

Legal Challenges in Water Conservation in India: An Analytical Study of Constitutional and Environmental Perspectives

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Abstract: Water is one of the most essential natural resources for the survival of human beings, animals, agriculture, industry, ecology and sustainable development. In India, the issue of water conservation has become increasingly significant due to population growth, rapid urbanisation, industrialisation, climate change, groundwater depletion, river pollution, unequal distribution of water resources and weak enforcement of environmental laws. Although India possesses a broad constitutional and statutory framework relating to water protection, conservation and pollution control, the country continues to face serious legal and institutional challenges in ensuring sustainable water governance.

The Constitution of India does not expressly mention the right to water as a separate fundamental right; however, judicial interpretation has recognised access to clean and safe drinking water as an integral part of the right to life under Article 21. Articles 48-A and 51-A(g) further impose duties on the State and citizens to protect the environment, including water resources. In addition, legislative measures such as the Water (Prevention and Control of Pollution) Act, 1974, Environment (Protection) Act, 1986, various groundwater regulations, municipal laws, irrigation laws and environmental impact assessment norms provide a legal basis for water conservation. However, fragmented governance, overlapping jurisdictions, inadequate enforcement, excessive groundwater extraction, pollution of rivers and lakes, weak community participation and poor coordination between central, state and local bodies continue to weaken the effectiveness of water conservation laws.

This article critically analyses the constitutional and environmental perspectives of water conservation in India. It examines the legal framework, judicial trends, regulatory mechanisms and practical challenges in water governance. The article also highlights the need for integrated water resource management, stronger groundwater regulation, effective implementation of pollution control laws, decentralised community participation and recognition of water as a public trust. The study concludes that water conservation in India requires not merely legislative reforms but also institutional accountability, ecological sensitivity, public awareness and rights-based governance.

Keywords: Water Conservation, Right to Water, Article 21, Environmental Law, Groundwater Regulation, Public Trust Doctrine, Sustainable Development, Water Pollution

INTRODUCTION

Water is the foundation of life and an indispensable resource for human existence, agriculture, industry, sanitation, public health and ecological balance. In India, water has traditionally been regarded not merely as a physical resource but also as a social, cultural and spiritual necessity. Rivers, ponds, wells, lakes and groundwater systems have historically supported civilisations, agriculture and communities. However, in contemporary India, water conservation has emerged as one of the most pressing legal and environmental challenges.

India faces a paradoxical water situation. On the one hand, it receives significant rainfall during the monsoon season; on the other hand, large sections of the population experience water scarcity, drinking water insecurity and seasonal droughts. The problem is not only the availability of water but also its management, conservation, distribution and quality. Rapid urbanisation, industrial pollution, encroachment upon water bodies, excessive groundwater withdrawal, deforestation, climate change, unplanned construction and inefficient agricultural practices have severely affected India's water resources.

The legal dimensions of water conservation are complex because water falls within multiple legal, constitutional and administrative domains. Under the constitutional scheme, water is primarily a State subject, but inter-State rivers, environmental protection, pollution control and national planning involve central intervention. This creates overlapping responsibilities between the Union, States, local bodies, pollution control boards, groundwater authorities and development agencies. As a result, water governance in India often suffers from fragmentation, duplication and weak accountability.

The right to water has not been expressly mentioned as a fundamental right under the Constitution of India. However, the Supreme Court and High Courts have interpreted the right to clean and safe drinking water as part of the right to life under Article 21. This judicial approach has transformed water from a mere natural resource into a constitutional entitlement. At the same time, the State has a constitutional duty under Article 48-A to protect and improve the environment, and every citizen has a fundamental duty under Article 51-A(g) to protect natural resources including rivers, lakes and forests.

Water conservation is therefore not only a policy issue but also a constitutional obligation, environmental necessity and human rights concern. The challenge lies in translating

constitutional principles and statutory provisions into effective ground-level implementation. This article analyses the legal challenges in water conservation in India from constitutional and environmental perspectives.

MEANING AND IMPORTANCE OF WATER CONSERVATION

Water conservation refers to the planned, efficient and sustainable use, protection, preservation and management of water resources. It includes preventing wastage of water, protecting water bodies from pollution, regulating groundwater extraction, promoting rainwater harvesting, restoring traditional water systems, improving irrigation efficiency and ensuring equitable distribution of water.

Water conservation is important for several reasons. First, it ensures availability of drinking water for present and future generations. Second, it supports agriculture, which remains the backbone of India's rural economy. Third, it protects ecosystems, wetlands, rivers, lakes and biodiversity. Fourth, it reduces conflicts over water sharing between individuals, communities, sectors and states. Fifth, it strengthens climate resilience by reducing vulnerability to droughts and water stress.

In legal terms, water conservation is closely connected with the principles of sustainable development, inter-generational equity, precautionary principle, polluter pays principle and public trust doctrine. These principles have been recognised by Indian courts and have influenced environmental jurisprudence. Therefore, water conservation must be understood as a duty of the State, responsibility of citizens and obligation of industries and institutions.

CONSTITUTIONAL FRAMEWORK RELATING TO WATER CONSERVATION IN INDIA

The Constitution of India provides an indirect but strong foundation for water conservation. Although the Constitution does not contain a separate article specifically guaranteeing the right to water, several constitutional provisions collectively support water protection and conservation.

Article 21 and Right to Water

Article 21 guarantees that no person shall be deprived of life or personal liberty except according to procedure established by law. Judicial interpretation has expanded Article 21 to

include the right to live with human dignity, right to health, right to clean environment and right to pollution-free water. Since clean drinking water is essential for life, it is treated as an integral part of the right to life.

The recognition of right to water under Article 21 imposes a duty upon the State to ensure access to safe, sufficient and affordable water. It also enables citizens to approach constitutional courts when water sources are polluted, drinking water is denied or state authorities fail to protect water bodies.

Article 14 and Equality in Water Distribution

Article 14 guarantees equality before law and equal protection of laws. In the context of water conservation, Article 14 is relevant because unequal access to water can result in discrimination. Rural communities, urban poor, women, marginalised groups and tribal populations often suffer more due to lack of access to safe water. Equitable water governance is therefore necessary to satisfy the constitutional mandate of equality.

Article 19 and Livelihood Concerns

Water is directly connected with livelihood, especially for farmers, fishermen, pastoral communities and traditional occupations. Any arbitrary deprivation of access to water resources may affect the right to livelihood, which has been recognised as part of Article 21 and linked with freedoms under Article 19. Therefore, water policies must balance conservation with livelihood protection.

Article 39(b) and Distribution of Material Resources

Article 39(b), a Directive Principle of State Policy, requires that ownership and control of material resources of the community be distributed in such a manner as to serve the common good. Water is a material resource of the community. Therefore, its conservation and equitable distribution must be guided by public interest and not by purely commercial considerations.

Article 47 and Public Health

Article 47 imposes a duty upon the State to improve public health. Since contaminated water is a major cause of disease, safe drinking water and prevention of water pollution are essential

components of public health. Water conservation is therefore closely connected with the constitutional goal of improving health standards.

Article 48-A and Environmental Protection

Article 48-A directs the State to protect and improve the environment and safeguard forests and wildlife. Water bodies form an essential part of the environment. Rivers, wetlands, ponds and groundwater systems require legal protection under this constitutional mandate.

Article 51-A(g) and Fundamental Duty of Citizens

Article 51-A(g) imposes a fundamental duty on every citizen to protect and improve the natural environment, including forests, lakes, rivers and wildlife, and to have compassion for living creatures. This provision creates environmental responsibility among citizens and supports public participation in water conservation.

Seventh Schedule and Legislative Competence

Water falls under Entry 17 of the State List, which includes water supplies, irrigation, canals, drainage, embankments, water storage and water power, subject to Entry 56 of the Union List. Entry 56 empowers Parliament to regulate and develop inter-State rivers and river valleys when such regulation is declared expedient in public interest. This division reflects federal balance but also creates challenges in coordinated water governance.

STATUTORY FRAMEWORK FOR WATER CONSERVATION IN INDIA

India has several laws dealing directly or indirectly with water conservation, water pollution, groundwater control, environmental protection and resource management.

Water (Prevention and Control of Pollution) Act, 1974

The Water Act, 1974 is one of the most important environmental laws in India. Its objective is to prevent and control water pollution and maintain or restore the wholesomeness of water. The Act establishes Central and State Pollution Control Boards and empowers them to regulate discharge of pollutants into water bodies.

The Act requires industries and local bodies to obtain consent before discharging sewage or trade effluents. It also authorises pollution control boards to inspect premises, collect samples

and initiate prosecution. However, implementation remains weak due to poor monitoring, inadequate infrastructure, limited manpower and delays in prosecution.

Water Cess Act, 1977

The Water Cess Act was enacted to levy and collect cess on water consumed by industries and local authorities. Its purpose was to generate funds for pollution control boards and encourage efficient water use. However, the Act has now lost much of its practical relevance after changes in the tax framework.

Environment (Protection) Act, 1986

The Environment Protection Act, 1986 is an umbrella legislation enacted after the Bhopal Gas Tragedy. It empowers the Central Government to take measures for protecting and improving the environment. Water conservation measures, pollution control standards, environmental clearances and regulation of hazardous activities can be enforced under this Act.

National Green Tribunal Act, 2010

The National Green Tribunal Act, 2010 provides for effective and expeditious disposal of environmental cases. The NGT has played a significant role in matters relating to river pollution, groundwater extraction, illegal construction on water bodies, industrial discharge and restoration of lakes and wetlands.

Wetlands Rules

Wetlands act as natural water storage systems and biodiversity zones. The Wetlands (Conservation and Management) Rules provide a framework for identification, notification and protection of wetlands. However, many wetlands remain unprotected due to lack of updated inventories and weak enforcement.

Groundwater Regulation

Groundwater is one of the most exploited water resources in India. The Central Ground Water Authority regulates groundwater extraction through guidelines and No Objection Certificates. Several states have also enacted groundwater laws. However, enforcement remains difficult because groundwater extraction is highly decentralised and often linked with land ownership.

Municipal and Panchayat Laws

Local bodies have important responsibilities regarding drinking water supply, drainage, sanitation, wastewater management and protection of local water bodies. Panchayats and municipalities can play a major role in rainwater harvesting, pond restoration and community-based conservation. However, lack of funds, technical capacity and administrative coordination limits their effectiveness.

JUDICIAL APPROACH TO WATER CONSERVATION

Indian judiciary has played a transformative role in environmental protection and water conservation. Through public interest litigation, courts have expanded the scope of fundamental rights and developed important environmental principles.

Right to Clean Water as Part of Right to Life

The courts have repeatedly held that the right to life includes the right to clean drinking water and pollution-free environment. This interpretation has constitutionalised water protection and made State authorities accountable for failure to prevent water pollution.

Public Trust Doctrine

The public trust doctrine means that certain natural resources such as air, water, rivers, forests and seashores are held by the State in trust for the public. The State cannot transfer or exploit these resources in a manner that harms public interest. This doctrine is highly relevant for protecting lakes, ponds, rivers and wetlands from encroachment and commercial misuse.

Polluter Pays Principle

The polluter pays principle requires that the person or entity causing pollution must bear the cost of preventing and remedying environmental damage. In water pollution cases, this principle is essential for imposing environmental compensation on industries, local bodies and other polluters.

Precautionary Principle

The precautionary principle requires preventive action where there is risk of serious environmental harm, even if scientific certainty is not complete. This principle is important in

matters involving groundwater depletion, river contamination, industrial discharge and ecological damage.

Sustainable Development

The judiciary has recognised sustainable development as a balancing principle between economic growth and environmental protection. Water conservation requires this balance because development projects, industries and urban expansion must not destroy water systems.

MAJOR LEGAL CHALLENGES IN WATER CONSERVATION IN INDIA

Despite constitutional recognition and statutory provisions, India faces several legal and institutional challenges in water conservation.

Absence of Comprehensive National Water Law

India does not have a single comprehensive national water conservation law. Existing laws are fragmented across pollution control, irrigation, groundwater, municipal governance, environment protection and local administration. This creates inconsistency and weak coordination.

Federal Complexity

Water is primarily a State subject, but rivers, groundwater, environment and inter-State water disputes involve both Union and State authorities. This federal complexity often results in disputes, delays and lack of uniform standards.

Weak Groundwater Regulation

Groundwater extraction is one of the biggest water conservation challenges in India. In many areas, borewells are installed without proper permission or monitoring. The traditional legal link between land ownership and groundwater use has encouraged over-extraction. Regulatory authorities often lack sufficient manpower and real-time monitoring systems.

Pollution of Rivers and Water Bodies

Industrial effluents, untreated sewage, agricultural runoff, religious waste and solid waste continue to pollute rivers, lakes and ponds. Despite the Water Act, pollution control remains

inadequate due to weak enforcement, poor sewage treatment capacity and lack of accountability of local bodies.

Encroachment of Water Bodies

Urbanisation and real estate development have led to encroachment upon lakes, ponds, wetlands, drainage channels and floodplains. Once water bodies are converted into construction sites, ecological restoration becomes difficult. Legal protection often comes too late.

Ineffective Implementation of Rainwater Harvesting Laws

Many states and cities have made rainwater harvesting mandatory in buildings. However, compliance is poor due to weak inspection, lack of maintenance and absence of penalties. Rainwater harvesting is often treated as a formality rather than a conservation necessity.

Lack of Community Participation

Traditional water systems in India were often community-managed. Modern water governance has become highly bureaucratic, reducing local participation. Without community involvement, conservation schemes fail to achieve long-term sustainability.

Inadequate Data and Monitoring

Effective water regulation requires reliable data on groundwater levels, water quality, extraction volumes, rainfall, pollution sources and water use. In India, data is often fragmented, outdated or unavailable to the public. This weakens legal enforcement and policy planning.

Climate Change and Water Stress

Climate change has intensified floods, droughts, erratic rainfall and glacier-related risks. Existing water laws are not fully climate-sensitive. Conservation law must now incorporate climate adaptation, disaster management and ecological resilience.

Commercialisation and Inequality

The increasing involvement of private players in water supply, packaged drinking water and industrial water use raises questions of equity and affordability. Water conservation laws must ensure that commercial use does not deprive communities of basic water needs.

ENVIRONMENTAL PERSPECTIVE OF WATER CONSERVATION

From an environmental perspective, water conservation is closely connected with ecological balance. Rivers, wetlands, lakes, aquifers and forests are interconnected systems. Destruction of one component affects the entire ecosystem.

Water conservation must therefore move beyond human-centred use and recognise ecological needs. Rivers require environmental flows. Wetlands require protection from construction and pollution. Groundwater requires recharge. Forests must be protected because they influence rainfall, soil moisture and water cycles.

Environmental law must integrate water conservation with biodiversity protection, climate policy, land-use planning and pollution control. Conservation cannot succeed if water is treated merely as an economic commodity. It must be viewed as an ecological resource and public trust.

CONSTITUTIONAL PERSPECTIVE OF WATER CONSERVATION

The constitutional perspective transforms water conservation into a matter of rights, duties and governance. Article 21 creates a rights-based foundation for access to clean water. Article 48-A creates a duty of the State to protect water resources. Article 51-A (g) creates citizen responsibility. Article 39 (b) supports equitable distribution of water resources.

Thus, water conservation is not optional. It is constitutionally required. The State must prevent pollution, regulate exploitation, protect vulnerable communities and ensure sustainable use. Citizens must avoid wastage, prevent pollution and participate in conservation.

The constitutional approach also requires judicial review of arbitrary or environmentally harmful decisions. Courts can intervene where water bodies are encroached upon, groundwater is illegally extracted, or public authorities fail to discharge their duties.

ROLE OF LOCAL SELF-GOVERNMENT IN WATER CONSERVATION

Local self-government institutions are essential for effective water conservation. Panchayats and municipalities are closest to local water resources. They can identify ponds, wells, lakes, drainage lines and community water needs.

The 73rd and 74th Constitutional Amendments strengthened decentralised governance. Subjects such as drinking water, minor irrigation, watershed development, sanitation and local environmental protection can be handled effectively by local bodies. However, local institutions require financial support, technical training, legal authority and community participation.

INTER-STATE WATER DISPUTES AND CONSERVATION

India has several inter-State water disputes involving rivers. These disputes often focus on allocation rather than conservation. States compete for water shares but pay insufficient attention to river health, catchment protection, groundwater recharge and pollution control.

A conservation-oriented approach to inter-State water disputes would require basin-level planning, ecological flows, pollution control, data sharing and cooperative federalism. Tribunals and courts should not only decide allocation but also consider sustainability.

NEED FOR INTEGRATED WATER RESOURCE MANAGEMENT

Integrated Water Resource Management means coordinated development and management of water, land and related resources. It promotes equitable use without compromising ecosystems. India needs integrated river basin authorities, groundwater-surface water linkage, data transparency, stakeholder participation and scientific planning.

At present, water governance is divided among many departments. Irrigation, drinking water, industry, environment, agriculture, urban development and pollution control often function separately. Integrated management can reduce duplication and improve accountability.

SUGGESTIONS AND RECOMMENDATIONS

1. India should consider adopting a comprehensive national framework law on water conservation based on constitutional principles, ecological sustainability and equitable access.

2. The right to safe and clean water should be expressly recognised through legislative or policy measures.
3. Groundwater regulation should be strengthened through compulsory registration of borewells, digital monitoring, water audits and strict penalties for illegal extraction.
4. Rainwater harvesting should be made effectively enforceable with regular inspection and maintenance requirements.
5. Pollution Control Boards should be strengthened with better manpower, technology, laboratories and enforcement powers.
6. Local bodies should be made accountable for sewage treatment, drainage management and protection of local water bodies.
7. Traditional water conservation systems such as stepwells, ponds, tanks and johads should be restored.
8. Water conservation should be integrated with urban planning, land-use regulation and building permissions.
9. Strict action should be taken against encroachment on lakes, ponds, wetlands, riverbeds and floodplains.
10. Community participation should be legally institutionalised through water user associations, gram sabhas and local monitoring committees.
11. Environmental compensation should be imposed on polluters and used for restoration of affected water bodies.
12. Water literacy and public awareness should be promoted in schools, universities and communities.
13. Climate change adaptation must be incorporated into water laws and policies.
14. Industries should be required to adopt water recycling, zero liquid discharge and efficient water-use technologies.
15. Judicial directions relating to water conservation should be implemented through time-bound compliance mechanisms.

CONCLUSION

Water conservation in India is a constitutional, environmental, social and developmental necessity. The Constitution of India, through judicial interpretation of Article 21 and provisions such as Articles 48-A and 51-A (g), provides a strong foundation for protection of water resources. Statutory laws such as the Water Act, Environment Protection Act, groundwater regulations and NGT Act further support conservation. However, the real challenge lies in implementation.

India's water crisis is not merely a crisis of scarcity but also a crisis of governance. Fragmented laws, weak enforcement, excessive groundwater extraction, pollution, encroachment, poor data systems and inadequate community participation have limited the success of water conservation measures. A rights-based and ecology-centred approach is necessary to ensure sustainable water governance.

Water must be treated as a public trust, not merely as a commodity. The State, citizens, industries and communities must share responsibility for its protection. Effective water conservation requires legal reform, institutional accountability, technological innovation, public participation and constitutional commitment. Only then can India secure water justice for present and future generations.

References

1. Baxi, U. (2010). *Human rights in a posthuman world: Critical essays*. Oxford University Press.
2. Cullet, P. (2009). *Water law, poverty, and development: Water sector reforms in India*. Oxford University Press.
3. Cullet, P., & Gupta, J. (2009). India: Evolution of water law and policy. In J. W. Dellapenna & J. Gupta (Eds.), *The evolution of the law and politics of water* (pp. 157–173). Springer.
4. Divan, S., & Rosencranz, A. (2022). *Environmental law and policy in India: Cases, materials and statutes* (3rd ed.). Oxford University Press.

5. Government of India. (1974). *The Water (Prevention and Control of Pollution) Act, 1974*. Government of India.
6. Government of India. (1986). *The Environment (Protection) Act, 1986*. Government of India.
7. Government of India. (2010). *The National Green Tribunal Act, 2010*. Government of India.
8. Government of India. (2012). *National Water Policy, 2012*. Ministry of Water Resources.
9. Government of India. (2020). *Guidelines to regulate and control groundwater extraction in India*. Ministry of Jal Shakti.
10. International Law Association. (1966). *Helsinki Rules on the Uses of the Waters of International Rivers*. International Law Association.
11. Iyer, R. R. (2003). *Water: Perspectives, issues, concerns*. SAGE Publications.
12. Iyer, R. R. (2007). *Towards water wisdom: Limits, justice, harmony*. SAGE Publications.
13. Kothari, J. (2006). The right to water: A constitutional perspective. International Environmental Law Research Centre.
14. Lele, S., & Srinivasan, V. (2013). Disaggregated economic impact analysis incorporating ecological and social trade-offs and techno-institutional context: A case from the Western Ghats of India. *Ecological Economics*, 91, 98–112.
15. Ministry of Jal Shakti. (2024). *Major steps taken by Government for water conservation*. Government of India.
16. Planning Commission of India. (2007). *Report of the Expert Group on Groundwater Management and Ownership*. Government of India.
17. Rosencranz, A., & Jackson, M. (2003). The Delhi pollution case: The Supreme Court of India and the limits of judicial power. *Columbia Journal of Environmental Law*, 28(2), 223–254.

18. Shiva, V. (2002). *Water wars: Privatization, pollution and profit*. South End Press.
19. Singh, C. (1991). *Water rights and principles of water resources management*. Indian Law Institute.
20. Wahi, N. (2022). The evolution of the right to water in India. *Water*, 14(3), 398.