INDIA'S APPROACH TO INTERNATIONAL WATERCOURSE: INDIA'S DISPUTE WITH PAKISTAN AND CHINA

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ABSTRACT

This essay deals with how the international watercourses particularly the Indus and the Brahmaputra between India, Pakistan and China is sharing its transboundary water resources peacefully from an Indian perspective. The main ideation of the essay is to deal with the legal instruments through which it is governed. Being the middle riparian state how India is performing its duties is assessed throughout this essay.

1. INTRODUCTION

"நீர்இன்று அமையாது உலகெனின் யார்யார்க்கும்வான் இன்று அமையாது ஒழுக்கு" -திருக்குறள் 20, திருவள்ளுவர்

The translation of this Thirukkural is: "If it be said that the duties of life cannot be discharged by any person without water, so without rain there cannot be the flowing of water".

Without water there is no life on earth. Water covers 70.9 per cent of the earth's surface, only 3 per cent is fresh or potable and used for human consumption. Of this,2 per cent is frozen and locked in glaciers, snow, ice and permafrost. Of the remaining 1 per cent, 30 per cent is ground water. The remaining freshwater found in rivers, lakes, ponds, and other water bodies, is non-frozen, salt free, and accessible for human consumption[1].

[1] Uttam Kumar Sinha, Riverine Neighbourhood: Hydro-politics in South Asia, (Pentagon press, 1st ed 2016)

This is the 'visible water' that society interacts with for drinking, agriculture, domestic and industrial needs. Precipitation and rainfall also add to the freshwater stock.

Water is not confined to political borders. Transboundary waters accounts for 60 per cent of the world's freshwater flows. An estimate of 153 countries have territory within at least one of the 286 transboundary river and lake basins and 592 transboundary aquifer systems.[2] Only 32 countries have 90% or more of their transboundary basin area covered by operational arrangements[3]. Only 24 countries report that all their transboundary basins are covered by cooperation arrangements. India falls within both operational arrangement and cooperation arrangement category country with respect to Pakistan and China.[4]

From these data it is inevitable that visible freshwater resources are severely impacted by global population and economic growth put together they extract and pollute faster than it is replenished. The ever-expanding gap between demand and supply of water will make water a contested issue especially in densely populated countries like India, China and Pakistan. Since water is the largest shared resource in the world, disputes are unavoidable and requires considerable inter-state understanding to resolve the dispute. water, as a trans-boundary resource, remains by nature unruly and conforms to no unanimously accepted rules, but water-sharing arrangements among basin countries are reached ultimately through political equations. water issues within countries determine water issues between countries. Despite that, countries shows willingness to cooperate, even the world's most impeccable enemies have negotiated water agreement even when their relationships are strained.

water scarcity has become a pressing concern for the south and south east Asian region, with per capita availability of water fallen by nearly 80 percent in the last six decades[5]. The region hosts three major watercourse systems—the Indus, the Brahmaputra and the Ganges. All the stakeholders depend heavily on these transboundary water resources to meet their domestic and industrial needs. In the Indian subcontinent, two rivers – the

[2] Data sourced from https://www.unwater.org/water-facts/transboundarywaters#:~:text=Transboundary%20waters%20account%20for%2060,is%20lacking%20in%20most%20countries.last accessed on 24/01/24
[3] ibid
[4] ibid
[5] https://asiafoundation.org/resources/pdfs/SGTFReport.pdf

Indus and the Brahmaputra – act as both lifelines and lines of contention for India, Pakistan, and China. Navigating through the turbulent waters of treaties, geopolitical tensions, and the relentless need for water security. This essay delves into understanding the approaches India has adopted to these water disputes, focusing specifically on its interactions with Pakistan and China, two neighbours with whom it shares vital water resources.

2. INDIA'S APPROACH TO TRANSBOUNDARY RIVER DISPUTE WITH PAKISTAN IN THE INDUS BASIN

2.1 Geographical understanding:

The Indus River is the twelfth largest river in the world[6] and originates near lake Manasarovar to the north of the Himalayas range on the Kailash Parbat Mountain in China (Tibet) at an elevation of 5 500 m. The Indus River basin stretches from the Himalayan mountains in the north to the dry alluvial plains of Sindh province in Pakistan in the south and finally flows out into the Arabian Sea draining an area of 11, 65,500 Sq.km[7]. The total length of Indus from origin to its outfall in Arabian Sea is 2,880 km, out of which 801 km flows through India[8].

Table 1: Country areas in the Indus River basin[9]

Countries included	**Area of country in basin (km^2)**	**As % of total area of the basin**	**As % of total area of the country**
Pakistan	520 000	47	65
India	440 000	39	14

[6] Data sourced from FAO. 2011. AQUASTAT Transboundary River Basins – Indus River Basin. Food and Agriculture Organization of the United Nations (FAO). Rome, Italy https://www.fao.org/3/CA2136EN/ca2136en.pdf p.4 last accessed on 25/01/24

[7] ibid

[8] Indus basin- Ministry of water resources, GOI- version 2.0 2014 https://indiawris.gov.in/downloads/Indus%20Basin.pdf p.8 last accessed on 25/01/24

[9] See supra no. 6 p.4

China	88 000	8	1
Afghanistan	72 000	6	11

The Indus River has two main tributaries, the Kabul on the right bank and the Panjnad on the left. The Panjnad is the flow resulting from five main rivers (literally Punjab means "five waters"): the Jhelum and Chenab, known as the western rivers with the Indus River, and the Ravi, Beas and Sutlej, known as the eastern rivers.

2.2 Historical understanding:

The Indus valley civilization is 4000 years old. Modern Canal irrigation works were taken up by the colonial British Government in the undivided India, in 1859 the Upper Bari Doab Canal (UBDC) was the first such canal built on the river Ravi. A triple canal project was constructed during 1907-1915 linking the Jhelum, Chenab, and Ravi rivers by allowing the transfer of surplus water from Jhelum and Chenab to Ravi River. It is a landmark in integrated inter basin water resources management.

Sutlej valley project was completed in the year 1933. Sukkur barrage and its system of 7 canals were the first modern hydraulic structure on the Lower Indus plain. Haveli and Rangpur on Chenab on 1939 and Thal canal on Indus was completed on 1947. This Indus Basin Irrigation system (IBIS) spread across the plains of Indus valley is the largest contiguous irrigation system in the world.[10]

In August 1947 the Indian subcontinent was two independent states namely India and Pakistan, the border cut right across the Indus system, but there was no provision made for the manner of division of Indus in the Indian Independence Act[11]. As the boundary between India and Pakistan cut across many of the river's tributaries, an upstream-downstream power structure emerged, which has been the source of tensions between the two countries. Unlike India, Pakistan relies almost exclusively on the Indus, and southern downstream areas are especially vulnerable to strains on the basin's water

[10] See supra no.6 pg. 9
[11] Indian Independence Act of 1947

supply. This makes Pakistan one of the most water-stressed countries in the world. Around 90% of Pakistan's food and 65% of its employment depend on farming and animal husbandry, which are sustained by the Indus.

In December 1947 a standstill agreement was signed between East Punjab (India) and west Punjab (Pakistan) to maintain status quo allocation of the Indus water till March 31st 1948. On April 1st 1948 water flow to west Punjab was completely cutoff by East Punjab and restored only on 30th April 1948[12]. On May 1948, interim agreement called Delhi agreement or Inter- Dominion agreement was signed. Unhappy with the outcome Pakistan approached ICJ on June 1949 but India refused. This marked the beginning of the international conflict over the Indus River. In response India registered the Delhi Agreement with UN on 1950 May.

The erstwhile president of World Bank, Eugene Black offered to facilitate a proposal on the lines suggested by Lilienthal, to mediate both the countries to arrive at mutually accepted agreement. Thus in 1952 the Indus Mediations began at the world bank's headquarters Washington DC. The On 8 July 1954, the Bhakra Nangal canals opened, because of the political tension the world bank abandoned the strategy of integrated development of the river by India and Pakistan and put forth the alternative proposal to reserve the 3 rivers lying to the west (Indus, Jhelum and Chenab) for the exclusive use of Pakistan and the 3 rivers lying to the East (Ravi, Beas, Sutlej) for the exclusive use of India. The final negotiations towards the Treaty began in May 1959, and took 15 months and the Indus water Treaty was finally signed.

2.3 The Indus water treaty:

The then Indian Prime Minister Late Jawaharlal Nehru and the then President of Pakistan Late Field Marshal Mohammed Ayub Khan, signed the treaty personally, on 19 September 1960 and is effective from 01.04.1960. The aim of the Treaty was to create a frame work for sharing of Indus water.

[12] Suchita Uppal & Zaid Wahidi "Water Wars and the U.N. Watercourse Convention: The Indo-Pak Story." Cornell International Law Journal 66.1 (2020): 319-365. https://community.lawschool.cornell.edu/wp-content/uploads/2021/03/Uppal-Wahidi-ILJ-online.pdf p. 2 last accessed on 25/01/24

Brief summary of the Indus water Treaty 1960

- The Indus system of rivers comprises of main stem of Indus river along with its five left bank tributaries, namely, the Ravi, the Beas, the Sutlej , the Jhelum and the Chenab and a right bank tributary, namely, the Kabul which does not flow through India. The Indus River system was divided into three Eastern Rivers (Ravi, Beas and Sutlej and their tributaries) and three Western Rivers (Indus, Jhelum and Chenab and their tributaries).

- Under the Treaty, the waters of Eastern Rivers are allocated to India. India is under obligation to let flow the waters of the Western Rivers except for the following uses:

  (a) Domestic Use,

  (b) Non-consumptive use,

  (c) Agricultural use as specified,

  (d) Generation of hydro-electric power as specified

- India has been permitted to construct storage of water on Western Rivers up to 3.6 MAF (million-acre feet) for various purposes. No storage has been developed so far.

- Under the Treaty, India and Pakistan have each created a permanent post of Commissioner for Indus Waters. They together constitute the Permanent Indus Commission (PIC), which is entrusted with the implementation of the Treaty. The PIC is required to hold meetings and tours and submit report on its work to the two Governments every year. It has held 117 tours and 118[13] meetings so far.

[13] https://www.mea.gov.in/press-releases.htm?dtl/35375/118th+meeting+of+the+IndiaPakistan+Permanent+Indus+Commission last accessed on 25/01/2024

- Both sides are required to exchange information related to river flows observed by them, not later than three months of their observation and to exchange specified information on Agricultural Use every year. India communicates as a gesture of goodwill, flood data to Pakistan from 1st July to 10th October every year, to enable them to undertake advance flood relief measures. The arrangement is reviewed every year.

- Article VII which emphasises "Future Co-operation". It recognizes the "common interest" of the two countries, "in the optimum development of the Rivers", and to that end they would "co-operate, by mutual agreement, to the fullest possible extent".

- India is under obligation to supply information of its storage and hydroelectric projects as specified, to Pakistan, in writing, their information specified in the Treaty. Pakistan can raise objections within three months of the receipt which are then resolved under Article IX.

- The treaty has distinct procedures to settle issues which may arise through the Permanent Indus Commission: "questions" are handled by the Commission; which when unresolved become "differences" that are to be resolved by a Neutral Expert; which when unresolved becomes disputes and "disputes" are to be referred to a seven-member arbitral tribunal called the "Permanent Court of Arbitration."

- There is no exit clause in the Treaty. However, Article XII provides for modification of treaty provisions through a "duly ratified treaty", which will replace the present one with the condition that it cannot be abrogated unilaterally.

2.4 India's approach to the treaty:

In the past 6 decades, the treaty has survived 2 wars (1965 and 1971) and Kargil conflict 1999 and several cross-border terrorist attacks by Pakistan. Even during the war there was no reordered strategic decision of attacking the other country's hydraulic installations. During terror attacks abrogating treaty is used as a tool to threaten. In

2016 after the Uri attack, prime minister of India said "Blood and Water cannot flow together."[14] However on each occasion based on its cost benefit assessments, India chose not to abrogate the treaty.

India has so far constructed Bhakra Dam on Sutlej, Pong and Pandoh Dam on Beas and Thein (Ranjitsagar) on Ravi. These storage works, together with other works like Beas-Sutlej Link, Madhopur-Beas Link, Indira Gandhi Nahar Project etc has helped India utilize nearly entire share (95 %) of waters of Eastern rivers. However, about 2 MAF of water annually from Ravi is reported to be still flowing unutilized to Pakistan below Madhopur. To stop the flow of these waters that belong to India for its utilization in India, Construction of Shahpurkandi project, Ujh multipurpose project and the 2nd Ravi Beas link below Ujh.[15]

The water sharing problem has been well settled by the treaty but the dispute regarding Indian Hydro electric projects in the western rivers particularly in Jhelum and Chenab remains. Though there is a provision for storage dam up to 3.6 MAF, not a single storage dam was built by India so far. One of the projects identified for storage purpose is the Bursar multipurpose project on Marusudar river (tributary of Chenab) in Kashmir and the other one is multipurpose project on Gyspaon Bhaga River (Chenab River) in Himachal Pradesh proposed to satisfy 1MAF storage, 800MW of electricity and irrigation of 1 lakh hectares and 0.74 MAF storage 300 MW electricity and irrigation of 50000 hectares respectively.[16]

Out of the total capacity of 11406 MW which is to be harnessed from the three western rivers, only 3034 MW has been tapped so far. Another 2500 MW generation capacity is being added with the upcoming projects that also include Pakaldal (1000 MW) and Kiru (624 MW) Projects[17].

In the past India has won two major disputes through Article IX of the treaty- including the Baglihar Dam project which a Neutral Expert ruled on in 2007, and the previous

[14] Maj gen AK Chaturvedi AVSM, "Indus water treaty: an appraisal", Vivekananda foundation, 2018
[15] https://pib.gov.in/Pressreleaseshare.aspx?PRID=1565906
[16] Introduction to south Asia, Block 4 unit 12, IGNOU study material for BA subject specific elective p.191
[17] ibid

dispute on the Kishenganga project- which Pakistan said was interfering with its own Neelum project downstream in 2013.

In 2016 after the completion of Kishenganga dam and the Ratle dam began construction, Pakistan escalated this to a "difference"- meaning it asked World Bank for a Neutral Expert, and then moved on within months to a "dispute"- asking the World Bank for an Arbitration tribunal. India had already accepted the Neutral Expert, so this meant having two parallel and possibly conflicting processes.

In 2023 Jan 25 India issued an official notice to its Pakistani counterpart through Indian commission for Indus water, calling for the modification of the Indus water treaty as per Article XII (3) of the treaty. On 27th Jan the court of arbitration began to hear the 2016 Pakistan's petition but India boycotted the proceedings stating India is participating in Neutral expert proceedings and it can't be compelled to recognize or participate in illegal and parallel proceedings not envisaged by the Treaty.[18] Indian Government wanted to modify the treaty to avoid this parallel proceedings and also Pakistan's "intransigence" attitude forced India to take this extreme step- and Pakistan has been refusing all solutions offered since 2006.

3. INDIA'S APPROACH TO TRANSBOUNDARY DISPUTE WITH CHINA IN THE BRAHMAPUTRA RIVER

3.1 Geographical understanding:

The mighty Brahmaputra River originates in the great glacier mass north from Kailash ranges of Himalayas at an elevation of 5,150 m just south of the lake called 'Konggyu Tsho'. The Brahmaputra River traverses a distance of 2,900 km, through four countries, namely Tibet (China), Bhutan, India and Bangladesh, before joining the Bay of Bengal. Brahmaputra basin spreads over 580,000 Sq.km which covers China (50.5%), India (33.6%), Bangladesh (8.1%) and Bhutan (7.8%). The basin is of irregular shape; the maximum east-west length is 1,540 km and the maximum north-south width is 682

[18] https://www.mea.gov.in/press-releases.htm?dtl/36761/Matters+pertaining+to+the+Indus+Waters+Treaty

km.[19]

The Brahmaputra River originates on the northern slope of the Himalayas in China, where it is called Yalung Zangbo/TSangpo. It flows eastwards for about 1 130 km, then turns southwards and enters Arunachal Pradesh (India) at its northern-most point and flows for about 480 km. Then it turns westwards and flows through Arunachal Pradesh, Assam and Meghalaya for another 650 km and then enters Bangladesh. Then the river curves to the south and continues on this course for about 240 km until its confluence with the Ganges River. Within Bangladesh, the river varies considerably in width ranging from less than 2 km to more than 12 km. The Brahmaputra River is classed as a braided channel.

3.2 India and China: The contrasting hydro-politics:

China is a critical player in the hydro-politics of the region. Its hydrological position is one of complete upper riparian supremacy. In contrast, India – another key player in hydro-politics is simultaneously an upper, middle, and lower riparian. India's middle riparian position increases its dependency (and thus water insecurity) on the headwaters of the rivers such as the Indus, Sutlej, and Brahmaputra which originate in the Tibetan plateau. China is also equally water insecure but it relates to the uneven distribution within its territory with the north and west excessively water stressed. In terms of per capita water availability, China ranks among the world's lowest[20].

China is probably the worlds's most independent riparian country[21].Being in a hydrologically advantageous position China has a larger political equation with its riparian neighbours[22]. India on the other hand, given its middle riparian position and long-standing commitments has to balance the concerns of its lower riparians (Bangladesh) without compromising its own water requirements.

[19] Brahmaputra basin- Ministry of water resources, GOI- version 2.0 2014 https://indiawris.gov.in/downloads/Brahmaputra%20Basin.pdf p.8 last accessed on 25/01/24
[20] Uttam Kumar Sinha, Riverine neighbourhood: Hydro-politics in South Asia, (pentagon press 1st ed 2016) p 127-128
[21] ibid
[22] Brahma Chellaney, Water: Asia's New Battleground (Washington, DC: Georgetown University Press, 2011).

While China has no formal water sharing arrangements with its neighbours, India has several treaties with its neighbours.

China, given its hydrological position, factor water as a tool, leverage, and a bargaining instrument in framing its regional policies in contrast, and would tend to take a strategic view of the water it commands; in contrast Water treaties commit India to a dialogue-based water sharing approach, and diplomatically become an important part of its neighbourhood policy.

3.3 India China transboundary cooperation:

The Trans-border rivers flowing from China to India fall into two main groups. 1) The Brahmaputra River system on the Eastern side, which consist of river Siang (main stream of river Brahmaputra) and its tributaries, namely Subansiri and Lohit. The river Brahmaputra is called Yaluzangbu or Tsangpo in China. 1) The Indus River system on the Western side consists of river Indus and the river Sutlej.

Table 2 India China Transboundary water Cooperation

India and China transboundary cooperation		
A) Memorandum of Understanding (MoU) on provision of Hydrological Information of the River Brahmaputra/ Yaluzangbu	1) In the year 2002, the Government of India had entered into an MoU with China for five years upon provision of hydrological information on Yaluzangbu /Brahmaputra River during flood season by China to India.	In accordance with the provisions contained in the MoU, the Chinese side is providing hydrological information (water level, discharge and rainfall) to Indian authorities on regular basis. MoUs in this connection are being extended from time to time.

	2) Both the countries also signed a separate MoU on Strengthening Cooperation on Trans-Border Rivers on October 23, 2013.	Can be seen in which inter alia the scope of provision of hydrological information of three hydrological stations has also been enhanced.
B) Memorandum of Understanding on Hydrological Data Sharing on River Sutlej / Langqen Zangbo	During the visit of the Chinese Prime Minister to India in December, 2010, an MoU on provision of hydrological information of Sutlej/Langqen Zangbo River during flood season by China to India was signed with China on December 16, 2010 with a validity of five years.	The Implementation Plan containing technical details of provision of hydrological information, data transmission method and cost settlement etc. in respect of the MoU on River Sutlej was signed between the two countries in April 2011, in Beijing, China.
	During the recent visit of Vice President of the People's Republic of China in November 2015, an MoU has been renewed on November 06, 2015, with a validity of further five years.	Accordingly, implementation plan on River Sutlej signed on April 13, 2016 during the 10th ELM meeting held in New Delhi, India.

C) Expert Level Mechanism (ELM)	During the visit of the President of the People's Republic of China to India in November 20-23, 2006, it was agreed to set up an Expert-Level Mechanism.	To facilitate discussion, interaction and cooperation on provision of flood season hydrological data, emergency management and other issues regarding trans-border Rivers as agreed between them. Accordingly, the two sides have set up the Joint Expert Level Mechanism.
D) Memorandum of understanding on provision of hydrological information of the Brahmaputra River in flood season by China to India	Signed on June 9, 2018, between Ministry of Water Resources, People's Republic of China and Ministry of Water Resources, River Development and Ganga Rejuvenation, Republic of India.	The agreement enables the Chinese side to provide hydrological data in flood season from May 15 to October 15 every year. It also enables the Chinese side to provide hydrological data if water level exceeds mutually agreed level during non-flood season.

Source: Anwesha Mohanty, "Water as a Political Security Tool: The Himalaya's Strategic Conundrum", Focus Asia Perspective & Analysis February 2021

3.4 India China Conflicts:

Water has emerged as a contentious issue between India and China, with complex inter-linkages among the social, environmental, economic, and political dimensions of the resource. The Brahmaputra is linked with the Sino-Indian border dispute in the

eastern Himalayas, where China claims the territory of Arunachal Pradesh where the Brahmaputra enters India. Since China is the ultimate upstream country (with no formal river sharing agreement or treaty with its neighbours) and India is middle riparian (with a number of water treaties with its neighbouring countries), the hegemonic analysis would suggest that

China exhibits a negative hegemonic role on the waters as compared to India[23].

As a lower riparian, India's concerns revolve around future plans of water diversion as well as a series of dam projects undertaken by China on the Yarlung. China completed

the Zangmu dam in 2014 and is currently constructing five multipurpose dams in the upper part of the Yarlung Zangbo for hydropower and irrigation purposes[24]. China's ambitious mega-dam at the Tsangpo Grand Canyon also received approval in 2021 after years of denial on grounds of technical implausibility[25]. India retaliated by announcing a dam in Assam for flood control[26]. The outcome of such a "dam-for-dam" strategy looms large among riparian communities.

Fragmented cooperation in the basin has failed to eliminate insecurity and build trust between the riparians Consequently, speculations are widespread in the BRB. For instance, certain public discourse in India blames Chinese activities behind flash floods, murky flows, and seasonal drying up of the Brahmaputra and speculates upstream diversion; whereas China links any Indian water intervention to diplomatic sabotage in the territory it claims.

3.5 India's approach towards China:

India unlike the Mekong riparian countries have made it difficult for China to solely steer the discourse on bilateral water issues as it continuously addressed the concerns to China. Therefore, China had to show its co-operative stance where it signed

[23] See supra no. 20
[24] Tanushree Baruah, Anamika Barua, Sumit Vij, Hydropolitics intertwined with geopolitics in the Brahmaputra River Basin, WIREs Water, 10(2), e1626.2023 https://doi.org/10.1002/wat2.1626
[25] https://www.thehindu.com/news/international/china-gives-green-light-for-first-downstream-dams-onbrahmaputra/
article34014912.ece.
[26] https://scroll.in/article/980469/india-wants-to-counter-chinas-mega-dam-plans-by-building-its-own-it-is-a-bad-idea.

memoranda of understanding with India confirming the Chinese provision of hydrological information during the flood season. As a corollary, mutual security concerns and the border stalemate between China and India overshadow Brahmaputra River management. MoU-backed seasonal data sharing is in place but undoubtedly is at the bottom rung of any comprehensive cooperation.

A recent instance of hydro-politics intertwined with geopolitics was when China leveraged its geographical position against India by withholding hydrological data after the Doklam border crisis but continued sharing it with Bangladesh, which China later clarified was due to monitoring stations' maintenance.[27]

"The most obvious re-source that is prone to securitization is transboundary water."[28] Despite these characteristics of water that lends itself to securitization, both the Chinese and Indian government used a key strategy that is to desecuritize their water dispute. For both the countries want stability and economic growth.

China and India maintain the status quo to gain water rights to pursue unilateral decision-making for achieving their respective development agendas. Maintaining the status quo is a cautious strategy by the riparians for avoiding overt conflicts; however, such an impasse at the regional and national level has made the Brahmaputra a contested river, and the local communities continue to suffer from annual floods.

4. CONCLUSION

Water is acknowledged as the bloodstream of the biosphere. Water security links together food, energy, economic growth, and human security challenges. The complexities involved on water issues are multi-pronged in South Asia. Delineating the complexities involved on water issues is critical to regional policies and thus peace and stability of the region. Water is a systemic crisis and an urgent political issue that requires government engagement in its management and reform. The various dimensions of water – including the fact that it is the most shared resource–

[27] Dr. Selina Ho, The China–India Water Dispute: The Potential for Escalation, Indo pacific perspectives2021
[28] Itay Fischhendler, "The Securitization of Water Dis-course: Theoretical Foundations, Research Gaps and Objectives of the Special Issue," International Environment Agreements 15, no. 3 (2015), 249–50.

demonstrates that wide collaboration and cooperation, although difficult, is the only effective way to address it.

The subcontinent has large river systems. Prominent are the Indus basin in the west and the Ganga- Brahamaputra-Meghna basin in the east. Resource nationalism will increasingly dominate the hydrological contours of South Asia and will largely define regional politics. The treatment of rivers as a good in the subcontinent will primarily be interpreted within the regional asymmetry/symmetry power configuration. The upstream-downstream supply disputes will commonly feature in the riparian politics.

The Indus Water Treaty (IWT) is the most significant confidence-building and successful measure between India and Pakistan. Despite the wars and hostilities, the IWT has functioned well since it was signed in 1960. However, one cannot ignore the challenges of future supplies of fresh water between the two countries. The article delves into a historical account of how the treaty came about, the salient features of the treaty and the recent challenges with regard to the functioning of the treaty. With Pakistan, given some stringent provisions in the Indus Water Treaty that thwart India's plans of developing projects on the western rivers, a 'modification' of the provisions of the treaty should be called for. Whether it is done through renegotiations or through establishing an Indus II Treaty, modifications of the provisions are crucial in case of the western rivers for the benefit of India.

Water relations between India and China have a very limited conflict potential though, as rising powers, there will be rising tensions over trans-boundary rivers. It cannot be denied that China’s hydrological position gives it the strategic width to deal with India, a lower riparian. While China is showing greater sensitivity to India’s lower riparian apprehensions than before, but it is highly unlikely to move beyond the ‘expert-level mechanism’ to a more comprehensive treaty. China is comfortable with not having water treaties, and prefers to engage bilaterally in limited formats. Transparency on hydrological data-sharing and a willingness to listen is part of its effort to build a positive image as a responsible upper riparian power. Maintaining status quo would ensure regional stability and economic prosperity.

It is important for India to create global awareness about the water resources in Tibet

and build regional pressure. Tibet's water is for humanity, not for China alone. Almost 2 billion people in South and Southeast Asia dependent on the water resources of Tibet. Tibetans need to be also sensitised to the water resources and the extensive ecological damage that China's water diversion plans can cause. Tibet should be made commons resource that are meant for collective use and belonging to all rather than for individual ownership and exploitation. Walljasper says:

"Water commons means that water is no one's property; it rightfully belongs to all of humanity and to the earth itself. It is our duty to protect the quality and availability of water for everyone around the planet. This ethic should be the foundation of all decisions made about use of this life-giving resource. Water is not a commodity to be sold or squandered or hoarded."[29]

The path forward with both countries would require continued diplomatic efforts, scientific collaboration, and a collective commitment to ensuring that water, the life of civilizations, becomes a source of peace and prosperity, not conflict.

[29] Jay Walljasper, at http://otherworldsarepossible.org/claiming-protecting-water. Cited in Blues Beyond Boundaries: Transboundary Water Commons, Action Aid Report, Bhubaneswar: Natural Resource Knowledge Activist Hub, 2015, p.1.

5. REFERENCES

5.1 Treaty

1) Indus water Treaty 1960

5.2 Books

1) Prasad Chikshe, Academic study of Indus water treaty and its impact, Jnana Prabodhini, Ambajogai, 1st ed, 2020

2) Uttam Kumar Sinha, Riverine neighbourhood: Hydro-politics in South Asia, Pentagon press, 1st ed 2016

3) Amit Ranjan, Contested waters: India's transboundary river water disputes in South Asia, Routledge publication, 1st ed 2021

4) Introduction to south Asia, Block 4 unit 12, IGNOU study material for BA political Science, subject specific elective paper.

5.3 Research papers/ Articles

1) Suchita Uppal & Zaid Wahidi "Water Wars and the U.N. Watercourse Convention: The Indo-Pak Story." Cornell International Law Journal 66.1 (2020): 319-365. https://community.lawschool.cornell.edu/wp-content/uploads/2021/03/Uppal-Wahidi-ILJ-online.pdf

2) Maj gen AK Chaturvedi AVSM, "Indus water treaty: an appraisal", Vivekananda foundation, 2018

3) Anwesha Mohanty, "Water as a Political Security Tool: The Himalaya's Strategic Conundrum", Focus Asia Perspective & Analysis February 2021

4) Tanushree Baruah, Anamika Barua, Sumit Vij, Hydropolitics intertwined with geopolitics in the Brahmaputra River Basin, WIREs Water, 10(2), e1626.2023 https://doi.org/10.1002/wat2.1626

5) Dr. Selina Ho, The China–India Water Dispute: The Potential for Escalation, Indo pacific perspectives, 2021 https://www.airuniversity.af.edu/Portals/10/JIPA/IndoPacificPerspectives/June%202021/06%20Ho.pdf

6) **Ravindra Pratap, Building Peace Over Water in South Asia: The Watercourses Convention and SAARC, 4 Athens J.L. 7 (2018), doi:10.30958/ajl.4-1-1.**

7) Cullet, P., & Gupta, J. (2009). Evolution of Water Law and Policy in India. https://link.springer.com/chapter/10.1007/978-1-4020-9867-3_10

8) Waseem Ahmad Qureshi, Water as a Human Right: A Case Study of the Pakistan-India Water Conflict, 5 Penn St. J.L. & Int'l Aff. 465 (2017).

9) Mark Christopher, Water Wars: The Brahmaputra River and Sino-Indian Relations, CIWAG Case Studies Reports & Studies (U.S. Naval War College Digital Commons, 2013).

10) **Arpan Mandal, Rengmili Engtipi & Kripal Das, Geo-Politics of Sino-Indian Transboundary Water Management In Brahmaputra River, 6 J. Positive Sch. Psychol. 8674-8684. (2022)**

11) Jin H. Pak, China, India, and War over Water, 46 Parameters 6–1 (Summer 2016).

12) Zhang Hongzhou**,** China-India Water Disputes: Two Major Misperceptions Revisited, Rsis ,No. 015 – 19 January 2015

13) Austin Wu & Andrew Latham, Darkening Waters, Gathering Storm: Sino-Indian Water War on the Brahmaputra River, E-International Relations (Mar. 29, 2023), https://www.e-ir.info/2023/03/29/darkening-waters-gathering-storm-sino-indian-water-war-on-the-brahmaputra-river/.

14) Mahapatra, S.K., & Ratha, K.C., Brahmaputra River: A Bone of Contention Between India and China, 13 Water Util. J. 91 (2016).

5.4 Reports

1) FAO. 2011. AQUASTAT Transboundary River Basins – Indus River Basin. Food and Agriculture Organization of the United Nations (FAO). Rome, Italy https://www.fao.org/3/CA2136EN/ca2136en.pdf p.4

2) Indus basin- Ministry of water resources, GOI- version 2.0 2014 https://indiawris.gov.in/downloads/Indus%20Basin.pdf

3) Brahmaputra basin- Ministry of water resources, GOI- version 2.0 2014 https://indiawris.gov.in/downloads/Brahmaputra%20Basin.pdf

4) Water security for India: the external dynamics, IDSA Task Force Report,2010

5.5 websites:

1)https://www.unwater.org/waterfacts/transboundarywaters#:~:text=Transboundary%20waters%20account%20for%2060,is%20lacking%20in%20most%20countries

2) https://asiafoundation.org/resources/pdfs/SGTFReport.pdf

3)https://www.mea.gov.in/pressreleases.htm?dtl/35375/118th+meeting+of+the+India Pakistan+Permanent+Indus+Commission

4) https://pib.gov.in/Pressreleaseshare.aspx?PRID=1565906

5)https://www.mea.gov.in/pressreleases.htm?dtl/36761/Matters+pertaining+to+the+Indus+Waters+Treaty

6) https://www.thehindu.com/news/international/china-gives-green-light-for-first-downstream-dams-onbrahmaputra/ article34014912.ece.

7) https://scroll.in/article/980469/india-wants-to-counter-chinas-mega-dam-plans-by-building-its-own-it-is-a-bad-idea.

8) https://climate-diplomacy.org/case-studies/water-conflict-and-cooperation-between-india-and-pakistan

9) https://www.usip.org /publications/2023/02/india-and-pakistan-are-playing-dangerous-game-indus-basin

10) https://www.thehindu.com/videos/worldview-with-suhasini-haidar-water-wars-why-does-india-want-to-renegotiate-the-indus-water-treaty-with-pakistan/article66467137.ece