

# **INDUS WATER TREATY: EMERGING FLASHPOINT BETWEEN INDIA AND PAKISTAN**

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## **ABSTRACT**

*The water sharing conflict is one of the major concerns of the 21<sup>st</sup> century. The ever growing population and developments would render conflicts between water rich and water scarce countries inevitable. Though they concluded the Indus Water Treaty in 1960, India and Pakistan have been at odds on water issue since their independence. The rise in population, industrialisation and urbanisation has immensely increased the demand for water. Water sharing between them is characterised by intermittent conflicts. This has turned the Indus Water Treaty in to an emerging flashpoint between India and Pakistan. This paper studies the current water-related issues through the mechanism of Indus Water Treaty. The authors argue that although, there are some inadequacies within this covenant, these issues can be resolved within the framework of the Treaty as long as the parties strictly adhere to the provisions and modify some aspects to suit the present circumstances.*

**Keywords:** *Conflict-Cooperation, Flashpoint, India-Pakistan, Indus Water Treaty, Water.*

## **INTRODUCTION**

The water conflict between India and Pakistan has made South Asia more vulnerable to war. Though the water issues were present in the pre-1947 India, the partition of the Subcontinent into India and Pakistan made them hot bilateral problems between New Delhi and Islamabad. However with the vital role of the World Bank (WB), the two countries signed a water sharing agreement in 1960, called the Indus Water Treaty (IWT). This Treaty is hailed as a successful mechanism of water distribution. Nevertheless, the rise in population, industrialisation and urbanisation has immensely increased the demand for water. Moreover, the Treaty is confronted by the increasing change in climatic patterns. As a result a number of water related conflicts have arisen between the two riparian states which have posed a direct threat to the viability of the Treaty.

The Indus basin has a complex geopolitical setting. The headwaters are located mainly in two countries: China with the basin area 7.5 per cent and India having a basin area 33.6 per cent. A small portion of the basin, i.e., 6.3 per cent lies in Afghanistan. Whereas a major segment of the basin, 52.6 per cent, is in Pakistan. There is no transboundary institutional arrangement for water management in the Indus basin, except the 53 year old IWT between India and Pakistan. The Treaty is known as the only successful mechanism between the two countries, surviving last fifty three years. However, recent strains like changing climate, rapidly increasing population, industrial growth and inaccessibility of water supply are minimising the effectiveness of the Treaty (Karki, et al, 2011: 245). In addition the ever growing cynicism among the two countries is reversing the successes realized by the Treaty. As the transboundary water sharing is a fragile topic, the co-operation between the two riparians is unavoidable to make the Treaty more effective. Although the focus of this paper is on the current water-related flashpoints between India and Pakistan, it is important to highlight the circumstances under which the Treaty was negotiated between the two parties. Accordingly, this paper has been divided into two parts. First part deals with the history of the water conflict before the IWT, and the milieu in which this agreement was concluded. The second part tries to analyse the IWT under the backdrop of the current water related flashpoints, and challenges posed by the factors of non-cooperation.

## **INDUS WATER TREATY 1960: AN OVERVIEW**

The Indus waters dispute is one of the most serious problems of the partition. Though the water conflict existed in British India, it emerged as a potential threat to the peace and security of the subcontinent only after the creation of India and Pakistan. The partition of the Subcontinent internationalised the issue. During the demarcation of borders between India and Pakistan, distribution of water resources was hardly discussed. Nevertheless, India and Pakistan signed a Standstill Agreement on December 20, 1947, which maintained the status quo till March 31, 1948. Two days before the superannuation of this agreement, Pakistan requested India for the extension of the accord which it declined (Baxter, 1967: 451). As a result, India stopped the water flowing towards Pakistan on April 1, 1948 (Arora, 2007: 3). This posed a grave threat to the security of Pakistan.

In April-May 1948, India and Pakistan started negotiations on the resumption of water. The first round of talks opened up on April 15 at Shimla in India. This round failed to break the deadlock between them. The second round was held in New Delhi on May 4, where both the parties successfully signed the Delhi Agreement. While taking the advantage of its upper riparian position, India, after agreeing to resume the flow of water, asserted that lower

riparian: Pakistan had no right to the waters of the eastern rivers: Sutlej, Beas and Ravi. It stressed that Pakistan recognise India's rights to all the rivers and demanded that Pakistan pay for the waters (Beach et al, 2000: 102-103; Michel, 1967: 202-203). Despite New Delhi's restoration of the water supply to the Central Bari Doab Canal and the Dipalpur Canal, Pakistan later rejected the agreement stating the reason that it was against its national interests. The uncompromising stances of both the parties resulted in the failure of the negotiations.

In June 1949, Pakistan attempted to take the water conflict to the International Court of Justice. India strongly objected this move arguing that it would be settled bilaterally. In February 1951, the former chairman of the Tennessee Valley Authority and the US Atomic Energy Commission, David E. Lilienthal visited India and Pakistan. After his meetings with the leaders of both the countries, he recommended a joint management of the Indus river basin. He also opined that the WB should use its good offices to bring the parties to the agreement. He further anticipated that the WB could help in financing the Indus Development Program (Gulhati, 1973: 91-94; Michel, 1967: 219-223).

These Lilienthal's recommendations worked out. Through the good offices of the WB, India and Pakistan successfully constituted a Working Party (WP) in 1952.<sup>1</sup> With the WB's major role, the WP held three rounds of talks<sup>2</sup> where both countries continuously retained their unbridgeable positions. At the end of the first round, Wheeler advised both the parties to carry out individual studies regarding the water requirements, water allocations, and the total water availability in the Indus river system. This became the base for the subsequent two rounds where India and Pakistan presented the data of their conducted studies; and, both parties sought explanations and clarifications from each other. Lastly, after it realised that the parties could not resolve their differences, the WB suggested the two parties to prepare their own plans (Beach et al, 2000: 104; Salman and Uprety, 2002: 46; Malik, 2005: 125; Arora, 2007: 56; Gulhati, 1973: 118-119).

On 6 October 1953, another meeting was held in Washington where both the parties submitted their proposals. These proposals again displayed the huge discrepancies insofar as the demand, supply and additional utilizations were concerned. The Indian plan estimated 119 million acre feet (MAF) of the usable water in the basin, allocating 29 MAF for its own use and keeping 90 MAF as Pakistan's share. The Pakistani proposal, on the other side, assessed the total usable water as 118 MAF, allocating 102.5 MAF for its own use and keeping 15.5 MAF as India's share (Michel, 1967: 230-231; Biswas, 1992: 206; Priscoli and Wolf, 2009: 192; Arora, 57; Beach et al, 2000: 104).

As both plans again displayed the unbridgeable differences of India and Pakistan, the WB sought concessions from the two parties. They, therefore, later modified their plans. The modified Indian plan earmarked all the eastern rivers and seven per cent waters of the

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<sup>1</sup> India was represented by A. N. Khosla, Head of the Central Water and Power Commission and ex-officio Additional Secretary, Ministry of Natural resources and Scientific Research who was assisted by N.D.Gulhati and J.K.Malhotra whereas, Pakistan was represented by Mohammad Abdul Hamid, a prominent engineer, assisted by four senior engineers and the representative of the WB was Raymond A. Wheeler, Engineering Adviser to the Bank who was assisted by Neil Bass and Dr Harry Bashore. In 1954 the representation to WP changed as Pakistan changed Hamid with G. Mueenuddin, a bureaucrat, as the chief representative, N. D. Gulhati replaced Khosla as the Indian representative and the WB was represented by William Iliff, Vice-President to the Bank.

<sup>2</sup> The first two rounds were held in May and December, 1952 in Washington and Karachi respectively, and the third round was conducted in January 1953, in New Delhi.

western rivers for India whereas none of the eastern rivers and 93 per cent waters of the western rivers for Pakistan. The Pakistani plan, on the other side, proposed 70 per cent of the eastern rivers and all of the western rivers to Pakistan whereas, 30 per cent of the eastern rivers and none of the western rivers to India (Baxter, 1967:459; Biswas, 1992: 206; Arora, 2007: 57; Priscoli and Wolf, 2009: 192). However, these modified plans also failed to break the impasse as one party rejected the plan of the other party.

On 5 February 1954, the WB provided its own plan for the development of the Indus basin. It was completely in contrast with what was earlier suggested by Lilienthal in 1951. The proposal advocated the territorial division of the Indus river system between the two riparians. As per the WB's plan the eastern rivers- Ravi, Beas and Sutlej would be exclusively available for Indian uses and the western rivers- Indus, Jhelum and Chenab would be available for the use of Pakistan, except for the insignificant volume of the Jhelum waters used in Indian Administered Jammu and Kashmir (IAK)<sup>3</sup>at that time (Michel, 1967: 235; Alam, 1998: 123; Kux, 1992: 24; Snow, 2008: 213; Kirmani and Moigne, 1997: 4; Baxter, 1967: 460-461; Gulhati, 1973: 137; Arora, 2007: 57; Malik, 2005: 128; Beach et al, 2000: 104; Priscoli and Wolf, 2009: 193).

India accepted the plan with some reservations about the existing uses on the western rivers in IAK. But Pakistan refused to accept it because of the historical uses of the eastern rivers. Moreover, the Pakistani camp was of the opinion that the link canals from the western rivers, as suggested by the Bank proposal to replace the supplies of the eastern rivers, could not provide adequate supplies to the country. Pakistan, therefore, demanded storage projects in order to meet its requirements. In May 1956 the WB accepted Pakistan's position only after the Bank's consultant engineers duly studied and substantiated the storages as necessity (Michel, 1967: 244; Alam, 1998: 134-137; Baxter, 1967: 463). The plan paved a way for the resumption of talks between India and Pakistan.

Therefore, India and Pakistan resumed their negotiations. They once again held a series of meetings and consultations in India, Pakistan, Washington, Rome and London to deliberate the issues pending. The major breakthrough, however, came only after General Ayub Khan came to power in 1958 as Pakistan finally approved the Bank proposal (Alam, 1998: 146-147; Gulhati, 1973: 250-251; Malik, 2005: 147). In short, after almost nine years (1952-1960) of an intense negotiation process, India and Pakistan finally concluded the landmark Indus Waters Treaty on 19 September 1960. With the good offices offered by the WB, the Prime Minister of India, Jawaharlal Nehru and the President of Pakistan, Ayub Khan played constructive roles in making this Treaty a reality.

The IWT divided the Indus river system between India and Pakistan. India enjoys exclusive rights over three eastern rivers: Ravi, Beas and Sutlej. Whereas, Pakistan got three western rivers: Indus, Jhelum and Chenab, with some provisions for India to utilise an insignificant water flow for agriculture and hydropower generation from run-of-the-river power plants in the IAK (Iyer, 2003: 219-220).

Both the parties, however, claim that the treaty favours the other side (Gautam, 2005: 25-26). Pakistan, therefore, tries to prevent India's infrastructure development along the western rivers as it claims that these structures affect the quality and quantity of water reaching

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<sup>3</sup> The Indian Administered Jammu and Kashmir includes Kashmir Valley, Jammu and Ladakh, excluding the parts under Pakistani and Chinese control. Kashmir refers to the pre-1947 State of Jammu and Kashmir.

Pakistan. India, on the other side, is determined to utilise the hydropower capacity of the western rivers flowing through IAK. Thus, water still remains a critical issue between the two countries.

Though providing a definite mechanism for conflict resolution, IWT is facing a number of challenges. Since its inception, a host of water issues have arisen between the two parties. The Treaty, for the first time, came under stress at the very moment India started construction of hydropower plants on the western rivers and subsequent Pakistan's challenge to such constructions. In fact, it is said that the Treaty survived hitherto as a successful mechanism because India has done miniature labour to harness the hydropower capacity of Jhelum and Chenab in IAK (Briscoe, 2010: 29). According to Narendra K. Tripathi, an Indian scholar, 'the treaty, despite its long history, is not based on the principles of integrated basin management. It was a reluctant geopolitical division of the waters' (Tripathi, 2011: 69; Iyer, 2003: 220). Even though the IWT successfully divided the Indus river system into India and Pakistan, it does not incorporate co-operative water sharing among the two countries.

## **WATER RESOURCES OF INDIA AND PAKISTAN**

India is a semi-arid country having an average annual rainfall of over 1100 mm. The country contains only 4 per cent of world's water resources, but has to support 17 per cent of world's population, and 15 per cent of livestock. India is relatively in a better position than Pakistan due to the Himalayan water resources in the north, and peninsular rivers like the Godavari, Krishna, Cauvery, and Mahanadi in the south. Despite this, the country is moving steadily closer to the threshold in terms of water supply, India's per capita water availability has declined from over 5,000 cubic metres in 1950 to 1545 cubic meters as per the 2011 census (PIB, 2012). It may reach the water scarcity level<sup>4</sup> of 1,000 cubic metres per capita in 2025 (Akthar, 2010: 9). Comparatively, India's water storage capacity of 120-200 days is much better than Pakistan's 30 days. It is, however, far less than the countries like the US, Australia, and South Africa (see figure 1 below). This is inevitably a worrying situation considering the facts of mounting population, growing middle class, exponential industrial growth, rising food demands, hyper-urbanisation, and other factors which are definitely going to wreak havoc if the situation is let loose further. These facts shape and shade India's relations with its co-riparian neighbours like Pakistan, Nepal, Bhutan, Bangladesh, and China with whom it shares river systems.

Contrary to India, the situation in Pakistan is more appalling. As it is one of the most water-stressed countries on the globe, the severe water shortages in Pakistan are becoming order of the day. Pakistan is one of the world's most arid countries (Wirsing, 2009: 113), having annual rainfall of less than 240 mm. Moreover, the Indus basin covers nearly 71 per cent of its territory. Thus, Pakistan is substantially dependent on the Indus river system.

The various national and international reports on Pakistan's water situation indicate that the country is moving fast from being water-stressed to water-scarce. As per Pakistan Strategic Country Environmental Assessment Report 2006, water availability per person has drastically fallen from about 5,000 cubic meters in 1951 to 1,100 cubic metres in 2005. Today Pakistan

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<sup>4</sup> Hydrologists typically assess scarcity by looking at the population-water equation. An area is having water stress when annual water supplies drop below 1,700 m<sup>3</sup> per person per year. When annual water supplies dip below 1,000 m<sup>3</sup> per person per year, the area faces water scarcity, and when the supply goes below 500 m<sup>3</sup> it is known as absolute scarcity condition.

is on the brink of water stress level,<sup>5</sup> and it is feared that by 2025 per capita availability may plunge below 700 cubic metres (World Bank, 2006: 50; Wirsing, 2009: 113). The Indus system is Pakistan's lone life-line.

## **WATER CONFLICTS: KEY ISSUES OF CONTENTION**

The recent conflicts between the two countries over hydropower projects on the western rivers have posed a big challenge to the sustainability of the IWT. Pakistan has objected to the construction of around 26 Indian projects in the Indus basin in IAK (Sridhar, 2007-08: 27-28). Pakistan's rationale as Arshad Abbasi, a Pakistani scholar, puts it as 'almost all Indian projects on Jhelum, Chenab and Indus are classified as run of river projects but they will entail serious consequences for downstream areas both individually and accumulatively if treaty will not be followed in letter and spirit' (Abbasi, 2012: 15). Therefore, for Pakistan the main apprehension is that the combined storages of the Indian projects on the western rivers would adversely impact the country during the floods as well as the lean seasons.

In 2005, a new development was seen for the first time since the inception of the Treaty. In order to resolve their differences, India and Pakistan referred the Baglihar dispute to a neutral expert,<sup>6</sup> and the problem was successfully resolved. Moreover on 20 December 2013, the International Court of Arbitration (ICA) gave its final decision on Kishanganga Project controversy. Now the main contentious irritant is the Tulbul Navigation Project. However, the Nimbo-Bazgo project might become a big issue. Therefore new bitter conflicts are increasingly surfacing between India and Pakistan which are acting as stumbling blocks in their co-operation.

## **TULBUL NAVIGATION PROJECT CONTROVERSY**

The Tulbul Project has been the most prolonged conflict between India and Pakistan since 1984. This project is a 'navigation control structure', known as Wullar Barrage in Pakistan. It is located at the mouth of the Wullar lake, near Sopore (see figure 2) in IAK. The Lake is fed by Jhelum River. India started the construction of 439-foot long and 40 feet wide barrage with the maximum storage capacity of 300,000 acre feet of water (Sridhar, 2007-08: 28). While maintaining that to make the river navigable from Anantnag to Baramulla via Srinagar throughout the year (Iyer, 2003: 221), India says that the project's main purpose is to regulate water release from the lake in order to maintain a minimum flow of 4.5-feet in the river during the lean season i.e., October to February.

Pakistan strongly objects the construction of the Wullar barrage. The Treaty, in Annexure E, Paragraph 9, allows India to construct works on the Jhelum main for flood control, and in Paragraph 8 (h), India can store water by building a barrage on the Jhelum main not exceeding 10,000 acre feet. Pakistan's contention is that the Treaty allows India limited storage on the Jhelum main, and rejects India's proposal to store 300,000 acre feet of water as against the provisions of IWT. Consequently, the construction of the barrage clearly violates the IWT. In addition, Pakistan believes that the barrage would obstruct flows into their Upper Chenab Canal, and Lower Bari Doab Canal. The question, therefore, is whether the project is

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<sup>5</sup> When per capita water supply falls below 1700m<sup>3</sup> per year, it is termed as the water stress level.

<sup>6</sup> As per IWT, the World Bank after consultations with the Governments of India and Pakistan appointed a Neutral Expert, Professor Raymond Lafitte, on May 10, 2005. A Swiss Civil Engineer and Professor at Swiss Federal Institute of Technology in Lausanne, his work was to address differences between the two countries regarding the Baglihar Project.

a flood control structure as India claims or a storage work as Pakistan proclaims (Thapliyal, 1999: 1626).

In 1986, when India voluntarily suspended the project's construction, both countries opened bilateral negotiations to break the deadlock. Subsequently, India and Pakistan held more than nine rounds of secretary-level talks, and five meetings under the Composite Dialogue Process: 1998, 2004, 2005, 2006 and 2007 (Altaf, 2012). They, nevertheless, failed to settle the problem. Moreover, the two countries recently had another round of secretary-level talks on 28 March 2012 in New Delhi where Pakistan sought additional technical details from India on the project. India, once again maintained that no pondage was being created and the regulating structure is permitted under IWT for non-consumptive uses. While maintaining its earlier stand as a storage scheme (PTI, 2012; MEA-Govt. of India, 2012), Pakistan once again disputed this Indian claim. It blamed India with the breach of the Treaty, and made it responsible for decreasing water supply to Pakistan. Conversely, India insists that the decrease is due to the climatic variability. Their conflicting positions have made the issue intractable.

Although India claims that the project could not harm Pakistani interests as it would regulate water flows during the monsoon season and thereby prevent floods which in turn assure supplies to Pakistan during the lean months. Pakistan, however, maintains that the project would block the water and would cause grave problems in Pakistan.

## **KISHANGANGA/NEELUM JHELUM PROJECT CONTROVERSY**

The Kishanganga River, a tributary of the Jhelum, originates in IAK. It crosses the Line of Control (LoC)<sup>7</sup> and joins the Jhelum in Pakistani administered Kashmir (PAK). Kishanganga water conflict emerged when, in 2007, India began constructing a dam on the Kishanganga River (see figure 2 above), and Pakistan strongly protested against it. The project is designed to divert the waters of the river through a 22 km tunnel to the hydroelectric plant located near Bonar Madumati Nala, another tributary of Jhelum. The diverted waters would be returned to the Jhelum via the Wullar Lake (Verghese, 2008: 200-202; Iyer, 2010), (see figure 3). The Treaty permits India, under Article III paragraph 2 (d), (subject to the provisions under Annexure D, Part 3 (iii)), (Article III, IWT: 1960) to build run-of-the-river hydro-power projects on the western rivers. Annexure D, Part 3 (iii), allows inter-tributary transfers if necessary, subject to the existing agricultural or hydropower use by Pakistan. Annexure E, Paragraph 10, states that the construction works on a tributary of the Jhelum River should be designed so as not to adversely affect 'the then existing agricultural or hydroelectric use' on that tributary. Here the question arises how the 'existing uses' would be specified and whether the existing uses mean the then uses when the Treaty was signed or it means at a time when the construction of a new project would start. For Pakistan, then means now, and for India then means then only. In this situation, each country interprets IWT to suit their respective interests.

Pakistan objected to the construction of 330MW Kishanganga hydro-power plant on the plea that diversion of waters violates the IWT (Malik, 2005: 188). Although the diverted waters would be returned to the Jhelum, Pakistan fears, diversion is bound to reduce the flow

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<sup>7</sup> The Ceasefire Line dividing the Indian Administered Kashmir and the Pakistani Administered Kashmir was established on 27 July 1949, which was violated by both the countries during the Bangladesh war and in July 1972, with minor deviations from the earlier line, the Line of Control (742km) was demarcated. It acts as part of the de facto border between the two countries.

downstream and would thereby wreak disaster in Pakistan. According to Ramaswamy Iyer, formerly Secretary Water Resources Government of India, ‘the diversion of a substantial part of [*Kishanganga*] by India will undoubtedly have some impacts downstream. This will affect not merely certain uses of the waters but also the river regime itself and the ecological system (Iyer, 2010).’ While declining Pakistani standpoint, India’s former Foreign Secretary, Nirupama Rao called such allegations the ‘breast-beating propaganda’ while adding that ‘the myth of water theft does not stand the test of rational scrutiny or reason (Polgreen and Tavernise, 2010).’

Besides, the construction of the Kishanganga project endangers Pakistan’s Neelum-Jhelum Project. Having this fear, Pakistan took the issue to the International Court of Arbitration (ICA) on 17 May 2010. Although in February 2013, the court in its interim order allowed inter-tributary water diversion from Kishanganga to Madumati. However, it did not describe the proportion of diversion and the river flow below the project. The final verdict of the ICA came, after over ten months of the interim award on 20 December 2013. This allowed India to construct the Kishanganga project with preserving a minimum flow of 9 cubic meters per second (cumecs) in the river below the project for Pakistan’s hydropower generation along with the maintenance of the river ecosystem downstream (Khan, 2013; Times of India, 2013).

Interestingly, both countries view this ICA’s verdict as a victory. Though its immediate benefits go to India, Pakistan says that its long-genuine-demand has been met because the verdict reversed the Baglihar decision,<sup>8</sup> with that the water in the Kishanganga dam cannot be exploited below dead storage.<sup>9</sup> In addition, the ruling will be applicable to the future projects as well. India, on the other side, is also satisfied with the decision. In short, both the countries claim that the verdict is a non-zero-sum game.

## **EMERGING CONFLICT ON NIMBO-BAZGO PROJECT**

Another important non-cooperative factor is the Nimbo-Bazgo hydropower project with generation capacity of 45 MW. The project is more than 10,000 feet above the sea-level which makes it one of the highest altitude hydropower projects in the world. The project is on the Indus River at Ladakh in IAK. Pakistan’s concern is that the project would substantially reduce water flow in the Indus River as the design of the gated spillways and depth of the dam clearly violates the IWT (Javaid, 2011; Parsai, 2010).

Contrary to Pakistan’s stand, the United Nations Framework Convention on Climate Change (UNFCCC) awarded India with carbon credit<sup>10</sup> for the project on August 11, 2008. This

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<sup>8</sup> In the Baglihar decision the Neutral Expert permitted India to exploit the water in the dam below dead storage. For more details on the decision, see Mohanty, Tapan R. and Adil Hasan Khan, “Dam of Division: Understanding the Baglihar Dispute,” *Economic and Political Weekly* 40, no. 29 (July, 2005): 3155-3158; Gazdar, Haris, “Baglihar and Politics of Water: A Historical Perspective from Pakistan,” *Economic and Political Weekly* 40, no. 9 (Feb. - Mar., 2005): 813-817; Sinha, Rajesh, “Two Neighbours and a Treaty: Baglihar Project in Hot Waters,” *Economic and Political Weekly* 41, no. 7 (February, 2006): 606-608; Seema Sridhar, 26-29.

<sup>9</sup> Dead Storage level means that portion of the Reservoir Capacity which is not used for operational purposes, and "Dead Storage" means the corresponding volume of water.

<sup>10</sup> Carbon Credit means a permit that allows the holder to emit one ton of carbon dioxide. Credits are awarded to countries or groups that have cut down their greenhouse gases below their emission quota. Carbon credits can be traded in the international market at their current market price. This system was ratified in conjunction with the Kyoto Protocol initiated by the United Nations Framework Convention on Climate Change (UNFCCC). Its goal is to stop the increase of carbon dioxide emissions.

disappointed Pakistan and it alleged that India illegally got carbon credit by falsely showing Pakistan's approval on the Environmental Impact Assessment (EIA) of the project, without Pakistan's consent (Mustafa, 2012). The authorities in Pakistan also blamed its former Indus Commissioner Mr Jamat Ali Shah, for facilitating India in the development of the project, by remaining silent and not initiating appropriate action at the right time. In order to probe his role, a three member committee was appointed which gave him clean chit but held India responsible for violating the provisions of IWT (Mustafa, 2012).

Pakistani government has shown its displeasure against UNFCCC's decision to award carbon credits to India for the project (Parvaiz, 2012). Thus, the country is now looking to initiate another arbitration proceeding over the project. The decision to approach the International Court of Arbitration on the said project was taken after the secretary level talks between the two countries were held in New Delhi on July 5, 2012 (Akther, 2012). Till date, Pakistan has not formally initiated this process further.

### **ISSUE RAISED BY JAMMU AND KASHMIR**

The potential threat to the existence of the IWT comes from IAK. The people of Kashmir consider the Treaty as a theft of the most important renewable resource of Kashmir by India and Pakistan. The Treaty has limited the rights of the state over the use of its own water resources to a minimum degree. The main rivers flowing through the state (Indus, Jhelum and Chenab) were given to Pakistan under IWT. According to Uttam Sinha, a prominent Indian scholar, 'By allowing the western rivers to go exclusively to Pakistan- except for certain nominal specified uses- so that it could in turn use the exclusive rights of the eastern rivers in order to construct the Bhakra Nangal dam and the Rajasthan Canal Projects, India did not anticipated the resentment and discontent it would cause in Jammu and Kashmir' (Sinha, 2010: 668). Because of the limitations imposed on the tapping of water resources, the state has been unable to grow to the optimum potential of its agriculture and electricity sectors. The cumulative effect of this is the alienation of people from the Union of India.

Kashmir is capable of generating about 20,000 MW of hydroelectricity and could have easily become an exporter of electricity. The Treaty restricted the rights of the state for purposes of even non-consumptive uses, particularly its ability to build storage reservoirs on these rivers. Though the state is well endowed with water resources, it is poorly irrigated. Indeed, dissatisfaction over the Treaty has been building up throughout the state. There is a growing resentment over the shortage of electricity which is cited as one of the main causes for the state's industrial backwardness and hence increasing unemployment. The State Legislature in 2002 passed a resolution calling for the review or total abrogation of the Treaty (Swain, 2013: 8; Chakraborty and Nasir, 2002: 58). The successive state governments, especially since 2000, have raised this issue several times and demanded the Government of India to review this Treaty.

Interestingly, the state government has recently approved the appointment of a consultant from the Halcrow Consulting India Private Limited, for quantifying the actual losses suffered by the state since the inception of the IWT in 1960. The main objective behind this move is to raise the issue with the Indian government for compensation (Greater Kashmir, 2013).

### **THIRD PARTY ROLE**

The role of third party is crucial to settle the complicated conflicts including the Indus basin. India resists to the third party intervention in its internal or external issues. New Delhi, however, has time and again accepted such a role to break the water impasse with Pakistan. At the beginning, India acknowledged the WB's role as a mere facilitator. But its role over time gradually evolved into the mediator as the dispute became more complex. As Baxter records, '[WB's] function actually went beyond 'good offices' or 'mediation' in the technical senses of those terms' (Oppenheim, 1952: 8-10; Baxter, 1967: 477). He further says that 'the Bank was forced to play a more active part in working out a solution' (Baxter, 1967: 477; Alam, 1998: 104). In short, IWT is an outcome of the third party's vital role.

Therefore, the third party mediation has now become an unavoidable fact to settle the water conflicts between India and Pakistan through the IWT. Both countries can invoke the arbitration clauses of the Treaty to solve their present and future water conflicts like Baglihar and Kishanganga disputes. However, bilateral negotiations, at the Indus Commission level or at the inter-government level could also play a major role in bridging the differences between India and Pakistan.

### **COOPERATION ON INDUS BASIN: A WAY FORWARD**

There are various international conventions emphasising transboundary cooperation. One of them is the UN Convention on Non-Navigation Uses of International Water Courses, 1997. This convention obliges states to conserve, manage and protect international water courses. Even though India and Pakistan are not signatories to it, the convention offers a comprehensive framework for transboundary water cooperation. The convention is widely viewed as a codification of customary international law with regard to obligations for equitable and legal utilisation, the prevention of significant harm, and prior notification of planned measures. The other important convention is the Helsinki Convention (1992) on Trans-Boundary Water Courses. It provides another model for bilateral cooperation (Soofi, 2010; Stone, 2010: 83-84).

Despite these, the IWT has come across a number of serious problems, high level of mistrust, linkages to Kashmir issue, negative public perceptions in both countries and deep hostilities offer challenging obstacles to cross. The Treaty, under Article VII, provides the future cooperation mechanism for the planning and development of the rivers by mutual agreement. India and Pakistan, however, have not submitted any matter requiring joint planning till date. This is the reason why disputes on various projects are mounting every now and again, widening the chasm between the two neighbours.

### **CONCLUSION**

The IWT is enormously significant. It is the mechanism which has secured South Asia from the water war between the two major countries in the region. However, since the establishment of the Treaty in 1960, a number of issues over the western rivers have emerged between these two countries. This has made the Treaty weak to maintain its fundamental purpose: securing the subcontinent from witnessing a water war between India and Pakistan. Nevertheless, the Treaty provides a large scope for the modification of the existing and the incorporation of the new provisions to settle the differences and disputes arising from time to time between the two countries.

In short, to make the Treaty capable enough to resist to its challenges arising from time to time, the following suggestions are recommended:

- 1) That India and Pakistan must strictly adhere to the cooperative aspects of the Treaty, such as future cooperation mechanism, comprehensive dispute resolution and exchange of data to settle their difference and disputes over the western rivers.
- 2) That the IWT should be modified in line with Article XII of the IWT, to introduce the new provisions, on the technological and climatic variability in order to bind India and Pakistan to coordinate their modern technologies in a way which, on the one side, do not harm their key interests and would not lead to environmental degradation on the other side.
- 3) That India should formally accept the third party mediation in all bilateral issues including water conflicts and should invoke the mediation clause of IWT to break the Tulbul project deadlock.
- 4) As the people of Kashmir consider the IWT a theft to their most important resource and demand its abrogation, both India and Pakistan should jointly incorporate some provisions in the Treaty which would ensure the developments in agriculture, hydro-power, and industrial sectors in Kashmir.
- 5) That both India and Pakistan should renovate their water infrastructure with modern technology to ensure the better utilization of water. and,
- 6) That both India and Pakistan should settle the Kashmir dispute to remove trust deficit which would in turn re-strengthen the IWT.

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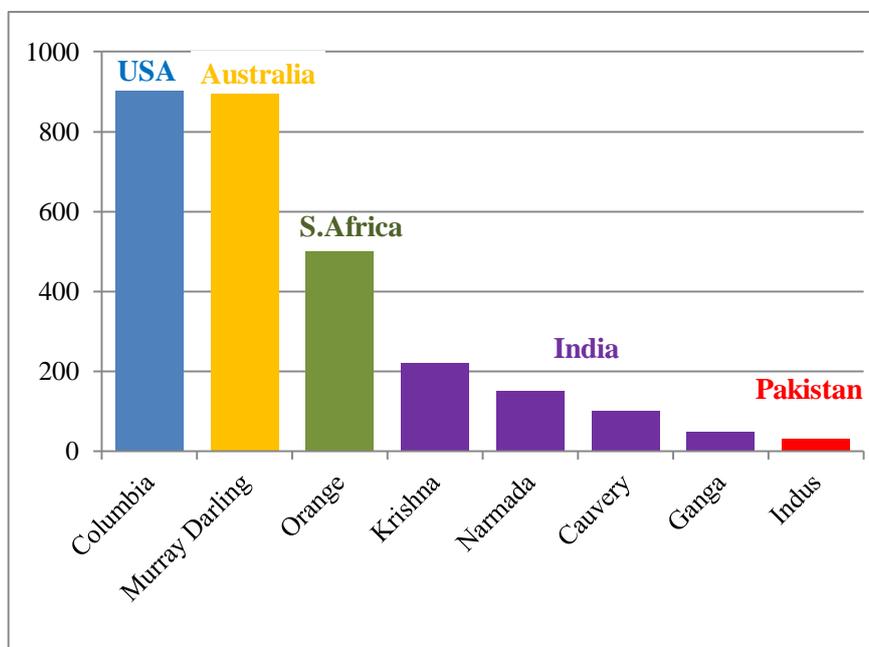
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Figure 1: Water Storage on different Rivers Basins



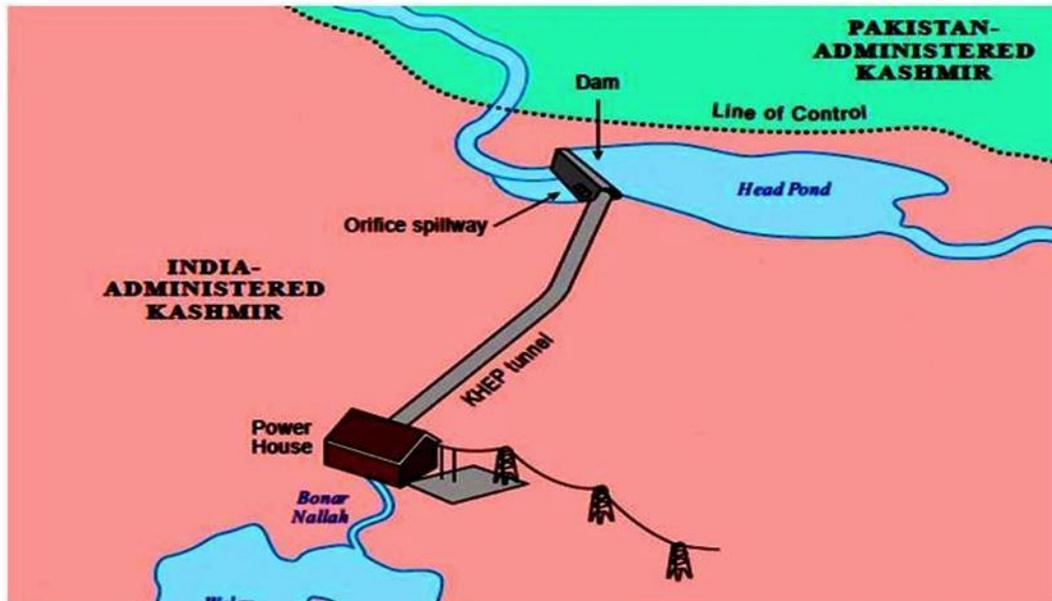
Source: The World Bank analysis of ICOLD and GDRC data

Figure 2: Location of Tulbul/Wular Barrage and Kishanganga Dam in Kashmir



Source: South Asian Media Net

Figure 3: Kishanganga dam and diversion of water into another tributary



Source: Courtesy International Court of Arbitration