate the occupation of land before acquisition or cure the absence of compensation. Public benefit and individual protection operate together within the constitutional structure.

4. Indian statutory framework

4.1 The 2013 land acquisition statute

The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 replaced the Land Acquisition Act, 1894. The change was significant because the new statute combines acquisition with social impact assessment, compensation, rehabilitation and resettlement. It defines affected families more broadly than title holders alone and creates a framework for examining livelihood loss. The Act contains provisions relating to Social Impact Assessment, appraisal of public purpose, preliminary notification, objections, survey, declaration, award, possession and rehabilitation. Indian scholarship has traced the movement from the colonial acquisition model towards a framework that combines compensation with participation and rehabilitation. It has also identified persistent tensions concerning public purpose, valuation, administrative capacity and the position of people without formal title (Morris and Pandey, 2007; Ghatak and Ghosh, 2011; Chakravorty, 2013). Comparative assessment of acquisition systems indicates that transparent valuation, early engagement and credible dispute resolution influence both legitimacy and implementation (Mahalingam and Vyas, 2011).

Compensation is structured through market value and the additions prescribed by the Act and its First Schedule. The Second Schedule contains rehabilitation and resettlement entitlements, while the Third Schedule concerns infrastructural amenities. The Act also contains safeguards concerning acquisition of irrigated multi crop land and food security. These safeguards recognise that agricultural acquisition has consequences extending beyond private wealth because productive land supports food systems and rural employment.

The practical effect of the Act depends on implementation. Accurate identification of affected families requires attention to owners, tenants,

agricultural labourers, artisans and other persons whose livelihood may depend on the affected area. A revenue record may establish title but may not reveal grazing, crop residue exchange, informal tenancy, seasonal access or livestock movement. Social assessment should therefore record the functioning of the land, not only its legal classification. Social Impact Assessment is intended to identify the minimum land requirement, alternatives, affected groups and mitigation before acquisition. Its value depends on access to information, meaningful participation and connection with the final decision (Esteves et al., 2012; Vanclay et al., 2015; Singh and Wankhede, 2017). A social framework that follows people through project change is more useful than a static list of impacts prepared only for approval (Smyth and Vanclay, 2017).

4.2 Sector statutes and infrastructure specific routes

Infrastructure acquisition does not occur under one uniform procedure. The National Highways Act, 1956 provides a special process for national highway acquisition. It includes notification of intention, an opportunity to object, declaration of acquisition, vesting, compensation and arbitration. The Railways Act, 1989 contains provisions for acquisition for a special railway project. The Petroleum and Minerals Pipelines (Acquisition of Right of User in Land) Act, 1962 generally permits acquisition of a right of user for pipeline purposes rather than acquisition of full ownership. Electricity works may rely on the Electricity Act, 2003 and powers associated with the Indian Telegraph Act, 1885.

Section 105 and the Fourth Schedule of the 2013 Act identify specified central enactments. The Removal of Difficulties Order issued in 2015 extended the beneficial provisions relating to compensation and rehabilitation in the First, Second and Third Schedules to acquisitions under the listed enactments. The relationship between the general Act, a sector statute and a State amendment must be examined carefully. A statement that the 2013 Act applies or does not apply in full can be misleading unless the precise statutory route is identified.

Table 1. Principal legal instruments relevant to infrastructure land acquisition

Instrument	Infrastructure application	Main relevance
Constitution of India, Article 300A	All compulsory deprivation of property	Authority of law, fair procedure and constitutional protection
2013 land acquisition statute	General acquisition for public purpose	Social assessment, compensation, rehabilitation and resettlement
National	National	Special

Instrument	Infrastructure application	Main relevance
Highways Act, 1956	highways	notification, vesting, compensation and arbitration procedure
Railways Act, 1989	Special railway projects	Sector procedure for acquisition and compensation
Petroleum and Minerals Pipelines Act, 1962	Pipeline corridors	Acquisition of a right of user and compensation for loss or damage
Electricity Act, 2003 and Indian Telegraph Act, 1885	Transmission and distribution works	Placement powers, access and compensation
State amendments and rules	Projects within the concerned State	Variation in procedure and entitlement

5. Landmark judgments on acquisition for infrastructure

5.1 Vidya Devi v. State of Himachal Pradesh

In Vidya Devi v. State of Himachal Pradesh, the State had used private land for construction of a road without completing lawful acquisition or paying compensation. The Supreme Court rejected the argument that the landholder could be denied relief because of delay. It affirmed that forcible dispossession without authority of law violates Article 300A. The importance of the decision extends beyond its facts. A completed road does not convert an unlawful occupation into a lawful acquisition, and the public nature of the work does not remove the duty to compensate.

5.2 Sukh Dutt Ratra v. State of Himachal Pradesh

Sukh Dutt Ratra concerned land used for road construction without formal acquisition. The Supreme Court again emphasised that the State cannot take private property without following law. The Court refused to allow delay and laches to defeat the claim where the State continued to enjoy the benefit of the land. The judgment is important for legacy infrastructure, where possession may have occurred decades earlier and records may be incomplete. Administrative passage of time does not itself extinguish the constitutional defect.

5.3 Indore Development Authority v. Manoharlal

The Constitution Bench in Indore Development Authority v. Manoharlal interpreted section 24 of the 2013 Act in relation to acquisition proceedings initiated under the 1894 Act. The Court explained the conditions governing deemed lapse under section 24(2). Lapse requires the legally specified combination of failure concerning possession and compensation for the relevant period. The decision also clarified tender and deposit of compensation,

possession and the effect of court orders. For infrastructure administration, the central lesson is the need to maintain separate and reliable records of notification, award, tender or deposit of compensation, and possession. A general label such as pending land does not reveal the legal status of the parcel.

5.4 Union of India v. Tarsem Singh

Union of India v. Tarsem Singh examined compensation under the National Highways Act. Section 3J had excluded application of the 1894 Act, which resulted in denial of solatium and interest available under the general acquisition law. The Supreme Court held that this discriminatory exclusion violated Article 14 and extended the relevant benefits. The judgment confirms that use of a sector statute cannot justify arbitrary inequality in compensation among landholders whose property is compulsorily acquired for public purposes.

5.5 Project Director, National Highways Authority of India v. M. Hakeem

In Project Director, National Highways Authority of India v. M. Hakeem, the Supreme Court considered the power of a court under section 34 of the Arbitration and Conciliation Act, 1996 in a dispute concerning compensation determined under the National Highways Act. The Court held that section 34 did not provide a general appellate power to modify an arbitral award. The later Constitution Bench decision in Gayatri Balasamy v. ISG Novasoft Technologies Ltd. recognised a limited power of modification in defined and severable circumstances. These decisions matter because compensation disputes under the highway statute use arbitration, but judicial intervention remains controlled by the arbitration law rather than a complete rehearing of valuation.

5.6 Kolkata Municipal Corporation v. Bimal Kumar Shah

Kolkata Municipal Corporation v. Bimal Kumar Shah provides the most structured recent explanation of Article 300A. The Supreme Court described the constitutional right to property as a set of connected protections. These include notice, an opportunity to be heard, a reasoned decision, acquisition only for public purpose, restitution or fair compensation, an efficient process, and conclusion of the proceedings. The judgment moves analysis beyond the narrow question of whether some compensation was offered. Lawful acquisition requires a defensible sequence from notification to completion.

Table 2. Landmark judgments and principles for infrastructure acquisition

Judgment	Principle	Infrastructure implication
Vidya Devi v.	Road construction	Complete lawful

Judgment	Principle	Infrastructure implication
State of Himachal Pradesh, 2020	does not permit dispossession without law and compensation	transfer before occupation
Indore Development Authority v. Manoharlal, 2020	Lapse under section 24 depends on the defined conditions for possession and compensation	Maintain distinct legal records for each acquisition stage
Sukh Dutt Ratra v. State of Himachal Pradesh, 2022	Delay does not ordinarily protect continuing State use of land taken without law	Identify and resolve legacy occupation
Union of India v. Tarsem Singh, 2019	Discriminatory denial of solatium and interest in highway acquisition violates equality	Provide complete and equal compensation
Project Director, NHAI v. M. Hakeem, 2021, read with Gayatri Balasamy, 2025	Court control over arbitral awards is limited by current section 34 doctrine	Use the correct valuation and arbitration route
Kolkata Municipal Corporation v. Bimal Kumar Shah, 2024	Article 300A contains notice, hearing, reasons, public purpose, compensation, efficiency and conclusion	Treat constitutional procedure as an acquisition readiness requirement

6. Principles emerging from the judgments

6.1 Possession must follow legal authority

The first principle is temporal. Legal authority should precede occupation. Starting construction on the assumption that title, consent or compensation can be resolved later transfers legal risk to the affected person and delivery risk to the project. The road cases show that physical completion does not erase the duty to acquire and compensate. An infrastructure authority should not treat availability of a work front as equivalent to lawful possession.

6.2 Procedure has substantive value

Notice, hearing and reasons are not formal steps with no effect on outcome. They allow errors in ownership, area, land classification, access and valuation to be identified before possession. For agricultural land, a hearing may reveal that the proposed boundary divides a field, blocks irrigation or removes the only route used for livestock. A reasoned decision also creates a record showing whether these concerns were considered.

6.3 Compensation must reflect the governing statute

Compensation cannot be treated as a discretionary project payment. It must be determined under the applicable statute, including market value, statutory additions, interest and rehabilitation where applicable. Tarsem Singh demonstrates that unequal exclusion of beneficial components can be unconstitutional. The highway arbitration cases further show the importance of a correct initial valuation because later judicial correction is constrained.

6.4 Completion and record integrity are essential

Land acquisition involves several dates and legal acts. Notification, declaration, award, payment, possession and mutation are not interchangeable. Indore Development Authority demonstrates why incomplete records create uncertainty about lapse and continuity. Infrastructure agencies need a parcel level legal register that records each statutory stage, the person entitled, the compensation status, possession evidence, litigation and restrictions on use.

7. Effects on agricultural land and land use

7.1 Direct conversion and loss of productive land

Permanent acquisition changes the use of land from agriculture to transport, energy, water or public facility functions. The significance of conversion depends on soil quality, irrigation, cropping intensity and the availability of comparable land. Acquisition of irrigated multi crop land may produce a greater effect on food production and household income than acquisition of an equal area of less productive land. This explains the food security safeguards within the 2013 Act. The economic effect also reflects expectations created by infrastructure and urbanisation. Land prices may rise before acquisition, while officially observed transactions may not represent future use value or the value of an integrated holding (Ghatak and Mookherjee, 2014).

7.2 Fragmentation and residual land

Linear infrastructure can divide a holding without acquiring it in full. A road, railway, canal or pipeline restriction may leave residual parcels on either side. The remaining land may become difficult to reach, irrigate or cultivate with machinery. Conventional compensation based on the acquired strip may not capture the reduction in usefulness of the residue. Parcel configuration, access and severance should therefore be examined during design and valuation.

7.3 Irrigation, drainage and soil conditions

Agricultural productivity depends on water movement. Embankments, cuttings, access roads and construction yards can interrupt field channels or natural drainage. Excavation and material storage may affect topsoil. Pipeline and transmission projects may allow continued cultivation but impose

restrictions, periodic access requirements or crop damage. Restoration obligations should specify drainage, topsoil, field access and post construction condition rather than describing temporary land as automatically restored.

7.4 Induced land use change

Infrastructure changes accessibility and land value beyond the acquired boundary. New roads and stations can encourage commercial development, subdivision and speculative conversion. Irrigation can alter cropping and settlement, while reservoirs can replace extensive landscapes. These changes may create benefits but can also accelerate the loss of agricultural land. Acquisition assessment should therefore be connected with regional land use planning rather than confined to the engineering footprint. Research on special economic zones and industrial land conversion in India shows how development can shift control from cultivators towards public and private development agencies, producing different regimes of dispossession even where a formal public purpose is asserted (Levien, 2011; Levien, 2012).

8. Effects on livelihoods and livestock dependent households

8.1 Ownership does not define the full affected population

Agricultural landscapes support people with different legal relationships to land. Owners, tenants, share cultivators, agricultural labourers, dairy households and users of common resources may all experience loss. A title centred process can identify the person entitled to land compensation while overlooking others whose income depends on cultivation or livestock. The broader definition of affected family in the 2013 Act provides a basis for identifying these interests, but documentation remains critical. Tenure guidelines emphasise that legitimate interests may include customary and informal rights, particularly where formal records are incomplete (FAO, 2012). Development safeguard standards similarly require attention to livelihood effects even when physical relocation does not occur (International Finance Corporation, 2012; World Bank, 2017).

8.2 Fodder, grazing and livestock movement

Livestock dependence connects animals with cultivated land, crop residue, common grazing, water and settlement access. Acquisition can reduce fodder supply even where no livestock shelter is taken. Fragmentation may lengthen movement to grazing or water. Construction traffic, barriers and noise can further alter established routes. A lawful compensation award for land does not by itself establish whether a dairy or livestock activity can continue. Livelihood vulnerability is multidimensional because changes in natural,

physical, financial, human and social assets can reinforce one another. Recent indicator research on compulsory acquisition supports assessment of exposure, sensitivity and capacity to recover rather than reliance on compensation status alone (Pinuji et al., 2025).

8.3 Compensation and livelihood restoration

Compensation addresses the value of property and legally recognised interests. Livelihood restoration asks whether productive capacity and income can be reestablished. The two outcomes should not be assumed to coincide. The impoverishment risk literature identifies landlessness, joblessness, loss of common resources and social disarticulation as connected risks of displacement (Cernea, 1997; Mathur, 2013; Levien, 2018). For agricultural households, restoration may require access, irrigation repair, replacement land, assistance for alternative activity, fodder continuity or relocation of livestock facilities.

8.4 Vulnerability and distribution

The same acquisition can have unequal effects. A household losing a small share of a large diversified holding may adapt more easily than a tenant losing access to the whole area cultivated. Women may contribute substantially to livestock care and agricultural work without appearing in title or compensation records. Small holders, scheduled communities and households dependent on common resources may have limited capacity to enter a prolonged dispute. Social assessment should therefore examine distribution, not merely average compensation.

9. Environmental sustainability and infrastructure planning

Infrastructure sustainability is often assessed through service benefits such as reduced travel time, improved connectivity, irrigation supply or energy access. These benefits remain important, but they do not cancel local environmental effects. A sustainable project should minimise unnecessary acquisition, avoid highly productive land where reasonable alternatives exist, preserve drainage and access, manage temporary occupation and restore disturbed land. Social impact assessment should connect predicted change, affected groups, mitigation and monitoring rather than serve as a one time description (Vanclay, 2003). International guidance treats impact assessment as a continuing process from prediction to management and follow up (World Bank, 2004; Vanclay et al., 2015). This approach is relevant where construction effects, temporary occupation and restoration continue after the award of compensation. Legal compliance and environmental assessment are distinct but related. Acquisition establishes the authority to take property and the entitlements of

affected people. Environmental and forest approvals examine other protected interests. Compliance with one does not substitute for another. A project may possess land lawfully but still require environmental, forest, wildlife, wetland or pollution approvals. Conversely, an environmental approval does not create title or authorise possession of private land.

The case law supports a planning sequence in which rights are verified before construction. The infrastructure authority should identify the applicable statute, map the required interest in each parcel, issue notice, hear objections, record reasons, determine compensation, complete rehabilitation obligations, secure lawful possession and preserve the record. Agricultural assessment should occur within this sequence so that alignment, access, drainage and residual land issues are considered before they become disputes.

Table 3. Integrated legal and agricultural review for infrastructure planning

Planning stage	Required consideration	Expected record
Project conception	Public purpose, alternatives and minimum land requirement	Reasoned need and alternative assessment
Land identification	Title, tenancy, livelihood use, commons, irrigation and livestock access	Verified parcel and affected person register
Notification and hearing	Notice, objections and response to agricultural consequences	Service record, hearing record and reasoned decision
Valuation and rehabilitation	Applicable statute, full compensation and livelihood measures	Award, entitlement plan and payment record
Possession	Completion of legal conditions before work begins	Parcel level possession record
Construction	Temporary access, drainage, topsoil, dust, noise and livestock movement	Environmental inspection and grievance record
Completion	Restoration of temporary land and livelihood outcome	Restoration certificate and monitored outcome

10. Discussion

The reviewed law shows that infrastructure acquisition is not a single event. It is a sequence of public decisions constrained by constitutional and statutory duties. The most important judicial development is the movement from a narrow concern with formal acquisition towards a fuller account of property protection. Kolkata Municipal Corporation expresses this account through notice, hearing,

reasons, public purpose, compensation, efficiency and conclusion. The road cases add a firm rule that completed public construction cannot legitimise possession obtained without law.

These principles have practical significance for agricultural land. Notice and hearing can identify severance, irrigation and access effects. Reasons can show whether an alternative boundary or facility location was considered. Fair compensation can include the components required by the governing statute. Rehabilitation can address livelihood loss among people who are not limited to registered owners. Timely conclusion reduces the period during which households face uncertainty about cultivation, investment and movement.

The relationship between land acquisition and project delay should be framed carefully. Safeguards are not obstacles to be removed for speed. Delay often reflects late initiation, weak records, uncertain design, incomplete valuation or occupation before legal readiness. A rights compliant process can improve delivery because it identifies issues before procurement and construction. However, protection of affected people remains an independent legal obligation even where it does not shorten the schedule.

Agricultural and livestock effects also show why compensation cannot be interpreted only through market price. Productive landscapes create flows of crops, fodder, milk, labour and water. Their disruption may continue after payment. A descriptive legal review cannot quantify these effects, and the present paper makes no numerical claim. It instead identifies the questions that infrastructure authorities should answer: what land function is lost, who depends on it, what happens to the residual parcel, how livestock resources are affected, and whether restoration is monitored.

11. Recommendations

First, the applicable legal route should be recorded for every parcel. The project register should identify whether land is acquired under the general statute, a sector statute, negotiated purchase or a statutory right of user. State amendments and current rules should be verified before notification.

Second, agricultural function should be documented with title. Records should include irrigation, cropping intensity, access, tenancy, common use, fodder and livestock dependence. This information should inform design, Social Impact Assessment, valuation and rehabilitation.

Third, infrastructure design should minimise severance and functional loss. Underpasses, service access, drainage structures, channel restoration and changes to facility boundaries may protect a larger

productive area than their direct physical dimensions suggest.

Fourth, lawful possession should be treated as a formal readiness condition. A construction package should not assume access merely because notification has begun or a payment has been proposed. The record should show the completion of the statutory conditions applicable to the parcel.

Fifth, livelihood restoration should be monitored separately from compensation payment. Indicators should address cultivation, access, fodder cost, livestock activity, employment and income where those matters are affected. Monitoring should include tenants, labourers and users of common resources where the law recognises their interest.

Sixth, legal, social, environmental and engineering records should be integrated without merging their distinct purposes. A common parcel reference can allow the project authority to see title, compensation, rehabilitation, environmental restriction, design dependency, possession and dispute status while preserving responsibility for each decision.

12. Conclusion

Indian law permits compulsory acquisition for infrastructure, but public purpose does not displace constitutional protection. Article 300A, the 2013 acquisition statute, sector laws and Supreme Court judgments require authority, notice, hearing, reasons, compensation and completion through law. Vidya Devi and Sukh Dutt Ratra reject infrastructure occupation without acquisition. Indore Development Authority clarifies the legal treatment of possession and compensation in older proceedings. Tarsem Singh protects equality in highway compensation. M. Hakeem and Gayatri Balasamy define the limits of court intervention in arbitration. Kolkata Municipal Corporation brings these principles together through a structured account of property rights.

For agricultural land, the legal process should recognise that the acquired parcel forms part of a productive and environmental system. Fragmentation, access, irrigation, fodder, livestock movement and induced land use change may extend the impact beyond the acquired area. Compensation for title and restoration of livelihood are related but distinct. Infrastructure planning becomes more defensible when these consequences are identified before possession, addressed through design and entitlement, and monitored after construction. This approach connects constitutional legality with agricultural continuity and environmental sustainability without treating either as secondary to project delivery.

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Hardik Saxena: Conceptualisation, legal review, analysis and writing. Yash Kumar Mittal: Supervision, conceptual review and editing. Niruti Gupta: Supervision, policy interpretation and editing.

Conflict of interest

The authors declare no conflict of interest.

Data availability

The legal materials discussed in the paper are publicly available through India Code and the Supreme Court of India.

Ethical statement

The paper is based exclusively on public legal and documentary materials and does not involve human participants or animals. Ethical approval was therefore not required.

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