

An Analysis of Water Governance in India: Problems and RemediesNeelkanth J. Bhatt ¹, Kapil J. Bhatt ²¹Assistant Professor, Department of Civil Engineering, Government Engineering College, Rajkot, Gujarat, India.²Practising Lawyer, Morbi, Gujarat, India.

Abstract — The availability of water is a basic element to human life, economy and political strength of any country and thus sustainable water management is vital for national development. Administering water and achieving Integrated Water Resources Management (IWRM) for sustainable use and economic development is both a technological and a governance test. The competence to make these changes, therefore, depends on transformation in water governance. This study seeks to analyze the existing mechanism of Water administration at center and state level, the constitutional status of water, draft National Water Framework Bill – 2016 and National Water Policy – 2012, and the judgments of High courts and Supreme Court of India to draw meaningful inferences. Results reveal that the country has a good administrative set-up to deal with the water resources sector but owing to present day needs the constitutional status of water must change. The legal status of Right to Water can have an immense impact on the way this precious resource is being governed. It is, therefore, necessary that the central government by means of Constitutional amendment explicitly incorporates Right to Water as Fundamental Right of every citizen and also includes the water in either the Union List (List-I) or the Concurrent List (List-III). The Laws framed by the center ought to be mandatory for states and not recommendatory. The policies of the state shall not only focus on regulations, licences, restrictions, and penalties but also on knowledge dissemination to help, guide, influence and coordinate the public water use. Public and stakeholders' participation at all levels ought to be made integral to all water administration.

Keywords- Water Resources Management, Water Administration in India, Constitutional Status of Water, Water Law.

I. INTRODUCTION

Water is vital for life and for most human activities. There are several substitutes to commodities such as coal, oil, minerals, and metals, but none for water. Almost 1.4 billion people, amounting to 25 % of the world's population or one third of the population in developing countries stay in areas that will experience severe water scarcity through the first quarter of the 21st century [1]. Because of the great spatial and temporal variability in the rainfall, water resources distribution in the country is extremely skewed in space, and time. The government of India Report of Sub-Committee on Policy and Institutional Framework (2008) [2] has affirmed that the national average annual per capita availability of water resources of the country is 1800 Cubic Meter per year, which is projected to doze off to 1150 Cubic Meter per year by 2050. Consequently, it was estimated that by 2050, 30% of the geographical region and 16% of the population in the nation will be under water paucity condition. The report also states that the residents of the country may stabilize at around 1600 million by the year 2050 and subsequently the available utilizable water resources would be too little to meet the upcoming water requirements of all the sectors.

The basic element to human life, economy and political strength of any country is the availability of the water. Integrated Water Resources Management (IWRM) refers to the promotion of coordinated development and management of water, land and related resources for optimal uses of these resources to achieve social and economic national progress in an equitable manner without compromising the sustainability of these resources. Good water administration is accordingly fundamental to IWRM. Leadership, commitment, and good governance are a prerequisite for the survival and progress of any nation [3]. In this context, administering water and accomplishing IWRM is both a technological and a governance test. IWRM necessitates a new framework with significant changes in existing interactions between political affairs, acts, regulations, institutions, civil society, and the end user [4]. The capacity to make these changes, therefore, will be determined by the transformations in water governance.

In this context, the present study aims analyzing the water administration at centre and state level, the constitutional status of water, draft National Water Framework Bill – 2016 and National Water Policy – 2012, and the judgments of Supreme Court of India and High courts to propose suitable measures required to deal with IWRM in the country.

II. METHODOLOGY

Because of the exploratory nature of the study, a qualitative research approach was employed for the study. A desk study was undertaken to prepare an inventory of data that could be collected from secondary sources. The collected data was analyzed and synthesized to identify problems in the water sector and to suggest appropriate remedies.

III. WATER ADMINISTRATION IN INDIA

In India, besides various organizational, financial and managerial structures, the water sector is also administered through regulatory tools and dispute resolution mechanism. Some of the regulatory powers and functions are also transferred from government to independent and autonomous institutions and authorities. The general organizational framework of the country's water sector comprising of several agencies and boards at central and state-level are presented in Table 1 and 2 respectively [5, 6, and 7].

Table 1 Administration of Water at Central Government Level

Name of Agency	Role(s) of Agency
Ministry of Water Resources, River Development, and Ganga Rejuvenation	Is a nodal central level ministry. It is in charge of overall planning and administration of water assets in the nation.
Central Water Commission	Provides overall technical support to the ministry
Central Groundwater Board	
National Water Development Agency	
Central Water and Power Research Station	
Central Soil and Materials Research Station	Provides research and training support to the ministry
National Institute of Hydrology	
NERIWALM North Eastern Regional Institute for Water and Land Management	Capacity building institution for water and land management for irrigation and agriculture development
WAPCOS	Provides consultancy services in all facets of water resources, power and infrastructure sectors
Niti Aayog erstwhile Planning Commission of India	Grants project clearance and allows and authorizes the financial allocation to various water projects within the country
Irrigation Department under the Ministry of Agriculture	Influences the water sector through Ministry of Water Resources, River Development and Ganga Rejuvenation
Pollution Control Boards under the Ministry of Environment and Forest	
Ministry of Housing and Urban Development	
Ministry of Drinking Water and Sanitation (established in 2010-formerly under Ministry of Rural Development)	Is the nodal department for the overall policy, planning, funding and coordination of programmes of drinking water and sanitation in the country
National Water Resources Council	Is the apex policy organ which is chaired by Prime Minister and includes Union Minister of Water Resources, Chief Ministers, and Governors of all states and Union Territories
National Water Board	Is the executive arm of National Water Resources Council which is chaired by union Secretary of Water Resources and the chief secretaries and top bureaucrats of the states and Union Territories
Independent Board(s)	
Bansagar Control Board	For the smooth execution, operation and management of respective project and work as conflict resolving agency for interstate water conflicts among the states
Betwa River Board	
Brahmaputra Board	
Farakka Barrage Project	
Narmada Control Authority	
Sardar Sarovar Construction Advisory Committee	
Tungabhadra Board	
Upper Yamuna River Board	
Water Resources Department	Overall policy, planning, funding and coordination of water resources at state level
Water and Land Management Institutes Agricultural Universities	Capacity building, Research and Development and Training at state level for water and land management
Water Authorities and State Water Boards	For the effective regulation and monitoring of water resources at state levels
Water Supply and Sewerage Board	Caters to public the water, waste water, solid waste management and storm water management services within the state
Municipality/ Nagar Palika	
Gram Panchayat	
State Pollution Control Board	Have the responsibility of water quality aspects
Irrigation Department	Regulates operates and manages the provisions of irrigation within the state and Construction, maintenance, and management of water resources projects and schemes
Public Works Department	Construction, maintenance, and management of allied projects and schemes

Andhra Pradesh was the first Indian state to conceive the idea of setting-up a separate water regulatory authority in 1997. Maharashtra Water Resources Regulatory Authority established in 2005 was first of its kind independent state level authority. Soon, several other states such as Arunachal Pradesh in 2006, Uttar Pradesh in 2008, Jammu and Kashmir in 2010, Kerala and Gujarat in 2012 had also set-up similar authorities.

Respective state Government is responsible for water supply related activities, irrigation, financing water resources projects and cost recovery from these projects within the state territory. The central government also provides financial grants to the state government for undertaking and implementing projects of national importance and other centrally assisted schemes. However, by and large, the state has to manage and develop its water resources from their own revenue. Most of the states still administer its water resources based on its physical/administrative boundaries rather than on hydro-geological boundaries.

Table 2 Administration of Water at State Level

Name of Agency	Role(s) of Agency
Water Resources Department	Policy formulation, holistic planning, funding and coordination of water resources at state level
Water and Land Management Institutes	Capacity building, Research and Development and Training at state level for water and land management
Agricultural Universities	
Water Authorities and State Water Boards	For the effective regulation and monitoring of water resources at state levels
Water Supply and Sewerage Board	Caters to public the water, waste water, solid waste management and storm water management services within the state
Municipality/ Nagar Palika	
Gram Panchayats	
State Pollution Control Board	Have the responsibility of water quality aspects
Irrigation Department	Regulates operates and manages the provisions of irrigation within the state
Public Works Department	Construction, maintenance, and management of water projects and schemes

Due to different historical backgrounds the water levy, water charges, water tariff policies of states differ significantly. Moreover, many Indian states have unclear or diffused administrative and functional responsibilities that hamper IWRM within the state.

Though, many states have adopted Water User Associations (WUAs) for enhancing cost recovery and improving system within their respective territories, performance of these associations are not so effective due to lack of appropriate legal framework and punitive tools required to deal the water sector in a holistic manner at macro and micro levels. Presently, conflicts encompassing water sector is dealt at state &/or national level within the bounds of Constitution of India and National Water Policy. Further, under the Inter-State Water Disputes Act of 1956, the central government has established several Tribunals to deal the interstate water conflicts. Though, the orders/awards of such Tribunals can always be referred to High court(s) and Supreme Court for unresolved differences of parties involved. At micro-level such disputes are dealt by institutions such as panchayats and WUAs.

IV. WATER IN INDIAN CONSTITUTION

India is a union of States. The constitutional provisions as regards to allocation of responsibilities among the State and Centre fall into three categories: The Union List which is also known as List-I, the State List also known as List-II and the Concurrent List known as List-III. The Article 246 of the Constitution dispenses with subject matter of laws to be framed by the Parliament of India and by Legislatures of the State Government. In the Constitution, water is a matter included in Entry 17 of List-II i.e. State List. However, since the majority of the rivers in the country are inter-State, the regulation and development of waters of these rivers, is a cause of inter-State disagreement and clashes. Article 262 of the Indian Constitution provides a role for the Central government in adjudicating conflicts surrounding inter-state rivers that arise among the state/regional governments [8]. The Entry 56 of List I of Seventh Schedule provides that "Regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union are declared by Parliament by law to be expedient in the public interest". Thus, Entry 17 of List-II is subject to the provision of Entry 56 of List-I i.e. Union List.

Thus, in Indian Constitution, the water is a subject matter of the state government concerned.

V. JUDICIAL VERDICTS ON WATER

The Constitution of India does not enshrine the right to water as a fundamental right explicitly. However, courts at both centre and state level have construed Article 21 of the Constitution to be offering all its citizens the right to life, as encompassing the right to safe and secured water and sanitation. In 1990, for example, The Kerala High Court in

Attakoya Thangal v. The Union of India documented the right to water as essential and significant. Various notable Court Judgments dealing ‘water’ is presented in Table 3.

Table 3 Some Important Courts Verdicts on Water

Case Details	Judgment of Court(s)
M.C. Mehta vs Union Of India & Ors on 12 January 1988 [9]	The Supreme Court of India reinforced the right to pollution-free waters implicitly by ordering immediate actions against the industries if they were held responsible for pollution of water.
Subhash Kumar vs State Of Bihar And Ors on 9 January 1991 [10]	The Supreme Court of India held that “the right to live includes the right of enjoyment of pollution-free water and air for full enjoyment of life”. In the event that anything jeopardizes or debilitates that quality of life in derogation of laws, a citizen has every right to invoke provisions of Article 32 of the Constitution for confiscating the pollution of water or air which may be harmful to the quality of life.
M.C. Mehta vs. Kamalnath on 13 December 1998 [11]	The Supreme Court of held that the concept of public trust doctrine in the following words: “By the law of nature these things are common to mankind – the air, running water, the sea and consequently the shores of the sea”, is a part of law of land and the State is the trustee of all natural resources which are by nature meant for public use and enjoyment. The State as a trustee is under a legal duty to protect the natural resources. These resources meant for public use cannot be converted into private ownership. The court further held that no one shall be allowed to pollute the natural resources and the one who pollutes the environment must pay to reverse the damage caused by his acts
M.C. Mehta vs. Kamalnath On 12 May 2000 [12]	The Supreme Court Bench held that “Pollution is a civil wrong. By its very nature, it is a Tort committed against the community as a whole. A person, therefore, who is guilty of causing pollution, has to pay damages (compensation) for the restoration of the environment and ecology. He has also to pay damages to those who have suffered a loss on account of the act of the offender”.
Narmada Bachao Andolan vs Union Of India And Others on 18 October 2000 [13]	The Supreme Court of India held that “Water is the basic need for the survival of human beings and is part of the right of life and human rights as enshrined in Article 21 of the Constitution of India and can be served only by providing a source of water where there is none”.
P.R. Subas Chandran vs Govt. Of A.P. And Others on 24 August 2001 [14]	The Andhra High Court held that the Government, in its governance is to be guided by Articles 39 (b) (e) (f), 41, 43 and 47 of the Constitution of India. All citizens have a fundamental right to have clean and healthy air and water, which has been bestowed to them under Article 21 by the Constitution of India.
Hinch Lal Tiwari vs. Kamala Devi on 25 July 2001 [15]	Apart from escalating the substance of the right to life as comprising the right to water, the court has, in the context of water pollution, directed the cleaning up of water sources including rivers.

VI. NATIONAL WATER POLICY - 2012 AND DRAFT NATIONAL WATER FRAMEWORK BILL – 2016

With a vision of attaining sustainable and optimal development, maintenance of worth and proficient use of water resources to equal the growing demands on this valuable natural resource of the country [5] the Ministry of Water Resources, River Development and Ganga Rejuvenation from time-to-time lays down necessary regulations and policies. The first National Water Policy was adopted in September 1987. Subsequently, it was reviewed and updated in 2002 and later in 2012 [5].

For a country which is having Constitutional and Administrative Law, Criminal Law, Contract Law, Labour Law, Company Law, Tort Law, Property Law, Tax Law, Trust Law, Family Law, and many more laws and numerous Acts, ironically, there was no Water Law at national level till 2016. Finally, on 16th May 2016, the Central Government has brought the Final Draft of National Water Framework Bill – 2016.

VII. RESULTS AND DISCUSSION

The country has a good administrative set-up to deal with the water resources sector. However, lack of apt organizational arrangements for stringent enforcement and immediate monitoring of the regulating and developmental policies is noticeable at both center and state level.

The Central Government has come up with the proposed legislations by way of National Water Framework Bill – 2016 to put legal and statutory backing to Right to Water as Fundamental Right of every Citizen.

The following similarity emerges in the underlying Principles of Draft National Water Framework Bill – 2016 and the Underlying Principles of National Water Policy – 2012 [16, 17].

- Both instruments state that ‘the state government as trustee holds water in public trust’ at all levels for its people. This ought to be beneficial for all. The sustainability of water resources should therefore be central to it.
- Both instruments stress that the state at all levels, the citizens, and all types of water users ought to guard and conserve all available water sources.
- Both instruments consider maintaining Environmental flows adequate to preserve and protect a river basin as a hydrological and ecological system.
- Both instruments advocate People-centered decentralized water management, for both surface and ground water, including local rainwater harvesting, watershed development, and participatory irrigation management.
- Both instruments stresses upon an integrated and interdependent water and land management.
- Both instruments lay down need for Appropriate Treatment and Use of Waste Water.
- Both the instrument acknowledges that Water quality and quantity are interlinked and should be overseen by the proper Government in an integrated way, unfailing with more wide-ranging customary administration approaches inter alia including the use of economic incentives and penalties.

The Draft National Water Framework Bill – 2016 [16] emphasizes that the available water, after meeting the required priorities, should be allocated for other uses, in a manner to promote its conservation and efficient. Whereas, the National Water Policy – 2012 [17] identifies that Water, over and above the pre-emptive need for safe drinking water and sanitation should be treated as an economic good with a view to promoting its conservation and efficient use.

Though, The Draft National Water Framework Bill – 2016 is a very positive step towards achieving the national goals the fact that water being a State subject, the proposed Bill, however, will not be binding on States for adoption.

Though, the Constitution of India does not explicitly state Right to Water as Fundamental Right but the judiciary who is there to interpret the act and legislation, in this case, has elucidated and ordered on several instances that state is the trustee and a custodian of the natural resources such as water resources and is, therefore, duty bound to provide safe water to its citizens for full enjoyment of life. The courts held the Right to Water as a fundamental right of every citizen.

The makers of the Constitution of India might have adopted water as state subject mainly due to following reasons:

1. It is very much clear from the entries of the Constitution that the makers meant water implies irrigation and therefore they might have assigned the primary roles to state government and secondary dispute resolving role to central government.
2. It was difficult for the makers to foresee the environmental, ecological, social, human and legal aspects relating to the water of the present era.
3. As we are today, the makers were not aware of the likely impact of climate change and the looming water crisis.

Thus, owing to present day needs the constitutional status of water must change. The legal status of Right to Water can have an immense impact on the way this precious resource is being dealt with. If fully incorporated into the Constitution, it can prove to be a powerful judicial tool and powerful political advocacy. The central government does frame legislations, regulations, policies, work plans, and budget allocations, but these instruments are to be implemented at local levels by the state government subject to adoption of such national instruments by the respective state government. This emphasizes the need to have national policies, plans, and allied resources to be set-up to enable local authorities to effectively attain IWRM through the explicit reference to water as a fundamental right in the Constitution. It is, therefore, necessary that the central government by means of Constitutional amendment explicitly incorporates Right to Water as Fundamental Right of every citizen and also includes the water in either the Union List or the Concurrent List.

Merely creating authorities is not sufficient, effective management of water resources predominantly depends on the satisfactory functioning of the institution and the treatment of water on the public trust doctrine. However, the water should be also treated as an economic good and social good keeping in view the contemporary and future climate variability.

Present water related policies has many limitations, viz. there is lack of public participation in law making process, there is lack of sufficient incentives promoting well-organized use of water resources, the members of water authorities only happen to be either from politics or from bureaucracy with powers vested with politicians leaving vital decisions being guided by vote bank politics rather than what the situations demand, the recommendatory nature of central law, regulations, and policies; and above all several instruments lacks transparency and accountability.

The policies of the state shall not only focus on regulations, licenses, restrictions, and penalties but also on knowledge dissemination to help, guide, influence and coordinate the public water use. Public and stakeholders’ participation at all levels must be made integral to all water administration. Ramaswamy (2010) [18] believes that to have a more equitable

and comprehensive water resources management, the governance has to shift from big, centralized, capital-intensive 'water resource development' (WRD) projects by way of big dams and reservoirs and canal systems, to small, decentralized, local, community-led, water-harvesting and watershed-development programmes, with the large projects being looked upon as projects of the last choice; and the misuse of groundwater will have to be relentlessly restrained in the interest of resource-conservation as well as equity.

VIII. CONCLUSIONS

There is an urgent need to introduce apt arrangements for holistic water administration in the country. The need of having various authorities in the water sector should be re-examined and rethought. The constitutional status of water should be attuned to suit the current requirements. The legal status of Right to Water can have an enormous impact on IWRM. If fully incorporated into the Constitution, it can prove to be a powerful political and judicial tool. It is, therefore, necessary that the central government by means of Constitutional amendment explicitly incorporates Right to Water as Fundamental Right of every citizen and also includes the water in either the Union List or the Concurrent List. Moreover, the recommendatory nature of National Water Framework Bill – 2016 ought to be changed to mandatory by bringing about the required constitutional amendment and other suitable measures to achieve IWRM.

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