

INTERNATIONAL JOURNAL OF LEGAL SCIENCE AND INNOVATION

[ISSN 2581-9453]

Volume 6 | Issue 3

2024

© 2024 International Journal of Legal Science and Innovation

Follow this and additional works at: <https://www.ijlsi.com/>

Under the aegis of VidhiAagaz – Inking Your Brain (<https://www.vidhiaagaz.com>)

This Article is brought to you for free and open access by the International Journal of Legal Science and Innovation at VidhiAagaz. It has been accepted for inclusion in International Journal of Legal Science and Innovation after due review.

In case of **any suggestion or complaint**, please contact Gyan@vidhiaagaz.com.

To submit your Manuscript for Publication at International Journal of Legal Science and Innovation, kindly email your Manuscript at editor.ijlsi@gmail.com.

Critical Analysis of Indian Policies on Groundwater Control and Management: With special reference to El Nino Impact

SAILESH OJHA¹

ABSTRACT

Groundwater is an essential and depleting resource in our nature that we are highly reliant on, for our lives and livelihood. Even after the attempts made by the central and the state govt. the existing situation is vulnerable. The situation of Chennai and Bengaluru are significant examples to establish the concern. India's geographic location makes it drought-prone and 29% of its aquifers are either exhausted or critical due to demographic burden and improper extraction of groundwater. The frequent occurrence of El Nino years shows that in the future impact of El Nino would be against the Indian interest. Laws are not very stringent to obligate farmers to water harvesting and evolution in farming methods. India procures huge profits of its GDP from food and agriculture which is highly dependent upon groundwater for irrigation. Subsidies in farming and extraction of groundwater are directly proportional to each other and attract more new stakeholders. Lack of Awareness regarding the health of aquifers and their functioning is another problem. There is no separate law for groundwater regulation at the central level albeit policies have been made in this regard which is advisory for the states in nature. Under the Environment Protection Act, the provision of the Central Groundwater Authority is mentioned which is the primary organ to look after the protection and management of groundwater and Aquifer, also there is no bifurcation of groundwater from surface water in existing laws and policies, which affects the very objective of groundwater policy because the precipitation of groundwater and surface water somehow related to each other but are entirely different when it comes to conservation and management.

Keywords: *Groundwater, El Nino, Aquifer, Farming, Fundamental Rights, Environmental pollution.*

¹ Author is a student at Junior Research fellow, Faculty of Law, University of Delhi, Delhi, India.

I. INTRODUCTION

India is home to approximately 18% of the world's population but only engages about 2.4% of the world's land area.² Despite this, the country consumes about 4% of the world's water resources. India is the largest user of groundwater due to its growing economy and population. Groundwater is a crucial source of drinking water in both rural and urban areas, making it a crucial resource for the country's water security. Unfortunately, India's groundwater governance has several weaknesses that hinder efforts to conserve groundwater. As a result, groundwater levels in the country are declining rapidly. To address this issue, experts recommend reform in groundwater governance and promoting the wise use of groundwater.³ In India, the right to clean water is a fundamental right as per the verdict of the apex court in the case of "*Subhash Kumar v State of Bihar*"⁴ under *Article 21 of the Indian Constitution*"⁵. The Apex court uses the remedial provision art. 32 of the Indian constitution held that the "*Right to life*" is a fundamental right under Art. 21 of the Constitution, which includes the right to enjoy pollution-free water and air for a fulfilling life.⁶ The impugned law was the Water Prevention and Control of Pollution Act. Additionally court stated that, if anything or anyone endangers or impairs the quality of life against the laws, a citizen has the right to seek recourse under Art. 32 of the Constitution to remove the pollution of water or air, which may affect the quality of life. The other statutory provisions are also available like 144 and 145 of the criminal procedure code⁷ and s.268,277 under the Indian Penal Code⁸ and the subject-specific statutes are also enacted to protect water and the environment. Water is the most precious natural resource that is essential for human survival and development. It is also enshrined under, Article 39 of Directive Principle Of State Policy (DPSP) Part IV, and an important duty of citizens under Article 51A (g) Part IV(A) of the Indian Constitution.⁹ The Environment (Protection) Act, of 1986 defines the environment as a "*combination of water, air, and land and the interconnectedness that exists among them, including human beings, other living creatures, plants, micro-organisms, and property*"¹⁰. There is a conflict between fundamental rights and the Directive Principle of State Policy (DPSP) regarding the use and purpose of

² Central groundwater authority(CGWA), India, available at, https://nwm.gov.in/sites/default/files/national%20water%20policy%202012_0.

³ Sarfaraz Ahmed Khan · Tony George Puthucherril · Sanu Rani Paul Groundwater law and management in India, from an elitist to an egalitarian paradigm: Springer

⁴ *Subhash Kumar v State of Bihar*, Indian Kanoon, 9 January 1991, AIR 420, 1 991 SCR (1) 5

⁵ The constitution of India 1949 pt.III, art. 21

⁶ Id.

⁷ Criminal Procedure Code, 1973 (act 2 of 1974)

⁸ Indian Penal Code, 1860 (act 45 of 1860)

⁹ The Constitution of India, 1949, pt. IV(A), art. 51(A)(g)

¹⁰ The Environment (Protection) Act, 1986 (act 29 of 1986)

groundwater. On one hand, everyone has the right to access water, and on the other hand, only the owner of the land has the proprietary right to mine groundwater. It means the owner of the land has an unrestricted right to extract groundwater. In the eye of Jurisprudence, owners have the *right in rem*, which means they can exclude the whole world against their right. Water is available in different forms and has different sources but water for human use can be categorized into surface water, sub-soil water, and groundwater, and all these resources are natural and essential for human survival, which makes these terms subject to fundamental rights. In a landmark case i.e. Plachimada case of Kerala¹¹, the honourable High Court division bench reversed the single bench judgement. The appellate court granted permission for the company to extract 500,000 litres from the ground per day, in the year 2005-2006. The court stated that the panchayat has no power to prohibit groundwater extraction by a private individual or company from its land.¹² The court rejected the scope of the Public Trust Doctrine as theoretical and not authorised by the impugned law, and the existing statute became the hindrance in upholding the power of the panchayat and upheld the right of the landowner to extract groundwater from their land as a basic right, that could only be restricted through express statutes.¹³ The conflict arose between the residents of Plachimada village and the Coca-Cola company. The issue was related to the possession of groundwater. As per the current legal framework, the owner of the land is the owner of the water beneath it. However, this rule may not apply in cases where natural resources like oil, minerals, and coal are present under the crust. In later cases, the government acts as a trustee and acquires the land. The ownership of land is a right in rem, and no one can dispute their interest in extracting groundwater. In India, the ownership of land is still governed by the Easement Act¹⁴ which is outdated and unable to address current challenges such as drought, excessive groundwater extraction, population growth, climate change, pollution, and problems arising due to unplanned and rapid urbanisation etc. The theme of World Food Day in 2023 is "Water is life, Water is food Leave No One Behind".¹⁵ The event will urge swift action in water management. The Food and Agriculture Organisation of the United Nations (FAO), The International Fund for Agriculture Development (IFAD), and the United Nations World Food Programme (WFP) stress the need to adopt an innovative and collaborative approach for better management, conservation, and availability of scarce water resources. There are less than seven years left to achieve the UN

¹¹ Perumatty Grama Panchayat vs State Of Kerala, 16 December 2003, Kerala Law Times, 2004(1)KLT731

¹² see, *Global Judicial Portal*, United Nation Environment Programme, Geneva, 2023, available at, <http://judicialportal.informea.org>

¹³ Indian Kanoon, India, available at <http://indiankanoon.org/doc/580673/>

¹⁴ Indian Easement Act, 1882 (act 5 of 1882)

¹⁵ Food and agriculture organisation, 16 Oct. 2013, <https://www.fao.org/world-food-day/en>

Sustainable Development Goals (SDGs). India is an agro-economy-based country that enjoys several seasons, which benefit crops. However, certain situations make the Indian subcontinent ideal for agriculture. According to the World Bank report, India procures 10% of its GDP with the help of groundwater,¹⁶ and India also uses the maximum of its extracted groundwater for agriculture, which is around 60% of the extracted groundwater. Certain crops, such as Paddy and wheat, demand high amounts of water, and India's position in growing these crops is among the top five countries in the world and is exporter too. The data are significant for the concern and to rethink about the use of groundwater, some geographical factors are also there which make the Indian continent more drought-prone and vulnerable to the extraction of groundwater. As far as we know, the Indian economy is agriculture-based and is currently the most populous country in the world. In the condition of being burdened by the demand of the population, there is huge pressure to meet the demand and also keep a surplus for export and economic well-being. Now, the crops are cultivated despite their demand for huge amounts of water. The monsoon in India, from the past few decades is not in a position to provide enough favour as it was known for earlier. West Bengal and Uttar Pradesh are the highest paddy-producing states in India, and many other states falling under the top 10 producers in India are continuously facing rainfall deficit year by year. As per the report of CAG released in 2021, reveals that from 2004 to 2017, the extraction of groundwater has increased by 58% to 63% and as per the Directorate of Economics & Statistics Ministry of Agriculture & Farmers Welfare, the share of groundwater in irrigation has increased from 61% in 2007-08 to 64% in 2016-17.¹⁷ This dependency on groundwater is a matter of concern because the main source of groundwater rejuvenation is rainfall, and India is the victim of rainfall deficit due to a certain geographical position which was a boon some days but is now a bane for the rainfall. Among certain challenges, one of the main challenges is El-Nino, which is getting stronger day by day, 2023 is declared as El Nino year and is responsible for deficient rain in most of the region and excessive rain in some parts of India.

(A) Methods for assessing the problem

To understand the topic, it's important to know what is aquifer? An aquifer is a body of porous rock or sediment that contains groundwater. When it rains, the water seeps into the aquifer through the soil, and can later emerge through springs or wells. Aquifers can be divided into two types: unconfined and confined. "Unconfined" aquifers are located beneath a permeable

¹⁶ PROGRAM-FOR-RESULTS INFORMATION DOCUMENT (PID) CONCEPT STAGE, National Groundwater Management Improvement Program, Report No.: PID0017448, World bank Document.5 April 2017

¹⁷ Department of Agriculture & Farmers Welfare Ministry of Agriculture & Farmers Welfare, Government of India, Annual Report 2022-23, www.agricoop.nic.in

layer of porous rock whereas an impermeable layer of rock or clay covers “confined” aquifers.¹⁸ the uppermost level where water appears in the ground is called the water table, but the aquifer may be situated very deep for example, if we dig a well we see water appear after a few feet which means the water table of the region is the level at which we get water and if the rock formation of the aquifer is permeable then one can extract hundreds of gallon water at a time, albeit if the aquifer surrounded by impermeable rock it means the rock is less porous or non-porous then the well would get dry very soon because the permeability of rock matters for the easy access to the groundwater, thus, the recharge of the aquifer will also depend on the nature of the rock. On normal days natural mechanism is enough to replenish the aquifer. Still, when any abnormality occurs like a delay in or lack of rainfall or pollution, then therapeutic intervention is required to recharge the Aquifer but most of the farmers in India are not aware of the method of recharging and preserving rain water. The process by which precipitation replenishes an aquifer is called recharging. Aquifer depletion has largely been caused by increased agricultural irrigation and excessive digging of borewells. Additionally, groundwater can become contaminated when excessive amounts of chemical herbicides and pesticides are used on farmland, septic tanks malfunction, unmanaged landfills, or when hazardous chemicals seep through the soil into the aquifer. While there is methodology to determine an aquifer's measurement or capacity to provide groundwater, certain tests can be used to analyze its health and expansion, such as the Pumping, Slug, and Constant-Head tests. These tests are used to determine an aquifer's transmissivity, hydraulic conductivity, and storativity (storage coefficient).¹⁹

II. RELATION OF EL NINO, AGRICULTURE AND GROUNDWATER SCARCITY

El Nino is a Spanish word that means “The Child” The name refers to baby Christ because, this phenomenon starts developing around Christmas, It is characterised by abnormal warming of the surface water in the equatorial Pacific region.²⁰ This phenomenon is responsible for a reduction in rainfall in the Indian subcontinent and some other regions of the Indus ocean and excessive rain in some parts of Ecuador and Chile. Along with El Nino, there is another phenomenon called La-Nina. Unlike El Nino, La-Nina is responsible for abnormal cooling in the equatorial Pacific region, which results in increased rainfall in the Indian subcontinent. The

¹⁸ Water science school USGS, Aquifer and Groundwater, United States Of America, 16 October 2019, available at <https://www.usgs.gov/special-topics/water-science-school/science/aquifers-and-groundwater>

¹⁹ Aquifer testing methods, <http://www.aqtesolv.com/aquifer-tests/aquifer-tests.htm>

²⁰ MICHELLE L'HEUREUX, What is the El Niño–Southern Oscillation (ENSO) in a nutshell, 5 May 2014, National Centre for Environmental information, <https://www.climate.gov/news-features/blogs/enso/what-el-ni%C3%B1o%E2%80%93southern-oscillation-enso-nutshell>

third term is the neutral phase, where the temperature remains normal throughout the year. All three terms collectively make up the El-Nino Southern Oscillation (ENSO). The equatorial region of the earth receives the maximum sunlight and heat throughout the year, this heat is transferred and regulated by the oceanic warm current with the help of trade wind which blows towards the west along to the equator and takes away warm water from the South American continent(Peru) to the Asia, in this process after movement of warm water, the coldwater rises from depth this process called “upwelling” and this is normal phenomenon.El Nino developed on the coast of Peru, the cold water was replaced temporarily and the upwelling process was affected due to weak air movement, which caused the unusual heating of the ocean. This warming is caused by heating that affects the monsoon pattern in India which is responsible for unusual and less rainfall in India.El Nino has been getting stronger day by day, and scientists are unaware of the factors that trigger it, but in total, we can blame ourselves for environmental degradation.El Nino disrupts the oceanic current, which helps in regulating the oceanic temperature. This temperature regulation is critical in the regulation of monsoons and rainfall because the oceanic portion of the earth covers three-fourths of the planet and is responsible for all significant changes in the atmosphere and atmospheric pressure. Over the past seven decades, India has experienced fifteen El Nino events, but out of fifteen, there were six instances when India received normal rainfall or above normal rainfall, in the last four El Nino India has faced drought and less rainfall up to 94% of long periods average (LPA).²¹ In July and August, India has experienced the lowest rainfall in the past 103 years, which is cause for concern. As the global temperature continues to rise, the planet is becoming more vulnerable to environmental damage. This shift has moved beyond global warming and is now being referred to as global boiling. In India, this shift is having a significant impact on agriculture and rainfall. According to the Indian Meteorological Department, August 2023, It has been reported that this month has been the driest on record since the tracking of rainfall began in 1901.²² By the end of the southeast monsoon which is the last wave of rainy clouds of the monsoon season, ended with below normal and cumulative rainfall deficiency stood for 5.6% of the long-period average(LPA). The country has witnessed a total of 820mm of rain against the normal average of 868mm. The United Nations University's Interconnected Disaster Risks

²¹ End of season report, Indian Metrological Department Earth System Science Organisation, Ministry of Earth Science,2023

²² Vishwa Mohan, This August driest, hottest since 1901 in India, September 1 IST 7:31 , The Times of India, Newspaper
<https://timesofindia.indiatimes.com/india/imd-this-august-driest-hottest-since-1901-in-india/articleshow/103262205.cms>

Report 2023²³ revealed that agriculture and the exploitation of groundwater are directly linked. Since groundwater is the primary source of irrigation, farmers are often free to use excessive groundwater regardless of demand. another setback is the method of farming in India which is traditional and requires excessive water consumption. As the world's largest groundwater consumer, India is at risk of having 60% of its aquifers become critical or exploited within the next 20 years. Additionally, 60% of irrigation water in India is extracted from aquifers, while 85% of household needs are met by it. Currently, 29% of blocks are either critical or over-exploited. India is highly susceptible to drought, and the El-Nino effect, which has caused water levels to drop significantly because of a lack of rainfall and a higher rate of evaporation than precipitation. India has experienced significant rainfall shortages in key agricultural regions, including Uttar Pradesh, Haryana, Punjab, Madhya Pradesh, and Karnataka. Despite the lack of rainfall, farmers continue to farm by extracting groundwater through bore wells. This has caused the water table to fall to a critical level in many areas. The regions mentioned above are the states that produce paddy, wheat and sugarcane, these crops require large amounts of water and they adapt to traditional methods of farming that require ample amounts of water, without realizing the consequences. They even sell water from 60 to 100 rupees per hour, depending on the region. The government provides subsidies for farming tools and submersible machines, which accelerates the extraction of groundwater. However, farmers are not aware of the methods and importance of recharging groundwater and its management. 2023 is declared as El-Nino year for India, which means there will be a rain deficit as we can take inference from the previous four El Nino. The situation is getting worse, as unmanaged and open boreholes causing pollution of water aquifer. Although the government is hesitant to impose a ban on the unauthorized use of groundwater in agriculture, because of political and cultural relations of groundwater and human beings, any clog on such unorganised use may lead to some chaos for political parties in elections. Farmers are the main stakeholders in the exploitation of groundwater. This exploitation needs to be checked by proper legislation and taking risks to exempt farmers from the scheme in preserving and managing groundwater would be very dangerous for sustainability.

It is important to recognise the vulnerability of our laws when it comes to protecting and managing groundwater.

Groundwater is an important source of drinking water, and it is mandatory to form a legal framework regarding its management and control. Access to groundwater is vital to fulfil the

²³ Key 21 of 37, Risk Tipping Points Report, 2023, United Nations University Institute for Environment and Human Security, available at <https://interconnectedrisks.org>

fundamental right to access clean water. Additionally, groundwater is a significant source of irrigation, making it crucial for farmers' livelihoods and access to food. Irresponsible and inequitable use of groundwater can have a significant impact on human life, livelihood, and the economy. Therefore, it is crucial to prioritise equity and sustainability in the groundwater legal system. If we see the agendas enumerated in sustainable development Goals (SDGs), groundwater will fall into more than one goal, like goal number 6, clean water and sanitation and goal number 11 which is, sustainable cities and communication. India is a signatory of SDGs and has to achieve them by 2030. Control and management of groundwater are regulated at both, the central and the state level, although water is a State subject under Article 246, List VII entry 17 of the Indian Constitution.²⁴ The apex body at the central level to control and regulate groundwater development and management is the Central Ground Water Authority (CGWA)²⁵ which was established in January 1997 under sub-section (3) of Section 3 of the Environment Protection Act, 1986,²⁶ by the Hon'ble Supreme Court of India. There is another piece of legislation that was enacted by the centre in 1974, the Water Protection Act 1974,²⁷ but this act does not mention groundwater and is limited to surface water only. The Water Protection Act, of 1974²⁸ law was enacted by the centre on the approach of the 12 states, where states demanded from centre to frame comprehensive legislation to regulate surface water under Article 252 of the constitution of India²⁹ but this law has nothing to do with groundwater hence, its relevance about groundwater reduces. The CGWA has the authority to control and develop groundwater management across the country and can issue the necessary directives for this purpose, among other things and such power is conferred on CGWA by section 5 of the Environment Protection Act, 1986.³⁰ The Central Ground Water Authority (CGWA) issues "No Objection Certificates" (NOC) to businesses, infrastructure, mining and other development projects, to supervise and manage groundwater extraction. The NOC outlines the requirements for the applicant to execute. The current legislation governs the extraction and management of groundwater. Still, instead of such effort no significant change has been seen in the management and protection of groundwater. In 2015, a report submitted by an expert committee chaired by Dr Mihir Shah on restructuring the working of CWC (Central Water Commission) and CGWB (Central Groundwater Board), suggested for the establishment of a new advisory and governing

²⁴ The Constitution of India 1949, pt.IX, ch.I, art.246, cl 2

²⁵ The Water (Prevention and Control of Pollution) Act, 1974 (act 6 of 1974)

²⁶ Environment Protection Act 1986 (act 29 of 1986), ch II, s.3

²⁷ The Water (Prevention and Control of Pollution) Act, 1974 (act 6 of 1974)

²⁸ *supra*.

²⁹ The Constitution of India, 1949, ch.I, art. 252

³⁰ The Environment Protection Act, 1986 (act 29 of 1986), ch II, s. v

body named National Water Commission (NWC).³¹ The committee indicated the lacunae and differences between states and the centre in conserving and managing the groundwater. The Model Bill, of 1970³² revised in 2005, is the governing piece of legislation with many irregularities and lack of proper guidelines causing difficulty in coordination among the nodal agencies. Another Committee in 2011 also suggested, replacing water from the state list with the union list, currently, the centre's power to legislate on the water is limited to the affairs related to inter-state water river disputes or can issue guidelines or policies for states to frame laws on particular issues. Laws enacted by the states align with the policy enacted by the centre, bringing the same lacunae that the centre policy suffers from. The central groundwater policy is lenient to farmers and households, they are major stakeholders in exploiting the resource, which is cause for concern. The government's schemes are providing too much liberty to farmers in terms of digging bore wells as well as providing subsidies, which attracts more vulnerability. While some states have shown concern by taking the help of non-profit organizations and Bhujal Sainiks to spread awareness related to groundwater and its vulnerability among farmers, these efforts seem to be less effective because there is no advancement in the methodology of harnessing this resource. The Ministry of Water Resources has stated that the current irrigation system has suffered from a lack of innovative methods, leading to resource waste and effective underutilization. However, corporations and government agencies are also ignorant in handling the crisis. The installation of community RO plants for pure water is a great initiative to provide clean potable water, but the residue water remains untreated and vanishes. The recent policy for the protection and management of groundwater is the Groundwater Policy 2012, which is advisory, and states are advised to frame their laws to prevent groundwater and its mismanagement. Since 2012, many other attempts have been made to tackle the existing water crisis, like Model Groundwater (Sustainable Management) Act, 2016,³³ and Model Groundwater (Sustainable Management) Bill, 2017,³⁴ to achieve India's promise to achieve the SDGs goal. However, all the attempts are replicas of the prevailing provisions of the Groundwater Policy 2012. Here are a few glimpses of the 2012 groundwater policy related to agriculture, which exempts farmers from the extraction of groundwater and they are free from any liability, although the liabilities are not very strict and

³¹ Comptroller Auditor General of India, Report on Ground Water Management and Control, Performance audit, Report 9 of December 2021, Ministry of Jal Shakti, Department of water resources and river development and Ganga rejuvenation

³² Ministry of Water Resource, Model bill to regulate and control the development of groundwater 1970/2005

³³ Model Groundwater (Sustainable Management) Act, 2016, International Environmental Law Research Centre, <https://www.ielrc.org/content/e1605.pdf>

³⁴ see Cullet, P. (2018). Model Groundwater (Sustainable Management) Bill, 2017: a new paradigm for groundwater regulation. *Indian Law Review*, 2(3), 263–276. <https://doi.org/10.1080/24730580.2019.1565567>

are advisory. In all the attempts, farmers are out of the ambit of the provisions made for the management of groundwater, and consequently, 18 states are facing huge water security crises. States like Punjab and Haryana have overexploited their aquifers, and the western part of Uttar Pradesh is facing aquifer puncture and intrusion of carcinogenic elements, making it vulnerable for drinking purposes. This highlights the lack of proper knowledge and inadequate legal regimes to control and manage groundwater in India.

III. CONCLUSION

There is a need for a proper and dedicated legal regime to tackle the problem at the war level because there is no time to spread holistic awareness, as we can learn from the current situation of Bengaluru and Chennai where people are compelled to intake contaminated water because of water scarcity and even contaminated water is not available for the whole population due to critical aquifer and drought-prone river. However, there are some initiatives taken by NGOs and govt. to protect and rejuvenate groundwater and surface water, it requires a scientific, and continuous effort to deal with this problem. The approach of government is still very slow and we are not in a position to wait for evolution. It Ought to be mandatory to construct groundwater recharge facilities, and the selling of water through bore wells should be banned with immediate effect. Govt should install a community water system for the supply of water to needy farmers at a certain charge. Proper and regular mapping of Aquifers should be compulsory, and the states should act according to the public trust doctrine, the same was reiterated by the Supreme Court many times, however, a few states are doing good but efforts are not enough to curb the problem. An integrated law is required at the central level, for proper control and management. Industries and Individuals should be advised on the disposal of chemical waste. Groundwater recharge should be compulsory at the ward and sector level and every ward of the district should have one groundwater recharge facilitation. The wastewater of the community RO plant system should be checked and addressed for farming purposes. Open and defunct borewells should be shut down and the NOC (Non-Objection Certificate) process for new borewells should be given after a detailed enquiry of the aquifer and according to the compatibility of the region. Laws related to Irrigation, Rural and Urban Development, and Company law, have a direct impact on the pollution and consumption of groundwater so these laws must comply with the groundwater law. The govt. schemes are one of the major factors in the exploitation and pollution of groundwater, instead of giving subsidies related to water govt. can install a community irrigation facility at a certain distance with an electronic meter that can record water withdrawal per minute, which would help in monitoring the health and capacity of the aquifer. Also, India needs some strict provisions in law either at the state

or central level in case of any emergency, like, any year declared as drought or rain deficit then the modus operandi should be changed according to the situation and would be applicable until the situation gets back to normal. In this era of Environmental Emergency need to be ready for any ups and downs.
