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# WATER MANAGEMENT AND LAWS IN INDIA: A SMOLDERING REALITY

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## ABSTRACT

Water is essential for every living organism. We cannot imagine our life without water. But with the increasing population this abundant natural resource is now not available amply to everyone. Access to safe drinking water and sanitation are internationally recognized human rights. The Supreme Court of India has interpreted the right to water as being part of the fundamental right to life, which is enshrined in Article 21 of the Constitution. India has several laws and regulations that govern water resources and their management. India is undergoing the worst water crisis in its history and nearly 600 million people are facing high to extreme water stress. India water problem is caused by several factors, including rapid population growth, urbanization, industrialization, and climate change. At the same time India is fast moving towards a crisis of ground water overuse and contamination. The future of water management in India depends on various factors, including government policies, community participation, and technological advancements. If well plan and policies are implemented then only this problem can be sort out otherwise we have to face serious implication in future.

**Keywords:** Water Management, Water Laws, Right to Water, Access to clean water, Ground water crisis, Government Policies on water.

## Introduction:

### Importance of water:

Water is essential for every living organism. We cannot imagine our life without water. Mother Earth consists 71% of water only 3 % of it is fresh water 2.5% of the earth's fresh water is unavailable locked up in glaciers, polar ice caps, atmosphere, and soil highly polluted or lies too far under the earth's surface to be extracted at an affordable cost. 0.5% of the earth's water is available fresh water.<sup>1</sup> 97% of the earth's water is found in the oceans which is too salty for drinking. And even adult human body also contains 60 % present water.<sup>2</sup> Therefore it is not wrong to say there is no life without water. Nature has given abundant bounty of water as natural resource to every living creature. Though the Earth only consists 0.5% water as drinkable water. It was well managed till last 2 decades but with the increasing population this abundant natural resource is now not available amply to everyone. Similarly climate change and global warming is also worsening the situation internationally and domestically, in particular developing nations to advance a human right based approach to access the water.<sup>3</sup> There are United Nations credentials and international recognition about the right to water so also on national front law secure this right. In India, access to water has become a significant problem, with many parts of the country facing water scarcity and pollution. India's water problem is complex and multifaceted, with various factors contributing to the crisis. In this research article, we will explore the Indian water problem, its causes, and its impact on society and the environment the laws regarding the water and its enforcement to meet the future need and challenges.

### International Legal Position on Right to Water:

Right to drinking water is well recognized at international level. Access to safe drinking water and sanitation are internationally recognized human rights, derived from the right to an adequate standard of living under Article 11(1) of the International Covenant on Economic, Social and Cultural Rights.<sup>4</sup> In November 2002, the Committee on Economic, Social and

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<sup>1</sup> <https://www.usbr.gov/mp/arwec/water-facts-ww-water-sup.html> (Accessed on 9/1/2023)

<sup>2</sup> <https://www.usgs.gov/special-topics/water-science-school/science/water-you-water-and-human-body> (Accessed on 9/1/2023)

<sup>3</sup> Narain, V. (2009). Water as a fundamental right: A perspective from India. *Vt. L. Rev.*, 34, 917.

<sup>4</sup> <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-economic-social-and-cultural-rights> (Accessed on 10/1/2023)

Cultural Rights adopted General Comment No. 15 on the right to water. Article I.1 states that “The human right to water is indispensable for leading a life in human dignity. It is a prerequisite for the realization of other human rights.”<sup>5</sup>

On 28 July 2010, the United Nations General Assembly adopted a historical resolution recognizing “the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights” (A/RES/64/292).<sup>6</sup> It declares that the water supply for each person must be sufficient and continuous to cover personal and domestic uses, and it also mandates that Water services must be affordable to all. No individual or group should be denied access to safe drinking water because they cannot afford to pay.

### **Right to Water a Fundamental Right:**

Under the Constitution of India, the right to water is not explicitly recognized as a fundamental right. However, the Supreme Court of India has interpreted the right to water as being part of the fundamental right to life, which is enshrined in Article 21 of the Constitution. *Narmada Bachao Andolan v. Union of India*<sup>7</sup>, In this case, the Court held that “the right to water is a right to life, and thus a fundamental right.” In this case, the Supreme Court stated that “state is responsible for providing clean drinking water to the citizens.” In *Subhash Kumar*,<sup>8</sup> the Supreme Court held that right to life is a fundamental right under Art. 21 of the Constitution and it include the right to enjoyment of pollution free water and air for full enjoyment of life. *A.P. Pollution Control Board v. Prof. M.V. Nayudu*<sup>9</sup> In a landmark judgment, the Supreme Court of India reaffirmed that access to clean and safe water is a fundamental right guaranteed under Article 21. The court held that the government has a duty to ensure that all citizens have access to clean water for drinking, cooking, and sanitation. The court also recognized the need to balance the right to water with the needs of the environment, stating that water conservation and management should be a priority for the government. The court emphasized the importance of sustainable water management practices to ensure that future generations have access to this essential resource.

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<sup>5</sup> [https://www.un.org/waterforlifedecade/human\\_right\\_to\\_water.shtml](https://www.un.org/waterforlifedecade/human_right_to_water.shtml) (Accessed on 10/1/2023)

<sup>6</sup> <https://www.ohchr.org/en/water-and-sanitation/about-water-and-sanitation> (Accessed on 10/1/2023)

<sup>7</sup> (2000) 10 SCC 664

<sup>8</sup> *Subhash Kumar vs. State. of Bihar*- (1991) 1 SCC 598

<sup>9</sup> (2001) 2 SCC 62.

## **Indian Laws on water**

India has several laws and regulations that govern water resources and their management. Some of the key laws related to water in India are:

The Water (Prevention and Control of Pollution) Act, 1974: This law aims to prevent and control water pollution by regulating the discharge of pollutants into water bodies.

The Water (Prevention and Control of Pollution) Cess Act, 1977: This law imposes a cess on the use of water by industries and other users to finance pollution control measures.

The Inter-State River Water Disputes Act, 1956: This law provides a mechanism for resolving disputes over the sharing of water resources between states.

The River Boards Act, 1956: This law provides for the establishment of river boards to regulate and develop water resources and ensure their proper utilization.

The Groundwater (Management and Regulation) Act, 2009: This law regulates the extraction and use of groundwater and aims to prevent its over-exploitation.

The National Water Policy, 2012: This policy provides a framework for the development and management of water resources in India, with a focus on ensuring equitable and sustainable use of water.

The Environmental Impact Assessment (EIA) Notification, 2020: This notification provides a framework for assessing the potential environmental impacts of development projects, including those related to water resources.

In addition to these laws, there are several state-level laws and regulations related to water management and conservation. The implementation of these laws is overseen by various government bodies, including the Central Water Commission and the Central Pollution Control Board. Though there are lots of laws in this regard in spite of that the problems related to the waters are worsening day by day.

**India and Water Problem:****Drinking Water and quality Index:**

NITI Aayog in June 2018 mentioned that India is undergoing the worst water crisis in its history and nearly 600 million people are facing high to extreme water stress. The report further mentions that India is placed at 120<sup>th</sup> amongst 122 countries in the water quality index, with nearly 70% of water being contaminated.<sup>10</sup>

**No access to clean water:**

Nearly 163 million of India's population of 1.3 billion lack access to clean water close to home, About 75% of households do not have drinking water at home, 84% rural households do not have piped water access. Women in the rural areas are the biggest victims of India's water crisis. Women in villages who have to walk miles each day to fetch water are bearing the brunt of India's worst water crisis in history,<sup>11</sup> According to 2018 report by Britain based charity water aid.<sup>12</sup>

**Disease Burden:**

Annually about 37.7 Millions Indians are affected by waterborne diseases, 1.5 Million children die of diarrhea and 73 million working days are lost leading to an economic burden of 600\$ million a year.<sup>13</sup> It's shocking 2,00,000 people die each year due to polluted water.<sup>14</sup>

**River Pollution:**

According to Central Pollution Control Board (CPCB) most recent study 351 polluted stretches were identified on 323 rivers based on monitoring results in terms of Biochemical Oxygen Demand (BOD) which is an indicator of organic pollution.<sup>15</sup> By 2030 the country's water demand is projected to be twice the available supply, implying severe water scarcity for

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<sup>10</sup> <https://pib.gov.in/newsite/PrintRelease>. (Accessed on 13/1/2023)

<sup>11</sup> <https://www.reuters.com/article/us-india-water-women-idUSKBN1K318B> (Accessed on 14/1/2023)

<sup>12</sup> <https://www.charitywater.org/our-projects/india> (Accessed on 14/1/2023)

<sup>13</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9112585/> (Accessed on 14/1/2023)

<sup>14</sup> <https://www.thehindu.com/sci-tech/energy-and-environment/india-faces-worst-water-crisis-niti-aayog/article24165708.ece> (Accessed on 17/1/2023)

<sup>15</sup> <https://pib.gov.in/PressReleasePage>. (Accessed on 20/1/2023)

hundreds of millions and an eventual loss around 6% of countries GDP.<sup>16</sup>

India water problem is caused by several factors, including rapid population growth, urbanization, industrialization, and climate change. The following sections will explore each of these factors in more detail.

### **Population Growth:**

India has a rapidly growing population, which has put significant pressure on the country's water resources. The demand for water has increased exponentially, with the population projected to reach 1.7 billion by 2050.<sup>17</sup> The growing population has led to increased demand for food, energy, and water, which has resulted in the depletion of water resources.

### **Urbanization:**

Urbanization has also contributed to India's water problem. As people move from rural areas to cities, the demand for water increases, and the existing water infrastructure struggles to keep up with the demand.<sup>18</sup> In many urban areas, the water supply is inadequate, and the quality of the water is poor.

### **Industrialization:**

Industrialization has also put significant pressure on India's water resources.<sup>19</sup> The rapid growth of industries, particularly in the manufacturing and mining sectors, has led to increased water consumption and pollution. Many industries discharge untreated wastewater into rivers and other water bodies, leading to severe water pollution.

### **Climate Change:**

Climate change is another factor contributing to India's water problem.<sup>20</sup> Changes in

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<sup>16</sup> <https://economictimes.indiatimes.com/news/economy/agriculture/by-2030>. (Accessed on 22/1/2023)

<sup>17</sup> <https://www.un.org/development/desa/en/news/population/world-population-prospects-2017.html> (Accessed on 22/1/2023)

<sup>18</sup> <https://www.worldbank.org/en/country/india/brief/world-water-day-2022-how-india-is-addressing-its-water-needs> (Accessed on 25/1/2023)

<sup>19</sup> <https://coal.gov.in/en/sustainable-development-cell/mine-water-utilization> (Accessed on 26/1/2023)

<sup>20</sup> <https://www.unicef.org/stories/water-and-climate-change>. (Accessed on 26/1/2023)

rainfall patterns and temperatures have led to droughts and floods, affecting water availability and quality. Climate change has also led to the melting of glaciers, which are a significant source of water for many rivers in India.

### **Impact of India's Water Problem:**

India's water problem has had a significant impact on society and the environment. The following sections will explore the impact of India's water problem on these two areas.

#### **Society:**

The lack of access to clean and safe water has had a severe impact on the health of the population. Waterborne diseases, such as cholera and typhoid, are prevalent in many parts of the country, particularly in rural areas. Lack of access to water has also affected the education of children, particularly girls who are often responsible for collecting water for their families.<sup>21</sup> The water problem has also led to social conflicts, particularly between farmers and urban residents. The demand for water by urban areas has led to the diversion of water from agricultural lands, leading to a decline in agricultural productivity.<sup>22</sup>

#### **Environment:**

India's water problem has had a severe impact on the environment.<sup>23</sup> Water pollution has led to the degradation of rivers and other water bodies, affecting aquatic ecosystems and biodiversity. The depletion of groundwater resources has also led to the sinking of land, particularly in urban areas, affecting the stability of buildings and infrastructure.

#### **Ground Water Crisis:**

India heavily depends for agricultural and for drinking purposes on ground waters. According to one survey 21 major cities of India are expected to run out of groundwater as soon as 2020, affecting around 100 million people.<sup>24</sup> At the same time India is fast moving towards a crisis of ground water overuse and contamination.<sup>25</sup> Ground water overuse or

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<sup>21</sup> <https://water.org/our-impact/water-crisis/childrens-and-education-crisis/> (Accessed on 28/1/2023)

<sup>22</sup> <https://www.oecd.org/agriculture/topics/water-and-agriculture/> (Accessed on 30/1/2023)

<sup>23</sup> <https://www.downtoearth.org.in/blog/water/india-s-water-crisis-> (Accessed on 30/1/2023)

<sup>24</sup> <https://www.aljazeera.com/news/2019/6/20/india-is-running-out-of-water-fast> (Accessed on 2/2/2023)

<sup>25</sup> Shaping the contours of ground water governance in India, Himanshu Kulkarni, Mihir Shah, P.S. Vijay Shankar, November 25, 2014, <http://ac.els-cdn.com/S2214581814000469/1-s2.0-S2214581814000469->

overexploitation is defined as a situation in which, over a period of time, average extraction rate from aquifers is greater than the average recharge rate. In India, the availability of surface water is greater than ground water. However, owing to the decentralized availability of groundwater, it is easily accessible and forms the largest share of India's agriculture and drinking water supply.<sup>26</sup> 89% of ground water extracted is used in the irrigation sector, making it the highest category user in the country.<sup>27</sup> This is followed by ground water for domestic use which is 9% of the extracted groundwater. Industrial use of ground water is 2%. 50% of urban water requirements and 85% of rural domestic water requirements are also fulfilled by ground water.<sup>28</sup>

**Legislative and Policy Framework** Currently, the Easement Act, 1882 provides every landowner with the right to collect and dispose, within his own limits, all water under the land and on the surface.<sup>29</sup> This makes it difficult to regulate extraction of ground water as it is owned by the person to whom the land belongs. This gives landowners significant power over ground water.

Further the law excludes landless ground water users from its purview. Water falls under the State List of the Constitution. This implies that state legislative assemblies can make laws on the subject. In order to provide broad guidelines to state governments to frame their own laws relating to sustainable water usage, the central government has published certain framework laws or model Bills. In 2011, the government published a Model Bill for Ground Water Management based on which states could choose to enact their laws. In addition, it outlined a National Water Policy in 2012 articulating key principles relating to demand management, usage efficiencies, infrastructure and pricing aspects of water. As recommended in this policy, the government published a National Water Framework Bill in 2013. Courts

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90f3.00000aacb362&acdnat=1450341541\_4c147174ec4f214578113853e69b8bb3 (Accessed on 2/2/2023)

<sup>26</sup> Suhag, R. (2016). Overview of ground water in India. PRS Legislative Research, 9504(February), 12.

<sup>27</sup> Annual Report 2013-14, Ministry of Water Resources, River Development and Ganga Rejuvenation, [http://wrmin.nic.in/writereaddata/AR\\_2013-14.pdf](http://wrmin.nic.in/writereaddata/AR_2013-14.pdf). (Accessed on 2/2/2023)

<sup>28</sup> Deep Wells and Prudence: Towards Pragmatic Action for Addressing Ground water Overexploitation in India, The World Bank, March 2010,

<http://siteresources.worldbank.org/INDIAEXTN/Resources/2955831268190137195/DeepWellsGroundWaterMarch2010.pdf>. (Accessed on 2/2/2023)

<sup>29</sup> Section 7 (g), Indian Easement Act, 1882.



have delivered verdicts on concerns such as access to drinking water and on the right to safe drinking water as a fundamental right.<sup>30</sup>

### **Future of water management in India**

Water management in India is an ongoing challenge due to several factors such as rapid urbanization, climate change, and increasing demand for water. The future of water management in India depends on various factors, including government policies, community participation, and technological advancements. And the steps that need to be taken to ensure sustainable water use.

### **Government Policies:**

The government plays a critical role in managing water resources in rural India. In recent years, the Indian government has launched several initiatives to address the water crisis, such as

### **National River Rejuvenisation Mechanism:**

Recently the National Green Tribunal (NGT) directed the ministry of Jal Shakti to devise an appropriate National River Rejuvenisation Mechanism for effective monitoring of steps to curb pollution and for rejuvenisation of all polluted rivers stretched across the county.<sup>31</sup>

### **National Water Policy 2012:**

It aims to take cognizance of the existing situation, to propose a framework for creation of the system of laws and institutions and for plan of action with unified national perspective.<sup>32</sup>

### **National Water Mission 2010:**

It ensure integrated water resource management leading to water conservation, less wastage, equitable distribution forming better policies .<sup>33</sup>

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<sup>30</sup> The cases include Wasim Ahmed Khan v. Govt. of AP, 2002; Mukesh Sharma v. Allahabad Nagar Nigam & Ors., 2000, and others

<sup>31</sup> <https://pib.gov.in/PressReleaseIframePage.aspx> (Accessed on 3/2/2023)

<sup>32</sup> [https://jalshakti-dowr.gov.in/sites/default/files/NWP2012Eng6495132651\\_1.pdf](https://jalshakti-dowr.gov.in/sites/default/files/NWP2012Eng6495132651_1.pdf) (Accessed on 4/2/2023)

<sup>33</sup> [https://jalshakti-dowr.gov.in/sites/default/files/Mission\\_Doc\\_Vol22880755143\\_0.pdf](https://jalshakti-dowr.gov.in/sites/default/files/Mission_Doc_Vol22880755143_0.pdf) (Accessed on 5/2/2023)

**National River Conservation Program (NRCP):**

The National River Conservation Plan (NRCP) by the Ministry of Environment and Forests aims at preventing pollution of rivers and improving water quality.<sup>34</sup>

**Jal Jeevan Mission:**

Since August 2019 the Indian Government has been working with the states to carry out the Jal Jeevan Mission which aims to provide drinkable tap water to every rural home in India by 2024 including those in habitation where the water quality is poor.<sup>35</sup>

**The Jal Shakti Abhiyan and the National Rural Drinking Water Programme :**

These initiatives aim to provide safe and clean drinking water to rural communities and ensure the sustainable use of water resources.<sup>36</sup>

The future of water management in rural India depends on the effectiveness of these initiatives and the government's commitment to addressing the water crisis. The government needs to invest in infrastructure such as dams, canals, and reservoirs to ensure water availability during times of drought. The government also needs to develop policies that promote water conservation, such as rainwater harvesting and wastewater treatment.

**Community Participation:**

Community participation is essential for the successful management of water resources in India. Local communities have an intimate knowledge of the local water resources, and their involvement in water management can lead to better outcomes. The future of water management in India depends on the participation of communities in water management initiatives.<sup>37</sup> Communities need to be educated on water conservation practices and encouraged to participate in initiatives such as rainwater harvesting, groundwater recharge, and water reuse. The government needs to promote community led water management initiatives and provide financial and technical assistance to support these initiatives.

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<sup>34</sup> <https://www.india.gov.in/information-national-river-conservation-plan>. (Accessed on 5/2/2023)

<sup>35</sup> <https://jaljeevanmission.gov.in> (Accessed on 5/2/2023)

<sup>36</sup> [https://jalshakti-ddws.gov.in/sites/default/files/NRDWP\\_Guidelines\\_2013.pdf](https://jalshakti-ddws.gov.in/sites/default/files/NRDWP_Guidelines_2013.pdf) (Accessed on 5/2/2023)

<sup>37</sup> <https://indiaclimatedialogue.net/2019/07/31/community-participation-is-a-must-for-water-management/> (Accessed on 10/2/2023)

**Technological Advancements:**

Technological advancements can play a critical role in managing water resources in rural India.<sup>38</sup> The use of technology such as remote sensing, Geographic Information Systems (GIS), and satellite imagery can help in water management by providing accurate data on water availability, water use, and water quality. In recent years, several technological solutions have been developed for water management in rural India, such as solar-powered water pumps, mobile-based water management systems, and smart irrigation systems. The future of water management in rural India depends on the adoption of these technologies and the development of new technologies that can help in water management.

**Conclusion:**

The future of water management in India depends on various factors such as government policies, community participation, technological advancements and strict enforcement of water laws. The government needs to invest in infrastructure, develop policies that promote water conservation, and promote community-led water management initiatives. Water conservation is an essential component of addressing India's water problem. There is a need for efficient use of water in agriculture, industry, and households. There is also a need for water harvesting and reuse, particularly in urban areas. Communities need to be educated on water conservation practices and encouraged to participate in water management initiatives. There is a need for better water management practices, including water allocation, pricing, and monitoring. The government needs to develop a comprehensive water policy framework that considers social, economic, and environmental factors. Similarly there is a need for investments in water treatment infrastructure to improve the quality of water. Technological advancements can play a critical role in managing water resources in rural India. The adoption of existing technologies and the development of new technologies can help in water management in rural India. Ensuring sustainable water use in rural India is critical for the wellbeing of rural communities and the environment. If well plan and policies are implemented then only this problem can be sort out otherwise we have to face serious implication in future and we ourselves will be responsible for it.

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<sup>38</sup> <https://www.worldbank.org/en/news/feature/2019/03/22/helping-india-manage-its-complex-water-resources> (Accessed on 10/2/2023)