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ANALYSIS OF THE INDO-PAK INDUS WATERS TREATY 1960

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ABSTRACT

The Indus System of Rivers in the Indus Basin comprises of River Indus and its five main tributaries i.e. Jhelum, Chenab, Ravi, Beas and Sutlej. They all combine into one river near Mithan Kot in Pakistan, which outfalls into Arabian Sea at the south of Karachi. The boundary of the Indus Basin is clearly defined in the west, the north and the northeast by mountain ridges. The total area of the Indus Basin is roughly 350,000 square miles. Most of it lies in Pakistan and the rest in Occupied Jammu and Kashmir, India, China and Afghanistan. The climate in the plains downstream of the rim stations ranges from semi arid to arid. Annual rainfall ranges from about 2 inches to about 30 inches. The total annual average discharge of these rivers at the rim stations is about 170 MAF (Million Acre Feet).

At the time of independence, major portion of the Indus Basin formed a part of Pakistan and out of 37 Million Acres of total area getting irrigation waters 31 Million Acres was in Pakistan. The boundary line between the two countries was drawn without any respect to the related irrigational works. It was, however, affirmed by the Boundary Commission and the Arbitral Tribunal that the authorized shares of the two zones in the common water supply would be continued to be honoured.

The water dispute between Pakistan and India came up when the Arbitral Tribunal expired on March 31, 1948. The issue started getting a heed even from international community and substantial awareness was developed that there could be a war on the issue. After protracted negotiations, under the World Bank, when the Bank was convinced that the existing uses in Pakistan could not be met by transferring the waters from the Western Rivers, and that Storages on the Western Rivers would be required for the purpose, the Indus Waters Treaty was signed in 1960.

The Treaty consists of 12 Articles and 8 Annexures. It is based on the division of the Rivers between the two countries. The waters of the Sutlej, Beas and Ravi rivers named in the Treaty as “Eastern Rivers”, are for the unrestricted use for India; and the waters of Indus, Jhelum and Chenab rivers, named in the Treaty as “Western Rivers”, are for the exclusive use of Pakistan; except for certain specified uses allowed to India in upper catchments.

Under the Treaty, Pakistan constructed replacement works comprised of two storages dams (one on Indus River and one on Jhelum River), six new barrages (diversion dams), remodeling of two existing barrages, seven new inter-rivers link canals and remodeling of two existing link canals. However, a lot of issues regarding water utilization of western rivers have propped up between the two countries and IWT 1960 has been continuously referred and dilated.

This paper discusses in detail the history, evolution and application of IWT 1960 and presents way forward for improvement of the situation.

ANALYSIS OF THE INDO-PAK INDUS WATERS TREATY 1960

1. INTRODUCTION AND THE BACKGROUND

The Indus System of Rivers in the Indus Basin comprises of River Indus and its five main tributaries i.e. Jhelum, Chenab, Ravi, Beas and Sutlej as shown in figure-1 below. They all

combine into one river near Mithan Kot in Pakistan, which outfalls into Arabian Sea at the south of Karachi. The boundary of the Indus Basin is clearly defined in the west, the north and the northeast by mountain ridges.

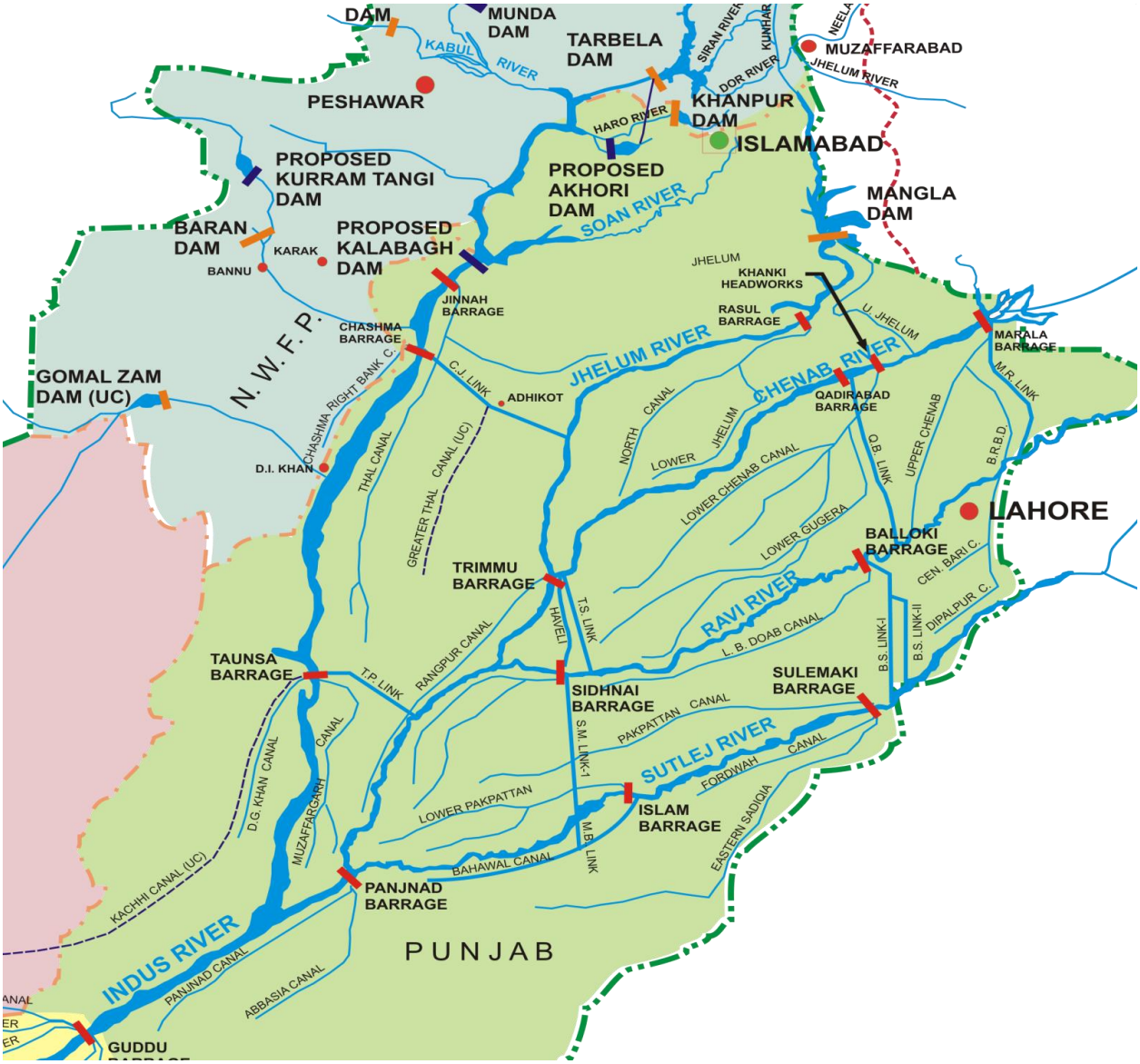

Figure-1: Indus River System in Pakistan

The total area of the Indus Basin is roughly 350,000 square miles. Most of it lies in Pakistan and the rest in Occupied Jammu and Kashmir, India, China and Afghanistan. The climate in the plains downstream of the rim stations ranges from semi arid to arid. Annual rainfall ranges from about 2 inches to about 30 inches. The total annual average discharge of these rivers at the rim stations is about 170 MAF (Million Acre Feet).

On 14 August 1947, when South Asia was divided into two independent countries, there existed in the region one of the most highly developed Irrigation System in the world and approximately 37 Million Acres of area used to receive irrigation supplies from the waters of the Indus System of Rivers. The available water supplies were allocated to the various princely States and Provinces in conformity with the principle of equitable apportionment of the waters

with preferential right to existing users. At the time of independence, major portion of the Indus Basin formed a part of Pakistan and out of 37 Million Acres of total area getting irrigation waters 31 Million Acres was in Pakistan. The boundary line between the two countries was drawn without any respect to the related irrigational works. It was, however, affirmed by the Boundary Commission and expressly agreed by the representatives of the affected zones before the Arbitral Tribunal that the authorized shares of the two zones in the common water supply would be continued to be honoured.

2. THE FIRST WATER DISPUTE BETWEEN PAKISTAN AND INDIA

The water dispute between Pakistan and India came up when the Arbitral Tribunal expired on March 31, 1948. On April 1, 1948, India taking advantage of being an upper riparian on all rivers, stopped the waters of all the irrigation canals (irrigating about 1.6 Million Acres in Pakistan), which cross the India-Pakistan border and demanded that Pakistan should recognize that the proprietary rights on the waters of the Rivers in Punjab (India) wholly vest with that Government and the Punjab in Pakistan could not claim any share of these waters as a right.

The claim forwarded thereupon by Pakistan was based upon the time honoured formula that existing uses are sacrosanct and only excess water, not previously committed, could be divided amongst the riparians according to the area, population, etc. This principle had the support of several treaties between the nations, or states, or even the provinces in the same country.

The Indians in return put forward a principle under which the upper riparian has an absolute right to the water and the lower riparian can only get it under an agreement or treaty entered between the parties.

3. ROAD TO THE TREATY

India agreed to restore some of the supplies to Pakistan in May 1948, when quite a pro-Indian temporary agreement was signed. It was, however, generally realized that Pakistan could not live without restoration of the full supplies and on this question there could be no compromise. The issue started getting a heed even from international community and substantial awareness was developed that there could be a war on the issue.

Direct negotiations between the Parties failed to resolve the dispute. Negotiations under the World Bank commenced in May 1952, wherein it was agreed that specific engineering measures be worked out by which the supplies available to each country would substantially be increased, beyond what they have ever been (enlarging the pie).

The working party set up under the Bank failed to agree on a plan for effective utilization of the waters of the Indus System. The World Bank, in its proposal of 5 th February 1954, listed three basic difficulties (given hereafter), which prevented the working party from reaching the heart of the problem, i.e. a fair diversion of the waters between the two countries.

4. DIFFICULTIES IN RESOLUTION

The three basic difficulties noted by the World Bank in resolution of the dispute were the following:

(i) The first difficulty lies in the fact that the water supplies and storage potentialities are inadequate to the needs of the basin;

(ii) The second difficulty is that although the working party is planning on the basis of the development of the Indus Basin as an economic unit, two sovereign states are involved, which greatly limits the practical aspects of planning.

(iii) The third difficulty, and the most serious of all, arose in the course of discussions. The plans put forward by the two sides differ fundamentally in concept. An essential part of Pakistan's concept was that the existing uses of water must be continued from existing sources and the corresponding concept of the Indian plan, on the other hand, is that although the existing uses (here defined to include only actual historic withdrawals) may be continued, they need not necessarily be continued from existing sources.

5. INDUS WATERS TREATY - 1960

The Engineers of the Bank worked out their initial proposals on averages ignoring the special seasonal needs for sowing and maturing of the crops, when the demands of water is maximum and the flows are minimum. After protracted negotiations, under the World Bank, when the Bank was convinced that the existing uses in Pakistan could not be met by transferring the waters from the Western Rivers, and that Storages on the Western Rivers would be required for the purpose, the Indus Waters Treaty was signed in 1960.

The Treaty consists of 12 Articles and 8 Annexures. It is based on the division of the Rivers between the two countries. The waters of the Sutlej, Beas and Ravi rivers named in the Treaty as "Eastern Rivers", are for the unrestricted use for India; and the waters of Indus, Jhelum and Chenab rivers, named in the Treaty as "Western Rivers", are for the exclusive use of Pakistan; except for certain specified uses allowed to India in upper catchments.

6. REPLACEMENT WORKS

Under the Treaty, Pakistan was required to construct and bring into operation a system of works on the Western Rivers in order to accomplish the replacement of water supplies in irrigation canals in Pakistan, which at the time of partition were dependent on water supplies from the Eastern Rivers. The replacement works comprised of two storages dams (one on Indus River and one on Jhelum River), six new barrages (diversion dams), remodeling of two existing barrages, seven new inter-rivers link canals and remodeling of two existing link canals. This only became possible through the generous assistance (grants and loans) by the friendly countries like USA, Canada, UK, Netherlands, Germany, France, Italy, Australia, Newzeland, etc. The fund was called the Indus Basin Development Fund and was set up and administered by the World Bank with the assistance of Indus Basin Development Board, constituted by the Government of Pakistan. India made a fixed contribution £ 62.060 million towards this Fund, which was payable in ten years in equal installments. Thus India got 24.00 MAF of perpetual flow of the Rivers for this amount. The estimated cost of replacement works (1964 estimates) was US $ 1208.50 million. There was a transition period of 10 years during which Pakistan was to receive waters from the "Eastern Rivers" for use in the aforementioned canals.

Such a division of Rivers was a distinct departure from the concept of international law of upper and lower riparian rights (protection of existing uses from the same source). In this way Pakistan had to forgo the entire perpetual flow of fresh waters of the three Eastern Rivers (24.00 MAF), which it used to receive historically for irrigation.

7. INSTITUTIONAL ARRANGEMENTS

Under the provisions of Article VIII(1) of the Indus Waters Treaty 1960, both India and Pakistan appointed Commissioners for Indus Waters. Each Commissioner, unless either Government decides to take up any particular question directly with the other Government, is the representative of his Government for all the matters arising-out of the Treaty and serves as the regular channel of communication on all the matters related to the implementation of the Treaty. The two Commissioners together form the *PERMANENT INDUS COMMISSION.* The functions of the Commission are:

i. to establish and maintain co-operative arrangements for the implementation of the Treaty;

ii. to promote co-operation between the Parties in the development of the waters of the Rivers;

iii. to make every effort to settle promptly any question arising between the Parties; and

iv. to undertake tours of inspection of the Rivers to ascertain facts.

Under the Treaty, restrictions have been placed on the design and the operation of hydroelectric plants, storage works and other river works to be constructed by India on the Western Rivers. India is required to supply to Pakistan certain specified information related to these works at least 6 months in advance of undertaking the works so as to enable Pakistan to satisfy itself that the design conforms to criteria set out in the Treaty. Within a specified period, ranging from two to three months, Pakistan has the right to communicate to India, in writing, its objections that it may have regarding the proposed design on the ground that it does not conform to certain criteria specified in the Treaty.

Under the Treaty, restrictions have also been placed on the irrigated cropped area to be raised by India in the basins of Western Rivers. The Treaty also provides for a regular exchange of the daily hydrological data and other data under Articles VI and VII(2) of the Treaty.

The Treaty provides for a self-generating procedure for the settlement of differences and disputes. Any question which arises between the Parties concerning the interpretation or application of the Treaty or the existence of any fact, which, if established, might constitute a breach of the Treaty, is to be first examined by the Commission, which endeavours to resolve the question by agreement.

8. MAJOR WATER RELATED ISSUES BETWEEN PAKISTAN AND INDIA

(i) Wullar Barrage on river Jhelum

Under the provisions of Indus Waters Treat 1960, India is not allowed to build any storage on the main river (Jhelum) except for 0.75 Million Acre Feet (MAF) of storage on the tributaries of river Jhelum and 0.01 MAF incidental to a barrage,

In February 1985, Pakistan learnt through reports that India is planning to construct a Barrage, namely “Tulbul Navigation Project”, at the downstream end of Wullar Lake on River Jhelum. In March 1985, Pakistan conveyed its concerns to India and sought details of the scheme for its examination. India supplied some details of the scheme in March 1986. According to the information supplied by India, the Wullar Barrage, located at the out fall of Wullar Lake on Jhelum Main, would be 439 feet in length, with a gated weir and under sluices, and a 12 meter wide navigation lock. It would have a maximum discharge capacity of 50,000 cusecs and would enable pond level in the lake to be raised and maintained at elevation 5,178 feet. Thus, it might be possible to manipulate additional storage of approximately 0.336 MAF of water in the Lake.

The matter was accordingly taken up by the Permanent Indus Commission for resolution under Article IX(1) of the Treaty but the Commission failed to resolve the issue. The construction of works, which India executed for the piers/abutment of barrage and navigation lock was, however, got suspended by Pakistan in September 1987.

Later, on the request of the Government of India, bilateral negotiations started at the level of the Secretary, Ministry of Water and Power, Government of Pakistan and the Secretary, Ministry of Water Resources, Government of India. So far, 13 rounds of talks

have been held. At present the issue is under the ambit of composite dialogue between the two Governments.

(ii) Baglihar Hydroelectric Plant on river Chenab

Baglihar Hydroelectric Plant is a Run-of-River Project constructed by India on river Chenab. Under the Indus Waters Treaty 1960, India is allowed to construct Run-of-River Hydroelectric Plants on Western Rivers, subject to the provisions of the Treaty. The design of the Plant should be in accordance with the criteria provided in Paragraph 8 of Annexure D to the Treaty. India supplied information about the Plant in May 1992.The Plant is located on river Chenab about 147 kilometers upstream of Marala Headworks in Pakistan.

Pakistan, under the provisions of the Treaty, raised objections on excessive freeboard provided in the design of the Plant, higher water seal at the intake of the power tunnel, excessive Pondage in the operating pool behind the dam and the design of orifice type gated spillway.

Since the Permanent Indus Commission could not resolve the objections, Pakistan invoked the relevant provisions of the Treaty and in order to resolve the issue under the provisions of the Treaty, the World Bank appointed a Neutral Expert on 10 May 2005. The Neutral Expert called both the Parties to Paris in June 2005, and formulated modalities in the form of Protocol. The written and oral part of arguments between the Parties were undertaken in a series of five meetings of the Parties with the Neutral Expert, and one visit to the site of the Plant. The Neutral Expert gave his Final Determination on 12 February 2007.

The decision of the Neutral Expert upheld Pakistan's contention that the design by India is not in conformity with the design criteria of all the four designs features of the dam as laid down in the Treaty. The changes as determined by the Neutral Expert were confirmed during the Tour of Inspection by the Permanent Indus Commission in July 2008.

India formally commissioned the Plant on 10 October 2008, however, the testing of turbines was started on 5 September 2008 as reported in the print media.

For commissioning of the Plant, India filled the reservoir for its dead storage in August 2008 and did not abide by the specific provisions of the Treaty as to maintain the flow of 55,000 cusecs at Marala Headworks in Pakistan.

Inspite of repeated requests by Pakistan Commissioner, India did not provide details of schedule for initial filling of Baglihar reservoir or testing/commissioning of Plant. The protest on reduction of flow was accordingly lodged against the Treaty violation by India. Whereafter a site inspection and a meeting of the Permanent Indus Commission was arranged by India from 18-25 October 2008. After the inspection of the site, Pakistan Commissioner in the meeting of the Commission asked for compensation of lost water which was reduced due to violation of the Treaty provisions by India. Similarly, hourly data for the operation of the initial filling was asked in order to jointly agree the reduction of flow. India, however, did not cooperate to supply the hourly data and refused compensation of flow to Pakistan. Pakistan Commissioner thus declared that in order to resolve the matter he will proceed further as per mechanism given under the Treaty.

(iii) Kishenganga Hydroelectric Plant on River Neelum (Kishenganga)

The proposed Kishenganga Project is located in Occupied Jammu and Kashmir on river Neelum. which is a tributary of river Jhelum. The original design envisaged the

construction of 268 meter long and 75.48 meter high concrete dam with reservoir capacity of 0.18 MAF and power storage of 0.14 MAF. The stored water of River Kishenganga is to be diverted through a 21 km long tunnel to produce power of 330 MW. The water after production of power is to join Wullar Lake.

Pakistan raised objections on the diversion of flow and design of the project. The issue was formally taken up through the meetings of the Commission from May 2003 to November 2005. On failure of the Commission to resolve the issue, Pakistan Commissioner for Indus Waters initiated proceedings for reference of the case to the Court of Arbitration. However, Indian Commissioner intimated vide his letter dated 19 June 2006, that under Paragraph 15(a) of Annexure E, the Kishenganga Storage-cum-Hydroelectric Project has now been revised as a Run-of-River Plant. Revised information, as specified in Appendix-II to Annexure D to the Treaty was also supplied.

Pakistan Commissioner after examining the information supplied by India raised following objections:-

i. The proposed design of the Plant in respect of freeboard, pondage, spillway and intake is in violation of the provisions of the Treaty.

ii. India is not authorized to divert waters of river Kishenganga (Neelum) in view of Article III, Article IV(6) and Paragraph 15(iii) of Annexure D.

The issue is currently under discussion at the level of the Permanent Indus Commission.

9. WAY FORWARD FOR IMPROVEMENT IN THE SITUATION

According to the conflict intensity scale of Le Huu Ti, the issue of water dispute between the two countries fluctuates from institutional mechanism, information mechanism, tension and diplomatic action. However, IWT has settled the situation a lot and the situation of open dispute is not reached.

If the zero alternative is ruled out to improve the situation, following alternative package is recommended;

- Regional cooperation spirit needs to be revitalized keeping in view the recent world trends
- INDO PAK Confidence building measures are required to fill the trust gap
- India could be more forthcoming with flow data and be more prompt and open in communicating its planned projects on the Indus basin to Pakistan, particularly in the western basin.
- Pakistan can engage with India within the context of the IWT more positively than defensively, and also educate its media and politicians so as not to sensationalize technical arguments by presenting them as existential threats.
- IWT 1960 needs further fine tuning and pdating to make it more clearly applicable after a half century of experience. The IWT could be fruitfully modified and renegotiated to bring it more in line with contemporary international watercourse law and emerging concerns with water quality, environmental sustainability, climate change, and principles of equitable sharing.

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