



AN ANALYSIS OF INDIA PAKISTAN WATER CONFLICTS

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ABSTRACT

The article seeks to address the water conflict between India and Pakistan and its implications for relations between the two opposite states. This dissertation further sheds light on the steps taken to find a solution to this conflict and then the issue was resolved through the “Indus water treaty in 1960”, which was a temporary solution. This work examines disputes over the construction of dams or reservoirs on rivers across borders, such as the construction of “Baghliar dam”, “Kishanganga project” and “Wuller Barrage” from India and further examines the Pakistan’s response to these Projects. This study also sheds light on India’s response to the Diamer Bhasha dam being constructing by Pakistan. The focus of this research is on the Baghliar, Kishanganga and Diamer Bhasha Projects. The method employed in the proposed research is analytical one and also with qualitative approach. This study is based on both primary and secondary sources. This study shows that if the water dispute is not solved then it will be catastrophic. An early resolution of this dispute is essential for better relations between both bilateral sates.

Keywords: Indus Water treaty (IWT), Water Issue, World Bank, India Pakistan Relations, Baghliar dam, Kishanganga project, Wuller Barrage, Diamer Bhasha Dam.

INTRODUCTION

In 1947, the Indian sub-continent was divided and two independent and “sovereign” states were established on the “World map”. “The Indus Basin Irrigation system, which irrigated 37 million acres of land, was originally conceived as a unified system”, while it was now “divided between India and Pakistan” without worrying about the borders of irrigation. Form the day of independence there were some sort of issues between the two countries (Lowi, 1995).

So some were resolved but some issues still exist. The water dispute is at the “top of the list”. When two countries raised the issue in the “World Bank”, and “Treaty” was signed, called the “Indus water Treaty (IWT)”. The 1960 Indus Basin was the best example of a solution to the water crisis, but India soon built some dams on western rivers, sparking water clashes between the two states (Qureshi, 2017).

Conflicts between India and Pakistan over the “Indus Basin” date back to the

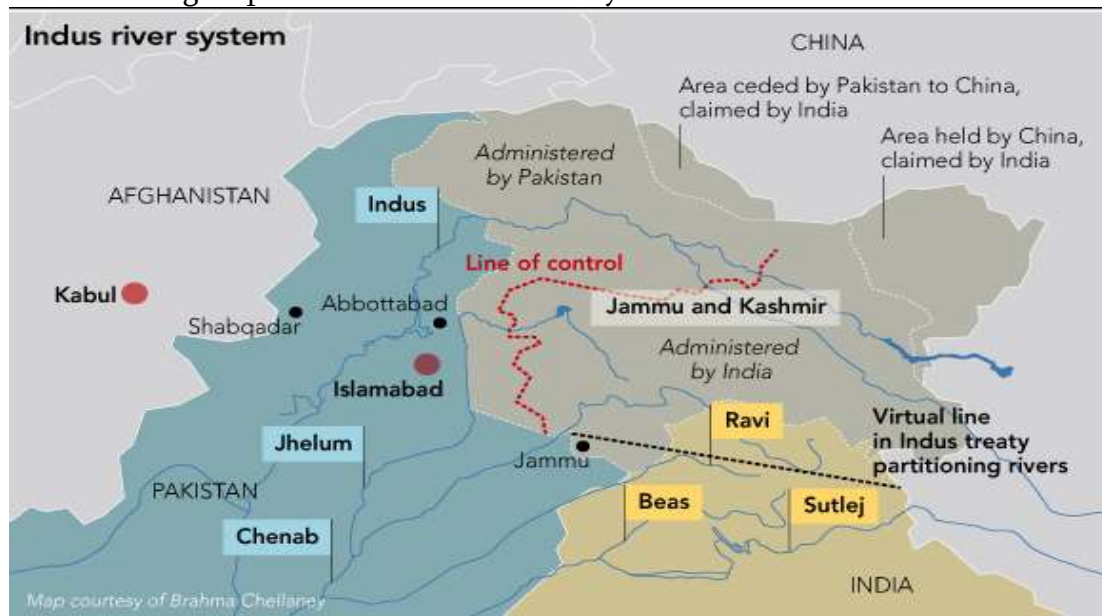
1947 partition. From “1947 to 1960”, both sides tried to resolve their “differences” through mostly “short-term agreements”, however bilateral talks didn’t resolve the issue, and then had to try international mediation. As a result, the Basin Treaty was signed on 1960 after 9 years of negotiations (Miner, 2009).

Following the Indus Basin Treaty, water disputes have arisen between the two countries, including, Baglihar, Kishanganga, Wullar, Dulhasti, Salal Uri II, Nimoobazgo and many other disputes, India has been started construction of dams on disputed areas in “violation of Indus water treaty” (Qureshi, 2017).

Indus River system and Kashmir

The Canal water system has six waterways, “the Indus, the Chenab, the Jhelum the Ravi, the Sutlej and the Beas”. It also includes the Kabul River, but it is not necessary to mention it in the present study. Indian-occupied Kashmir is at the forefront of five of the six rivers in India. Most of the Indus Basin is in Pakistan and the India, with about 30% of the basin in Tibet and Afghanistan. The “Indus drainage basin area” is a joint venture between India, Pakistan and China” (Akhtar, 2010).

The following map shows the Indus Water System:



Source: <https://www.clearias.com/indus-water-treaty/>

Table: 1 Catchment area of Indus River System (in Sq)

Name of Countries	Indus	%	Jhelum	%	Chenab	%	Ravi	%	Sutlej	%	Beas	%	Total	%
Pakistan	158078	62.5	10188	47.7	13469	51.7	11333	71.9	11232	27.6		....	204300	56
India	----		----		1735	6-7	4408	28.1	12138	29.6	7719	100	26000	8
Jammu & Kashmir	47298	18.4	11171	52.3	10831	41.6			----			....	69300	19
Afghanistan	29200	11.5	---		---				----			....	29200	8
Tibet	18062	7.6	---		---				17838	42.8		....	35900	9
Total	252638	100	21359	100	26035	100	15741	100	41208	100		100	364700	100

Source: Nazir, S. (1993). Water Resource of Pakistan and their Utilization. Miraj Din Press, 3-4.

The line drawn by Radcliffe's cuts the Ravi and the Sutlej though the boundary between Pakistan and Kashmir crosses the remaining three rivers. Indus is reached by the remaining five at Punjab in West Pakistan (Wolf, 2008).

Irrigation from these rivers was developed by the Mughals in the British era and vast deserts were turned into fertile fields. "These canals are connected to each other by a sequence of canals so that if there is a lack of water in one, a major link canal can draw water from the other". (Khan, 1959)

"Indus River water" originates "mainly from the Tibet region of China" and passes from side to side the region of "Jammu and Kashmir" and reaches Pakistan before it empty into the Arabian Sea. It also includes several tributaries. The system of the "Indus River" has been used for "irrigation" since the past. New reforms were made in India during the British rule. The large system of canals was built, while the old canals were revitalized (Nazakat, 2015).

Before partition, this irrigation system was fully understood. In 1947; when the line dividing the former Punjab province was drawn, the system cut it off. Not only that, India was given control over the canal headworks. "The Ferozepur weir on the Sutlej River", from which Dipalpur canal begins, is located on the border with Indian Territory. The Sulemanki weir in Montgomery district, Sulemanki weir has its significant eastern training works in the Indian district of Ferozepur (Gupta, 1958). Waters issue is also linked to Kashmir. The Jhelum and the Chenab enter Pakistan from this disputed area. India which has physical control over these waters can block Pakistan's supply of necessities. In addition, the Jhelum headworks are at Mangla in Azad Kashmir. (Gupta, 1958).

Pakistan's claim over the Kashmir valley is linked to rivers water because Indus River System passes through the region. This was confirmed in (1957), by the then "Prime Minister of Pakistan Hussain Suharwardy" in a statement: "There are as you know six rivers (in the Indus Basin). Most of them rise in Kashmir. One of the reasons, why, therefore, that Kashmir is so important for us is this water, which irrigate our lands" (Ranjan, 2016). Even General Ayub Khan, the first military ruler of Pakistan, has given the same reason in his "autobiography", "Friends Not Masters", "why the Kashmir valley is important for Pakistan" (Khan, 1967).

Kashmir Un- predictable future is naturally troubling for Pakistan. It is sometimes argued that this is to minimize the importance of Kashmir in this regard, while India cannot use those waters due to the nature of the region, it can only store them and thus damage Pakistan. It is believed that controlling Kashmir could help Pakistan manage its irrigation. The status of Kashmir and the psychological impact of its rivers have not been denied (Khan, 1959).

Moved towards Signing of IWT

On September 19th, 1960, within nine years of negotiations between the two rivals, a "treaty" was reached in Karachi between the "Prime Minister of India, Jawaharlal Nehru", and the "President of Pakistan Ayub Khan", "commonly known as the IWT". In the agreement, the World Bank split the entire reservoirs into two parts. Beas, Ravi and Sutlej (Eastern River) rivers were assigned to India while the rivers Chenab, Jhelum and Indus (western Rivers) were assigned to Pakistan (Biswas, 1992).

Former U.S. “President Eisenhower” explained it as "one bright spot ... in a very depressing world picture that we see so often".

This agreement contains 12 articles and 8 appendices. India is entitled to exclusive use of aggregate water supply of “Eastern Rivers, (Ravi, Beas and Sutlej)”. The agreement provides for the use of the “western rivers (Indus, Jhelum and the Chenab) for the exclusive use of Pakistan”, with exception of certain exceptional local uses. A system of canals connected to the inter-canals and storage reservoirs was to be built to provide an alternative source of water to Pakistan’s canals, off taking from the eastern rivers within an 10-year period. (Khan, 1990)

The agreement also helps in finance the construction of new dams, link canals and barrages. Some notable works are Tarbela Dam in Indus River and Mangla Dam in Jhelum River. It was further decided in the agreement that Pakistan would be assisted in the construction of “dams, barrages” and about “seven link canals” to store water with Indian financial support for the scheme. The rest will be provided by the “World Bank”, “United States, New Zealand, Australia and other friendly states of Pakistan” (Wescoat, 2000).

The agreement “sets out a mechanism” for coordination and exchange of information on river use between the two countries, “called the Permanent Indus Commission, which has a Commissioner for each country”. The agreement also sets out separate measures for dealing with “issues” that may arise: “questions” are dealt with by the “Commission”; “differences” have to be determined by impartial specialists, and the “dispute” is “referred to the court” (Zawahri, 2009). The “arbitration” should be referred to a seven member “Arbitration tribunal”. As a signatory to the agreement, the role of the “World Bank” is limited and “procedural”. In particular, its role in dealing with “differences” and “disputes” is incomplete to nominating natives to accomplish a specific role when “requested by either party”. (Khan, 1990)

While the agreement was not only a way to resolve the conflict but also an alternative to some “undeniable” “geopolitical” and other related factors.

Development under the Indus Basin project

The Indus Basin Project (IBP) was developed under the IWT, which includes the Mangla Dam, five barrages and eight inter-river link canals, which were completed during 1960-1971, and the Tarbela Dam started partial operation in 1975-1976. The two main components of the Indus Basin Project are Mangla (Jhelum) and Terbela (Indus). As part of the Indus Basin Project’s implementation schedule, the Mangla Dam project was first started and completed by 1968. At the same time, after a review by the World Bank, it was decided to move forward with the Tarbela Dam. As a result, construction began in 1968, largely completed in 1974, and partial operation began in 1975-1976 (frenken, 2011).

A detailed overview of the development made on the Indus Basin through the Indus Water Treaty is presented in the table below.

Table 2 shows the work completed on the Indus Basin by Pakistan

	Description of Work	Completion Year	Between Rivers	Command
Construction of link canals	Trimmu -Sidhnai	1965	Chenab-Ravi	
	Sidhnai-Mailsi	1965	Ravi-Sutlej	
	Mailsi-Bahawal	1965	Ravi-Sutlej	Mangla
	Rasul-Qadirabad	1967	Jhelum-Chenab	
	Qadirabad-Balloki	1967	Chenab-Ravi	
	Balloki -Suleimanki II	1951	Ravi-Sutlej	
		1970	Indus-Jhelum	Terbela
	Chashma-Jhelum	1959	Indus-Chenab	
Construction of barrages	Taunsa	1959	Indus	
	Guddu	1962	Indus	
	Jinnah	1946	Indus	
	Kotri	1955	Indus	
	Sidhnai	1965	Ravi	
	Marala	1968	Chenab	Mangla
	Qadirabad	1967	Chenab	
	Rasul	1967	Jhelum	
Construction of dams	Chashma	1971	Indus	Terbela
	Mailsi (Siphon)	1965	Under Sutlej	
	Mangla	1968	Jhelum	Mengla
Remodeling of existing works	Terbela	1976	Indus	Terbela
	Chashma barrage	1971	Indus	
	Balloki-Suleimanki Link I		Ravi-Sutlej	Mangla

	Marala-Ravi Link		Chenab-Ravi	
	BRBD Link		Chenab-Ravi	
	Balloki Headworks		Ravi	

Source: Frenken, K. (2012). Irrigation in Southern and Eastern Asia in figures: AQUASTAT Survey-2011. *Water Reports*, (37), 7.

Main Water Conflicts between India-Pakistan after IWT

Under the “Indus water treaty”, “India” was allowed to use water from “western rivers” in certain circumstances and could build some hydropower projects for local people, but according to the IWT, there were some restrictions on water storage Jhelum Rivers, but limited use of its own water is allowed, including the development of hydroelectric power projects on the river (Sohail, 2015).

The controversy began in 1970 when India started the Sallal Hydro Project on the Chenab River. Initially, India withheld information about it. Only four years later, India provided relevant information to Pakistan (Sohail, 2015).

Pakistan, in clear violation of the agreement, raised objections to the design of dam, which had six lower level outlets and a total height of 40 feet of spillway gates. After negotiations, the two countries resolved the issue in April 1978 by signing an agreement. India then violated the agreement again in 1984 “when they announced plans to build a barrage on the Jhelum River”. In 1992, they announced plans to build an-other project on the “Chenab River” under the 1960 agreement, which was also allotted to Pakistan (Michel, 2009).

India used to create problems for Pakistan on the issue of water distribution; some issues are still under observation. If such violations continue, it could damage their bilateral relations. In the 1st two decades (1960s and 1970s) the IWT was ratified by both sides in its original form and with restraint. On the other hand, when India started violating various parts of the agreement, Pakistan could not stop the violation. Pakistan later protested and demanded mediation from the World Bank, but to no avail (Begum, 2011).

The major Indian projects that have become hot from time to time and involved issues around the treaty of IWT include “Baglihar, Kishanganga, Wullar, Dulhasti, Salal, Uri II, Nimoobazgo” and many others.

Table 3 shows the major Indian Conflicted Projects

Projects	River	Construction began	Type of Project	Completion year
Baglihar	Chenab	1999	Gravity	2008
Salal	Chenab	1970	Gravity	1987
DulHasti	Chenab	1985	Gravity	2007

Kishanganga	Jhelum	2007	Concrete face Rock-fill	2018
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Details of the Major conflicted Projects which focused in this study are given below:

The Baglihar Project:

The Dam was constructed in 1999 on the “Chenab River”, and it was “450Magawatt” project. Pakistan considers the “Project” a Violation of the “Indus Water Treaty “because the dam also includes “Gated spillway”, which means that water storage is much larger then that what was decided under the Treaty (Adnan, 2018).

India’s view was “that if they failed to run the basin more flexibly, it would quickly fill with sediment, as had happened in the Salal project. The Indian and Pakistani IWT commissioners had failed to bridge the gap, with Pakistan asking the World Bank in 2005 to appoint a neutral expert” (Riffat, 2015).

The unbiased professionals, “applied fine point”, fundamentally argued“that live storage was not the same as the manipulable storage”. He argued “that only storage that could be used for the operational purpose of generating power constituted as live storage” (Adnan, 2018).

Neutral experts, applied the excellent point, must have argued that direct storage was not like manipulated storage (Riffat, 2015).

Though, the findings will “only make sense if Pakistan's concerns” are fully articulated, where power outlets may be located in Indian dams that have never existed before. But it does not matter if Pakistan's concern was India’s ability to connect the flow to Pakistan which has always been and still is (Sumbly, 2007).

For Pakistan, Baglihar's decision was a major setback as it reaffirmed the “Indus Water Treaty”to remove basic physical protection, which would allow Indians “to seriously manipulate the timing of water flow in Pakistan (Sohail, 2015).

DulHasti Dam:

Construction began in 1989. The Dam was started in 1983 and the “390 MW DulHasti hydropower project was fully commissioned in February-March 2007”. The project is being built by the “National Hydroelectric Projects Corporation (NHPC)” as part of a government initiative. Pakistan believes that this is not just a “hydropower” plant but a complete dam aimed at storing water for irrigation needs as seen in the case of “Baglihar Dam”. Furthermore, Pakistan feels that with an operational pond of 7605.5 acre feet, it could have the effect of one to two days of water stagnation at the “Marala headworks” during the lean months (Akhtar, 2010.)

The Kishanganga Project:

The Kishanganga project in Indian held Kashmir (IHK) began in 1994. The river Jhelum, which flows westwards in India, has two major “tributaries”. “The northern tributary, which flows at a considerable height in the foothills of the Himalayas, is the Neelum River”. The southern tributary, which flows at a much lower altitude, is Jhelum itself. The two tributaries join just after they enter Pakistan” (Salik, 2015).

The 330-megawatt Kishan Ganga hydropower plant is one of the projects that

India has tracked rapidly in the disputed Himalayan region between the two countries (Saik, 2015).

India started work on the project in 2007. In 2010, Pakistan took the matter to the “permanent court of Arbitration”, which suspended the project for three years.

But in 2013 the court ruled that the Kishangana was “a run-of-the-river plant within the meaning of the Indus Waters Treaty and that India may accordingly divert water from the Kishangana (Neelum River) for power generation” (Bhutta, 2013).

In 2016, Pakistan asked the “World Bank” to set up an “Arbitration tribunal”, Ratel, to analysis another “project” on the Kishan Ganga and Chenab. India rejected the proposal, “saying Pakistan's objections were inherently technical and the matter should be decided by an impartial expert” (Adnan, 2018).

Pakistan has denied that the decision of any technical expert has been made mandatory and India will not be bound to implement the recommendation of that expert (Bhutta, 2013).

The World Bank initiated both processes, but was paused when India and Pakistan refused to withdraw their proposals. After the pause, the bank held several rounds of talks - the last of which took place in September 2017 - but failed to resolve the dispute (Salik, 2015).

Wullar Barrage

Construction of the barrage was started in 1984 to convert the “natural Wullar Lake into a dam with a capacity of .03 MAF.” During the construction, there was a strong and intense protest from Pakistan, which resulted in the suspension of the work of the Indian government in 1987. The matter has since been taken up in consultation with India and the two governments have signed various confidence-building measures on their part as the commission failed to resolve the issue (Haines, 2018).

Pakistan's view on the conflict is that “the construction of a dam on the Jhelum will help India control the flow of the river, while India maintains that the dam is for maritime use as approved in the Indus Water Treaty.” Issues in Pakistan, such as the Bagliar project, the Kishanganga project and the Wullar Barrage, seek to deprive the country of its rightful share of water (Riffat, 2015).

Chutak, NimooBazgo&Dumkhar hydro projects on the Indus:

India is building three hydropower projects on the Indus River at Indian Held Kashmir. These include the 59-meter-high Chotak Dam, the 57-meter-high NimooBazgu and the 42-meter-high Damkhar (Alam, 2002).

On February 22, 2009, Pakistan decided to send its experts to visit the site of the dam for the first time to assess whether the ongoing construction was in accordance with the design given in the Indus Waters Treaty, when the Pakistan Armed Forces became concerned that the said projects could wreak havoc with the Northern Areas, if the said dams collapsed due to some reason or fault. (Ranjan, 2016) At the meeting of Indus Commissioners on March 29, 2010, India handed over the construction plans and maps of Nemo Buzgo Power Plant to Pakistan. Pakistan expressed concerns over the Nemo Buzgo and Chutak power plants, saying it feared that Indian projects could hamper the smooth supply of water to Pakistan (Alam, 2002).

The Pakistani side emphasized that the design of the current “Nemo Bazgo project aims to maximize the use of water space”. India has “designed the entire project on the most approximate conceptual data on water and flood flows.” Pakistan has raised objections on six counts to the NemoBuzgo” (Akhtar, 2010).

“At the July 2010 meeting of the Indus Commissioners”, India expressed its reluctance to discuss the construction of the Nemo Bazgu hydropower project, saying it was not part of the ongoing negotiations (Ranjan, 2016).

Pakistan has now started construction of Diamer Bhasha dam, which India has objected to being built in the disputed area of Pakistan Occupied Kashmir.

“Diamer Bhasha dam” is one of the major projects of Pakistan after Mangla and Tarbela dam, the construction of which was recently inaugurated by the present P.M Imran khan of Pakistan. India has strongly protested against this project.

“Diamer Bhasha Dam Project, Gilgit Baltistan, Pakistan”

“Diamer-Bhasha Dam” is an important project in Pakistan “to deal with water and power storage which is named after Diamer (a district in northern areas of Pakistan called Gilgit Baltistan)” and “Bhasha (a village in Kohistan in a province of Khyber Pakhtunkhwa”. The main part of the dam and its activities are located in “Diamer district of Gilgit Baltistan” (Sabir, 2017).

This dam is situated on the “Indus River, 315 km above Tarbela Dam and 40 km downstream from Chilas city”. It is understood that “the right abutment and the right powerhouse are in Gilgit-Baltistan and the left bank and left wing house is in Khyber Pakhtunkhwa” (Sabir, 2017).

This project contributes 4,500 megawatts of electricity, generating “annual revenue of US 2.216 billion” and substantially filling the current power shortage (Kiani, 2020).

“According to the government”, the dam will create jobs in the agriculture, industry and trade sector during and after construction (Sabir, 2017).

“The Government of Pakistan”, “the Supreme Court of Pakistan” and “WAPDA” are working together to accelerate the development of this dam under construction in Pakistan. The dam project is divided into two phases, Basic water reservoirs and other infrastructure. In addition to billions of rupees, countless hours will be spent on the construction of this dam (Dawn, 2008).

Controversy over Diamer Bhasha Dam:

The project faces regional tensions with India and local protests. The total cost of the project is 14\$ billion. For 50 years, Pakistan has been trying to secure funds. Since 1980, it has gone to the “World Bank”, the “Asian Development Bank” and “Western allies”, but they have all refused because the project is in conflicted area (Sabir, 2020).

In 2016, the project was included in the “China-Pakistan Economic Corridor projects”. “In 2017, however, Pakistan backed down out when China demanded 100% ownership of the entire asset” (Singh, 2012).

In 2018, astonishingly, Pakistan's Chief Justice Saqib Nisar ordered a crowd-funding campaign to launch the project, but the total fell short of the target. With no option left, Pakistan finally turned to China. The dam was made part of the “China-

Pakistan Economic Corridor (CPEC)” (Dawn, 2008).

“Muzammil Hussain, Chairman of the Water and Power Development Authority of Pakistan (WAPDA)”, proclaimed the plan at a “press conference”. He said “the Pakistan government would provide 30% funding and the rest will be arranged by the WAPDA”. This is understood in terms of China's debt. Hussein had estimated “the total cost of the project at US\$ 8.8 billion, but had previously given a figure of 14\$ billion” (News Desk, 2020).

India has protested, saying the project is in Indian Territory under Pakistan's illegal occupation. Besides, locals of “Gilgit-Baltistan” are also protesting. The dam is expected to inundate 32 villages in “Diamer district” alone. About 50,000 people will be homeless. Those who have already lost their land are not being compensated. They also stand to lose their cultural heritage. Buddhist statues and inscriptions in 50 villages will be submerged (Sabir, 2017).

Construction of Diamer-Bhasha Dam

On Wednesday, July 15, “the P.M of Pakistan Imran Khan” visited and inaugurated the construction work of the mega hydropower project. He was accompanied by “Chairman China-Pakistan Economic Corridor (CPEC) Lieutenant General (retd) Asim Saleem Bajwa” (News Desk, 2020).

In his address, Imran Khan said his government was moving towards building “the biggest dam in Pakistan's history”. “This will be our third big dam. China has made around 5,000 big dams, but has a total of about 80,000 dams. From this you can gauge the massive mistakes we have made in the past,” (Brohi, 2020).

He said, “The decision to build this dam was taken 50 years ago. There can be no better site for constructing a dam. It is a natural dam. This was decided 40-50 years ago and work on the project has begun today. This is one of the biggest reasons why we haven't progressed” (News Desk, 2020).

In Pakistan, the chairman of the “CPEC” was once the spokesman for the ISI in the “Pakistan Army.”

In a tweet AsimBajwa said, “Mobilisation for Diamer Bhasha: Historic milestone as PM kicks off mega construction work at Diamer Bhasha Dam today. 6.4 MAF Water reservoir, will add 1.2 M acres for agriculture, 4,500 MW cheaper, greener hydel power, steel/cement/construction boost, 16,000 jobs (sic)” (International the News, 2020).

Indian reaction on the construction of Diamer Bhasha Dam:

In India, government sources said, “India's position on any project in conflicted territory remains unchanged. The entire territory of the Union Territories of Jammu and Kashmir and Ladakh are an integral and inalienable part of India. India has always protested such activities in conflicted areas with both China and Pakistan” (Mohan, 2020).

The Foreign Ministry reacted sharply in May 2020 when the announcement was made as part of China's CPEC project, which is largely part of “Beijing's Belt and Road Initiative” (BEI).

“Our position is consistent and clear that entire territory of the Union Territories of Jammu and Kashmir and Ladakh have been, are and will continue to be

integral and inalienable part of India" (Mohan, 2020).

"MEA spokesperson Anurag Srivastava" said this during a press briefing on May 14.

"We have consistently conveyed our protests and shared concerns with both Pakistan and China on all such projects in the Indian territories under Pakistan's illegal occupation (NewsDesk, 2020).

The Diamer-Bhasha Dam is not the only controversial project in the region. There are many projects which are facing the same problems from both sides of the boundary.

CONCLUSION

This article has discussed the canal system distribution in 1947 with its history. It also discussed in detail how India and Pakistan moved towards signing the "Indus Basin Treaty", which was mediated by the "World Bank" to resolve the water issue between the two countries in 1960.

Despite the "Indus Water Treaty" there are water- related disputes and issues between the two countries due to political ties.

"The IWT does not have an exit clause, so it cannot be abrogated". Therefore, it allows for the possibility of re-negotiation, as this agreement is about to be finalized. It is possible that we will face a severe water crisis in the near future. So the best option is for the two countries to should work together to address the water challenges rather than escalate the issue.

The study has also discussed how the construction of multi-purpose water projects creates tension between India and Pakistan.

As mentioned above in this study, it is the political relations between both countries that decide water relations. Actually disputes over partition and their construction are the permanent causes of enmity between both states.

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