



A Review of Water Policies

Narsaiah Shivakoti ^{a*}

^a Department of Zoology, Govt Degree College, Ibrahimpatnam, Rangareddy, Telangana, India.

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The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

Water is a key driver of economic and social development while it also has a basic function in maintaining the integrity of the natural environment. However, water is only one of many vital natural resources and its issues mustn't be considered in isolation. Every year the number of deaths that are taking place due to the use of unsafe water is increasing and to minimize these problems policymakers are working at various levels by framing the policies i.e., United Nations Convention 1966, 1977, 1992, 1997, and 2010. From 1992 onwards every year 22nd of March has been declared World Water Day by the United Nations. At the national level, the acts are The Easement Act of 1882 protects private property rights to groundwater, The Indian Fisheries Act [1] poses which bans the Use of explosive material near coastal areas, The River Boards Act [2] by the federal government is to establish an Advisory River Board to settle concerns in interstate cooperation, The Merchant Shipping Act [3] deals with a different aspect of merchant shipping, The Water (Prevention and Control of Pollution) Act [4] established a framework of governing bodies like central and state pollution Control Boards, Water (Prevention and Control of Pollution) Cess Act [5] provides for the levy and collection of cess or fees on water-consuming industries and local authorities, National Water Policy [6] and revised NWP 2002, 2012 [7,8] deal with conservation and efficient use of water. Indian government also implementing various schemes related to water like Pradhan Mantri Krishi Sinchayee Yojana, Clean Ganga Mission, Atal Bhujal Yojana and National Mission for Sustainable Agriculture. Telangana state adopted the Telangana Water Resources Act [9] that concerned with the efficient and equitable administration of water supply, The Telangana Water, Land, and Trees Act [10] is to protect and conserve water, land, and trees in Telangana, Telangana State Water Policy [11] deals with the state's strategy for the conservation, management, and development of its water resources.

Keywords: United Nations; water; acts; pollution; Telangana.

**Corresponding author: Email: drsnr.shivkoti@yahoo.com;*

1. INTRODUCTION

Water availability varies greatly in both space and time. Precipitation occurs just three or four months out of the year and ranges from 10 cm in western Rajasthan to over 1000 cm at Cherrapunji in Meghalaya. Further, water does not respect state boundaries. Clean water is crucial element to human survival and economic growth. The quantity and quality of water are under increasing threat, however, due to global water concerns such as water scarcity, pollution, and the effects of climate change. The equitable and sustainable use of water resources is essential in addressing these issues, and water policies play a key role in this regard.

In the present study, the author is discussing water policies at International, National, and state levels. Beginning with a discussion of the transboundary nature of many water resources, the human right to water and sanitation, and the effects of climate change on water resources, the paper reviews the primary issues and challenges in international water policy [12-14]. There's talk of the different legal instruments and agreements that have been drafted to deal with these issues as well. Next, the article shifts its focus to the Indian context, analyzing the state of Telangana's water policies and contrasting them with those of other countries. The report wraps off with a look at the relative success and failure of water policy on a global and Indian scale.

2. LITERATURE

The environment consists of four segments of the earth namely the atmosphere, hydrosphere, lithosphere, and biosphere: The United Nations has long been addressing the global crisis caused by insufficient water supply to satisfy basic human needs and growing demands on the world's water resources to meet human, commercial and agricultural needs. Similarly, the World Bank, Food and Agricultural Organization, United Nations Development Programme, World Health Organization, United Nations International Children's Emergency Fund, World Meteorological Organization, United Nations Educational, Scientific and Cultural Organization and United Nations environment program are all concerned and are regularly coordinating or participating in special programs related to water resources.

Around 2.2 billion people lack access to safe drinking water services. Over half of the world's

population, or 4.2 billion people, do not have access to safe sanitation facilities. Nearly 297,000 children under five die every year from diarrheal diseases due to poor sanitation, poor hygiene, or unsafe drinking water. WHO/UNICEF [15] 2 billion people live in countries experiencing high water stress. (UN 2019)90 percent of natural disasters are weather-related, including floods and droughts. United Nations Water Conference [16] announced the period of 1981-1990 as the international drinking water supply and sanitation decade. World Water Day is observed on March 22 to raise awareness about the importance of water and educate people to conserve it. The theme of World Water Day of 2022 is "Groundwater, making the invisible visible, and for 2023 Accelerate Change" to accelerate the change required to solve the water and sanitation crises.

India has more than 17% of the world's population but just 4% of the world's renewable water resources and 2.6% of the world's land area. Water availability is further limited due to unequal distribution throughout both space and time. Furthermore, there are frequent floods and droughts in one or more parts of the country. The right to "clean water" and the right to access "drinking water" were read as part of the "right to life" under Article 21 of the Indian Constitution [17].

The Constitution guarantees all citizens the fundamental rights to equality, life, and personal liberty. Article 15 (2) [18] also states that no citizen may be subject to a restriction on "the use of wells, tanks, and Ghats" the Indian government is focusing on supply of drinking water in all the five-year plans and the responsibility has been explicitly established in the 20-point program, drawn up in 1975 and modified in 1982 and 1986. As a result, many programs were developed and implemented at the federal and state levels, including the Accelerated Rural Water Supply Program and the National Drinking Water Mission in [19]. Later it was renamed as the Rajiv Gandhi National Drinking Water Mission in 1991.

Several laws have also been developed, including:

- Laws establishing water authorities for urban water supply.
- Laws on water supply in major cities.
- Statewide water supply laws.

- Laws that regulate the extraction and use of groundwater.
- Laws to protect water sources.
- Water supply laws for certain industrial areas.

The Water (Prevention and Control of Pollution) Act was enacted in [4] for the prevention and control of water pollution and for maintaining or restoring the wholesomeness of water in the country. The Act was amended in 1988. The Water (Prevention and Control of Pollution) Cess Act was enacted in [5], to provide for the levying and collection of a cess on water consumed by persons operating and carrying on certain types of industrial activities. This cess is collected to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution constituted under the Water (Prevention and Control of Pollution) Act, [4]. The Act was last amended in 2003.

3. METHODOLOGY

The methodology of this research consists of a survey of the prior literature on water policies on both the global and Indian scales. That means looking at water policies at the national and state levels in India, as well as examining international treaties and instruments. Using a variety of resources, including official government documents, news articles, and reports from non-governmental organizations, the paper also contains an in-depth analysis of the water policy of the Indian state of Telangana.

3.1 Acts

3.1.1 International acts

1. *International Covenant on Economic, Social, and Cultural Rights* [20].

The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing, and housing, and to the continuous improvement of living conditions.

2. *The United Nations Water Conference* [16].

A set of ten resolutions was made directed at United Nations agencies, governments, and the international community overall. These ten resolutions include the assessment of water resources, community water supply, agricultural

water use, research and development of industrial technologies, the role of water in combating desertification, technical cooperation among developing countries, river commissions in international river basins, institutional arrangements for international co-operation in the water sector, financing arrangements for international co-operation in the water sector, and water policies in the occupied territories.

3. *United Nations Framework Convention on Climate Change* [21].

The idea of observing a water day around the world was first mooted during the United Nations Conference on Environment and Development in Rio de Janeiro in 1992. According to Article 2, the Convention's ultimate objective is "to achieve, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". This objective is qualified in that it "should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed sustainably".

4. *United Nations Watercourses Convention* [16]

The UN Watercourses Convention establishes a framework for the utilization, development, conservation, management, and protection of international watercourses, whilst promoting optimal and sustainable utilization thereof for present and future generations and accounting for the special situation and needs of developing countries.

5. *United Nations General Assembly Resolution on the Human Right to Water and Sanitation* [22].

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).

3.1.2 National acts

1. *Easement Act of 1882* [23]

This act is considered a permanent feature of the soil, it protects private property rights to

groundwater and makes clear that any water that reaches the surface is state-owned.

2. *The Indian Fisheries Act of 1897 [1]*

This act states that the use of dynamite or any other explosive substance in any fashion (coastal or inland) with the intent to catch or kill any fish, can be issued by the government under two sets of penal crimes.

3. *The River Board Act 1956 [2]*

The states might involve the federal government in establishing an Advisory River Board to settle concerns in interstate cooperation.

4. *Inter-State River Water Disputes (Amendment) Bill, 2019*

On July 25, 2019, the Lok Sabha debated and approved the most recent revision to this Act. It will further simplify the resolution of river water conflicts between states. The purpose of this bill is to strengthen the current institutional framework for resolving interstate river water disputes by amending the Inter-State River Water Disputes Act of 1956 [2].

5. *The Merchant Shipping Act [3]*

This act provides measures to increase the speed of growth of Shipping in the post-independence period. The Act is divided into 24 sections, each of which deals with a different aspect of merchant shipping. These sections cover things like ship registration, sailing, and fishing vessel registration, the National Shipping Board, crewing requirements, the hiring, firing, and repatriation of seamen and apprentices, the protection of passengers and goods, the regulation of vessels engaged in the coasting trade and the Indian merchant marine, ship collisions, oil pollution prevention and control, and the restrictions placed on shipowners.

6. *The Water (Prevention and Control of Pollution) Act [4]*

In order to mitigate and eventually eliminate water pollution, the Water (Prevention and Control of Pollution) Act [4] established a framework of governing bodies. It specifies requirements for the cleanliness of discharged water. Industries that contribute to pollution must get permits before dumping garbage into waterways. By its terms, this legislation

established the Central Pollution Control Board (CPCB).

Some Key Points of the Water Act [4]:

- Limit and eventually eliminate water contamination.
- Establishing pollution control boards charged with carrying out the law's requirements.
- Maintaining and restoring the "wholesomeness" of our aquatic resources.
- It is the responsibility of the state pollution control board to intervene when sewage or other pollutants are being dumped into water bodies.
- In addition to fines, anyone breaking the law in under faces jail time (under Section 24) and possible jail time (under Section 43) of between one year and six months and six years.

7. *Water (Prevention and Control of Pollution) Cess Act [5]*

This act provides for the levy and collection of cess or fees on water-consuming industries and local authorities.

Some key points of this act include:

- Regardless of whether water is being used for industrial cooling, spraying in mine pits, or feeding boilers.
- For domestic purposes.
- Toxins in the environment are readily biodegradable, but they are introduced into the water supply during processing.
- During manufacturing processes harmful and difficult-to-biodegrade contaminants enter the water supply.

8. *National Water Policy [6]*

Ministry of Water Resources adopted the first National Water Policy in September 1987. It was reviewed and updated in 2002 and later in 2012.

- NWP 1987: Water is a prime natural resource, a basic human need, and a precious national asset. The planning and development of water resources need to be governed by national perspectives.
- NWP 2002:

- (I) Irrigation and multi-purpose projects should invariably include a drinking water component, wherever there is no alternative source of drinking water.
 - (II) Providing drinking water to all human beings and animals should be the priority.
- NWP 2012: The main emphasis of National Water Policy 2012 is to treat water as an economic good which the ministry claims to promote its conservation and efficient use. This provision intended for the privatization of water-delivery services is being criticized by various quarters.
 - The Indian government also implements various schemes to conserve water, like
 1. Pradhan Mantri Krishi Sinchayee Yojana (PMKSY): the motto of scheme "Har Khet Ko Paani" Launched in 2015, its main aims to enhance the water use efficiency in agriculture through a combination of measures like micro-irrigation, rainwater harvesting, and promoting efficient water management practices.
 2. Clean Ganga Mission (Namami Gange): Initiated in 2014, this mission aims to clean and rejuvenate the Ganges River by addressing pollution, promoting sanitation, and improving wastewater management.
 3. Atal Bhujal Yojana (ABHY): Launched in 2019, this scheme focuses on sustainable management of groundwater resources through community participation, demand-side management, and efficient use of water.
 4. National Mission for Sustainable Agriculture (NMSA): This mission aims to promote sustainable agricultural practices, including efficient water use, soil health management, and climate-resilient cropping systems [24].
 5. Environment protection act (1986): The objective of EPA is to protect and improve the environment and environmental conditions. It also implements the decisions made at the UN Conference on Human Environment that was held in Stockholm in the year 1972. EPA act protects the environment against air, water, noise, and soil pollution.
- The Telangana Water Resources Act, of 1991 is a piece of Indian legislation that was put in place to ensure the responsible growth, preservation, and administration of the state's water supplies.
 - Permitting and licensing users and the development of water storage and conveyance systems also control water usage.
 - The purpose of this law is to promote the efficient and equitable administration of Telangana's water supply.
2. To protect and conserve water, land, and trees in the Indian state of Telangana, the Telangana Water, Land, and Trees Act was passed in 2002. Construction of buildings and other structures, as well as the extraction of water and minerals, are all examples of operations that could be impacted by these regulations. Guidelines for carrying out the provisions of the Telangana Water, Land, and Trees Act are laid forth in the Telangana Water, Land, and Trees Rules (2004) of the Indian state of Telangana. These regulations spell out how to get permission to do things that might harm the state's water, land, or trees, and they spell out the consequences for not following the law.
 3. The state of Telangana in India has established a policy document called the Telangana State Water Policy [11] that details the state's strategy for the conservation, management, and development of its water resources. The policy's goals are to maintain and improve the quality of the state's water resources and to guarantee that they are used sustainably and equitably.

4. CONCLUSION

Global water concerns and sustainable management of water resources are both directly and indirectly impacted by international and national water policies. Key challenges that must be addressed in international water policy include recognizing the transboundary nature of many water resources, the human right to water and sanitation, and the impacts of climate change on water supplies. Many of these problems in the Indian context have been solved by the state of Telangana's water policies.

3.1.3 State acts

1. *Telangana Water Resources (Regulation of Use) Act [9]*

COMPETING INTERESTS

Author has declared that no competing interests exist.

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2. River Board Act; 1956.
3. Merchant Shipping Act; 1958.
4. Water Act; 1974.
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9. Water Resource Act; 1991.
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12. National Mission for Clean Ganga.
13. Atal Jal.
14. National Portal of India.
15. WHO/UNICEF; 2019.
16. United Nations Conventions; 1977.
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