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Policies, Legislations and Water Scarcity in Urban India during the Summer Months: Some Observations

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ABSTRACT

Water scarcity is a serious problem that impacts millions of people globally during the summer months in urban India. In this study, the underlying reasons of water scarcity in Indian cities during the summer months will be examined, with an emphasis on policy shortcomings and potential legal solutions. This study aims to pinpoint the main causes of water scarcity and offer legislation remedies to deal with the issue by examining case studies, policy papers, and current literature. For the purpose of reducing water scarcity and guaranteeing sustainable water access in urban settings, policymakers, urban planners, and other stakeholders involved with water resource management must take into account the findings of the study.

Keywords: *Water scarcity, Urban areas, summer months, Policy failures, Legal remedies, Governance, Water management, Sustainability, Climate change, Community engagement.*

I. INTRODUCTION

One of the precious things on the earth is water which we get, free of cost, and obviously not appropriately valued. In India has been facing water crises since a very long time in forms droughts. Nowadays, despite satisfactory rain in the monsoon season, the water scarcity and crisis is very common. Despite advancements in water management technologies and policies, many urban areas continue to face water shortages, leading to significant socio-economic and environmental challenges. In India, diverse water sources like glaciers, rivers, and lakes sustain life, but infrastructure development initiatives have affected them adversely. Not only the flow of water on surface has been controlled, but the water bodies are also struggling to survive due to the processes of unplanned industrialization and urbanization. Rainfall, vital for replenishing these resources, forms the backbone of the hydrological cycle, ensuring their continued supply.

[3] India, a nation home to 18% of the global population, grapples with just 4% of the domain's

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[3] HARDEEP RAI SHARMA, Water Resources of India, WATER RESOURCES AND MANAGEMENT, ebook, https://ebooks.inflibnet.ac.in/esp05/chapter/water-resources-of-india/ Accessed on 6th May, 20245.

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water, rendering it one of the most water-stressed countries. Many Indians encounter severe water scarcity, as highlighted in an analysis released recently by NITI Aayog, the government's think tank.[4] For instance, in 2024, the situation got worsened and during the month of April, the water supply was provided to the urban in different areas. More than 1,077 villages, people are relying on water tankers due to severe water scarcity. According to official records, approximately 1,194 tankers are currently operating in the area, and the respective district authorities have secured access to 1,655 private wells to refill these tankers.[5]

Summer water scarcity in urban areas is a complex problem that is made worse by several unique factors. Urban areas face numerous significant challenges related to water scarcity, such as inadequate infrastructure, rapid population growth, climate change, inefficient governance systems, and subpar water management methods. With initiatives to install conservation measures and encourage sustainable water use, water shortages remain an important issue for public health, economic development, and environmental sustainability in a number of places. [6]Thus, it is essential to identify the root causes of water scarcity and look into workable legislative and regulatory solutions to address this serious problem. As per Article 21 of the Indian Constitution, the Indian Supreme Court ruled in A.P. Pollution Control Board II v. Prof. M.V. Nayudu that access to clean drinking water is an inherent right and emphasized how crucial it is for human survival. This decision underscores the implicit rights to a healthy human and global environment and sustainable development within the right to life. Considering the water crisis of major cities, the challenge of water scarcity extends beyond Bangalore to pose a nationwide crisis looming over India's urban areas. It is being argued that the numerous major cities may soon face significant water shortages, presenting formidable hurdles for both residents and policymakers.[7]

Therefore, the present study explores the causes of urban water scarcity during summer, focusing on policy failures and potential legal remedies. It examines water management complexities and governance, proposing policy and legal solutions for sustainable urban water access.

[4] How is India addressing its water needs?, FEBRUARY 14, 2023.The World Bank, IBRD.IBA, https://www.worldbank.org/en/country/india/brief/world-water-day-2022-how-india-is-addressing-its-water-needs, Accessed on 7th May, 2024.

[5] Prasad Joshi, 1,000 villages, hamlets become tanker-dependent in Marathwada. https://timesofindia.indiatimes.com/city/aurangabad/1000-villages-hamlets-become-tanker-dependent-in-marathwada/articleshow/109359799.cms, Apr 17, 2024, 05:16 IST

[6] https://www.ielrc.org/activities/workshop_0612/content/d0607.pdf

[7] SNEHA MAHALE, 6 Indian cities that could face a water shortage in the near future, MARCH 20, 2024, Money Control News Website, / 06:47 PM IST, https://www.moneycontrol.com/news/environment/6-indian-cities-that-could-face-a-water-shortage-in-the-near-future-12494871.html

II. EVALUATING EXISTING WATER MANAGEMENT POLICIES AND PROGRAMMES

The water management is vital issue considering the water demand and uneven distribution. The Indian government has introduced many policies and action plan, principle and legislative measure to tackle such problems and to introduce the sustainable development. These polices are need to discuss to understand the aim of equitable distribution, safe guard water resource and to handle the emergency of water availability.

1950s–1960s: Many irrigation projects were started to support rural and agricultural development following independence. During the 1970s and 1980s, the emphasis removed to combined water resource management, taking into consideration the needs of several sectors. To promote the best and most sustainable use of water, the 1987 National Water Policy prioritized intake water, irrigation, hydropower, environment, and agro-industries.

In the 1990s, economic liberalization brought about significant changes to the policy environment. Eventually, in the 2000s, demand management and equitable water distribution were given more weight in a 2002 update to the National Water Policy. 2012: The most recent National Water Policy highlighted the importance of water as a resource for sustainable development, food security, livelihood, and life. Slightly from existence distorted, aquatic possessions must to be preserved and second-hand correctly.

- **National Water Policy, 2012**

In a bid to address India's urgent water-related issues, particularly scarcity and uneven distribution, the Ministry of Jal Shakti developed the 2012 National Water Policy. The policy's main goal is to safeguard and preserve water resources so that future generations can be assured of their availability. It promotes environmentally friendly methods like rainwater gathering and other innovative administrative methods that improve the water supply. The strategy additionally emphasizes the need to have a strong institutional and legal basis in order to support efficient water management. Its objective is to connect all areas and associated organizations together in an unified national strategy to collaborate on sustainable water use. In basic terms, the strategy aims to establish a fair and sustainable water management system across India by addressing current issues while developing preparations for the future. The National Water Policy, 2012, which stresses integrated water resource management, watershed conservation, natural resources, and dam safety, acts as the basis for local laws aimed at ensuring water security.[8]

[8] The National Water Policy, 2012

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- **National Water Mission**

The Indian government launched the National Water Mission to combat climate change. The goals were to save water, cut waste, and ensure equitable distribution among the states. Approved by the Union Cabinet in April 2011, this mission intends to establish a comprehensive water database, enhance water use efficiency, address vulnerabilities in over-exploited areas, support citizen and state-led conservation efforts, and implement a basin-level comprehensive water resources management system. With an emphasis on investor contribution and maintainable growth, multiple methods have been recognized to achieve these objects. The Ministry of Water Properties has providing funds for the performance of the National Water Mission, which places a robust emphasis on proactive participation and partnership between stakeholders.[9]

- **Jal Shakti Abhiyan-I (JSA-I)**

1,592 of 2,836 blocks have been comprised in the original examination, which was approved out in 2019 in 256 water-stressed regions crossways India. This exertion was prolonged in 2021 with the outline of the "Jal Shakti Abhiyan: Catch the Rain" (JSA:CTR) scheme, that required to "Catch the Rain Where it Falls When it Falls," acceptance all blocks in all regions, both town and geography. Propelled on March 29, 2022, the third phase, JSA:CTR 2022, lasts this nationwide endeavor. This year, the quarter point, JSA:CTR 2023, ongoing on March 4, 2023, with an stress on precipitation group. States and Union lands are urged to contribute in the exertion and instrument precipitation gathering.[10]

- **Other Initiatives**

The Plan of Ganga Action (GAP) and the National Mission for Clean Ganga (NMCG) highlight preservation and broad river basin organization though plummeting contamination and ornamental the water excellence of the Ganga River. In adding to hopeful naturally welcoming water organization follows, these creativities goal to defend water supply of India. The Ministry of Jal Shakti has been leading the Jal Shakti Abhiyan each year since 2019, with the exclusion of 2020 since of the COVID-19 epidemic. This year, "Catch the Rain 2023" was presented to indorse water-saving performs in all regions afterward Walk to November. Preliminary in 2015–16, the Pradhan Mantri Krishi Sinchayee Yojana aims to improve irrigation and water efficiency in agriculture. The Atal Bhujal Yojana, which was introduced in 2019, focuses on

[9] NATIONAL WATER MISSION, https://nwm.gov.in/schemes.
[10] Ministry of Jal Shakti, POLICY FOR RAINWATER HARVESTING, Posted On: 06 APR 2023 5:55PM by PIB Delhi, https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1914351.

controlling groundwater in seven water-stressed states by including the community. Water collection and preservation projects are additionally funded by the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). The Model Building Bye Laws and the Unified Building Bye Laws of Delhi are two examples of the rules set forth by the Ministry of Housing & Urban Affairs to guarantee that rainwater harvesting is integrated into the design of cities. Rainwater harvesting projects are supported by funding from the 15th Finance Commission through local governments in rural areas[11]. The federal government created this significant effort for both urban and rural areas, and as it fails to differentiate or separate the two, it is applicable to both.

III. EXPLORING NATIONAL LEGISLATIVE FRAMEWORKS RELATED TO WATER MANAGEMENT AND ASSESSING THEIR APPLICABILITY IN URBAN CONTEXTS

The Central Ground Water Specialist (CGWA) was recognized under Section 3(3) of Environment (Protection) Act, 1986, to oversee the regulation and management of undersurface development nationwide. CGWA monitors the withdrawal of groundwater by industries, infrastructure projects, and mining activities, enforcing guidelines that incorporate rainwater harvesting as a prerequisite for obtaining a No Objection Certificate. While water management, conservation, and harvesting initiatives fall primarily under the jurisdiction of individual states, CGWA plays a pivotal role in ensuring compliance with national regulations[12].

- **The Environment (Protection) Act, 1986**

Sections 3 and 5 of The Environment (Protection) Act, 1986, empower the Indian government to take decisive action to protect and improve the environment, including water resources. Section 3 provides the national government the authority to develop policies, start initiatives, and set up organizations that promote water conservation, like encouraging rainwater collection. The implementation of these measures can be ensured by the government issuing legally obligatory orders to people, organizations, and local authorities under Section 5. One way to do this is to force construction projects to have rainwater collection equipment and enforce adherence to water conservation laws. These approaches combine to provide a solid foundation for a sustainable national water organization.[13]

[11] https://mohua.gov.in/upload/uploadfiles/files/MBBL.pdf
[12] GOVERNANCE, I. G. (2011). Water Papers Water Papers.
[13] The Environment (Protection) Act, 1986

- **The Water (Prevention and Control of Pollution) Act, 1974**

Sections 24 and 25 of the Water (Prevention and oversight of Pollution) Act of 1974 help a lot with water quality regulation. Section 24 strongly promotes the need for clean and sustainable water sources, like rainwater collecting, as it bans the disposal of any polluting item into water bodies. The current status of preventing water pollution for the benefit of public health and the environment is addressed in this section.[14]

Affording to Section 25, each commercial or process that has an accidental to pollute water must first obtain agreement. This guarantees that possible polluters income proceedings to reduce their possessions however decreasing their obligation on groundwater, over rain gathering, between additional proceedings. Since they highpoint the location of preservative the native populace's admission to clean water provisions, indorse maintainable behaviors, and support strict contamination laws and rules, these basics are vital.

- **The Model Building Bye-Laws, 2016**

The Indian Ministry of Cover and City Affairs created the Model Building Bye-legislation, 2016 in order to make a reliable outline aimed at building legislature crossways the republic. These rules include limitations for maintainable performs, like instructing precipitation gathering schemes in new building, which inspire water preservation and effectual marine management. Chapter 9 of the Model Building Bye-Laws, 2016 necessitates that all structures have precipitation garnering systems connected. This standard is important since it ensures that precipitation is calm and held for later use. In addition, it helps with groundwater refilling, which lessens the issue of water shortage. Section 9.4.2 provides the stipulations for the project and connection of these schemes for gathering precipitation. This unit delivers complete instructions to ensure that the preparations are not only fruitful at gathering rain but also well-organized in their upkeep then operation.[15]

- **National Green Tribunal (NGT) Act, 2010**

The Nationwide Green Tribunal (NGT) Act, 2010 scholarships the court expert to look into bags connected to the defense of earth's resources. Section 14 provides the NGT with the control to appearance into grievances around devotion to rain collecting limits in instruction to assure obedience and indorse aquatic preservation. Defensive water capitals and founding maintainable performs depend deeply on this area. Unit 15 also gives the NGT the expert to command remedies, damages, and disadvantages for ecological damage, similar deteriorating

[14] The Water (Prevention and Control of Pollution) Act, 1974
[15] The Model Building Bye-Laws, 2016

to connect rain reaping diplomacies. Populations and the setting will advantage after these laws, which assurance answerability and indorse practical water preservation measures.[16]

Other Significant Legislative Frameworks

The Dam Safety Act of 2021, which goals to stop tragedies though indorsing aquatic upkeep, safeguards the harmless process of barriers crossways the republic finished monotonous examination, nursing, and repairs.[17] This legislation establishes the National Level Committee on Dam Safety and State Dam Safety Organizations to oversee dam management. The River Boards Act, 1956, establishes river boards to advice on the integrated growth of inter-state river basins, promoting sustainable and equitable water usage.[18]

IV. URBAN WATER SCARCITY: KEY CAUSES

The urban water scarcity is growing around the world basically in rapid developing nations like India. People travelling from village to urban areas and demand of resources are increasing and urban areas are in burden to fulfil it. Water is the unavoidable object of daily use. The factor such as climate change, global warming, inadequate infrastructure and lack of human power, population such issues are very high in summer days. To avoid such issues form urban are we need to do as sustainable development.

Population Growth:

Rapid urbanization leads to increased demand for water as more people move into cities. This growth strains existing water resources, particularly during hot summer months when water usage spikes. While climate changes and speedy population growth are commonly recognized threats to town water supplies, the impact of urban development patterns on future municipal water shortages is often overlooked.[19] The nation is among the most water-stressed in the world, with 18% of the world's population living in 4% of its water resources. The government's policy think tank, NITI Aayog, released a report recently that stated that a significant portion of Indians suffer from high to severe water stress. This problem is made worse by India's reliance on an increasingly unpredictable monsoon to meet its water needs. This strain on water resources is expected to get worse due to climate change, even as the nation involvements more recurrent and Spartan droughts and floods.[20]

[16] National Green Tribunal (NGT) Act, 2010
[17] The Dam Safety Act, 2021
[18] The River Boards Act, 1956
[19] Hadi Heidari,Mazdak ArabiMazdak, WarziniackTravis, Warziniack. Effects of Urban Development Patterns on Municipal Water Shortage, research article, frontier, https://www.frontiersin.org/journals/water/articles/10.3389/frwa.2021.694817/full, Accessed on 10th May, 2024 at 4:00am
[20] How is India addressing its water needs?, World Bank Group, February 14, 2023,

In 2019, despite Chennai receiving an regular of 1,400 mm of rainwater annually, the city's reservoirs ran dry, forcing the government to deliver 10 million liters of water daily just to meet basic needs. This severe crisis, mirrored in cities across India, is the result of unchecked urbanization and explosive population growth, which have pushed fragile water systems to the brink. A 2018 study printed in Nature estimated that by 2050, Jaipur will face the world's second-largest water deficit, right behind Chennai, with a staggering shortfall of 20%. Adding to the urgency, a 2020 WWF report warned that the growing pressure from population increases could drive 30 Indian cities into critical water scarcity by 2050, posing a direct threat to millions of lives..[21]

Climate Change

Rising temperatures and changing precipitation patterns reduce the availability of water from natural sources like rivers, lakes, and groundwater. These changes make it harder to maintain a consistent water supply. A major issue that may result in global variations in rainfall and temperature is climate change. Lakes' availability may be affected by these changes in water levels.[22] Yet, as more water dissipates from the land and changes in global weather patterns take place, storms and heavy downpour would rise because of the sky's increased capacity for holding moisture.[23]

Infrastructure Deficiencies

Leaking pipelines and insufficient storage space are two examples of the deteriorating water infrastructure in many cities. Substantial water losses and efficiency are the results of these deficiencies, particularly during periods of high demand. The primary causes of urban water shortage in India are socio-political issues and insufficient substructure. Metropolises frequently skill chief water damage and mistakes owing to their outmoded water schemes, which cannot save up by their fast development. The subject is worsened through poor storing, insufficient maintenance, and an absence of responsibility. Additionally, the nonappearance of

https://www.worldbank.org/en/country/india/brief/world-water-day-2022-how-india-is-addressing-its-water-needs, Accessed on 2nd July, 2024 at 8:30am

[21] India's urban water crisis: Cities at risk of running out of water, Kaushik Deka New Delhi,ISSUE DATE: Mar 29, 2021 | UPDATED: Mar 22, 2021 14:03 IST, https://www.indiatoday.in/magazine/nation/story/20210329-the-cities-of-woe-1781275-2021-03-20, Accessed on 2nd July, 2024 at 8:30am

[22] Hendri Irwandi, Mohammad Syamsu Rosid & Terry Mart, Effects of Climate change on temperature and precipitation in the Lake Toba region, Indonesia, based on ERA5-land data with quantile mapping bias correction, Scientific Report, Published: 13 February 2023, https://www.nature.com/articles/s41598-023-29592-y, Accessed on 8th May, 2024 at 7:20am

[23] Water – at the center of the climate crisis, United Nations, Climate action, https://www.un.org/en/climatechange/science/climate-issues/water?gad_source=1&gclid=Cj0KCQjws560BhCuARIsAHMqE0HceZGj16rWpMGd8AlubFnB09yWh22Khu0geMxIAjmxT97ZCnTLpBMaAtEvEALw_wcB, Accessed on 6th July, 2024 at 7:46am

good substructure aimed at reprocessing and precipitation group—which is delayed by a absence of party-political will and low community consciousness—income that crucial vicissitudes and savings in maintainable aquatic organization necessity be made.[24]

Unsustainable Water Management Practices

Unsuccessful approaches of irrigation, also abundant groundwater removal, and insufficient allocation of water resources and reservations all lead to the further depletion of available water supplies. These methods are especially troublesome during dry seasons when water is already scarce. Insufficient irrigation methods, excessive groundwater extraction, and poor resource allocation drastically reduce the quantity of resources that are obtainable. Thirsty periods are chiefly troublesome meanwhile here is previously a ration of aquatic, and these inappropriate errands only brand belongings inferior. Augmented straining on aquatic capitals is being caused by unproductive water use and an absence of maintenance labours. These anomalies are complete inferior by unsuccessful controlling and implementation governments. Speaking these performances is essential for safeguarding aquatic obtainability in the extensive term.[25]

Pollution and Contamination

Untreated sewage, agricultural runoff, and industrial discharge all lead to pollution which renders water supplies unsafe for human consumption. This contamination exacerbates water scarcity issues by reducing the amount of pure water that is available. Some of the sources of water pollution that make the water hazardous for people to drink are untreated sewage, industrial runoff, and agricultural runoff. This pollution reduces the amount of pure water accessible, which worsens issues with water shortage. Contaminated drinking water supplies damage ecosystems and pose an important health risk to urban populations. The ongoing nature of this issue is exacerbated by inadequate treatment facilities and poor waste management. Mitigating these issues requires bolstering pollution control strategies and upgrading the infrastructure for water treatment. India's waterways are becoming more and more contaminated as a result of urbanization. In India, surface water contamination is thought to be present in about 70% of cases. Roughly 40 million liters of wastewater are discharged into rivers and other bodies of water each day, of which very little is sufficiently treated. According to a recent World Bank report, this kind of upstream pollution release can cause up to a third of the GDP growth in downstream areas. The situation is made worse by the fact that water

[24] Rudresh Sugam, Arunabha Ghosh, Urban Water and Sanitation in India, February 2013, https://www.ceew.in/publications/urban-water-and-sanitation-india, Accessed on 8th Oct.2024 at 6:37am
[25] Roopal Suhag, Overview of Ground Water in India, https://prsindia.org/files/policy/policy_analytical_reports/1455682937--Overview%20of%20Ground%20Water%20in%20India_0.pdf.

pollution causes almost half of GDP growth in middle-income nations like India. According to another study, agricultural revenues and yields are expected to decrease by 9% and 16%, respectively, for those who live downstream of polluted areas in India.[26]

Lack of Awareness and Conservation Efforts

Many residents are not aware of the importance of water preservation or do not practice sustainable water use. Additionally, government initiatives for water conservation are often inadequate, hindering efforts to address water scarcity.

The recent Jal Jagar Mahotsav in Chhattisgarh is an illustration of an Indian government program. Chief Minister Vishnu Deo Sai launched this program with the intention of promoting water conservation and increasing public knowledge of the value of sustainable water usage. Groundwater levels in the area have already improved as a result of the effort.[27]

Poor Field Management

In agriculture, inefficient irrigation and lack of modern water-saving technologies result in excessive water use. This excessive use in rural areas impacts the water availability in nearby urban centers. Although surface water is used far less frequently than it could in India, groundwater is still the main source for irrigation. Using effective water-saving machineries and alternative irrigation sources, such as waterway water and rainwater gathering, is essential due to the overuse of groundwater and declining per capita water availability. If current practices continue unabated, an imminent water crisis is indicated by rapid depletion of groundwater, low irrigation efficiency, and frequent droughts. Enhancing irrigation infrastructure can promote micro-irrigation, increase storage capacity, and increase efficiency while preserving resources. To achieve sustainable water management and food security, farmers must be made aware of government programs and the need to strike a balance in the virtual water trade.[28]

Inadequate Infrastructure and Planning

Insufficient investment in water infrastructure and poor urban planning lead to issues like leaky

[26] Water pollution is killing millions of Indians. Here's how technology and reliable data can change that, This article is part of: India Economic Summit, world economic forum, https://www.weforum.org/agenda/2019/10/water-pollution-in-india-data-tech-solution/, accessed on 8th July, 2024 at 6:38am

[27] CM Sai Lauds Jal Jagar Mohotsav for Promoting Water Conservation, TNN/Oct 6, 2024, 19:00 IST, https://timesofindia.indiatimes.com/city/raipur/chief-minister-vishnudeo-sai-applauds-jal-jagar-mahotsav-for-water-conservation-efforts-in-dhamtari/articleshow/113988458.cms.

[28] RAJNI JAIN, PRABHAT KISHORE and DHIRENDRA KUMAR SINGH, Irrigation in India: Status, challenges and options, IRRIGATION IN INDIA, Journal of Soil and Water Conservation 18(4): 0-0, October-December 2019 ISSN: 022-457X (Print); 2455-7145 (Online), Accessed on 8st July, 2024 at 7:00am https://krishi.icar.gov.in/jspui/bitstream/123456789/34362/1/irrigation_rajni_preprint.pdf

pipelines, inadequate storage, and inefficient distribution. These problems worsen during high-demand periods, such as summer. Urbanization is rapidly increasing, with cities expected to house 66% of the global population by 2050, posing significant challenges. Rapid, unplanned urban growth not only heightens the risk of flooding but also harms aquatic ecosystems. To ensure sustainable development, new approaches are needed to balance urban expansion with economic, social, and environmental protection. This paper will explore the challenges and solutions for effective urban water preparation and management.[29]

State Disputes

Inter-state disputes over water allocation and usage further strain available water resources. These conflicts are particularly problematic during periods of high demand. While the river water disputes over Godavari, Krishna, and Narmada have been resolved by tribunals, ongoing project-specific issues still require attention from the Central Government and Supreme Court. Recently, Tamil Nadu raised concerns about Karnataka not properly implementing orders on Cauvery water sharing, which were addressed in Monitoring Committee meetings with necessary directives issued.[30]

Improper Water Use

Excessive water consumption for activities like landscaping, washing vehicles, and recreational purposes contributes to urban water scarcity. These wasteful practices need to be addressed to conserve water. In each city demand of water is continues causes of population growth and India deeply reliant on farming so such disaster has far- attainment Consequences. The inefficient agricultural performs and excessive groundwater removal have made crucial depleted water foundations. The climate change and uneven rain which affects river water flow and poor management of water, yearly planning and lack of infrastructure plays significant role in urban water crisis.[31]

Lack of Governmental Attention

Insufficient focus from governments on water management and conservation leads to a lack of resources allocated to address water-related challenges. This neglect exacerbates water scarcity

[29] Dr Harinarayan Tiwari, Urban Water Planning and Management: Evaluation of Indian, Accessed on 22nd Oct, 2024 at 4:30am Context, https://nwda.gov.in/upload/uploadfiles/e-book/PD-6/Urban-Water-Planning-and-Management.pdf,

[30] Interstate River Water Disputes, Press Information Bureau, Government of India, Ministry of Water Resources, Published on 17-July-2014 14:46 IST, https://pib.gov.in/newsite/PrintRelease.aspx?relid=106832.

[31] Tushar Das, Water Scarcity, wateraig org., https://www.wateraid.org/in/blog/water-scarcity#:~:text=There%20are%20several%20causes%20contributing,have%20depleted%20crucial%20water%20sources.

issues. Most of the time government is involved in election activities and to attract to voting banks and very less attention gives towards the water management unless it's their regional water crisis issues. The government's attempts to manage urban water have failed because city-level inadequacies in capacity and intent have prevented national plans like JNNURM from reaching their full potential. Due to the absence of administrative and financial authority, grants like AMRUT must be more directly linked to reform requirements. The efficiency of ULBs in managing water resources is constrained by the state governments' quasi-control. The 74th Constitutional Amendment's modest effectiveness emphasizes the need for more thorough changes and stricter enforcement. Without these adjustments, the lack of autonomy and responsibility in urban water management persists.[32]

Political Agendas

Political decisions often order short-term gains over long-term sustainability. Such choices can worsen water scarcity problems in urban areas. Urban water management has not always been adequately addressed by Indian political agendas. For instance, because to insufficient political will and implementation at the local equal, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was unable to provide long-lasting benefits. Despite its promise, the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) has had difficulty tying funds to substantive, legally binding changes. Furthermore, metropolitan municipal authorities continue to be heavily influenced by the state, notwithstanding the 74th Constitutional Amendment's attempts to decentralize power. These hindrances demonstration that here is motionless sufficient political will and teamwork aimed at cities to professionally achieve their source of water.

Water Usage in Large Industries

Big companies and businesses usage aquatic lengthily trendy manufacture and additional processes. This overdoing can straining city water provisions, particularly through the seasonal. Local small villages often face reserve restraints when better initiatives use huge quantities of water. Lacks are a characteristic subject as a consequence of these firms reducing local water sources. The siphoning of local supplies and the commercialization of water are major problems that are producing these shortages.[33]

[32] Vikas Kumar Rana, The role of the government in tackling India's urban water crisis, Published on Oct 29, 2024, https://www.orfonline.org/expert-speak/the-role-of-the-government-in-tackling-india-s-urban-water-crisis, Accessed on 02 Nov, 2024 at 11:30am,

[33] Jenna TsuiJun, Big Corporations Contribute to Water Shortages — How Can They Fix It?, Published on 03, 2020, Envrionmental Protection, https://eponline.com/articles/2020/06/03/big-corporations-contribute-to-water-shortages-how-can-they-fix-it.aspx. Accessed on 1st May, 2024.

V. CONCLUSION AND SUGGESTION

Managing urban water scarcity, especially in the summer, requires a comprehensive approach. Climate change, a growing population, and aging infrastructure are the main causes of this issue. Effective legislative and policy measures are required to tackle those issues. Enhancing water management practices, financing modern infrastructure, and encouraging sustainable water use constitute significant first initiatives. Promoting conservation efforts and raising public awareness may also significantly enhance the availability of water. Interstate collaboration and efficient governance are needed to resolve water-related issues. To prevent water contamination and guarantee the fair distribution of water resources, the government must enforce strict legislation. As a fundamental human right, access to water must be ensured by communities, non-profit organizations, governments, and humanitarian groups working together. If we acknowledge this right and pledge to protect it for those who are less fortunate, we can address a major shortcoming in 21st-century development and ensure an improved future for all.[34]

Contemporary desalination and recycling methods have helped countries like Singapore and Israel manage their water problems on a global scale. India could profit from similar strategies like rainfall collection and wastewater treatment. Achieving long-term water sustainability requires interacting with communities and incorporating them in water management projects. India can create efficient plans to safeguard its urban water future by taking inspiration from global best practices and adapting them to suit its specific needs.

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[34] Jayna Kothari, The Right to Water: A Constitutional Perspective, IRD Éditions, https://books.openedition.org/irdeditions/4810, Accessed on 9th May 2024 at 0523am