

Seminar Report

Indus Water Treaty: Issues and Recommendations



Institute of Strategic Studies Islamabad

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The Institute of Strategic Studies

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In addition to publishing a quarterly journal and a monograph series, the ISSI organises talks, workshops, seminars and conferences on strategic and allied disciplines and issues.

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Pictures of the Event



CONCEPT NOTE

“Water links us to our neighbors in a way more profound and complex than any other.”

John Thorson.

Of all the fault lines between Pakistan and India, the most crucial one has been the water dispute. Unfortunately however, it also is the most neglected one. The conflict first emerged between Pakistan and India in 1947 when the British partitioned the Indus Basin between the two countries. Being the natural upper riparian with control over canal head works, India regulated the water flow to the plains of Pakistan. In 1960, the Indus Water Treaty (IWT) was signed between the two countries through the arbitration of the World Bank. The rights over three eastern rivers - Ravi, the Beas and Sutlej were given to India, while Pakistan was granted dominion over the three western rivers - the Indus, the Jhelum and the Chenab. The IWT has stood the test of time as well that of three wars that the two countries have fought. The Treaty is referred to as a model for settling international water disputes.

Over the years, Indian initiatives to build various dams on the western rivers have been a source of concern for Pakistan as a water-stressed country. According to UNDP reports, Pakistan will become a water-scarce country by the year 2035, while the stress on the Indus basin shared by both countries has also increased since the 1990s. Pakistan's provision of water drainage facility to India has eased its projects of water management and agriculture while itself bearing the brunt of annual floods that have taken innocent lives and damaged valuable infrastructure in Pakistan. In a bid to build more water storage facilities to maximize use of the resources from the western rivers, Indian Prime Minister Narendra Modi has brought up the matter of revoking the Indus Water Treaty. While Pakistan has voiced its apprehensions about such a unilateral move on part of India, it has also urged the World Bank to mediate once again to settle the dispute.

Climate change, shrinking glaciers and changing patterns of precipitation make it even more imperative for Pakistan to understand the underlying problems relating to water conservation and efficient utilization. It is therefore, necessary to enlighten ourselves on our water related issues through illuminating discourse by distinguished experts and scholars.

Identification of the problem at home is the first step towards alleviating the concerns of the people of Pakistan about water conservation in Pakistan and grievances with India in the

backdrop of the significance of the Indus Water Treaty (IWT). Furthermore, such an understanding of the water issues at the domestic level can lead to resolution of this dispute between the two countries.

In this regard, the Institute of Strategic Studies Islamabad organized a one-day seminar on “Indus Water Treaty: Issues & Recommendations” on August 29, 2017. The seminar included esteemed speakers who enlightened the participants on this issue of extreme importance. The purpose of the seminar was to educate the general public on the importance and background of the Indus Water Treaty, its legal and technical analysis and to address and resolve our water-related problems through a well-rounded intellectual discourse in light of the Treaty.

The Chief Guest of the event was Honourable Mr. Khawaja Muhammad Asif, Foreign Minister of Pakistan. Distinguished speakers at the Seminar included: Sardar Muhammad Tariq, Chairman Pakistan Water Partnership; Mr. Ahmer Bilal Soofi, President, Research Society of International Law; Mr. Muhammad Shams-ul-Mulk, Former Chairman, WAPDA; and Mr. Mirza Asif Baig, Commissioner, Pakistan Commissioner for Indus Water.

Mr. Muhammad Irfan Tariq, Director General Environment Ministry of Climate Change who could not attend the seminar because of an urgent commitment was kind enough to share his presentation which has also been included in the report.

Seminar Programme

Inaugural Session (1015-1050 hrs)

- 1015 hrs Registration
- 1030 hrs Recitation from the Holy Quran
- 1035 hrs **Welcome and Introductory Remarks**
Ambassador Khalid Mahmood, *Chairman, ISSI*
- 1040 hrs **Remarks by the Chief Guest**
Honourable Mr. Khawaja Muhammad Asif,
Foreign Minister of Pakistan
- 1050 hrs Tea/Coffee

Presentations (1105-1220 hrs)

- Chair:** Ambassador Khalid Mahmood, *Chairman, ISSI*
- 1105 hrs **Overview of the Treaty**
Mr. Sardar Muhammad Tariq,
CEO/Chairman Pakistan Water Partnership (PWP)
- 1115 hrs **Contemporary Legal Discourse on the Treaty**
Mr. Ahmer Bilal Soofi,
President, Research Society of International Law (RSIL)
- 1125 hrs **Indus Water Treaty: Impacts of Climate Change**
Muhammad Irfan Tariq,
*Director General, Environment and Climate Change,
Ministry of Climate Change*
- 1235 hrs **Indian Constructions on Western Rivers: Pakistani Perspective**
Mr. Muhammad Shams-ul-Mulk,
Former Chairman, WAPDA
- 1235 hrs **Recommendations & Suggestions for Enhancing Effectiveness of the IWT**
Mr. Mirza Asif Baig,
Commissioner, Pakistan Commissioner for Indus Water (PCIW)

- 1245 hrs **Q & A**
- 1215 hrs **Concluding Remarks**
Ambassador Khalid Mahmood,
Chairman, ISSI
- 1220 hrs **Lunch**

WELCOME REMARKS

Ambassador Khalid Mahmood

Chairman, Institute of Strategic Studies Islamabad

It is with utmost pleasure that I personally and on behalf of ISSI warmly welcome the Chief Guest of today's Seminar, the Foreign Minister of Pakistan Hon. Khawaja Muhammad Asif. Although he has been to the Institute several times in the past, this is the first time he is gracing us in his new capacity as the Foreign Minister. So, this is a special occasion for the Institute. Sir, by your presence here today you have honoured us greatly and indeed dignified the Institute. That you have done so evokes special appreciation, knowing as we do how deeply you must be engaged in addressing the challenges the country has been facing lately.

There could not have been a better person to inaugurate today's Seminar on “Indus Water Treaty: Issues and Recommendations”. You combine in you, as the former Minister of Water and Power, the knowledge of technical aspects of the subject matter and as the Foreign Minister its political and strategic sensitivities.

Adequate distribution of trans-border water resources can be a bone of contention among states if proper legal framework and mechanisms are not in place for its equitable allocation. Pakistan and India since their birth also remained embroiled in conflict over this resource until the historic Indus Water Treaty (IWT) was signed between the two countries in 1960. Legally well-rounded and skilfully crafted, this Treaty is veritably an instrument of mutual cooperation between the two opposing sides.

The Treaty is often cited as a success story of international riparian engagement, as it has withstood major wars between the two signatories (in 1965 and 1971), incidents of terrorism and several skirmishes over water distribution. The agreement is also heralded as a triumph for the World Bank, which played an instrumental role in its negotiation during the height of the Cold War.

The water question is not only a functional problem, but also a political one linked to the Kashmir dispute. The dispute over Kashmir and the distribution of the Indus waters are inseparable and that any future solution of this dispute will have to consider the equitable distribution of the river waters. Mounting concerns about the impact of human activities on

the environment, potential climatic shifts, and expanding populations all underline the pressing need to manage this scarce natural resource in an integrated manner.

Fortunately enough, a legally advantageous and fair agreement is already in place in the form of IWT. Be it the matter of Indian constructions on the western rivers such as that of the Kishenganga and Ratle dam or the flow of the eastern rivers to Pakistan, all these issues can be resolved via judicious comprehension and proper faithful utilization of the IWT.

The number of dams or projects that India could or should construct on the western rivers is an issue that falls outside the scope of the IWT. IWT adopts a water-flow/cumulative water storage approach as opposed to an enlistment-of-sites approach vis-a-vis the western rivers allocated to Pakistan. Although these storages may store water within the permissible quota of the upper riparian, Pakistan wishes to challenge them not on engineering grounds, but rather on security perception considerations. This is the kind of issue that cannot be handled under the framework of the IWT. The IWT is a technical treaty primarily concerned with engineering solutions and water management. It neither takes into consideration security threats nor does it establish a mechanism dealing with the possible misuse of engineering.

Furthermore, a variety of factors over time like climate change, large scale industrialization, economic development, mismanagement of water resources and population growth have contributed towards exacerbating the water security threat to the point where the entire IWT framework lies at the risk of being undermined.

Pakistan is already close to being categorized as a water scarce country, fast approaching the absolute scarcity level. Its water per capita availability has dropped to 1,017 cubic meters per capita. This figure is expected to further decline to 800 cubic meters over the next decade. According to the International Monetary Fund (IMF), Pakistan is already the third most water-stressed country in the world. It has the world's fourth highest rate of water use and its economy is the most water-intensive in the world, utilizing the highest amount of water per unit of GDP. The need for water is accentuated by the fact that both Pakistan and India are mainly agrarian economies. Pakistan's largest economic sector, agriculture, consumes a whopping 90% of the country's rapidly dwindling water resources. In other words, Pakistan's economy is the most water-intensive in the world, and yet it has dangerously low levels of water to work with. Furthermore, NASA satellite data released in 2015 revealed that the underwater aquifer in the Indus Basin is the second-most stressed in the world.

Pakistan is one of the world's most arid countries with an average rainfall of less than 240 mm. Indus water is the only source of water for domestic, agriculture and industrial needs. Water conservation is another problem which faces both Pakistan and India. India blames Pakistan for its water woes that India says are emanating from poor management of water resources. India claims that Pakistan loses millions of cubic meters of water to the sea due to lack of water conservation efforts.

Indeed, Pakistan is not doing enough to preserve its water resources; It has poor water storage techniques and facilities. Under international law, it is obligatory that Pakistan properly manages its water resources. Also, in the wake of greater provincial autonomy after the 8th Amendment to the Pakistan Constitution, it is imperative that provinces demonstrate greater responsibility and resolve in managing the country's water resources.

The Treaty also neglects environmental concerns. Though prohibiting pollution of waters (Article IV (10)), IWT has no elaborate provisions on environmental protection.

The Indus Waters Treaty also does not envisage the regulation of ground water. The Indus Basin represents an extensive groundwater aquifer, covering a gross command area of 16.2 million hectares. Ground water accounts for 48% of all water withdrawals in the Indus Basin, and current withdrawals are forecast to deplete these resources. A revisit of the Indus Waters Treaty to include provisions with respect to ground water would be necessary for better trans-boundary aquifer management.

It is in the interest of both India and Pakistan to observe the letter and spirit of the Treaty and take steps to ensure effective functioning of the Indus water regime. These may include ensuring transparency in sharing of flow data through installation of telemetry system, timely data sharing over new Indian projects, joint watershed management, monitoring of the Hindu Kush Himalayan (HKM) glaciers and commissioning of environmental studies, cooperation in predicting and coping with floods or droughts and in ensuring quality of water bodies, strengthening the functioning of the Indus Waters Commission by expanding its scope and mandate and better management of water resources and sharing of best practices.

Lately, IWT has come under severe strain. India has put in cold storage the policy of "strategic restraint" and declared an all-out political, diplomatic and economic offensive against Pakistan. India has embarked on a strategy to build a series of small and big dams on the Western Rivers which Pakistan regards as an existential threat.

Political rivalry between the two countries has made things even more complicated. Hindu right-wing groups in India call on the Indian government to stop flow of water to Pakistan or flood it. In fact, Indian Prime Minister Modi's occasional threat to scrap IWT has added a new destabilizing element to the fraught relations between two nuclear states.

In my opinion, overall IWT has worked well for both the parties. The Treaty itself better not be tinkered with. Efforts should instead be focused on ensuring its effective implementation, in letter and spirit, by both parties in good faith and in a spirit of mutual confidence and trust. The new challenges e.g. concerning environment protection and depletion of underground water and the permissible number of dams that can be built by the upper riparian party can be mutually negotiated on the parallel to supplement IWT.

It is to consider all these facets of IWT that ISSI has invited renowned experts from all over Pakistan to this Seminar today. Before these experts express their respective view-point in the ensuing working session, I invite Honourable Chief Guest Khawaja Muhammad Asif, Foreign Minister of Pakistan, to give us the benefit of hearing his views on this important subject. It will help in making the Seminar's deliberations more focussed, substantive and purposeful.

REMARKS

Honourable Mr. Khawaja Muhammad Asif
Foreign Minister, Islamic Republic of Pakistan

It is indeed my pleasure to speak to you today on the important subject of Indus Waters Treaty (IWT). I am really grateful to the Institute of Strategic Studies Islamabad (ISSI) for inviting me to initiate Islamabad discussion on a subject which is very close to my heart. I strongly believe that healthy debate on issues of national importance plays a key role in defining and reshaping our political narrative. I also appreciate the efforts by ISSI to draw attention to the current pressing challenges, to assess them and find policy options to handle them.

With the advent of 21st century, the rapid global economic expansion and technological innovation has led to intensive struggle between nations for the natural resources, of which water is the most important. Water security is the most serious concern and is emerging as the key national security issue. The tensions over access to water, within and between countries, in the region are growing and are increasingly scrutinized. The issue seems even more complicated, when regional and bilateral rivalries are taken into account. Additionally, the changing patterns of precipitation as a result of climate change, exacerbate the scale of challenges before us.

As you would know that at the time of partition of India, boundary between India and Pakistan was cut through the Indus Valley, and forceful attempt by India to annex the State of Jammu and Kashmir further complicated the situation. The Indus Basin irrigation system remains one of the world's largest irrigation system. With Pakistan being the downstream riparian on Indus and all of its tributaries, the problem of water distribution was transformed into bilateral dispute with India and became a major conflict between the two newly independent countries. It was resolved after the conclusion of the IWT between both the countries in September 1960 with the World Bank as signatory inter-alia for the dispute settlement provisions.

Since its inception, the Indus Waters Treaty has stood the test of major wars and crises between Pakistan and India. It was again at the centre of attention when India endeavoured to circumvent the dispute resolution mechanism to which Pakistan resorted for resolution of

outstanding disputes concerning design parameters of Kishenganga and Ratle hydroelectric plants, as well as provisions of general applicability for all future run-of-river hydroelectric projects on the Western Rivers. Besides delay in arranging or participating in the meetings of the Permanent Indus Commission, India has also been denying the tours of inspection asked by Pakistan to be arranged on prompt basis as given in the Treaty. These actions by India represent non-cooperation towards implementation of the Treaty, which is against the objectives of the Treaty as outlined in its Preamble.

We are well aware that India is pursuing a long-term plan of constructing a number of run-of-river hydropower and storage projects that will potentially impact the natural pattern, as well as quantity of flow of the Western Rivers if the construction and operation are not done according to the design and operational criteria expressly given in the Treaty. We have conveyed our strong reservations on the designs and technical aspects of such infrastructures and hope that India would review and reconsider its stance which presents a direct threat to the Pakistan's right of receiving flows of the Western Rivers without interference except for the restricted uses permitted to India for which conditions have been clearly specified in the Treaty. Such indifference to the obligations specified in the Treaty would adversely affect Pakistan's agricultural, hydropower and environmental uses. We sincerely believe that New Delhi is not fulfilling its share of responsibilities under the Indus Waters Treaty.

Pakistan considers the Indus Waters Treaty of 1960 as a document which was concluded after protracted negotiations between the parties over several years and which entails substantive provisions that clearly fix and delimit the rights and obligations of both India and Pakistan, that embody a bargain that was agreed to by both the Parties, therefore any modifications or changes to the provisions of the Indus Waters Treaty of 1960 will neither be desirable nor acceptable. We perceive that the Indian attempts are a serious digression from the fundamental principles agreed in the Treaty.

Pakistan, on its part, has always demonstrated readiness and willingness to resolve all water disputes within the framework of the Treaty. Our position is based on the principles enshrined in the Treaty which must be honoured in letter and spirit.

In the present dispute on Kishenganga and Ratle hydroelectric plants of India, Pakistan urges and shall continue to urge the World Bank to fulfil its commitments with regards to the Treaty. Since the World Bank is a signatory to the Treaty, it should play its due constructive

role to help resolve the water issues between India and Pakistan and this will pave the path to ensure the peace in the region.

In conclusion, I would reiterate that Pakistan will stand with the principles and the law. Pakistan emphasizes that our neighbour should also honour tenets of the Indus Waters Treaty.

There is no escaping from the fact that Pakistan and India share and occupy the same geo-strategic space. It is important to recognise that bilateral cooperation on equitable access to strategic asset of Indus waters is crucial for maintaining the peace and stability in the region. The hegemonic attitude as depicted by India in the present dispute is neither constructive nor would it serve the interests of both the countries.

PRESENTATION

Overview of the Treaty

Sardar Muhammad Tariq

Chief Executive Officer, Pakistan Water Partnership (PWP)

Providing a background to the Indus Water Treaty (IWT), Mr. Tariq said that the contentious issues of water sharing rose immediately after the partition of the Subcontinent in 1947 and water wars between the two sovereign states became imminent. The World Bank intervened resulting in prolonged negotiation processes which finally led to IWT being signed in 1960.

The negotiation process under the proposal in 1952 by David Lilienthal (Former Chairman of the Tennessee Valley Authority) asked for a single integrated basin authority to operate, maintain and distribute the Indus Waters between India and Pakistan. Both India and Pakistan straight away rejected the proposal.

Following is a tabular presentation of the first suggested water sharing plans by India and Pakistan to World Bank October 6, 1953.

	For India	For Pakistan	Total Useable Water
i) Indian Plan	29.0 MAF	90.0 MAF	119.0 MAF
ii) Pakistan Plan	15.5 MAF	102.5 MAF	118.0 MAF

India gave its own second proposal which was followed by a counter proposal by Pakistan. These are presented as below:

India's Proposal	Eastern Rivers	Western Rivers
To India	100%	7%
To Pakistan	0%	93%

Pakistan's Counter Proposal	Eastern Rivers	Western Rivers
To India	30%	0%
To Pakistan	70%	100%

In response to these, the World Bank gave its own proposal which was later accepted by India and Pakistan despite their reservations. The proposal is as following:

	Eastern Rivers	Western Rivers
To India	100%	Limited non-consumptive uses
To Pakistan	0%	100%

India's post Treaty reactions took the stance of "Equitable Utilization" under which they argued that Pakistan got 75% of the Indus Waters which is a violation of equitable utilization. Moreover, trenchant criticism in *Lok Sabha* on November 30, 1960 also highlighted India's stand. On the other hand, Pakistan argued that it got only 75% of water when they had 90% of irrigated land – violation of principle of "Appreciable Harm"– favorite of International Law Commission. It argued that India is only utilizing 3 MAF but has been given 33 MAF. Denial of Eastern Rivers Water was hydrological shock in the west and irrigated land in the east. Where India got additional water for development, Pakistan got none. Pakistan, henceforth, has to live with a single basin with no additional water and no management flexibility.

Highlighting the challenges created by the IWT for Pakistan, Mr. Tariq said that transfer of water over hundreds of km through new structures included huge operation and maintenance (O&M) challenges with heavy O&M annual cost. Also, high degree of structural safety hazard in form of heavy floods became an imminent threat. Also, sediment flourishing the delta were trapped affecting land quality downstream which resulted in twin menace of water-logging and salinity, adding single basin constraints. With three rivers given to India,

water availability per capita declined considerably and 85% of river flow is trans-boundary. It passes through Indian held Kashmir. India's continuous interference with river flows threatens Pakistan water security. Tantamount to water terrorism. India is presently utilizing only 55% of its water resources, where as in Pakistan 100% of water is fully committed. Any interference with trans-boundary rivers by India would create serious water security issues vis-a-vis national security for Pakistan.

Mr. Tariq said that the IWT is a complex document. The Treaty proposes to fix and delimit the rights and obligations of both countries in the use of water without encroaching upon rights of each other. The Treaty attempts to comprehensively deal with the issue of water allocation between the two countries.

The Treaty is based on four (4) Principles:

- Principle of water sharing.
- Principle of cooperation between the parties.
- Dispute resolution mechanism.
- Construction of replacement works and making arrangements for their financing.

The Treaty along with its Preamble has twelve articles and eight annexure and appendices as below:

- **Article i** DEFINITIONS
- **Article ii** PROVISIONS REGARDING EASTERN RIVERS
- **Article iii** PROVISIONS REGARDING WESTERN RIVERS
- **Article iv** PROVISIONS REGARDING EASTERN RIVERS AND WESTERN RIVERS
- **Article v** FINANCIAL PROVISIONS
- **Article vi** EXCHANGE OF DATA
- **Article vii** FUTURE CO-OPERATION

- **Article viii** PERMANENT INDUS COMMISSION
- **Article ix** SETTLEMENT OF DIFFERENCES AND DISPUTES
- **Article x** EMERGENCY PROVISIONS
- **Article xi** GENERAL PROVISIONS
- **Article xii** FINAL PROVISIONS
- **Annexure A** EXCHANGE OF NOTES BETWEEN GOVERNMENT OF INDIA AND GOVERNMENT OF PAKISTAN
- **Annexure B** AGRICULTURAL USE BY PAKISTAN FROM CERTAIN TRIBUTARIES OF THE RAVI
- **Annexure C** AGRICULTURAL USE BY INDIA FROM THE WESTERN RIVERS
- **Annexure D** GENERATION OF HYDRO-ELECTRIC POWER BY INDIA ON THE WESTERN RIVERS
- **Annexure E** STORAGE OF WATERS BY INDIA ON THE WESTERN RIVERS
- **Annexure F** NEUTRAL EXPERT
- **Annexure G** COURT OF ARBITRATION
- **Annexure H** TRANSITIONAL ARRANGEMENTS

The Indus Waters Treaty establishes a complex system of the disputes settlement. The disputes are divided into two categories:

- i. Disputes which are purely technical in nature.
 - ii. Disputes which are grave and of serious nature.
- The Treaty designates twenty-three (23) areas which fall under disputes of technical nature called “a difference”.

- Any matter of technical nature is first examined by the Commission. In case of disagreement of the Commissioners, either of the Commissioner may refer the matter to a “neutral expert” who is to be a highly qualified engineer. The Treaty provides detailed procedure for referring the matter to a “neutral expert”.
- If the matter does not fall under the twenty-three (23) designated areas, then the matter is categorized as dispute.

Dispute resolution has different procedure as spelled out below:

- Matter is first referred to the Government of India and Pakistan.
- In case both Governments fail to resolve the dispute, the matter is referred to a “Court of Arbitration”.
- Court of Arbitration is to consist of seven members, two be designated by each of the parties and the remaining three by the parties through formal agreement.
- There would be a standing panel of umpires out of which three umpires would be selected.
- The composition of the umpires would be an engineer, an international lawyer and the third one would be anybody with any sort of background and experience.
- Annex G to the Treaty spells out constitution and procedure of the Court of Arbitration.

The Treaty envisaged construction of a number of large works called replacement works. Replacement works located in each country are:

Pakistan:

- Construction of two dams Mangla on river Jhelum and Tarbela on Indus River with two Hydro Power station one at each dam.
- Six Barrages, new and remodeled.
- Eight (8) link canals with a total length of 400 miles and diversion capacity of several

thousand cusecs.

- Installation of 2500 tube wells.

India:

- Some works to be carried out on Beas River

With respect to financial arrangements, Indus Basin Replacement works were to cost huge amount of money. Pakistan had no financial capacity to build these works. Indus Basin Development fund was created by seven participatory countries namely: Australia, Canada, Germany, New Zealand, Pakistan, USA and UK. The total fund amount was US\$ 900 million out of which US\$ 640 million was contributed by the participatory countries. India contributed US\$ 174 million; World Bank contributed US\$ 60 million. The World Bank was appointed as Administrator of the Fund. World Bank was required to furnish to the parties status of the fund periodically. Any dispute regarding the fund were to be settled by a single Arbitrator and in case it was impossible then by the Secretary General of the United Nations.

Pakistan undertook the challenge and within a record period of ten years completed some of the mega irrigation structures, thus converting Indus Basin into the world largest contiguous irrigation system spread over some 18 Mha.

IWT related irrigation works:

- 3 Storage Reservoirs –Tarbela, Mangla, Chashma
- 16 Barrages
- 12 Inter River Link Canals
- 2 Siphons
- 44 Canal Commands
- 62,300 Km Irrigation Canals i.e. 1½ time the circumference of the Earth
- 107,000 Km Water Courses

The gist of policy document produced by Institute of Defense Studies and Analysis in India (IDSA 2010) on this issue argues that if not well managed, riparian issues would lead to more conflicts. It calls for paradigm shift from water-sharing to benefit-sharing. Rivers are no more “soft component of country’s foreign policy” and treaties need to be evaluated and reframed based on current hydrological knowledge and future mutual needs.

The document places India at the epicenter of riparian politics due to its geographic contours. It suggests collaborative riparian management for settling many water induced conflicts. It emphasizes greater hydro-diplomacy to balance region’s growing water needs with larger security concerns. International water laws on allocating water within river basin are difficult to implement and often contradictory. India considers that under water stress situation and climate change impacts, the existing treaties would become irrelevant.

Mr. Tariq highlighted Five Constituencies in India with different views on this issue:

- First Constituency – In favor of Indus II under Article VII & XII of the IWT for a joint development of the Indus Water Basin.
- Second Constituency - Favors' a new Indus Treaty considering IWT as partitioning Treaty – Indus II to focus on new hydrological relationship.
- Third Constituency – Pressure group in Indian Kashmir asking for unhindered use of the Indus, Jhelum and Chenab rivers.
- Fourth Constituency – War over water not an option. India should use water as coercive tool and bargaining instrument for larger politico-strategic objectives of India.
- Fifth Constituency – India should exploit all potentials permissible under the Treaty first and then ask for more and ask for review of the Treaty.

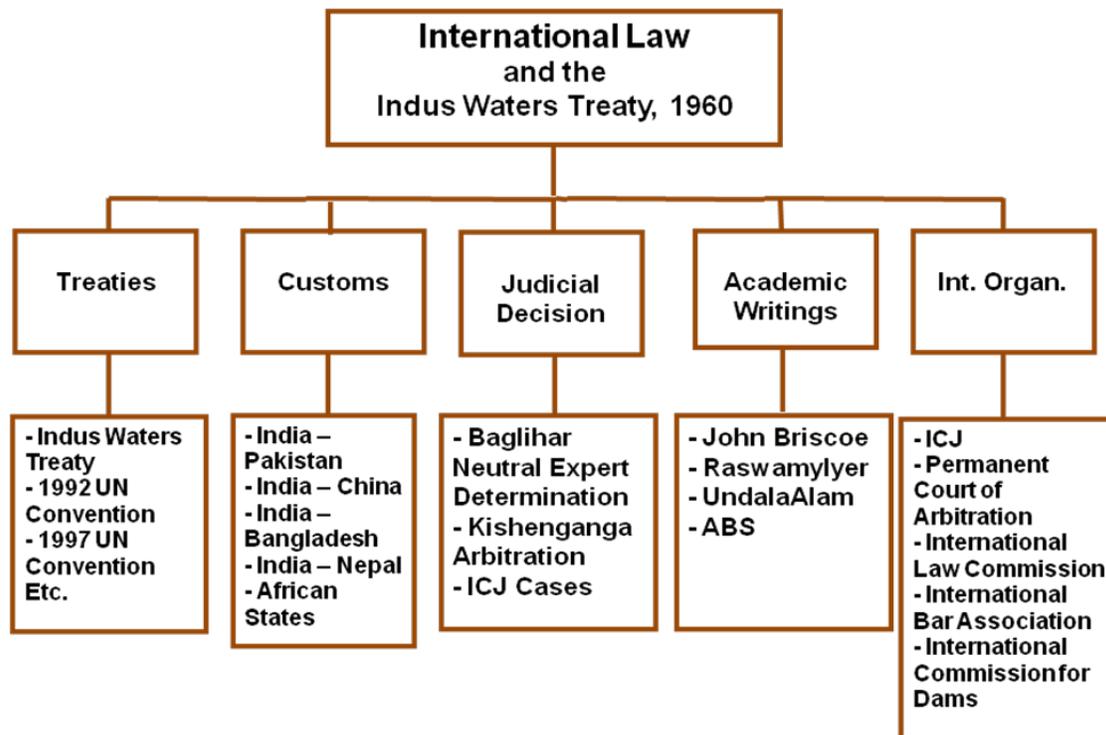
PRESENTATION

Contemporary Legal Discourse on the Treaty

Mr. Ahmer Bilal Soofi

*Advocate Supreme Court and former Federal Minister for Law,
Justice and Parliamentary Affairs*

The following presentation looks at the Indus Waters Treaty (IWT) 1960 and the surrounding issues from a purely legal perspective, i.e. this presentation does not delve into the related technical, engineering or political aspects. The following flow chart gives an insight into different sources of International Law, especially in context of IWT.



It was signed on September 19, 1960, with retrospective effect from April 1, 1960, through the good offices of the World Bank. It was between Field Marshal Mohammad Ayub Khan, President of Pakistan and Mr. Jawaharlal Nehru, Prime Minister of India. It consists of 74 pages, 12 Articles and 8 Annexure. With no expiry/sunset clause, it had a transition period of 10 years, until 1970.

In the preamble of IWT, "The Government of India and the Government of Pakistan, being equally desirous of attaining the most complete and satisfactory utilization of the

waters of the Indus system of rivers and recognizing the need, therefore, of fixing and delimiting, in a spirit of goodwill and friendship, the rights and obligations of each in relation to the other concerning the use of these waters and making provision for the settlement, in a cooperative spirit, of all such questions as may hereafter arise in regard to the interpretation or application of the provisions agreed upon herein, have resolved to conclude a Treaty in furtherance of these objectives, and for this purpose have named as their plenipotentiaries:

The Government of India:
Shri Jawaharlal Nehru
Prime Minister of India,

and

The Government of Pakistan:
Field Marshal Mohammad Ayub Khan, HP, H.J.,
President of Pakistan,

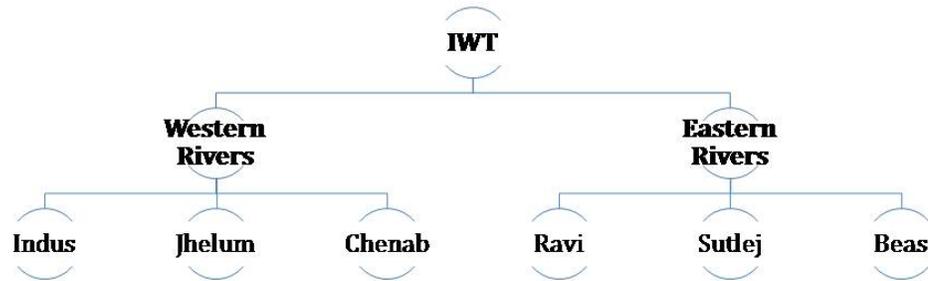
who, having communicated to each other their respective Full Powers and having found them in good and due form, have agreed upon the following Articles and Annexure:-

1. Definitions
2. Provisions Regarding Eastern Rivers
3. Provisions Regarding Western Rivers
4. Provision Regarding Eastern and Western Rivers
5. Financial Provisions
6. Exchange of Data
7. Future Co-operation
8. Permanent Indus Commission
9. Settlement of Differences and Disputes
10. Emergency Provision
11. General Provisions
12. Final Provisions

Annex	Title	Appendices
A	Exchange of Notes between Governments of India and Pakistan	-
B	Agricultural Use by Pakistan from Certain Tributaries of the Ravi	-
C	Agricultural Use by India from the Western Rivers	-
D	Generation of Hydro-Electric Power by India on the Western Rivers	3
E	Storage of Waters by India on the Western Rivers	1
F	Neutral Expert	-
G	Court of Arbitration	1
H	Transitional Arrangements	4

Highlighting the salient aspects of the IWT, Mr. Ahmer Bilal Soofi presented the following slides which explained five major aspects:

1. Division of Rivers



Western Rivers

- Unrestricted Use by Pakistan
- India can use them for:
 - Domestic Use
 - Non-Consumptive Use
 - Agricultural Use
 - Generation of HEP

Eastern Rivers

- Unrestricted Use by India (No vested right of Pakistan)

2. Permanent Indus Commission (PIC)

1. PIC set up under the IWT.
2. Comprises two commissioners:
 1. One from Pakistan;
 2. One from India.
3. Funded by the respective Governments.

3. Dispute Resolution Mechanism



4. Generation of HEP on Western Rivers by India

1. India can only make run-of-the-river dams.
2. Total capacity of these dams is restricted to 2.85 MAF (Million Acre Feet).

		Conservation Storage Capacity		
		General Storage Capacity	Power Storage Capacity	Flood Storage Capacity
(1)	(2)	(3)	(4)	(5)
			<i>million acre-feet</i>	
(a)	The Indus.....	0.25	0.15	Nil
(b)	The Jhelum (excluding the Jhelum Main).....	0.50	0.25	0.75
(c)	The Jhelum Main.....	Nil	Nil	As provided in Paragraph 9
(d)	The Chenab (excluding the Chenab Main) ...	0.50	0.60	Nil
(e)	The Chenab Main.....	Nil	0.60	Nil

Provided that

(i) the storage specified in Column (3) above may be used for any purpose whatever, including the generation of electric energy ;

5. Termination of Treaty

1. The IWT cannot be unilaterally terminated.
2. According to Article 12 (4), a new treaty needs to be drafted and mutually ratified by both India and Pakistan to this effect:

Article XII
Final Provisions
(4) The provisions of this Treaty ... shall continue in force until terminated by a duly ratified treaty concluded for that purpose between the two Governments.

In addition to the salient features and technical specifications of the IWT, Mr. Soofi drew everyone's attention to what's not covered in the Treaty. Citing his own published work, he argued that the "number of dams that India wishes to construct on the Western Rivers is an issue outside the scope of the Treaty."

Following is the clipping of his published work.

DAWN

Indus treaty: Pakistan's options

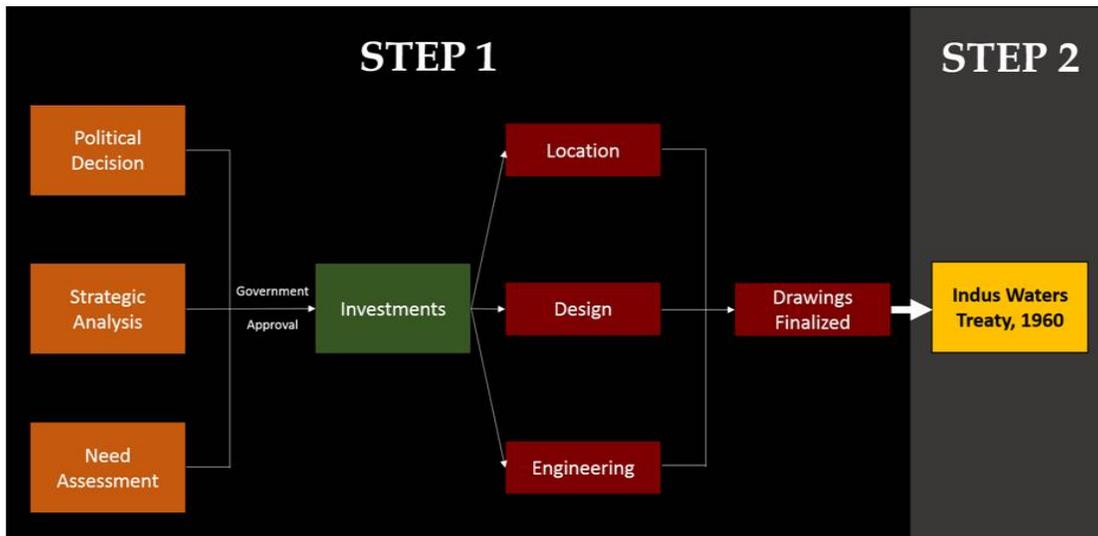
AHMER BILAL SOOFI — PUBLISHED APR 18, 2010 12:00AM

“There is no provision which expressly *authorizes* India to construct a certain number of dams. Neither is there one that prohibits India from making dams beyond a certain number. Clearly, therefore, **the number of dams that India wishes to construct on the Western Rivers is an issue outside the scope of the treaty** ... The treaty is a regulatory framework giving technical specifications. It is confined to these technicalities and does not address the substantive decision of the number of dams that the Indian government may wish to construct.”

Interestingly, the process of dam building in Indian Occupied Kashmir (IOK) highlights certain aspects of the process which are not covered in the Treaty. These include the political decision making involved in building a dam, the need assessment and the strategic analysis behind the decision.

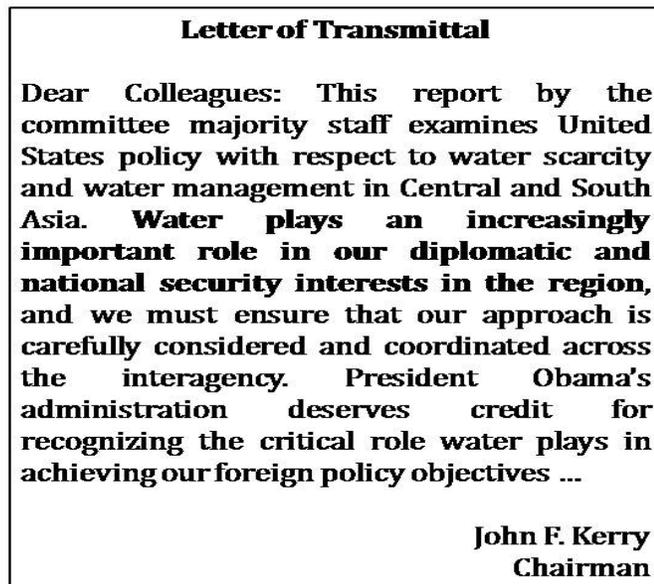
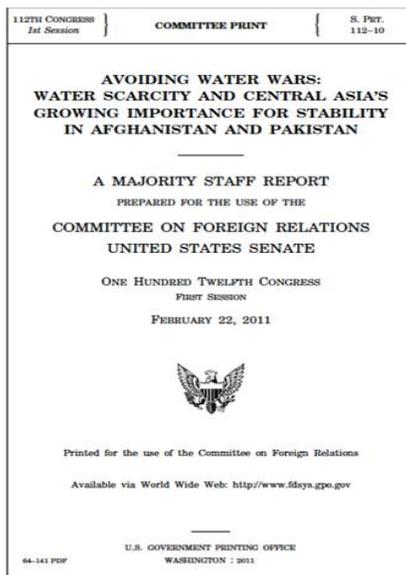
Moreover, in the slide as below, Mr. Soofi highlighted different stages of this process and in light of the IWT, only after India has finalised the decision it shares stage two information with Pakistan. Therefore, Pakistan's ability to influence a dam building decision under the IWT is also limited to an extent.

Decision Making of Building a Dam in IOK



Highlighting new and emerging challenges to water security and efficacy of the IWT, Mr. Soofi presented the following slides:

1. Major Staff Report for the US Senate, 2011 (1)



1. Major Staff Report for the US Senate, 2011 (2)

In Central and South Asia, particularly in Afghanistan and Pakistan, the **impacts of water scarcity are fueling dangerous tensions** that will have **repercussions for regional stability** and US foreign policy objectives. The national security implications of this looming water shortage – directly caused or aggravated by agriculture demands, hydroelectric power generation, and climate instability – will be felt all over the world.

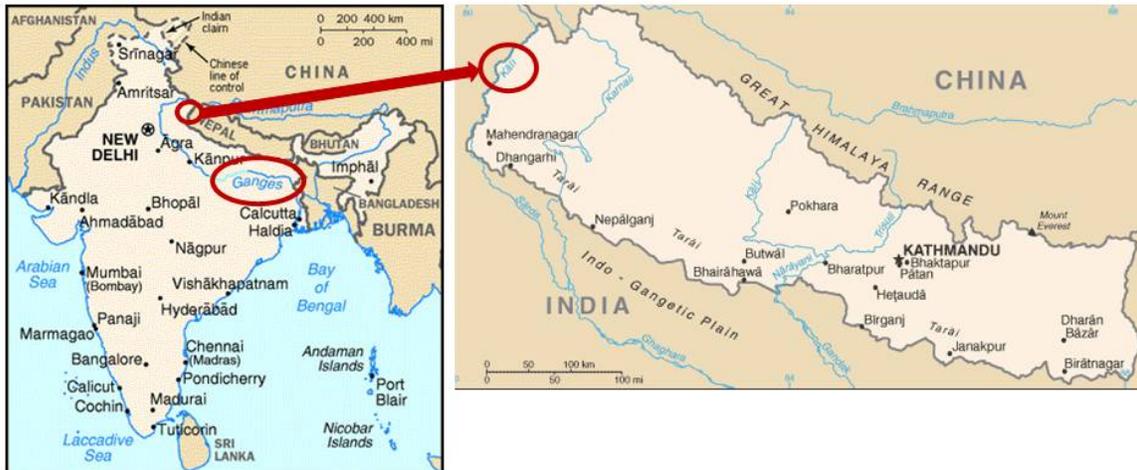
Through the **US-Pakistan Strategic Dialogue**, Under-Secretary of State for Democracy and Global Affairs Maria Otero has seized the initiative by cochairing a **water working group** to examine how to respond to Pakistan's needs and improve US assistance.

2. Evolution of Customary International Law

1. Case for Minimum/Environmental Flows (for the Eastern Rivers).
2. Role of a Responsible Upper Riparian State.

3. Indian State Practice (as a lower riparian)

1. Mahakali Treaty (Nepal).
2. Ganges Treaty (Bangladesh):
Express provisions relating to the creation of a new dam – States to mutually decide on the details.
3. 'Lower Riparian Anxiety' with regards to China:
Vis-à-vis China's plans to make dams on the Tibet River (which flows into Indus).



4. Justice Mansoor Ali Shah's Flood Report

1. No law regulating inhabitants of active flood plains.
2. Lack of a proper Flood Plain Management Plan.
3. Flood plains neither zoned nor demarcated.
4. Lack of regulation of construction works in the flood plains.
5. Lack of advice on nature of crops to be grown in the area.
6. Lack of emergency shelters.

5. LHC Judgment 2013 – Kalabagh Dam (1) (Hon. Justice Umar Atta Bandial)

1. Council of Common Interest(CCI)'s Decisions (1991 & 1998)
 - a) 1991: Express approval for construction of Dam
 - b) 1998: Direction for supplementary projects in support of the Dam
2. Technical study in 2004 by the provinces approved feasibility
3. Constitution confers upon CCI power to formulate and regulate policies for the Federation for a number of subjects, including Water and Power
4. A decision of the CCI has obligatory effect under A. 154 of the Constitution

5. LHC Judgment 2013 – Kalabagh Dam (2) (Hon. Justice Umar Atta Bandial)

5. The Court held that:

In the present day of shortage of available electric power in the national grid, scarcity and depletion of irrigation water resource for arable land in the country and the frequent occurrence of floods in the Indus riverine basin has adversely affected the quality and security of life of the citizen in the Province of Punjab and the country as a whole. The resulting degradation in the quality and conditions of life of the affected citizen violates their fundamental rights guaranteed under Articles 9 and 25 of the Constitution.

6. Therefore, the Court directed the Federal Government to implement the CCI decisions under A. 154 of the Constitution

6. Obligation on Pakistan to Make Dams

DAWN

Legal case for dams

AHMER BILAL SOOFI — PUBLISHED JAN 13, 2014 07:39AM

Under international law, a positive obligation to not inflict unreasonable harm on the lower riparian state restricts the sovereignty of the upper riparian state. However, while the **upper riparian is almost like a trustee for the lower riparian** and must therefore adopt suitable measures to preserve the catchment areas, its failure to do so **does not absolve the lower riparian from its independent obligation** to manage water flowing through its territories so as to ensure both **equitable and reasonable utilization** of shared water resources ...

I am afraid that the **failure** of the federal and provincial governments to **plan for construction of dams and water reservoirs will legally and politically weaken our stance against India** which is unabatedly constructing several more dams in a far smaller catchment area than ours."

7. Recent Threat to Unilaterally Revoke IWT (1)

1. **PM Modi held a meeting** on Monday, **26th September, 2016** to review the status of the IWT.
2. **ABS Statement in DAWN** on Tuesday, **27th September, 2016**:
 - **Unilateral termination of the IWT is illegal;**
 - **Treaties only unilaterally revoked in an environment of hostility (e.g. war);**
 - **Doing so will give Pakistan a non-coercive right of reprisal.**
3. India planning to **put pressure on Pakistan by exploiting Western Rivers**:
 - **This goes against the promise of goodwill enshrined in the IWT;**
 - **Proves Pakistan's 'lower riparian anxiety' was justified.**
4. **Indus Water Commissioners' meetings suspended.**

7. Recent Threat to Unilaterally Revoke IWT (2)

Interview: 'Indus treaty can't be revoked unilaterally'

DAWN

KHALEEQ KIANI — UPDATED Sep 27, 2016 12:40pm

Q: Can India unilaterally revoke IWT?

A: India has no legal competence under the treaty to revoke it per se on its own. Article 12(4) of the treaty entitles the termination of the treaty only if both India and Pakistan agree in writing. In other words, a termination treaty has to be drafted by both states and then ratified by both, to bring the IWT to an end. The treaty has no provision for unilateral "suspension". It is of an indefinite duration and was never intended to be time-specific or event-specific.

The IWT is not regime-specific — but rather state-specific. It will not expire with regime change. It is binding on both the states equally and offers no exit provision. Walking away from a treaty is in effect its breach ... In other words what India will call "revocation or withdrawal", Pakistan will refer to as a "breach".

Concluding with "A Way Forward", Mr. Soofi presented four critical points:

1. Understanding the difference in approaches. For example in an engineer's view, India does not violate IWT by constructing dams so long as it releases the minimum water flow. From a national security analyst perspective it enhances India's capacity to use water as a weapon.
2. Implementing the Paris Convention, 2015.
3. Main aim to lower greenhouse effect/emissions.
4. Pakistan, as a developing state, needs to move away from fossil fuel based energy generation.
5. Shift from non-renewable to renewable sources of energy.
6. Optimal option for Pakistan: Hydro-electric power generation.
7. Developed states under an obligation to finance developing states to implement their obligations under the Paris Convention, 2015.
8. Raising the issue on an international and bilateral Level.
9. Take up the issue of building dams as a bilateral agenda item outside the IWT framework.

10. Bring India's recent threat, statements and actions to the attention of the UN Secretary General (under Article 99 of the UN Charter) and the UNSC.
11. Capacity building of the Office of the Indus Water Commissioner.
12. Initiate an internship program for lawyers in the Indus Water Commissioner's office in Lahore.

PRESENTATION

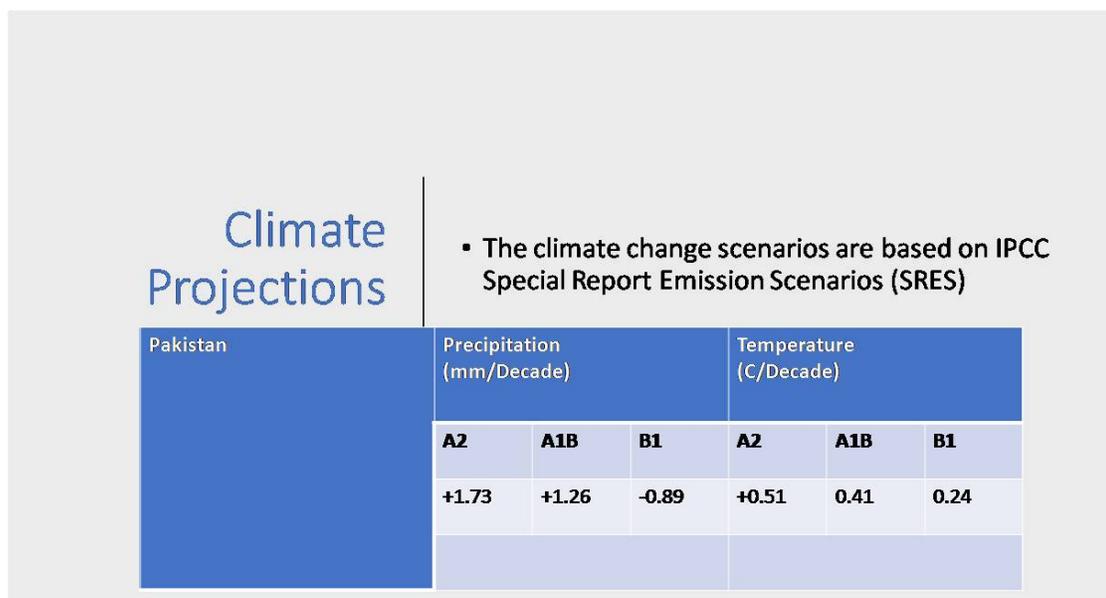
Indus Water Treaty: Impacts of Climate Change

Muhammad Irfan Tariq

Director General (Environment and Climate Change)

Ministry of Climate Change

Mr. Tariq began by providing the climate change projections for Pakistan.



He then went on to explain the implications of climate change and its impacts, which included:

Implications of Climate Change

- Water security and rising population;
- Decrease in glacier volume and snow cover;
- Increased annual flows for a few decades followed by decline in flows;
- Increase in the formation and outburst of glacial lakes;

- Higher frequency and intensity of extreme climate events; and
- Greater demand on water due to higher evapotranspiration rates.

Impacts of Climate Change

- These trends will have a significant impact on the spatial and temporal distribution of water resources.
- Presently, 95% of irrigation is located in the Indus river basin which uses 93% of withdrawn water.
- Thus, the melt water component is extremely important, making it a primary source for irrigation of the entire IBRS.
- Country's water resources are inextricably linked with climate change and projected climate change has serious implications for Pakistan's water resources.
- Climate change further complicates the water resources management in Indus Basin.
- On both annual and inter-annual basis in the country.
- This will further exacerbate the already difficult situation of a water stressed country facing demand increases due to population growth and increasing economic activity.

Mr. Tariq factored in the likely changes in water availability under various climate change projections up to 2050 and analysed the interaction between water demand and water availability. He said that the traditional trichotomy has been water use in agriculture, domestic use (drinking water and sanitation) and industry.

The present share of water in agriculture (the most dominant sector) is 111.21 million acre-feet (MAF) and is around 88% of total water use. The projected demand for agriculture water in 2025 is 119.85 MAF and that in 2050 is 135.76 MAF. The gap has clear implications for agriculture in terms of cropping patterns, rotations and under different systems of irrigation will be possible. Continuing present demands for agriculture will be difficult.

He said that Industrial Sector Water for industry is assumed growing at a rather constant rate, despite the fact that the industrial sector is being held up primarily due to a lack of

energy and widespread load shedding. Given the present investment in the energy sector Pakistan is poised to rejuvenate its industrial sector, based on a review of various growth estimates and investment plans of the government under its 2030 vision.

Much of the water pollution generated by these industries will also impact the Indus River Systems, where most of the effluence is dumped and which carries the agricultural load (pesticides, insecticides, weedicides). Domestic drinking water demand will increase from the current 7.56 MAF to 10.37 MAF by 2025 and 32.49 MAF by 2050.

Based on a review of various growth estimates and investment plans of the government under its 2030 vision, we estimate industrial water requirements in 2025 to be in the tune of 3.28 MAF, rising to 6.82 MAF in 2050. When combined with the effects of the China–Pakistan Economic Corridor (CPEC), this rise would be even higher. Industries will also impact the Indus River Systems adversely.

Water requirements will change in the 10 agro-ecological zones. The southern zones will see population migration trends as people move to higher elevations in search of milder temperatures.

Those choosing to continue to reside in the zones where temperatures will rise by 3–4.5 degrees Celsius will find water demands rising just to sustain health and economic activity. In the northern zones, that will see higher temperature up to 5.5 degrees (and in highest elevations as high as 7 degrees by 2080, as per current modeling work being undertaken by the Pakistan Meteorological Department) populations will engage in valley agriculture and it can be postulated that there will be some shifts in the population, though not on massive scale.

In the IPCC's The Emissions Scenarios of the Special Report on Emissions Scenarios (SRES), the A1 storyline and scenario family describes a future world of very rapid economic growth, global population that peaks in mid-century and declines thereafter, and the rapid introduction of new and more efficient technologies. (A1B) where balanced is defined as not relying too heavily on one particular energy source, on the assumption that similar improvement rates apply to all energy supply and end-use technologies.

There are anomalies in the data and at times diverging conclusions have been drawn by different studies regarding water resources and demand in Pakistan. The corroborative

evidence provided by the different stakeholders improves the overall understanding of the issues and finally a desire to see reasoned action by government and civil society to address the water scenarios emerging for Pakistan.

Finally, policy measures for “National Climate Change Policy-2012” are as following:

- To conserve water by adopting appropriate techniques and measures.
- Providing incentives for adoption of more efficient irrigation techniques.
- Developing local rainwater harvesting measures.
- To increase awareness to adapt to changing water resource situation due to climate change.
- Enhancing public awareness to underscore the importance of conservation and sustainable use of water resources.
- To develop and implement integrated water resource management.
- Ensuring that water allocations are made according to changes in sectoral demands caused by climate change.
- Protecting ground water through management and technical measures like regulatory frameworks, water licensing, artificial recharge especially for threatened aquifers.
- Developing waste water recycling and its reuse in agriculture, artificial wetlands and ground water recharge.
- Protecting and conserving water ‘catchment’ areas, and reservoirs from degradation, silting and irrigation system contamination.
- Encouraging active participation of farmers in water management along with line departments.
- Distributing water among provinces as far as possible according to crop sowing timing.
- To develop and enforce required legislative and regulatory framework to protect

water resources from climate change related vulnerabilities.

- Legislating and enforcing laws and regulations required for efficient water resource management, conservation and groundwater regulatory framework.
- Legislating and implementing the draft National Water Policy to address the water related vulnerabilities induced by climate change.
- Legislating and enforcing laws related to industrial and domestic waste management.
- Declaring glaciated areas as 'protected areas' to protect HKH Glaciers.
- To enhance capacity to manage the country's hydrological system.
- Preparing a comprehensive inventory of all water resources, including surface and ground water, in order to support an efficient water management system in the country.
- Strengthening the present hydrological network to monitor river flows and flood warning systems.
- Ensuring effective planning and management of irrigation water.
- Developing and extending technologies and techniques of domestic and drinking water saving, as well as sea water utilization.
- Enhancing national capacities for monitoring temporal changes in glaciers, snow cover, and meteorological parameters.
- To develop climate change resilient water infrastructure in the country and strengthen it according to the needs.
- Enhancing country's water storages capacities.
- Ensuring the early rehabilitation, remodeling and up-gradation of existing irrigation infrastructure in the country, which can sustain the climate change related expected extreme weather events.
- Developing infrastructure to harness the hill torrents potential.

PRESENTATION

Indian Construction on Western Rivers: Pakistani Perspective

Mr. Muhammad Shams-ul-Mulk
Former Chairman WAPDA

Mr. Muhammad Shams-ul-Mulk spoke about the century that is gone; about the environment in which certain events took place immediately after partition of India. These weren't easy days as what had happened in pre-partition Punjab, which had to undertake the complex question of partition.

In one of the meetings in the Civil Secretariat Lahore, one of the ministers raised the question over water rights under the new dominions. In reply, Sardar Sawan Singh commented that neighbors do not cut water on one another. This answer to the question on water rights was replied in the above mentioned expression a few months before Partition.

Later, on April 1, 1948, India stopped Pakistan's waters. How did this happen and why? To find answers to these questions you will have to go back to the partition. Mr. Mulk was of the opinion that two gentlemen belonging to the most respectable institutions, of Royalty and Judiciary, Lord Mountbatten and Radcliff, must be held accountable in this regard.

One of the maps, still in the Governor House Lahore, where the post partitioning is shown by a line on August 5, 1947 and then there is another map of August 11, 1947 which awards these resources to India and Pakistan. And the rule was that contiguous majority Muslim majority areas of West Punjab will be awarded to Pakistan and nine such tehsils which had Muslim majority and these were contiguous to Punjab were not awarded to Pakistan, but awarded to India. The map of August 11, 1947 shows this second boundary, which was the beginning of the problem.

Later on April 1, 1948 India stopped waters to Pakistan. In that early post-independence period, the Government of Pakistan faced challenging situation where it had to operate initially from tent offices in Karachi. The immediate concern was dealing with millions of refugees coming from India, having being attacked on their way to Pakistan? Under these circumstances and environment, this problem had taken its birth and has lingered over time.

As an engineer how would have I interpreted the Indus Water Treaty (IWT)?

“All the waters ... for its unrestricted use in India” as under Article 2, and interestingly Article 3 which allocates for Pakistan starts and ends with the same words, “All the waters ... for its unrestricted use for Pakistan”, equating Pakistan rights with that of Indian rights makes ours even more sacred. The only problem is this that every document provides for rights and obligations for the agreed parties under the Treaty, and if you do not use your rights, subsequently the other partner, in this case India, will tend to take the space that you created. Therefore, I believe that we have not been using our rights. Can you imagine that the waters flowing from Pakistan to Indian occupied territory are protected, and similarly, those waters flowing into Pakistan are thrown away in sea? Being careless is worse than absentee landlords.

Why are not we using our water rights carefully? With a heavy heart I say that we are doing what India would have wanted us to do.

I still remember that WAPDA was not involved in the negotiations. But in September 1960, when the Indus Water Treaty (IWT) was signed, President Ayub Khan called Chairman WAPDA and told him that he is nominating WAPDA as an agent of Government of Pakistan, which means that all the obligations that are given to be fulfilled by Pakistan will be fulfilled by WAPDA.

During my posting as Deputy Director Mangla Dam, people from all walks of life used to come to and express their pride in us building world’s largest water reservoir. However, I recall that after the involvement of WAPDA, it had asked for an additional dam to Mangla. So what to do, after some consultations, WAPDA advised construction of Kalabagh Dam, but Ghulam Ishaq Khan, then President agreed on the construction of Tarbela Dam.

But this was not an end. Later on, our plans were simple that building Kalabagh Dam by 1995 and Bhasha by 2010, which if these would have materialized, Pakistan would not be facing the problem of energy deficit as today. Even the electricity generation cost would have been cheaper. We should return to our old plan of 1967, we must start with Kalabagh, complete Bhasha, Dasu, Patan and all other dams.

Can you imagine that all our neighbors, specifically China and India, have built respectively 22,000 plus and approximately 4700 dams in past 50 years. I leave you with the question. What have we done?

PRESENTATION

Recommendations and Suggestions on Implementation of the Indus Waters Treaty – 1960

Mr. Mirza Asif Baig

Commissioner, Pakistan Commission for Indus Water (PCIW)

Explaining India's and Pakistan's entitlements under the Treaty – The Eastern Rivers, the text of Treaty says, "All the waters of the Eastern Rivers are for unrestricted use of India except for domestic use, non-consumptive use and agricultural use permitted to Pakistan."

- The limits specified for Pakistan's agricultural use:
 - 100 acres in Basantar Nullah; and
 - 45,000 acres flood irrigation distributed in various tributaries of the Ravi River.

Similarly, explaining the India's and Pakistan's entitlements under the Treaty – The Western Rivers, the text of Treaty says, "All the waters of the Western Rivers are for Pakistan except for domestic use, non-consumptive use, agricultural use and generation of hydropower."

- Additional agricultural area of 701,000 acres permitted when supplemented by storage,
- If not supplemented by storage, this area is limited to 270,000 acres Run-of-River (RoR) plants and those incorporated in Storage Works permitted subject to design and operational restrictions specified in Annexure D and E, respectively.
- The storage permitted is limited to 3.60 million acre-feet (MAF) distributed in the three river basins; no storage is permitted on the Jhelum Main.
- There is a limit specified on the Operational Pool (pondage) of RoR plants, excessive freeboard is not permitted, outlets (spillways, intakes and sediment outlets are to be placed at the highest level).
- There are restrictions on initial filling of dead storage of Run-of-River plants; and

- There are restrictions on the operation of the operational pool.

Furthermore, explaining India's and Pakistan's entitlements under the Treaty, it argued the following:

- There are restrictions on the design of the storage works similar to those for RoR plants.
- Annual filling of the conservation storage either is to be done with the consent of Pakistan Commissioner or in the period specified in the Treaty.
- Releases pattern is also controlled by the Treaty so that it is not harmful for the lower riparian.

India's agricultural use to date:

- Upper limit of agricultural use with supplement from storage is 701,000 acres (impact about 1-2 MAF).
- Upper limit of agricultural use without supplement from storage is 270,000 acres (impact about 0.5-1 MAF).
- Present use varies between 120,000 to 140,000 acres; within the limits (impact about 0.25 to 0.5 MAF).

Indian projects on the Western Rivers:

River	Completed	Under-Construction	Planned	Total
Indus	15	22	12	49
Jhelum	19	5	38	62
Chenab	18	5	53	76
Total	52	32	103	187

Constructed HEPs on the three Western Rivers:

River	Project	Live Storage/ Pondage (AF)	Manipulatable Capacity (AF)
Indus	Nimoo-Bazgo	7,880	41,605
Indus	Chutak	NIL	477
Jhelum	Uri-I	NIL	231
Jhelum	Uri-II	NIL	4,784
Jhelum	Lower Jhelum	780	370
Jhelum	Upper Sind-II	328	338
Chenab	Baglihar	26,397	163,561
Chenab	Dulhasti	7,604	8,545
Chenab	Salal	NIL	Initially 58,000 acre-feet, now negligible due to filling by sediments

India's attitude towards Treaty implementation:

- India accepted Pakistan's proposed modification in Salal Hydropower Project, but is facing problems of turbine abrasion after filling of the reservoirs by sediments.
- India's design had a fault that it did not incorporate a desanding/desilting facility.

- India instead of providing spillways with surface gates is adopting deep orifice spillways and wants to use these for sediment flushing.

In case of Baglihar, Neutral Expert (NE) accepted India's design of deep orifice spillways and permitted her to carry out drawdown flushing for sediment control. This decision was against the clear Treaty provision of Para 20 of Annexure E, which does not permit drawdown below dead storage level unless in an unforeseen emergency.

NE also accepted India's excessive pondage by leaving the obvious meaning of Paragraph 8(c) of Annexure D to the Treaty and adopting a meaning for which he had to leave aside the Treaty's definition of Firm Power and adopted ASCE definition of Firm Power with entirely different meaning. Pakistan placed a general question in previous Kishenganga case that whether drawdown below dead storage level was permitted by the Treaty?

India pleaded that drawdown flushing was a requirement for sediment control without which hydroelectric plants cannot function and should be allowed. India conceded that its design of Kishenganga was for drawdown flushing. The Court decided in Pakistan's favour and held that drawdown below dead storage level was not permitted unless in an unforeseen emergency and sediment flushing was not an unforeseen emergency.

Despite the Court's decision, India persisted with its design of Kishenganga Dam and designed Ratle HEP on the same lines as Baglihar Dam. Pakistan had no option but to take the matter to the Court of Arbitration. India did not appoint two arbitrators it is required to appoint within 30 days of the submission of Request for Arbitration.

In order to obstruct further Pakistan's access to the Court, it submitted a request for appointment of Neutral Expert and asked the World Bank to appoint a Neutral Expert.

The World Bank instead of proceeding with the earlier request of Court of Arbitration decided to form both forums of the Court and NE.

Subsequently, the Bank backtracked on the basis of possibility of conflicting outcomes and announced a 'Pause' for resolution of the substantive issues through bilateral talks, and if that is not possible, to achieve Parties' agreement on the mode of resolution. One round of talks has been held and Pakistan submitted alternative designs that are being reviewed by India and another round of talks is going to be held in mid-September 2017.

For India, there are two options: either agree to the Pakistan's alternative designs (or something close to it); or accept the resolution through Court of Arbitration. Pakistan must insist on the Court of Arbitration as its request happened earlier than India's. According to Article IV (14) of the Treaty, any illegal construction does not become legal on the basis that it has been completed.

Pakistan must not agree to fait accompli of Kishenganga Dam and must contest it for correcting India's persistent behavior of protracting the negotiations and proceeding with construction and trying to complete the dam.

Explaining how the Treaty deals with fait accompli, Article IV (14) of the Treaty was pointed out which said, "In the event that either Party should develop a use of the waters of the Rivers which is not in accordance with the provisions of this Treaty, that Party shall not acquire by reason of such use any right, by prescription or otherwise, to a continuance of such use."

Mr. Baig's recommendations and suggestions for enhancing effectiveness of the Treaty included the following:

1. Value the Treaty, it strongly safeguards our rights on the Western Rivers.
2. If we use water resources of the Western Rivers in an efficient manner, these would suffice us for a long time.
3. Respect the bargain struck, if we want to get our part of the bargain, we will have to accept the other party's share of the bargain.
4. Both Parties have benefitted from the Treaty and are benefitting from it.
5. Though India feels that the design criteria for hydropower plants is a weight around its neck, yet we can show that following the design criteria does not make the designs unsound and uneconomical.
6. We should be determined to get our rights protected. Tenacity and perseverance with the principled positions would ultimately yield results.
7. We should be reasonable and practical in our approach of Treaty implementation.

8. In-house strengthening is required both in technical and legal fields for better results at all levels.
9. All levels, institutional, diplomatic, media, international forums, political need to be involved for protecting the Treaty and safeguard our rights enshrined in it.
10. Develop the water resources of the Western Rivers. Some observers in India have eyes on the water resources that are being spilled into the sea.

ANNEXURE:

AGRICULTURAL AREAS ON WESTERN RIVERS

Figures in Acres

River	Eff. Date	Add Area	Total	From Flow	2015-16
Indus	42,179	70,000	112,179	112,179	49,715
Jhelum	517,909	400,000	917,909	667,909	605,378
Chenab	82,389	231,000	313,389	132,389	107,086
Total:	642,477	701,000	1,343,477	912,477	762,179

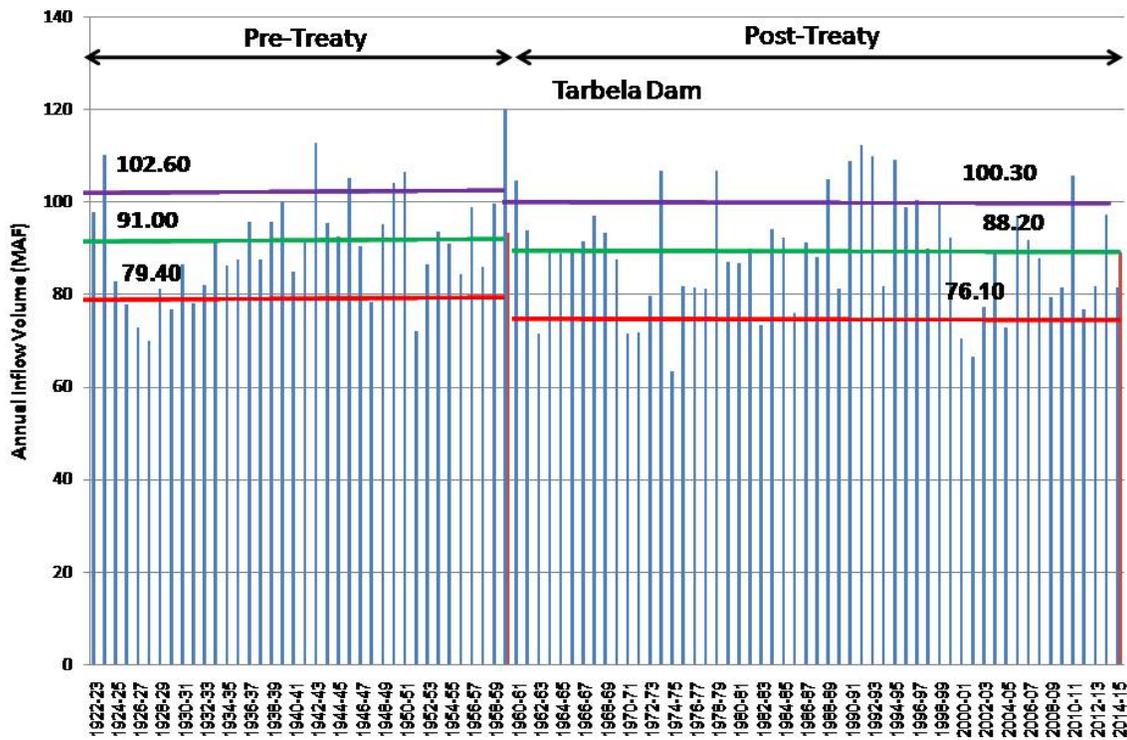
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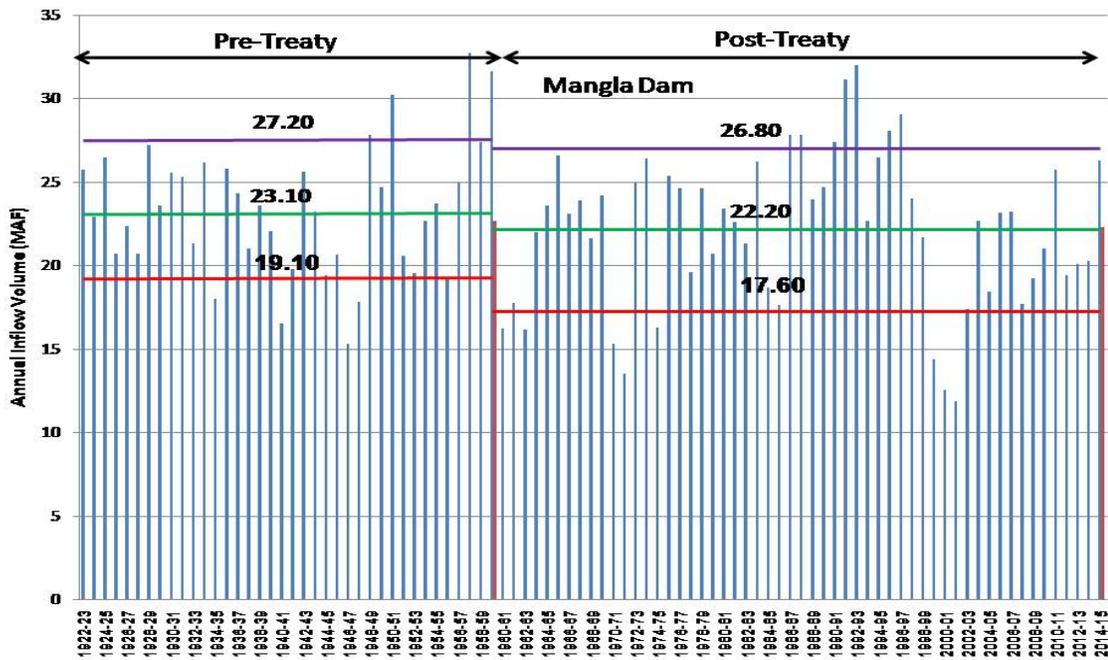
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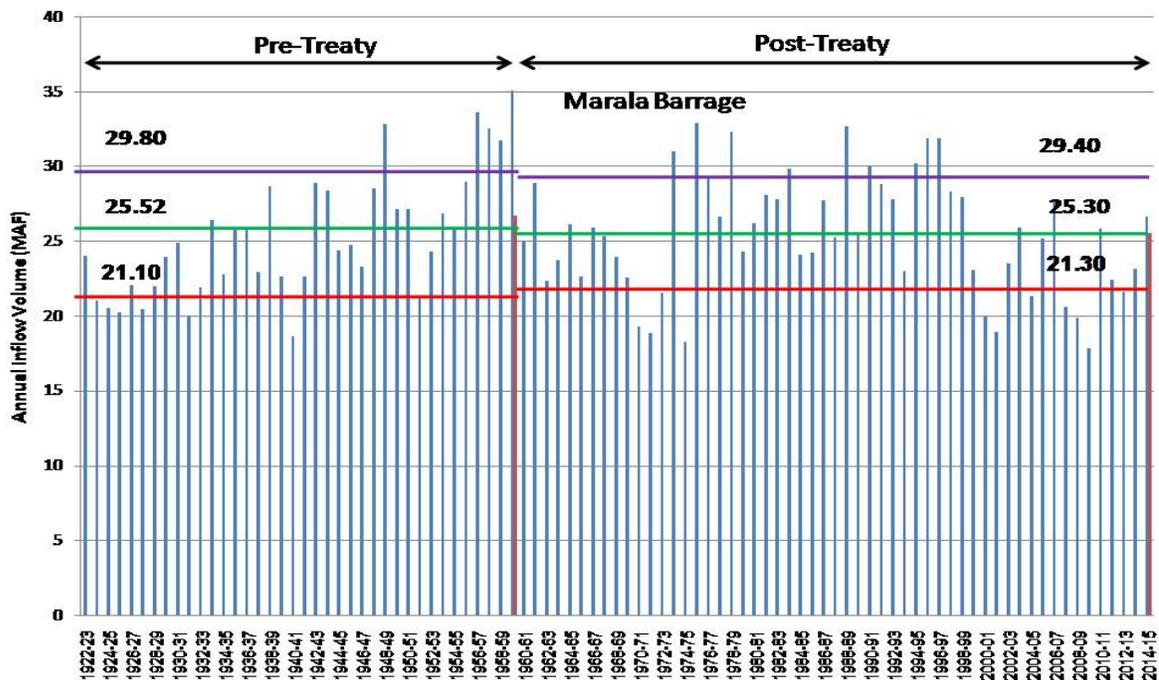
INDUS AT KALABAGH



JHELMUM AT MANGLA



CHENAB AT MARALA



QUESTION–ANSWER SESSION

The session was moderated by Chairman ISSI, Ambassador Khalid Mahmood.

Q: A representative from Planning Commission asked that why certain exceptions in the Treaty were created on the western side and not on the eastern side of rivers under India? Secondly, how to address environmental woes in the Indus Water Treaty?

Mr. Asif said that exceptions are there on the eastern side also, but they are very limited. An example can be drawn from the limits imposed on both in terms of irrigation land. With respect to environmental woes, I believe that a continued effort is required to cater to the changing needs and situations. This has to be a systematic process which should be based on dialogue and negotiations.

Q: A question was raised on the Kishanganga Dam case, arguing for its merits and de-merits?

Mr. Asif Baig said that Kishanganga case can be summarized as, "a lost battle but a win in the long war." There is a need to deeply study the case law on this.

Adding to reply, Mr. Shams-ul-Mulk pointed towards the lobby which wanted to divert Pakistan's attention away from effective resource utilization and their water rights which involves creation of water storage dams and power projects.

Mr. Ahmer Bilal Soofi recommended that there is a need to build a support mechanism for guiding the water commissioner in short run, and this legal position of Water Commissioner should be replaced with an institutional approach towards water issues which supports state craft.

Q: Is there authenticity in the argument that creation of dams will make lands barren?

Mr. Shams-ul-Mulk said that this was a misconception. He rationalized that the cost-benefit analysis of dams will ultimately benefit humanity, as it saves human lives during floods and provides water resource to be stored for later effective use and more.

CONCLUDING REMARKS

Ambassador Khalid Mahmood
Chairman, Institute of Strategic Studies Islamabad

Ambassador Khalid Mahmood, Chairman ISSI, in his concluding remarks said that all agree that the Indus Water Treaty (IWT) is valuable and useful, and efforts should be made to make its implementation more effective. New issues of environment and climate change have surfaced which do require some review of the Treaty. We also need to have an effective legal team to press our rights under IWT and general conventions.



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