

Groundwater Management under the Indian Legal Framework: Challenges and the Way Forward

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Abstract

About 89 per cent of the world's fresh water resources are found in groundwater, but over the past few decades, groundwater extraction has dramatically increased, having a detrimental effect on aquifers. India is the biggest users of groundwater in the World, over 230 cubic kilometers of groundwater is used per year. As a result, more and more aquifers are being exploited to an unsustainable level, and the nation frequently experiences drinking water shortages. This article focuses on the groundwater laws that apply in India. It also examines legal approaches in groundwater law and its challenges in this contemporary India where groundwater is a dwindling resource.

Further this paper highlights the measures taken by the central government in order to protect groundwater resources and argues that the existing framework governing groundwater is based largely on principles developed during the 19th century. In the light of this, the author argues that a new set of principles should be established that acknowledge the shared nature of groundwater and the human right to water, as failing to do so will violate the right to access water, and in turn, the right to life under Article 21 of the Constitution. Therefore, there is an urgent need to change the current situation.

Key words: Groundwater management, Sustainable development, India, Central Ground Water Board, Fundamental right.

I. Introduction

Groundwater is India's lifeline, it has been so for the last four decades in all sub-sectors including irrigation, rural and urban domestic supply and also to industrial and commercial sectors. For instance, groundwater supports around 62 per cent of the water needed for agriculture, 85 per cent of the water needed for rural water

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supply, and 45 per cent of the water needed for urban water supply.² However, this primary source of readily accessible freshwater is reaching unsustainable levels of exploitation. According to the 2021 CAG study, groundwater extraction in India rose from 58 to 63 percent between 2004 and 2017, exceeding the rate of groundwater recharging.³ Precipitation is the method where groundwater can be recharged but due to climate change, there is irregular rainfall which affect the recharge potential, and posing a serious threat to the quantity and quality of groundwater. An assessment was made by the **Central Ground Water Board (CGWB)**, it was found that many places are overexploited, and the majority of the places were also reported as critical and semi-critical.⁴ Moreover, aquifers are also running dry in the most densely populated and economically prosperous regions. In addition to that, groundwater resources will be more severely strained by climate change in the near future. Thus, groundwater is the main source of water for all main water uses and needs to be given the policy attention.

II. Status of Groundwater Depletion in India.

Groundwater is the water present beneath the earth's surface in soil pores spaces and in the fractures of rock formations, it makes 30 per cent of the freshwater supplies. However, India has a real problem when it comes to groundwater, Indians withdraw groundwater higher than the replenishment. India is the largest user of groundwater and uses an estimated 230 cubic kilometres annually, or more than a quarter of the world's total.⁵ The use of groundwater has grown significantly over the last few decades, and it is now the backbone of the country's food and drinking water security. It makes India the most groundwater-stressed

² Report of the Comptroller and Auditor General of India on Ground Water Management and Regulation, (Jul. 25 2022, 11:00PM), https://cag.gov.in/webroot/uploads/download_audit_report/2021/Report%20No.%209%20of%202021_GWMR_English-061c19df1d9dff7.23091105.pdf.

³ Purnanjali Chandra and Sindhuja Janakiraman, *Groundwater Regulation: A Challenge to make the 'Invisible Visible' in India*, WRI India, (May 27, 2022, 9:29 PM), <https://wri-india.org/blog/groundwater-regulation-challenge-make-%E2%80%98invisible-visible%E2%80%99-india>

⁴ Purnanjali Chandra & Sindhuja Janakiraman, *Supra note 3*.

⁵ *Id.*

region in the world. It accounts for around 25% of the world's groundwater extraction.⁶

Today India has surpassed both the USA and China as the amount of groundwater used annually has now climbed to 260 cubic kilometres.⁷ The viability of agriculture, long-term food security, livelihoods, and economic growth will all be seriously impacted by this. In October 2005, the Planning Commission established an expert panel to assess the groundwater situation, led by Kirit Parikh, a member of the commission's energy and water committee. It was estimated that by 2050, groundwater demand will certainly outpace supply and the main reason is urbanisation and industrialisation.⁸

Globally, groundwater is also the most stressed resource and for irrigation, it takes 70 per cent of available freshwater.⁹ In drier countries like Chile and Sudan, 90 per cent of freshwater is used in farmland and in India, over 50 per cent of all irrigation linked freshwater withdrawals are from groundwater reserves.¹⁰ Groundwater is primarily recharged in monsoon months from June to September but precipitation levels vary substantially with India's western region receiving less than 600 mm of rainfall. As a result, Rajasthan, Punjab, Haryana and Delhi are classified as critical regions having overexploited stages of groundwater extraction especially since most of these are intensively cultivated areas withdrawing high levels of groundwater.¹¹ These states consume more

⁶*Id.*

⁷The World Bank, *India Groundwater: A Valuable but Diminishing Resource*, (May 30, 2022, 9:30 PM) <https://www.worldbank.org/en/news/feature/2012/03/06/india-groundwater-critical-diminishing>

⁸S. V. Suresh Babu, *Planning Commission report on groundwater downplays industrial exploitation*, DOWN TO EARTH, (Jul. 15, 2022, 8:00 PM) <https://www.downtoearth.org.in/news/planning-commission-report-on-groundwater-downplays-industrial-exploitation-6655>.

⁹688 billion cubic metres: India's water withdrawals for agriculture are the highest in the world, Down to Earth (Aug 7, 2022, 09:30 AM), <https://www.downtoearth.org.in/news/water/688-billion-cubic-metres-india-s-water-withdrawals-for-agriculture-is-the-highest-in-the-world-60967>

¹⁰*Id.*

¹¹Vishwa Mohan, *Delhi, Punjab, Rajasthan and Haryana headed the Latur way as groundwater extraction soars*, THE TIMES OF INDIA, Apr 17, 2016, (Aug 02, 2022, 11:30 P.M).

groundwater than their rechargeable limit every year which makes them more vulnerable to water scarcity. Groundwater condition is also not uniform across the country. Therefore, the areas are divided into three categories based on groundwater levels: **overexploited, critical, and semi-critical**.¹²

Overexploited	Critical	Semi-Critical
It is the situation when groundwater extraction exceeds recharging.	It is the situation when the groundwater extraction rate is 90-100% of what is recharged	It describes situation where extraction rates are between 70% and 90% is semi-critical. ¹³

States that extract less than 50 % of groundwater are considered safe these include **West Bengal, Chhattisgarh and Tripura**. And those like **Tamil Nadu, Uttar Pradesh & Himachal Pradesh** which extract more than 50 % of their groundwater are semi-critical. The stage of ground water extraction is over 100% in **Delhi, Haryana, Punjab, and Rajasthan**, which implies that groundwater use exceeds annual extractable ground water resources in these states.¹⁴ But India's North-East states extract the least groundwater i.e. less than 12 % because a larger part of these states especially rural areas are more tribal dominated and traditional farming practices are still followed. There are also relatively high rainfall areas and large local water systems existing which provide water for irrigation. Therefore, these places are called non-critical in terms of groundwater depletion.

Besides the general problem of decline in groundwater resources there are other specific problems in India. For example, there is arsenic contamination in West Bengal, fluoride contamination in North Gujarat and southern Rajasthan, and Saline ingress in Saurashtra, Gujarat. Overall, 386 districts in India have

<https://timesofindia.indiatimes.com/city/delhi/delhi-punjab-rajasthan-and-haryana-headed-the-latur-way-as-groundwater-extraction-soars/articleshow/51860478.cms>.

¹² National Compilation on Dynamic Ground Water Resources of India, 2017, (Aug 17, 2022, 09:30 AM) <http://cgwb.gov.in/GW-Assessment/GWRA-2017-National-Compilation.pdf>.

¹³ *Id.*

¹⁴ National Compilation on Dynamic Ground Water Resources of India, 2017, *supra note* 12.

excessive nitrate levels, followed by 335 districts with fluoride, 301 districts with iron, 212 districts with salinity, 153 districts with arsenic, 93 districts with lead, 30 districts with chromium, and 24 districts with cadmium. The groundwater in many places contains more than one, two, or three hazardous substances.¹⁵ Reports have made it clear that practically every district is dealing with problems with both the supply and quality of water.¹⁶ Currently, the largest issue India has ever seen is the unplanned and irrational use of water by individuals causing the groundwater table to decline more quickly.

These widespread problems that India is facing currently are due to the failure to adopt an integrated approach to groundwater resources. Therefore, there is an urgent need to have efficient groundwater management and sustainable development of this dwindling resource. However, the government has introduced legislation, policies to protect and preserve this critical resource.¹⁷ In the following section, the author has highlighted the existing legal framework that has been introduced by the government to address the challenges of groundwater use.

III. Groundwater management under the Indian legal framework

A. Position of Groundwater Rights under Common Law Principle

There is currently no central law in India to regulate and control groundwater. The groundwater regulations in India are based on the legal principles evolved by the British Courts, known as the common law principle.

¹⁵ Vishwa Mohan, *Across India, high levels of toxins in groundwater*, THE TIMES OF INDIA, Jul. 31, 2018, (Aug 02, 2022, 11:30 P.M) <https://timesofindia.indiatimes.com/india/govt-body-finds-high-levels-of-groundwater-contamination-across-india/articleshow/65204273.cms>.

¹⁶ PRS INDIA, *Overview of Groundwater in India*, (Jan. 10, 2022, 01:33 AM). <https://www.prsindia.org/administrator/uploads/general/1455682937~Overview%20of%20Ground%20Water%20India.pdf>.

¹⁷ Farzin Naz and Jayanta Boruah, *Groundwater Management Under Indian Legal Framework*, Vol. 1: Issue 1, INDRAPRASTHA LAW REVIEW (2020) (May 27, 2022, 9:29 PM), https://indraprasthalawreview.in/wp-content/uploads/2020/10/ggsipu_uslls_ILR_2020_V1-I1-06-farzin_naz-jayanta_boruah.pdf.

Private Rights in Groundwater

Rights to groundwater is derived from both the statutory as well as common law principles. The common law principles recognises landlord natural rights over groundwater which means the landlord can extract an unlimited quantity of groundwater and is also not responsible for any damage caused to water resources as a result of his over-extraction. This legal principle is *cuius est solum, eius est usque ad coelum et ad inferos* which means that property holders have rights not only to the plot of land itself, but also to the air above and the ground below.¹⁸ Based on this principle, the court held in **Acton's Case**¹⁹ that groundwater, unlike surface water: "falls within that principle, which gives to the owner of the soil all that lies beneath his surface; that the land immediately below is his property, whether it is solid rock, or porous ground, or venous earth, or part soil, part water. The person who owns the surface may dig therein and apply all that is there found to his purposes with his free will and pleasure. Similarly, based on the same principle, there is a British-era law called the **Indian Easement Act of 1882** where the landowners have the right to collect and dispose of groundwater within their limits. This law is the main source of understanding of the current legal position on groundwater in India. Section 7 (g) the Indian Easement Act 1882 implicitly recognises the position of law to be same as that of the common law. This formulation also found judicial favour in some of the pre-independence decisions, most notably in *Kesava Bhatta v. Krishna Bhatta*.²⁰ Section 7 of the Act allows the absolute ownership of the land owner and is allowed unlimited withdrawal of ground water which leads to water overuse. Even today the Easement Act based on the common principles are part of groundwater law in India. As a result, landowners have gained influence over water rights, however it becomes difficult to regulate. Therefore, the Indian courts applied the public trust doctrine, another important doctrine in the landmark judgements keeping the importance of the local self-governing bodies in decision making. The public trust doctrine was founded on the idea that certain common properties such as rivers, seas, forests and the air were held by the state in trusteeship for the free and unimpeded use of the general public. The state, which holds the natural waters as a trustee, is duty bound to distribute or utilise the waters in such a way, that

¹⁸ OXFORD DICTIONARY OF LAW (8th ed. 2014).

¹⁹ Acton and Blundell and another 152 E.R. 1223 (1843).

²⁰ Karathigundi Keshava Bhatta v. Sunnanguli Krishna Bhatta (1946) 1 MLJ 131.

it does not violate the natural right to water of an individual or group and safeguards the interest of the public and of ecology or nature."

Over the years, the doctrine was applied more extensively by the Court through a series of decisions mostly in the context of the right to access and use water bodies, parks etc. (**M.I Builders Case, 1999**;²¹ **Intellectuals Forum Case, 2006**²²). The Single bench of Kerala High Court in the **Plachimada case**,²³ held that groundwater cannot be treated as private property, but in the public interest, it should be held by the state in public trust. The common law principle cannot be applied in this contemporary time where bore wells and heavy-duty pumps have been introduced. However, the decision of the Single Bench of Kerala was set aside by the Division bench on the public trust doctrine as stated in M.C Mehta case.²⁴ However, the Division bench has ruled that right to draw water should be within reasonable limits. Therefore, after this case, if the unlimited withdrawal is done then it can be actionable under the law of torts. Therefore, judiciary has played a pivotal role in ensuring access to water to everyone.

B. Indian Constitution and Groundwater Management

In India, water law is largely state-based. This is because the Indian constitution has adopted the government of India Act, 1935 which essentially gives power to the states to legislate on this matter. Water is a state subject²⁵ which means it belongs to the states and it has the responsibility to regulate and manage water including groundwater. However, "Entry 17" is subject to provisions of "Entry 58" List I of the Seventh Schedule i.e. Union List. Therefore, water also falls within the ambit of Parliament. In the public interest, Parliament can use its legislative and executive authority over groundwater.

Based on the Supreme Court's orders, **Central Ground Water Authority (CGWA)** a statutory body was established under Section 3 of the Environmental (Protection) Act 1986. It has given power under section 5 of the act to regulate groundwater abstraction, and its usage, and to monitor how well groundwater management plans are being implemented. Every two years, groundwater

²¹ M.I Builders v. Radley Shyam Sahu AIR 1999 SC 2468.

²² Intellectuals Forum, Tirupathi v. State of A.P. & Ors Appeal (civil) 1251 of 2006.

²³ Perumatty Grama Panchayat v. State of Kerala 2004, (1) KLT 731.

²⁴ M. C. Mehta v. Kamal Nath, (1997) 1 SCC 388.

²⁵ INDIA CONST. Entry 17 of List II in Seventh Schedule.

resources were to be evaluated by the Central Ground Water Board (CGWB). Since then the CGWA has been regulating and managing groundwater extraction in those States and Union Territories which do not have legislation on groundwater. Recently, the guidelines were notified by the CGWB which seeks to remove lacunae in the regulation by prescribing a minimum environmental compensation of ₹1 lakh for industrial, mining and infrastructure users for extracting groundwater without a no objection certificate (NOC). The central ground water authority has directed that the misuse of potable water will be a punishable offence in India. Punishable with a fine of Rs. 1 lakh and imprisonment for 5 years.²⁶ Hence, the states and Union territories were requested to review their regulations.

Besides this, amendments 73rd and 74th to the Indian Constitution²⁷ extend vast power to panchayats over water resources, minor irrigation, water management and watershed development and fisheries. There is also a fundamental duty to both the State and the citizens under Article 48A and Article 51A(g) to protect and improve the environment. The Judiciary approach has also been in favour of clean water and a clean environment for all the citizens of India. Initially, the Constitution nor any other legal document recognised the right to water as a basic right. However, considering the importance of freshwater, its scarcity and the injustice implicit in the legal regime, the judiciary occasionally construed **Article 21** to include the right to clean water and a clean environment as a fundamental right. Right to water was acknowledged as a fundamental right in the well-known case of *Subhash Kumar v. State of Bihar*.²⁸ As a result, the Right to Water has been highlighted in numerous judicial rulings and is now considered to be the law of the land. For example, the Kerala High Court ruled that the over-pumping and distribution of water violated Article 21 of the Indian Constitution in the case of *Attakoya Thangal v. Union of India*²⁹. The administrative officials of Lakshadweep Island agreed to supply water by drilling wells in this specific situation to meet the rising demand for drinkable water. Petitioners on the ground

²⁶ Central Ground Water Authority, (Aug 7, 2022, 09:30 AM), [http://cgwb.gov.in/CGWA/Documents/Draft%20revised%20guidelines%202017\(24.7.2017\).pdf](http://cgwb.gov.in/CGWA/Documents/Draft%20revised%20guidelines%202017(24.7.2017).pdf).

²⁷ INDIA CONST. art. 243G and 243W.

²⁸ *Subhash Kumar v. State of Bihar*, AIR 1991 SC 420.

²⁹ *Attakoya Thangal v. Union of India*, 1990 (1) K.L.T. 58.

contested this agreement, arguing that it violated Article 21 owing to the excessive pumping there was the unavailability of groundwater in the islands and the risk of excessive pumping bringing complete depletion and significant disruptions to the freshwater balance.

Additionally, the court ruled in *Gautam Uzir & Associates v. Gauhati Municipal Corp.*³⁰ that the municipal corporation was in charge of providing clean drinking water and had a duty to investigate the dearth and impurity of potable groundwater.

Hence, a new body of environmental law has emerged as a result of the Supreme Court's interpretation. The judiciary has frequently ruled that every State is bound by the right to water as the supreme law of the land.³¹ India has successfully imposed a ban on illegal extraction of water and whenever needed has come forward to protect this precious resource with the help of judiciary. This newly recognised right is crucial and directly related to management and groundwater preservation.

However, despite these legal developments that are pertinent to groundwater management, the colonial law i.e. **Indian Easements Act of 1882** continues to be the primary law that governs water relations, including the groundwater allocation regulations. The Indian Easements Act effectively treats groundwater as private property and grants the owner the "right to collect" any groundwater beneath his or her property. This colonial principle cannot be implemented in a country like India where water scarcity is a significant issue and also caste-based discrimination is predominated in India. This legal reality restricts the right of landowners and leaves out a vast number of people with no land, particularly the rural poor and the Dalits. Though the caste system is legally banned it is still in practice in many parts of the country. The Dalits do not have access to water as they are denied entry into areas where the upper caste controls the community wells. There have been many instances where a Dalit has been killed or mercilessly beaten. Recently in Rajasthan, a nine-year-old child was beaten to death by his upper-caste Hindu teacher for touching a water pot of upper Hindu.³²

³⁰ *Gautam Uzir & Anr. v. Gauhati Municipal Corp.*, 1999 (3) GLT 110.

³¹ INDIA CONST. Art. 141.

³² *Rajasthan: Dalit student beaten to death for touching water pot of upper caste*, HINDUSTAN TIMES (Aug 14, 2022, 09:40 PM),

There are end number of discrimination and violence faced by Dalits while collecting water because mostly they are depended on privately owned water sources usually owned by upper caste individuals.

This unfairness in law has made the condition more vulnerable, particularly in the rural areas and mostly the Dalit women bear the brunt of it because carrying water for a family is a women's duty in third world countries like India. The concept of private property right over groundwater resources needs to be abolished. There has been a legislative trend in many countries around the world to make groundwater a public resource. In countries like Australia, Indonesia and Peru groundwater is considered a common pool resource and now it is under a public domain.³³ Similarly, the same trend of bringing private waters into a public domain legislatively and abolishing riparian rights has been adopted by many developed and developing countries and it should be adopted by India as well.

IV. Government Policies and Groundwater Models on Groundwater Management: A New Paradigm for Groundwater Regulation

In the 1960s, the Indian economy was booming, and water management was meeting those needs. At the same time, though India was gaining wealth but the water-related problems were increasing. To address the issue of water, a series of changes were made at the national and state levels.³⁴ The Central Government of India took significant measures by adopting model groundwater bills and national water policies in an effort to reduce the disparity in water distribution. In pursuance of this initiative, various state governments have enacted groundwater legislation over the years. Hence, attracting a specific degree of uniformity in the creation, administration, and use of groundwater resources.

A. Government Policies Related to Groundwater

National Water Policy 2012

The first national state policy stating that water is a prime natural resource, a necessity for all living things, and a valuable national resource was adopted in

<https://www.hindustantimes.com/cities/jaipur-news/rajasthan-dalit-student-beaten-to-death-for-touching-water-pot-of-upper-caste-101660451656553.html>

³³ M.S. VANI, *GROUNDWATER LAW IN INDIA: A NEW APPROACH*, SAGE publications (2009).

³⁴ Farzin Naz and Jayanta Boruah, *Supra* note 18.

1987.³⁵ It prioritises drinking water over all other uses, for both people and animals. The policy calls for an integrated and coordinated development of surface and groundwater as well as limitations on the exploitation of groundwater through regulation. Despite having the policy, India's groundwater was facing challenges the policy has some deficiencies. Therefore, the 1987 Policy was modified but with much the same views.³⁶ Additionally, it emphasised the necessity of groundwater resource regulation and to prevent overexploitation prevention to ensure that overuse does not go beyond recharging limits. However, this policy was merely suggestive, and groundwater management approach was hazy. Therefore, the Ministry of Water Resources issued a new **National Water Policy, 2012**³⁷ to meet the challenges in the water sector. To achieve total food security and sustainable groundwater management, the policy correctly emphasises the management of groundwater as a common resource by the state under the doctrine of public trust. The new NWP addresses issues relating to water scarcity, planning, and management of water resources. The policy will set new guidelines for states to adopt, but it is left to the states to use these guidelines.³⁸

The Groundwater Sustainable and Management Bill 2016

Since the widespread introduction of mechanised pumping devices during the 1960s caused a sharp rise in groundwater consumption and a sharp decline in water tables, there has been a demand for groundwater law reform. This caused the Indian government to realise the requirement for a legal framework regulating groundwater. In 1970, a Model Bill for groundwater was adopted. Although this model law has undergone multiple revisions (1992, 1996, and 2005), the essential structure proposed in 1970 has been kept.³⁹ In its most recent, the Groundwater

³⁵ National Water Policy, 1987, (May 27, 2022, 09:30 AM) http://cgwb.gov.in/documents/nwp_1987.pdf

³⁶ Press Information Bureau, Government of India Ministry of Water Resources, (Aug 12, 2022, 01:30 P.M) <https://pib.gov.in/newsite/PrintRelease.aspx?relid=90775>.

³⁷ National Water Policy, (Jun 27, 2022, 09:30 AM), <http://cwc.gov.in/sites/default/files/nwauser/nwp-lectnote6.pdf>.

³⁸ Bharat Lal Seth, *National Water Policy, 2012 silent on priorities, Down To Earth*, 10 Feb 2012, (Aug 15, 2022, 08:30 A.M), <https://www.downtoearth.org.in/news/national-water-policy-2012-silent-on-priorities--35952>.

³⁹ Philippe Culet, *the Groundwater Model Bill: Rethinking Regulation for the Primary Source of Water*, Vol. 47, No. 45, *ECONOMIC AND POLITICAL WEEKLY*, p. 43, (2012), (Jul 10, 2022, 09:30 A.M). <https://www.jstor.org/stable/pdf/41720352.pdf>.

(Sustainable Management) Bill, 2017, was adopted to better suit our needs. All the laws are aimed at regulating the use of wells through licensing. This bill is not completely based on the legal framework of 1970 and for the first time suggested groundwater should be protected at the aquifer level. The National Aquifer Mapping and Management program (NAQUIM)⁴⁰ is being implemented by the Central Ground Water Board (CGWB) to facilitate the sustainable management of groundwater resources. The Groundwater (Sustainable Management) Bill was introduced in line with the national water policy guidelines.

The bill acknowledges groundwater as a fundamental right and a public trust.⁴¹ The Bill also expands on the decentralisation mandate and aims to provide local bodies with regulatory authority over groundwater resources. The groundwater resource will get benefitted from the proposed new framework because there is the inclusion of groundwater security plans and significant local involvement. Therefore, the groundwater will be used responsively and people and the state will play an active role to use groundwater and safeguard it for present and future generations. The new bill acknowledges the incorporation of protection principles, such as the precautionary principle, which were missing from water policy.⁴²

The Central Government has released updated groundwater use regulations. The new guidelines make it essential for existing industries, commercial units, and large housing societies to get a no objection certificate, and also forbid new industry and mining projects in over-exploited zones (NOC). However, the domestic consumers including armed forces, farmers, and micro & small enterprises that withdraw up to 10 m³ water per day are exempted from the requirement of a no objection certificate from the CGWB.

On February 11, 2020, the Act was passed by Uttar Pradesh Cabinet, presided over by Chief Minister Yogi Adityanath, based on this bill, which is a progressive

⁴⁰ Aquifer information and management system, Central Groundwater Board, <https://www.aims-cgwb.org/>

⁴¹ Model Bill for the Conservation, Protection, Regulation And Management Of Groundwater, 2016, Sec 9, (India) http://jalshakti-dowr.gov.in/sites/default/files/Model_Bill_Groundwater_May_2016_0.pdf.

⁴² *Id.* sec 10.

step in the groundwater regulation to raise the state's declining groundwater level.⁴³

Therefore, all the states need to reform their groundwater law because inaction only increases existing inequalities in access to groundwater. It's high time for the State to act as a public trustee of groundwater, to make sure that groundwater is protected, conserved, regulated and properly managed.

IV. CONCLUSION

It is beyond doubt that the regulation of groundwater is of the utmost importance, especially in an era where limited water resources are available. However, one of the biggest challenges for sustainable management of groundwater comes from overexploitation and overuse, and India is the biggest user of groundwater in the World. In India, the amount of groundwater resources that are currently available has significantly decreased. It is anticipated that soon groundwater access will be impossible in many of the nation's largest cities. In addition to this, water is constitutionally a 'State' subject under the List II of the Seventh Schedule of the Constitution. Therefore, the central government role is limited and can only provide guidelines in the form of water policies and model bills. Accordingly, the central government has prepared Model legislation since 1970s for the regulation of groundwater and had issued fresh guidelines from time to time. The States are advised to adopt them. Unfortunately, till December 2019, only 19 states have taken action to enact legislation for groundwater, the remaining states/UTs had not taken any move to enact legislation on groundwater.⁴⁴

The recent string of occurrences suggests that States are hesitant to pass legislation to control the use of groundwater. In order to enact a law on this matter, the Indian Parliament must utilise Article 252 of the Indian Constitution if this situation persists. Nevertheless, a better course of action would be to have a

⁴³ The Uttar Pradesh Ground Water (Management and Regulation) Act, 2019 Act, 13 of 2019 (India), https://prsindia.org/files/bills_acts/acts_states/uttar-pradesh/2019/2019UP13.pdf.

⁴⁴ *Only 19 states have legislation for management of ground water: CAG*, BUSINESS STANDARD, Jun 22, 2022, (Aug 22, 2022, 12:30 P.M) https://www.business-standard.com/article/current-affairs/only-19-states-have-legislation-for-management-of-ground-water-cag-121122200018_1.html

cooperation between the states and states need to treat groundwater problem seriously. They need to encourage people at village level or ground level to understand the importance of groundwater and encourage people on use of local tanks, rainwater harvesting. To spread awareness about water conservation the Ministry of Housing and Urban Affairs, formulated a **Model Building Bye Laws (MBBL) 2016** which requires all buildings with plots larger than 100 square meters to submit a proposal for rainwater harvesting.⁴⁵ This feature has been adopted by many States and Union Territories (UTs). Therefore, proper groundwater resource conservation is urgently needed since groundwater degradation violates the fundamental right to water enshrined in Article 21 of the Constitution. As far as the current groundwater law is concerned, the Indian Easement Act must be reformed because the decade-old law is inappropriate for solving the present-day problems.

Groundwater cannot be an element of land ownership in these contemporary challenges. However, there has been improvement in India's groundwater management. The government of India has launched the **Atal Bhujal Yojana**, which will help seven Indian states- Haryana, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh from 2020 to 2025 to conserve groundwater. In addition to this, **Jal Jeevan Mission** was launched in August 2019, aims to give every rural home a tap connection by 2024.⁴⁶It is therefore necessary to reconsider groundwater regulation and give adequate policy attention to safeguard this finite resource.

⁴⁵ Ministry of Jal Shakti Report on Groundwater Depletion, *supra note 44*.

⁴⁶ *Id.*