

**OPERATIONALIZING THE INDUS WATERS TREATY:  
CASE STUDY OF UPPER RIPARIAN**

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**ABSTRACT**

*Indus Waters Treaty is the agreement signed by Pakistan and India in 1960 to solve the water issue that was started after the partition. For some time the treaty was followed by both the parties in full spirit but due to some weak points and shortcomings India started violating the treaty. Still the treaty is in operation but only for lower riparian. Pakistan cannot bind India to follow because of flaws within the treaty. The paper is an attempt to highlight the violation of treaty by India also the shortcomings and defects in the treaty which India is always cashing at every point as it wishes.*

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**HISTORICAL BACKGROUND**

Pakistan faced the water issue from the day one, when India, the upper riparian blocked the flow of water to Pakistan from Ferozpur headwork. India got the authority of the head works of all rivers present in subcontinent viz. the Indus, Chenab, Bias, Jehlem, Sutlej and Ravi due to unjust demarcation of boundaries by Radcliffe between India and Pakistan. Chief engineers from India and Pakistan signed an agreement on 20<sup>th</sup> of December 1947, under which Pakistan could use water of Indus basin till Rabi Crop, which ended on March 31, 1948. On April 1<sup>st</sup> India blocked the water flow to Dipulpur canal and upper Bari Doab canal. The act was highly criticized by the people of Pakistan and a rumor arose among the people that India is going to convert Pakistan into a desert. Resolving the issue Pakistan sent a delegation to India where on May 4<sup>th</sup> 1948 an agreement was signed known as Delhi Agreement. Under the said agreement, Pakistan was required to pay for the continuous supply of water for only agricultural purpose and not for construction of dams until it manages an alternate source (Kux 2007:11).

On June 16, 1949, a notice was sent by government of Pakistan to Indian Prime Minister Jawhar Lal Nehru regarding a conference on: “equitable apportionment of all common waters” and suggested the world arbitration court to take part in the issue and bring it into their jurisdiction. But India was against the involvement of a third party. In the same year David Lilienthal, former chairman of Tennessee Valley Authority visited Indus basin and invited World Bank to take some interest in solving water disputes between the two rival countries. Lilienthal, after his visit to Indus basin, wrote articles about the relation and water issue between India and Pakistan, in one of his articles he had written (Niranjan 1973:2):

“India and Pakistan were on the verge of war over Kashmir. There seemed to be no possibility of negotiating this issue until tension aborted. One way to reduce hostility... would be to concentrate on the important areas where cooperation was possible. Progress in these areas would promote a sense of community between the two states, which might, in time, lead to a Kashmir settlement. Accordingly, I propose that India and Pakistan would work out a program jointly for developing and jointly to operate the Indus basin river system, upon which both countries were dependent for irrigation water. With new dams and irrigation canals, the Indus and its tributaries could be made to yield the additional water each nation needed for increased food production. In the article, I had suggested that the World Bank might use good officers to bring the two parties to agreement, and help in the financing of an Indus development program.”

In 1951, president of World Bank, Eugene Black arranged a meeting between Liaquat Ali Khan, the then prime minister of Pakistan, and his counterpart in India, Jawhar Lal Nehru, in Washington. In the meeting both finally agreed that neither side will reduce the flow of water without any appropriate reason (Vaild and Sing 2012).

From 1952 to 1960 a series of meetings were held for resolving the said issue, initially India was against the involvement of a third party so it took eight long years and at last in 1960 the famous Indus Water Treaty was signed by Jawhar Lal Nehru, Field

Marshal Ayub Khan the then President of Pakistan and W.A.B. Illif, President of World Bank on September 19, 1960 in Karachi.

The IWT is the most important agreement which had solved the issue of water sharing between India and Pakistan. Issue arose after stopping the water flow by India to Pakistan which created great disturbance and enmity towards India. After 1960, the issue was settled down for some time but due to some weak points in the Treaty, India again started creating problems for Pakistan. From 1970 till now India is constructing dams of western rivers which are against the Treaty (Akhtar 2012:38).

#### **PROVISIONS OF THE INDUS WATERS TREATY**

On 19<sup>th</sup> September 1960, with the help of World Bank, the long un-dissolved issue between India and Pakistan was resolved under the famous treaty know as Indus Basin Treaty (Sindh Tass agreement) in Karachi. Indus Water Treaty (IWT) is divided into three parts, part one consists of preamble, part two contains 12 articles and part three comprising of Annexures from A to H.

#### **Main Constituents of IWT**

	Preamble
Article I	Definitions
Article II	Provision regarding eastern rivers
Article III	Provisions regarding western rivers
Article IV	Provisions regarding both western and eastern rivers
Article V	Provisions regarding finance
Article VI	Data exchange
Article VII	Future cooperation
Article VIII	Permanent Indus commission
Article IX	Settlement of differences and disputes
Article X	Emergency provision
Article XI	General provision
Article XII	Final provision

	<b>ANNEXURE OF INDUS WATER TREATY</b>
Annexure A	Exchange of note between both government
Annexure B	Agricultural use by Pakistan from certain tributaries of river Ravi
Annexure C	Agricultural use by India from western rivers
Annexure D	Generation of hydroelectric power by India on the western rivers
Annexure E	Storing of water by India on the western rivers
Annexure F	Neutral experts
Annexure G	Court of arbitration
Annexure H	Transitional agreements

**Source:** Indus Water Treaty

#### **DISTRIBUTION OF WATERS**

Articles II and III of the treaty are about the distribution of rivers between India and Pakistan. Initially six rivers were categorized into two parts as eastern and western rivers. All the water of eastern rivers River Ravi, River Bias and River Sutlej was given exclusively for the use of India.

Pakistan can use unrestrictedly the eastern water so released after they have finally crossed into Pakistani territory [Article II (9)].

Pakistan shall receive water unrestrictedly of the western rivers (river Indus, river Chenab, river Jhelum) which India is under obligation to let flow [Article III (1)]. Yet India can use the western rivers before entering into Pakistani territory for their domestic uses, non-consumption uses, agricultural uses and hydro-electric power [Article III (2)].

From article II and III it becomes clear that India can use all the rivers for its own need while Pakistan was given the authority of three rivers for agricultural and domestic uses but India cannot store the western water nor can it construct any big storage work on it [Article III (4)].

#### **DATA EXCHANGE**

Article 6 of Indus water treaty explains the exchange of data from both the sides at a regular interval. The exchange of data will be followed on the following terms:

1. Daily gauge and discharge data relating to flow of rivers at all observation sites.
2. Daily extractions for or releases from reservoirs.
3. Daily withdrawals at the heads of all canals operated by government agency, including link canals.
4. Daily escape from all canals and link canals.
5. Daily delivery from link canals.

This data must be provided on monthly basis by each party not later than three months [Article VI (1)].

#### **PRINCIPLE OF COOPERATION**

Article VII provides guidelines for the future cooperation between the two nations. Both the states have to cooperate with one another in future, if any issue arose regarding water. Both the parties have to cooperate engineering work on rivers, and both of the states have to agree upon the work [Article VII (e)].

#### **PERMANENT INDUS COMMISSION**

Under article VIII of Indus Waters Treaty; there would be commissioners from each side, representing their government for resolving issues and disputes arising about the water between the two parties. Both the commissions will then form Permanent Indus Commission.

The function of Indus commission is to maintain goodwill for the Treaty implementation and to promote co-operation and understanding between India and Pakistan. The Commission must have to visit the rivers and sites of projects in every five years ascertaining the facts related with various developmental projects on rivers.

Article IX of the Treaty is about the settlement of differences and disputes. If any problem arose between the States within the Treaty, it would be firstly examined by Permanent Indus

Commission, if the Commission fails to resolve the issue, then the case will be send to neutral experts [Annexure F (20)].

If neutral experts reached the conclusion that it is indeed a serious dispute, then according to annexure G the case would be placed in front of Court of Arbitration, the decision of which will be automatically implemented upon both the parties [Article IX].

### **CONSTRUCTION OF DAMS ON WESTERN RIVERS**

Under article III of IWT, Pakistan could use three western rivers unrestrictedly, under the said article India also got the authority to use western rivers for minor use such as domestic use, agricultural use, non-consumptive use and run-on-river hydro-project before entering into Pakistani territory. According to Annexure D, India cannot construct big dams for the storage purpose, nor can they divert the natural flow of water, also on Chenab river the run-on-river plant should not be full pondage level. Part 4 of the same annexure deals with the irrigation canals, there will be no restriction on India to construct and operate new hydroelectric plant on irrigation channel taking from western rivers but not additional supplies of water to run the irrigation channel for hydroelectric power [Annexure (3) (4)].

For construction of new dams on western rivers India has to inform Pakistan about the design and level of storage of water, they must inform Pakistan six months in advance, before starting construction of the project. If such information were not provided Pakistan will inform India in writing against such decision and India has to change the shape and height of the dam within three months [Annexure D (10)].

According to article VI of IWT, a regular exchange of data from both the sides at regular intervals will be provided by both the parties, the data will be of daily basis, daily withdrawal and level of water flow from dams, also the level of water in the rivers, daily delivery from canals, daily escape from canals including link canals, means that both the countries have to inform each other in writing about the level and flow of water from headworks, dams and link canals.

But, from the date of implementation of IWT up to 1970, both the states followed the Treaty in true spirit but after 1970 and onward, India kept aside the treaty and started construction of dams especially on western rivers which should flow to Pakistan unrestricted according to the agreement. India had violated the Treaty many times in the construction of Baglihar, Dul Hast, Nimoo Bazgo, Wullar, Kishanganga and many more projects.

#### **CASE-I: SALAL HYDROELECTRIC PROJECT**

Salal hydroelectric project is constructed on river Chenab in occupied Kashmir. The first project when India started violating IWT and a tussle started once again between India and Pakistan after ten years. The starting date for the project was 1970. Under article III, Annexure D(3) India must have informed Pakistan about the project up to the start of 1971, secondly under Article VI, India was to submit the documents to Pakistan regarding the flow of water by constructing Salal project. India provided information about the Salal project in June 1974, four years after its starting date. That was the first violation of the IWT (Saddiqi 2010).

When Pakistan objected the design of Salal project, a series of sessions regarding the issue started. Pakistan objected the project under Annexure D of IWT, that it would disturb the regular flow of water to western Punjab. In 14<sup>th</sup> April 1978, both the parties signed a treaty known as Salal hydroelectric project, under which the design of the project was modified but India came victorious as they had built Salal hydroelectric project on Western River which might enter into Pakistani territory unrestrictedly (Nosheen & Toheeda 2013). The flexibility in this case boosted up the courage of Indians and later on they started regularly violating the Treaty by construction of dams on western rivers.

#### **CASE-II: WALLER BARRAGE PROJECT**

The second project started by India on Western Rivers was Wullar barrage project. The project is located on Jehlem River in occupied Kashmir. Same violation of Treaty was repeated in Wullar project. No information was provided to Pakistan before starting of project. It was started in 1984 and Pakistan raised

objection on the project in 1985. The issue was initially discussed among the commissioners under Article IX of IWT but India did not agree upon the stopping of construction on Wullar barrage. Later on the dispute was put forward to Permanent Indus Commission to deal with under Article VIII of Treaty and decide the case. Subsequently, the project was suspended in 1987. For resolving the issue, 30 meetings were held by India for starting the construction on project. The dispute is pending and the ban on construction persists (Akhtar 2012).

From this it is clear that there is no such provision in the Treaty to deal with the party violating the treaty. India will continuously construct dams on western rivers without informing Pakistan. And later on they will just change the design of the project. This violation is victory for India. Treaty also helps India in violation as no such provision is present about the behavior of upper riparian. India will always be violating and Pakistan will have to compromise on such occasions.

### **CASE-III: BAGLIHAR HYDROELECTRIC PROJECT**

Baglihar is situated in Chandrakot, in south of Doda district of Jammu. Baglihar hydroelectric project is constructed on Chenab River, which has shaken Indus Water Treaty to the base. It was the first dispute which was presented in front of Neutral Experts for solution. The project had the capacity to generate 450 MW of electricity. Pakistan explained its point that it was kept in dark about the project and was not allowed to visit the project site. For generating 450 mw power it was proposed that the height of the dam will be up to 144.5 meters and a gross storage of 395 million cubic meters of water (Khan 2005).

Pakistan raised six objections on the design of dam and told neutral experts that it is not according to the prescribed rules of IWT. The objections are about: (1) Elevation of tunnels, (2) Height of the gates, (3) Pounding level, (4) Lower weir level, (5) Level of intake tunnels, and (6) Gated and submerged spillways (*Ibid*).

Pakistani experts also feared that the structure of dam will result in loss of up to 8000 cusecs of water on daily basis which will directly affect the rabbi crops. Due to high storage of water



India can stop water to Pakistan in winter season up to 27 days, as they have to stop water for generation of electricity. They will need more water flow and in winter season the flow reached to dead storage, so they will stop the regular flow to Pakistan (Akhtar 2012:56).

By putting the situation in front of international court of justice, it was clearly showed that international court has no jurisdiction in this regard, because there is no such provision to deal with the situation.

In Baglihar dispute it became clear that in IWT India had given the authority to use the western rivers. But the point about the level of water during winter season is unclear, as the flow level almost reached to dead storage. It is also not mentioned in the treaty that what will be the level for power generation projects on run-of-river projects. If India wants to build a project having the capacity of more than 1000 mw nobody can stop them as there is no limitation for power generation project under IWT.

#### **CASE-IV: KISHANGANGA HYDROELECTRIC PROJECT**

Next step taken by the India after Baglihar project was Kishanganga hydroelectric project situated 5 kilometers to the North of Bandipora in Jammu and Kashmir. The installed capacity of the project is 330 megawatts. Initially Pakistan received information in 1988 that was about the run-on-river project but formally in 1994 Pakistan came to know the intention of India that the project is used for storage work. Initially Pakistan raised three objections. Kishanganga project will be constructed by diverting water of Neelum River to Wullar lake, so the objection was against the diversion of water. According to the IWT, if the water is diverted for irrigation purpose it must be returned to the main stream, while in this case India will divert the natural flow of water and will pass it through a tunnel for about 100 kilometers which will directly affect the Neelum valley and will convert it into desert as the valley is directly dependent upon Neelum river. By diverting the water flow Pakistan will receive 27 per cent less water than natural flow, which will damage not only the irrigation of Neelum valley but also it will damage the efficacy of Neelum Jehlum

hydroelectric project downstream. Lastly the design of the project is against the Article III, Annexure-D of the Treaty.

Subsequently, India promised that they would stop construction on project until they satisfy Pakistan about the design. Successive meetings were held but India failed to convince Pakistan till 2005. Further India did not provide the written data regarding the project. Continuously India is going against the Article VI of the Treaty that is about the exchange of date (Nosheen & Toheeda 2013). In 2005 Pakistan started negotiation for resolving the issue under Article IX (2,3,4 and 5) of Indus basin agreement and raised 6 points in which three were about the dam design, two were concerning power generation and last one was about the diversion of natural flow of water. In 2006 India submitted a revised plan under which height from 75.48 meters was reduced to 35.48 meters. Other points about the diversion and power generation are still pending.

The court of arbitration granted stay order on the construction of Kishanganga project on 25 September 2011, yet India had passed bill from its upper house about the construction and 330 MW power energy against the law of arbitration.

### **DUL HASTI, URI II, AND NIMOO BAZGO HYDROELECTRIC PROJECTS**

Dul Hasti dam is located on Chenab near Kishtwar in district Doda. It has the capacity to generate 390 megawatt of electricity. The construction on dam started in 1989. In Dul Hesti dam India once again kept Pakistan in the dark and did not give any documents about the said project. The second issue in this dam was that when Pakistan was given the documents about the dam it was for irrigation purposes not for power generation but India constructed it for power generation (Ahmad 2012:4).

Uri II dam is located in Baramulla district. Pakistan asked for information about the project in 2002 for the first time; again in 2004, and for the third time in March 2005, on this reminder India gave partial information about the ongoing project first in December 2005 and then in April 2006. Pakistan raised objection on the design as it was constructed against Annuxure-E of the

Treaty. The objection was about the height of the dam and Pakistani experts asked India to stop the construction until the objections were solved. But without any hesitation about the notice, India started work on the project (*Ibid*).

In Nimoo Bazgo, Pakistan raised objection on the point that the project will obstruct the smooth flow of water to Pakistan. A team consisting of water experts from Pakistan visited Nimoo project but they were not allowed to visit the site of project (Akhtar 2012:52).

In all these projects Pakistan was neither informed before starting the work nor Pakistan was given any information about the dams and projects. There is no article or clause about the request for seeking information, yet Pakistan requested for getting documents related Uri II project. In the case of Nimoo hydroelectric power project, Pakistani water experts were not allowed to visit the project site. According to Article VI of IWT, frequent visits would be done at regular interval while India did not allow Pakistani experts to visit.

Up to now India has violated Articles III and IV in case of Baglihar, Kishanganga and Salal hydroelectric project. Article VI, exchange of data in almost all the projects is violated; India had never provided information of projects in advance as mentioned in the Treaty. Article VII, regarding future cooperation, we see no cooperation in the above projects or any other issue that arose because of projects. In some cases that had even violated the decisions taken by the Court of Arbitration and neutral experts. In a nutshell almost every article of the Treaty is violated by India.

#### **SHORTCOMINGS IN INDUS WATER TREATY**

***Projects on Western Rivers:*** India has constructed up to 62 hydroelectric projects on western rivers, they can construct as they have the right under Article III of IWT and further freedom has been given in annexure D of the said Treaty. Construction of dams on western rivers leads to two drastic situations: first, using water for generating purposes and irrigation, they will stop the regular flow of water as they are continuously doing. In summer season when the level of water is high, no hard difficulty will be faced by

the lower riparian but in winter season when the flow almost reaches to dead storage, the lower riparian will suffer a lot. Due to low outlet the downstream dams will receive less water and will directly affect the power production. Also it will badly affect the irrigation canals and agricultural products, secondly constructing more and more dams also leads to shortage of water and a time will come when all the water will be used for storages and flow to lower riparian will stop due to which Pakistan will be converted to desert.

In annexure D of IWT, there is a provision and list of plants that upper riparian can construct projects but there is no such provision or clause regarding the number of future projects. In the absence of such provision in IWT there is no limitation on India to construct a specific number of dams and International Court of Arbitration will have no choice but to give permission to upper riparian to go ahead (Sufi 2013).

**Article IV (8) of IWT:** The use of natural channels of rivers for the discharge of flood or other excess water shall be free and not subject to limitation by either party, neither any party shall have any claim against the other in respect of and damage caused by such use” (IWT).

According to this article during rainy season either side can release water during flood season if dams are filled with mud and water so India being the upper riparian can open any time according to the need, also there is no limitation on the water release from any storehouse, so this article can only be used by India and she can use this point as a “water bomb” against Pakistan. By release of water she can easily damage the canal system, downstream dams, and agricultural land (Ahmad 2009).

In the same article it is mentioned that before releasing water one party must have to inform the second one, but during the recent flood no such prior information were provided to Pakistan and water from Indian dams was released which resulted in casualties, crop damage and loss of animals, so the clause related to the release of water should be replaced as it could only be used by upper riparian India, and Pakistan will always be in danger in future.

***Height Of Dams And Limitation On Electricity Production:***

Under article III, annexure D, India has given the right to construct run on river projects on western rivers before entering to Pakistani territory, but there is no such clause or article in the treaty about the height of dams. India is constructing different dams with different heights, one bigger than the other, so a limit should be kept about the height of the dams as we have a clause about the design of dams on western rivers. Also there should be limitations on the production of electricity value, if India wants more power generation, they must have to construct big dams and will stop more water for production. If the height and power generation would be kept on low level then objection on the project from Pakistan side will automatically be less which will directly affect confidence building measure.

***Sharing of Data:*** Article VI of IWT is about the sharing of data at regular intervals. Both the parties have to provide written data about the upcoming projects, also daily water flow. If any party is going to start any projects especially on Western River they must have to provide information six months before the starting of work. But there is no such article or clause about the non-availability of data, or providing information to the second party. As India has violated this article many times in the Baglihar, Sala, Kishanganga and other projects, they continuously keep Pakistan in dark, so there should be some punishment if such crime was committed by any party, or their projects should be demolished from the base and further they should be banned from constructing the same projects (Akhtar 2012).

***Climate Change:*** According to new study, per year increase in atmosphere temperature is  $0.4^{\circ}\text{C}$  due to which Himalayan glaciers will continue to retreat over the next 50 years. This will lead to low flow of fresh water in long running, as Indus River is heavily dependent on glacial and snow melting and Pakistan will face the impact in near future. The treaty had not explained such situation faced by any party in the future. Because of melting glaciers, Pakistan will suffer more than India as it is lower riparian and water flows to Pakistan after passing from India. Melting glaciers also affect the flora and fauna which will lead to heavy

floods and erosion from hills. Due to erosion dams will be filled with mud regularly which will affect the natural flow and quantity of water (Bakshi and Trived 2012).

**Water Level:** India has the right to construct dams under the Treaty but there is no such provision in the Treaty about the level of water in the dams. Pakistan demanded 500 cusec of water in August and September and 400 cusec in October in Kishanganga dam project, while India said only 100 cusec of water would be released to Pakistan, at last, court of arbitration granted 318 cusecs water to Pakistan. About the level of flow of water Pakistan can never get the support of Indus water treaty.

**Issue of Drawdown Flushing:** Indus water treaty is silent about the drawdown flushing. In all Indian projects rivers that are entering Pakistan having drawdown flushing above the dead storage. In Kishanganga dam project the issue of drawdown flushing was solved by the court of arbitration. Court issued a principle that drawdown flushing will be always below dead storage for all the dams that are being constructed on river Jehlem and Chenab. Initially there was no provision about the issue, now question arises that India had already constructed 62 dams where the drawdown flushing is above the dead storage.

## CONCLUSION

After partition Pakistan faced serious issue of water. Being an agricultural state Pakistan is always in need of water but due to some misfortune it got a very little amount of water. For uplifting the economy, a fertile land was available but for water resources we pleaded India. Indus Water Treaty was signed by both the parties to solve the issue once and for all. It provided opportunity for cooperation in future between India and Pakistan, but due to some flaws within the treaty India once again started aggression in one way or another. Initially India started using the weak points in the Treaty and constructed a number of dams by violating the Treaty. As lower riparian, Pakistan started sending messages and only objected to the acts but no fruitful results came out because of shortcomings of the Treaty.

Due to climate change in near future the water level would reach dead level and we will be still objecting and resolving the issues. In 1947 Pakistan possessed 5600 cubic meters of water and now 1100 cubic meters of water per person. For saving Pakistan from more havoc situation and to stop Indian aggression Indus Waters Treaty must be revised so that Pakistan can get its due share of water. The defects in the Treaty will always be cashed by India, and Pakistan will only knock at the door of the Court of Arbitration from where it would be difficult to receive a good share as they are also bound to obey Indus Waters Treaty. So a new revised version of IWT should be implemented to save our next generation.

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