



Water Crisis in India: A Saga of Federal Structure and Conflict

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India is a country blessed with multiple cultures and vast population. Rivers are the integral part of this land and worshipped as well as serve as the final source of livelihood for many. Inter-state river conflicts have now emerged as a challenge for Indian federalism. Krishna, Cauvery, Godavari, Ravi Beas and all river conflicts are the tension among the states. Odisha and Chhattisgarh have been on war front with regard to the water distribution of Mahanadi River which runs across both the states. Mahanadi in all those states is a matter of identity, not to withstand petty politics. River side of Mahanadi in both the states is also the industrial hub. With big dams constructed across both states, agriculture remains a core issue in the conflict. The proposed paper attempts to investigate the interstate water conflicts in the post independent India. Purposefully it looks in to the mechanisms of Indian federalism which deals with such type of conflict. The paper critically examines the issue of Mahanadi between Odisha and Chhattisgarh to relate it with the general federal structure. Federalism in India is a unique experience and its challenges are too unique. Perhaps unique redressal system is yet to emerge in Indian Federalism.

Keywords- Water Crisis, Conflict, Mahanadi River, Federalism, ISWT



Introduction:

Water conflicts aren't just for Hollywood melodramas anymore. With water scarcity affecting most of the world, well water could be the next flash point. As previously said by Ismail Serageldin, "yesterday's battles were over land, including empire building colonies, today's conflicts are over energy, but tomorrow's conflicts are likely to be over the most important of all natural resources that is water".¹ Water is life-giver, a source of livelihood and an enabler of development. However, it has already become an overexploited resource, resulting in shortages, degradation and competition which trigger the inter-country and interstate sharing disputes.² Water in the twenty first century has the potential to become what oil was to be twentieth century: - a source of both wealth and conflict. When the price of mineral water in the supermarket is compared to the price of crude oil, water is quickly becoming the new oil. Despite recent increases in oil prices, the spot price of crude oil remains cheaper than the retail price of mineral water or even ordinary bottled water. In geopolitics, just like oil in the previous century played a role in deciding the rise and fall of states, as a result, water may play a role in the rise and fall of powers throughout this century. Oil drove international geopolitics in the twentieth century; and the battle for the water is set to define many interstate relationships in this century. In truth, water conflicts can be fought and won without firing a single shot- if an upstream hydro-engineering infrastructure is quietly built to command shared resources.³

India is blessed with a massive network of rivers of which three major rivers, the Indus, Ganges and Brahmaputra as well as most of their tributaries originate in the Himalaya. The majority of Indian rivers is perennial; through their flows vary seasonally between extremes. All Indian rivers were previously honored; but their flows have been exploited excessively by



storage and diversions etc. The situation of the country's rivers is in a pathetic state, perennial rivers have been changed into seasonal ones, biodiversity has declined and water quality is degraded significantly.⁴ There are 25 major river basins in India, with the majority of rivers flow across the states. As river basins are shared resources, a coordinated strategy between the states is required, with the proper participation from the Centre to ensure the preservation, equitable distribution and long-term use of river water. Within India's federal political structure, inter-state disputes require the involvement of the Union government for a federal solution at two levels: between the states involved, and between the Centre and the states.⁵

In brief, the following could be cited as 'agents of death' for a river system:

- Man- made structures that prevent, decrease, regulate, or divert its natural flow.
- Human activities that introduce harmful materials (solid and liquid) to the water bed and floodplains.
- Excessive biological and inert material removal from the river system.
- The degradation and loss of river-linked water bodies (lake and ponds, including oxbow lakes) that are fed by wells and feed the river system through aquifer linkage.
- The transformation of river floodplains into unsuitable land uses.⁶

The Saga of Water Conflicts in India:

Dr. Ismail Serageldine once stated that- *"Many of the wars this century were about oil, but those of the next century will be over water"*. This was first prophesized in an interview at Newsweek in 1995.⁷ Inter- State River water disputes are one of the most controversial issues in today's Indian Federalism. In severe cases, it can interfere with other states as well.⁸ There are more than twenty major river systems in India. In terms of Indian federalism, most of India's rivers are interstate rivers when it crosses more than one state in India. The inter-state nature of Indian rivers has triggered a number of debates among federal units at inter-state level.⁹ The domestic, agriculture and industry are increasing day by day due to expansion of water requirement or uses in many lands and it has cost water scarcity. The weight of population growth and threat of unequal distribution of very essential natural resource water is surrounded by a series of ongoing conflicts and debates. This controversy is increasingly reflected in the



federal system like India and United States because most of the rivers of these two countries are Inter-State Rivers.¹⁰

When multiple states rely on the same river for water, their amicable relationship becomes a challenge for personal interests due to quick increase in water shortage, which leads to inter-state river conflict. Generally, conflicts over sharing grow problematic when upstream basins hinder water from rivers by building dams and other projects, which adversely affect the quality and quantity of water flow to the downstream basins limiting the scope of water use. Therefore, typical upstream-downstream water problem causes riparian rights disputes, which can sometimes lead to interstate wars. Most Indian states are fighting over the sharing of river water, which has directly or indirectly resulted a conflict or violence in some cases. After the implementation of major water development projects in the 1950s and the reformation of new state borders in 1950s and 1960s, the states are still at odds and have yet to arrive at a point where they can understand and solve the water sharing problem. Aside from that, our country is experiencing numbers of new water conflicts and rapid increase of water scarcity.¹¹

Krishna Water Dispute:

The Krishna is an east flowing river that begins in Maharashtra and flows through Maharashtra, Karnataka, Telangana and Andhra Pradesh before merging into Bay of Bengal. It comprises large basin with its tributaries that covers 33 percent of the entire territory of the four states.¹²

The Krishna River water is a source of conflict between the states of Andhra Pradesh, Karnataka and Maharashtra. The upstream states have plenty of water for irrigation and power generation, whereas downstream states suffer for the water use. As a result, tensions between upper and lower states are mostly caused by the construction of numerous dams across the river and uneven distribution of the river's water resources. These are some of the issues that the states are fighting over Krishna River's water. Under the Interstate Water Dispute Act 1956, the Krishna Water Dispute Tribunal was established in 1969 and published its report in 1973.¹³

The Cauvery Water Dispute:



The Cauvery is one of the most important rivers of Southern India. It is a river system that includes the Cauvery and several tributaries, including Hemavati, Kabin, Bhavani, Amravati and others. The main states in the Cauvery basin are Karnataka and Tamil Nadu, but tiny portion of the basin lies in Kerala and at the very end the delta contains Karaikal which is the part of Union Territory of Pondicherry. Thus, according to Indian Constitution, it is an inter-state river.¹⁴

The struggle over Cauvery River water has a long history. An agreement signed in 1892 and 1924 between the prince of Mysore and Madras Presidency sparked the controversy. The main issue of the Cauvery River is over the re-distribution of water that has previously been used up.¹⁵ It established a notion that any building operation like a reservoir on the river, required a consent with lower riparian states from 1974 but Karnataka began diverting water into four freshly built reservoirs without the Tamil Nadu's authorization, resulting in a controversy. The Cauvery Water Dispute Tribunal was formed in 1990 to resolve the dispute. It took 17 years for the final order in 2007, on how the Cauvery water should be split between four riparian states in normal rainfall situation.¹⁶

The Godavari Water Dispute:

The largest of the rivers is the Godavari. The river's geographical area is 3, 12, 812 square kilometers (1, 20, 777 square meters) and it flows through six states Maharashtra (where the river's source is on hill in Trimbak / Triambak); Karnataka, Telangana Chhattisgarh, Odisha and Andhra Pradesh. After feeding Mangroves on the south-east coast, the river splits into two streams, Vasistha and Gautami Godavari, before joining the Bay of Bengal.¹⁷ By the 2012, about 350 big and medium dams and barrages have been built in the river basins; the number of dams constructed in the basin is the highest of any river in India.¹⁸

On Godavari River, the Planning Commission sought to incorporate some important irrigation and hydroelectric generating plants. The commission requested proposals from the states of Bombay, Hyderabad, Madras and Mysore. In 1951, an inter-state meeting was held to examine water use in the Godavari and to evaluate the merits of the various schemes proposed. The states began to be rearranged linguistically in 1953. Andhra Pradesh was formed in 1953,



with state boundaries redrawn again in 1956. As a result, the 1951 agreement needed to be updated after the lengthy negotiations failed to produce a new agreement; a tribunal for the Godavari River was established in 1969.¹⁹

Ravi Beas River and the Dispute:

The Ravi Beas rivers, which are nourished by the Himalayas, travel south eastward across Punjab. The Ravi rises in Himachal Pradesh's Kullu valley then flows across Punjab, forming India's boundary with Pakistan for a short time before entering Pakistan near Lahore. Ravi's waters are transferred into the Beas River by Canal as it leaves Himachal Pradesh near Madhupur. The Beas commences in Himachal Pradesh and becomes a tributary of Sutlej after entering Punjab, Sutlej is a much larger river that originates in Tibet, flows through Himachal Pradesh and Punjab and then into Pakistan. The Rajasthan Feeder Canal diverts what are now the combined waters of the Ravi, Beas and Sutlej towards Rajasthan at Harike, where Beas meets the Sutlej. Indira Gandhi main Canal carries Himalayan water over 1, 000 KMs across the Thar Desert to irrigate the Rajasthan's dry western and southern regions, in addition to Punjab and Haryana.²⁰

The two parties engaged in the water war are Punjab and Haryana; both are agricultural surplus states that supply substantial food grains to the rest of India. After partition, in 1955 an inter-state meeting organized by the Central Government resulted in an initial agreement on the sharing of the Ravi Beas's water. The current water conflict between Punjab and Haryana dates back to the reorganization of Punjab in November 1966, when two new states were created as the successor of Punjab. The four perennial rivers, Ravi, Beas, Sutlej and Yamuna flow through both these states, which are heavily dependent on irrigated agriculture in this arid area. With the introduction and widespread adoption of high yielding wheat varieties in the late 1960s, irrigation became increasingly vital. Following Punjab's concerns over the 1976 agreement allocating Ravi Beas water became a debate; further leading to a discussion along with Rajasthan and a treaty was signed in 1981. This treaty met with criticism and which led to the formation of Ravi Beas Water Tribunal in 1986.²¹

The Mahanadi Water Dispute:



The Mahanadi River, which means “Great River” in Hindi, is one of the major rivers. It has total length of 858kms and drains an area of roughly 141, 600km². The river passes by the states of Chhattisgarh and Odisha on its way to the sea. This river flows slowly in its course and deposits more silt than any other river in the Indian subcontinent. The Mahanadi River is recognized for its rich soil and flourishing crops. Its delta offers one of the highest yields per acre in India as a result of large silt deposits.²² The large area of the basin is covered by agriculture land, which accounts for 54.27% of the total area and water bodies cover 4.45% of the basin. The basin is divided into 27 parliamentary constituencies, with 13 in Odisha, 11 in Chhattisgarh and one each in Maharashtra, Jharkhand and Madhya Pradesh (as of 2009).²³

The Mahanadi River has changed dramatically in recent decades, particularly since the formation of new state Chhattisgarh. The River Mahanadi is lifeblood of Chhattisgarh, covering half of the state’s entire land area. While the region was part of Madhya Pradesh, the river underwent significant developments but its pattern has lately changed. Odisha like Chhattisgarh places equal value on its waterways for its own development. According to studies, the river is facing variations in precipitation in its watershed as well as changes in water resources and their utilization as a result of human interventions and ecological change.²⁴

The issues of Mahanadi Water Conflict

The conflict is said to have begun in July 2016 when Odisha, the lower riparian state claimed that existing and proposed dams and wires in the upstream state Chhattisgarh would dry up the river down streams, causing severe economic, agriculture, and ecological consequences for its people, farmers, and industries.²⁵ Despite Hirakud reservoir requires 2 million acre-feet water during non-monsoon season, the water inflow decreased by about 4% between 1991-21 and 2004-05 and by 37% between 2005-06 and 2015-16. The flow of water decreased during monsoon period by 65% in 2016-17, 61% in 2017-18 and 57% in 2018-19 respectively. However, the water flow reduced to 3% in 2019-20, Das remarked. In addition, 61 of the 66 gates of Chhattisgarh’s Kalma barrage, which runs along the border of Jharsuguda district, have been closed this winter, resulting in a 5100 cusecs inflow to Hirakud Reservoir.²⁶



The Mahanadi, which flows by at least 20 of Odisha's 30 districts, boosts the state's economy and agriculture, as it supports more than 60 percent of the state's 4.2 crore people. After 25-kilometer-long earthen dam was built across the river in the Hirakud region of Sambalpur district in 1953, the dam water irrigates over 2.35 lakh hector of crops and produces 347.5 megawatts of electricity for the state. Besides, sis ecological hotspots in Odisha, including Bhitarkanika wildlife sanctuary, Chilika Lake, Tikarpada sanctuary and Chandaka elephant reserve directly depend on the river.²⁷

As Chhattisgarh has nearly 2000 dams and wires on the river, the source of conflict is 12 irrigation projects- *Ravisankar Sagar dam, Hasdeo Bango dam, MurrumSilli Dam, Tandula dam, Sondur dam, Dudhwa reservoir, Ghongha dam, Kharang Reservoir, Mongra Barrage, Moniyari tank and Kodar Reservoir*. These dams were built under the pretext of modest irrigation projects, but they were actually used to deliver water to industries. Other than these six industrial barrages- Saradih, Sheorinarayan, Basantpur, Mirouni, Kalma and Samoda heightened the tension. According to activists of both states are fighting for Mahanadi's ecological entity, the annual distribution of these barrages to industry is 1405.66 MCM.²⁸ The Central Government formed the Mahanadi Water Tribunal on 12th March 2018 under section 4 of the Interstate Water Dispute Act 1956 for settlement of the Mahanadi Water Conflict between Odisha and Chhattisgarh.²⁹

Challenges in Water Governance

It is important to first understand the prolonged and complicated nature of ISWDs in India, to better understand the challenges of the existing discourse on this problem.³⁰ The system is now affected by three major structural ambiguities: federal jurisdictional, historical geographical and institutional. These shortcomings are interconnected and have influenced India's constitutional framework, institutional reaction and political engagement on ISWDs.³¹

a. Federal-Jurisdictional

In independent India, legislative authorities over water were divided between the union and states in order to promote optimal use while balancing the interest of states. Schedule 7 of constitution differentiates between the usage of water within a state and purpose of controlling



interstate rivers. It grants to the Union Parliament the authority to enact laws and mechanisms to regulate interstate rivers (Union List: Entry 56, List 1) while states retained autonomy over water use for purposes like water supply, irrigation and canals, drainage and embankments, water storage, and water power (state list: entry 17, list 2) subjects to the provisions of Entry 56 List 1. This approach to the creation of ISWD legislative and constitutional mechanisms has led in an unclear division of authority between Union and states, producing federal jurisdiction uncertainty.³²

b. Historical-geographical

The unification of 571 disparate states resulted in the declaration of Independence. Following that, states were formed and unified to establish the Union of India. Initially the states were constructed based on political and historical concerns,³³ the States Reorganization Act of (1956) resulted in 14 states and six union territories. Following that, the boundaries of Indian states continued to change primarily on cultural and political reasons, with little respect for the historical and ecological dynamics of these regions. Changing border complicate current jurisdictional and resource sharing treaties and finally became causes of interstate political conflict, resulting in historical geographical challenges in interstate river water administration. Recognizing the problems raised by such redrawing of administrative boundaries, the Central Government enacted two other crucial acts in the same year to form a framework and managing interstate rivers such as Interstate Water Dispute Act 1956 and the River Boards Act 1956.³⁴

c. Institutional

In the context of interstate river conflict, the nature of the adjudicatory command in case of Interstate River disputes which has also created institutional uncertainty between the Tribunals formed by the Centre and the function of India's highest court. In a break from the 1935 Act, article 262 of the Indian Constitution states that the parliament or National Legislative Body must make legislation prohibiting the Supreme Court of India to take part in interstate water conflicts. As a result, this establishes a constitutional exemption for the Supreme Court, which is otherwise obligated by article 131 of the Indian Constitution to decide all other areas of



interstate and centre state conflicts in India. Article 136, on the other hand, authorizes the Supreme Court to consider appeals against the verdicts or awards of all Tribunals and commissions subject to its appellate jurisdiction.³⁵

While Article 262 prohibits the highest court from adjudicating ISWDs, article 136 authorizes it to consider appeals against the tribunals and guarantee their implementation. As a result, the Supreme Court, together with the Tribunal, continues to be the adjudicatory body. Creating institutional uncertainty on which body in India has final adjudicatory authority over ISWDs.³⁶

Water in the Constitution:

The constitution specifies how functions related to water resources development are divided between the federal and state governments. Water has been defined as state subject to Central intervention in order to manage the development of interstate rivers and to resolve interstate water conflicts. These provisions provide the River Board Act and Interstate Water Disputes Act. The Central government may also interfere in the interests of environmental and forest protection, as well as under regulations governing National development planning.³⁷

Water is essentially a state subject under the Indian Constitution, which came in effect from 1950. Entry 17 List II i.e. State List 7th Schedule of the constitution, states “Water” that is water supply, irrigation and canal, drainage and embankments, water storage and water power subject provisions of Entry 56 of the List I, as a result, states are allowed to implement the water legislation and develop policies in compliance with this provision. The above-mentioned entry 56 of List I (Union List) indicates that ‘regulations and progress of interstate rivers and river valleys to the extent that such regulation and development under the governance of the Union is proclaimed by Parliament by law to be measure in the public interest.’³⁸

Furthermore, we must consider the terms of Article 262:

262. Adjudication of conflicts involving water in interstate rivers or river valleys.

- Gives for the adjudication of any disagreement or complaint about the usage, sharing or control of any inter-state river or river valley’s waters. And



- Neither the Supreme Court nor any other Court shall have jurisdiction over any conflict or complaint referred in this clause (1).³⁹

Under this, two similar laws have been enacted. These are The River Board Act-1956 and The Interstate Water Dispute Act-1956.

a. River Board Act-1956

It allows the Centre to organize boards to advise on the coordinated development of inter-state basins in coordination with the state involved. The river boards were designed to avoid issues to prepare development plans and calculating expenditures for each state.

b. Interstate water Dispute Act-1956

In the event of interstate rivers or river valleys, the act provides an affected state to seek that the centre to form a Tribunal. The Centre has no role to play unless and until a state asks for a Tribunal.⁴⁰

The River Board Act 1956, approved by parliament under entry 56 of the Union List, merely gives for the formation of Advisory Boards; however, no boards, even advisory in nature, have been established under this act; fact the act has remained largely inoperative. The Inter-State Water Disputes Act 1956, adopted under article 262 of the Constitution, has also run into difficulties in recent years.⁴¹

Resent Steps Proposed by the Union Government

To address the challenges connected with the present structure of ISWT, the following laws have been proposed:

a. River basin Management Bill, 2018

The law is not just a step towards breaking away from constitutional deadlock and reliance on an urgency-driven party reaction. But it also tries to shift toward integrated river basin governance.



- The bill offers establishing a River Basin Authority (RBA) to regulate and promote the interstate rivers and river basins.
- It employs numerous normative concepts, such as participation, collaboration and use of sustainable resources; integrated water governance, demand management, and conjunctive water use, for efficient and effective river basin management.
- The proposed River Basin Management Bill, 2019 describes the governance of thirteen Indian River basins by establishing exclusive power and developing unique master plans for each river. The rivers covered by this authority include the Ganga, Indus, Godavari, Narmada, Mahi, Pennar, Cauvery, Krishna, Tapi, Mahanadi, Subarnarekha, Brahmini-Baitarani and Brahmaputra-Barak interstate rivers in north east.⁴²

b. Inter-State River Water Dispute (Amendment) Bill, 2019

The centre proposed the bill based on the Sarkaria Commission's report, which if passed would make it necessary for the Centre to constitute a tribunal on the request of the state or on its own initiative. It allows the Centre to form a Dispute Resolution Committee (DRC) within a year to resolve the matter peacefully through dialogue. If the DRC is unable to solve the conflict, then Centre must send it to Interstate Tribunal within three months.

- It establishes timetables while proposing the establishment of a Permanent Tribunal with several benches following the dissolution of all current tribunals. The Tribunal will be chosen based on the proposal of a selection committee comprised of Prime Minister, Chief Justice of India and Ministers from the law and justice and Jal Sakti Ministers.

c. Dam Safety Bill, 2019

It aims to provide an institutional structure for monitoring, inspection, operation and maintenance of specific dams throughout the country. Since Centre has suggested a new Authority for dam safety, it is believed that it would take away state's control over irrigation dams in their provinces.

- The Centre would gain enormous power if National Dam Safety Authority would decide on safety and any other matters. The NDSA would be led by an extra Secretary in the



Central Water Commission, and the states would be required to obey the authority's directives or face fines.⁴³

Concluding Remarks

The reform of water laws is crucial for India's economic, ecological and social process. The present legal framework which is primarily based on colonial assumption is in critical need of significant changes and a viable replacement is urgently necessary. In India, initiatives for managing the socio-legal mechanisms of the water system have mostly gone unnoticed. As Indian rivers are interstate in nature, most rivers pass through two or more states and frequently encounter issues over the sharing and construction of dams and wires between upstream and downstream states. Despite the fact that Indian Federalism has diverse water rights for rivers, the water conflicts continue to arise. There are several Tribunals for the interstate rivers but none have offered enough justice in dealing with such conflicts. As an example, the most recent water conflict over the Mahanadi between Odisha and Chhattisgarh, where Odisha Government has been requesting the Centre for the Mahanadi Water Tribunal since long, however, the dates of tribunal's award have been awaited till today.



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