



Post Seminar and Roundtable Report
17 JANUARY AND 23 FEBRUARY 2017

NATIONAL SEMINAR AND ROUNDTABLE

HYDRO POLITICS AROUND PAKISTAN: REASSESSING THE EFFICACY OF INDUS WATERS TREATY (IWT)



INSTITUTE FOR STRATEGIC STUDIES;
RESEARCH AND ANALYSIS (ISSRA)
NATIONAL DEFENCE UNIVERSITY, ISLAMABAD-PAKISTAN

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Foreword



In this contemporary world an explosive fault line is erupting across the global land scape between 'Water Haves and Water Haves Nots'. Water is surpassing oil as the world's scarcest critical resource. Just as oil conflicts were central in the twentieth century, the struggle over fresh water is set to shape a new turning point in the world order and destiny of civilisation. Water is life's matter and matrix, mother and medium. There is no life without water. Pakistan has been making headways in water management; however, severe mismanagement and lapses between water consumption and water management still exist. Creating awareness and enlightening the nation to manage and utilize water appropriately is another debate and requires serious pondering not only by the policy makers but also by every citizen of this country.

The seminar on 'Hydro Politics around Pakistan: Reassessing the Efficacy of Indus Waters Treaty (IWT)' conducted by Institute for Strategic Studies, Research and Analysis (ISSRA) under NDU provided a heated debate on the current water crisis. It provided a forum for a experts gathering of academicians and experts, to discuss, analyze and brainstorm the challenges and opportunities that come in the wake of the current debate on IWT and the politics surrounding the sharing of the most vital natural resource. Given how the preservation of the Western rivers water is of utmost importance to the national interest of the country, Pakistan has been negotiating IWT at various international platforms to ensure strict compliance of the treaty.

The government of Pakistan is taking the water issue very seriously. There is a dire need that people of Pakistan should make judicious use of water as 'Water is Soul on Earth'. It should be kept in mind that under any circumstances Pakistan will not succumb to Indian pressure and will ensure the rightful sovereign use of its water at all costs.

Lieutenant General Rizwan Akhtar, H.St, HI (M)
President NDU

Preface



Diversity in views is a reflection of a dynamic and constructive thinking. A thorough and intense deliberative exercise is needed to understand and analyse the current scenario facing the IWT. The raison d'etre of seminar and the roundtable conference was to address the issues imperative to water security and to propose policy guidelines to the state apparatus as a measured response to the Indian violations of the IWT. Indian statement “blood and water cannot flow together” and the threat of unilateral abrogation of the treaty has resulted into a new wave of hydro-politics debate around Pakistan and brought the IWT under immense strain. Such statements are not only raising doubts about the efficacy of the treaty but also hint towards the potential to escalate the tension. Therefore, the contemporary environment demands Pakistan to engage in a constructive academic discourse in order to strategize its policy options within and outside the ambit of the IWT. Pakistan needs to enhance its water storage capacity not only for its dire need, but also because the debate on climate change is gaining momentum in the international realm of politics. Monitoring the behaviour of its glaciers and recording melting patterns will help the country in preservation of its arterial fresh water resources, so that future natural disasters can be managed and averted.

The intellectual activities have proved to be another milestone in a series of such exercises undertaken by intellectuals and thinkers of the country in order to provide an array of high quality input for the purpose of thought provocation and stimulation amongst the policy makers and citizens of Pakistan. I am sure, the findings will help all stakeholders to re-visit policy papers and provide quality information for remedial action. I extend my profound gratitude to Brigadier (Retired) Masroor Ahmad, Director Defence Studies and his team on the successful organization of the seminar and the roundtable conference and compilation of this report.

Major General Ghulam Qamar
DG ISSRA

Executive Summary



- After the aggressive statements by Indian Government on the IWT (Indus Water Treaty) 1960, Pakistan has to make renewed efforts to ensure that the treaty remains intact by developing a policy by consulting provincial governments.
- Pakistan should communicate its willingness to cooperate with India for effective implementation of IWT, including the recommendations in articles 6, 7 and 9 of the treaty. Pakistan has to show its determination to impede any effort to violate or deviate from the commitments stated in the IWT and will seek assistance from multilateral organizations.
- Pakistan should take effective part in the consultations, started by the World Bank to resolve differences and disputes between India and Pakistan. Pakistan should propound a comprehensive dialogue to India, which will address the issues of concern of both countries. This dialogue will address the measures to enhance the efficacy of the permanent Indus Commission to serve as an effective institutional mechanism in conformity with the IWT.
- The Government of Pakistan should contemplate recommendations made by several India- Pakistan Track-2 dialogues held in recent years calling for Joint Studies by the relevant technical institutions and experts of the two countries. That include:-
 - Protection of the watershed of the Western rivers passing through India and Indian-occupied Kashmir.
 - Scientifically, credible assessments of the impacts of climate change including all important dimensions, on the Indus River Basin.
 - Monitoring the flow of water in rivers and

respective measures to respond to observed reduction in river flows resulting from prolonged periods of drought or other impacts of climate change aimed at precluding misunderstandings and boosting mutual trust. Such measures are necessary given that the IWT does not specify the amounts of waters for each party.

- Assessment of the cumulative effects of cascades of hydro-electric projects on the Western rivers built or planned by India on India's capability to manipulate the flows entering Pakistan and AJK and measures aimed at addressing Pakistan's concerns in this regard.
- Environmental flows in the three Eastern rivers to be allowed by India in order to restore the ecological sustainability of the Indus Basin.
- A comprehensive investigation of the state of trans-boundary aquifers and measures aimed at ensuring their sustainable use, including development of appropriate regulatory systems for sustainable ground water management.
- Identification of areas of cooperation in promoting integrated water resource

management in the Indus River Basin with special focus on enhanced agricultural water management and water saving techniques.

- The Government of Pakistan should empower the office of Commissioner for Indus Waters by providing resources. To protect trans-boundary water resources, Pakistan should conduct a dialogue with Afghanistan, which may lead to a treaty concerning the optimum utilization of the shared Kabul River based on mutual benefit. The long pending National Water Policy should be finalized without further delay and there is also a need to ensure effective coordination among the various water-related institutions and statutory bodies currently functioning in unconnected silos. The Water Wing of the Federal Ministry of Water and Power needs to be strengthened. Population management and control system should be devised for a better future management of the crisis.
- The nexus between the Water and Power Development Authority and the Pakistan Commissioner for the Indus Waters should be reestablished through the Commission for Indus Basin Strategic Analysis (CIBSA). Pakistan should have a shift from non-renewable energy resources to renewable energy resources to address the main aim of the Paris Convention.

Findings and Recommendations

- The National Transmission and Dispatch Company (NTDC) must return to the Water and Power Development Authority (WAPDA) while the thermal stations should be privatized. Nexus between the WAPDA & Pakistan Commissioner for Indus Waters (PCIW) should be revived through the Commission for Indus Basin Strategic Analysis (CIBSA). Together they can neutralize the internal and external threats of the enemy. In fact, the PCIW has been in a state of paralysis and facing criminal negligence. The solution is in the form of having a think tank for hydrological analysis. Both PCIW and IRSA absolutely lack the required capacities due to deficient technical depth and commitment. The PCIW secretariat is badly under-equipped to face a relentless upper riparian neighbour. Above all Pakistan needs to understand that our dilemma stems from our ignorance as the CIBSA waits for help.
- The Population Management and Control System should be devised for a better future management of the crisis. Rain water harvesting can save water in the agriculture sector. Ground water can be efficiently managed and additional storage can be established. Initiatives can be taken by the government to control pollution and the simple principle of 3Rs can be followed i.e. 'Reduce, Recycle, and

Reuse'. Both Hardware and Software changes need to be implemented by Pakistan to resolve the issue beforehand.

- The way forward rests in the notion of Understanding the difference in approaches, implementing the Paris Convention, 2015, raising the issue on an International and Bilateral Levels and capacity building of the office of the Pakistan Commissioner for Indus Waters. As per the views of national security analysts, India plans to exploit the capacity to use water as a weapon, whereas, the viewpoint of the lawyers community is that in order to raise the 'water weapon' the IWT mechanism should not be invoked.
- The main aim of the Paris Convention is to lower greenhouse effect/emissions. Pakistan, as a developing State, needs to move away from fossil fuel based energy generation and make a shift from non-renewable to renewable sources of energy. The optimal choice for Pakistan is vested in Hydro-electric Power Generation. Developed States are under an obligation to finance developing States to implement their obligations under the Paris Convention, 2015.
- The Indian Government's recent bellicose statements hinting at a review of the India-Pakistan IWT (1960) has brought the Treaty under severe strain. The high level meeting convened by Indian Prime Minister Modi on 26 September 2016 is reported to have ruled out any move for either a review or unilateral abrogation of the Treaty; however Pakistan should make renewed efforts to ensure that the Treaty remains intact. In this regard, it is suggested that the Government of Pakistan should develop, as a component of its national security doctrine, a policy in consultation with the provincial governments and the AJ&K Government and duly endorsed by the Parliament, reiterating its unequivocal commitment to the preservation of the IWT and its implementation in letter and spirit. Pakistan should state its readiness to cooperate with India in the full and effective implementation of the IWT, including its articles 6 and 7 providing for regular exchange of data and other relevant information and future cooperation respectively as well as the dispute settlement mechanism stipulated in article 9 of the Treaty. Pakistan should declare its resolve to resist and foil any attempt to violate or deviate from the commitments spelt out by the IWT and toward this end seek the assistance and support of the United Nations and other relevant multilateral organizations and forums.
- The Government of Pakistan should participate in a spirit of good will and mutual trust in the consultations initiated by the World Bank to resolve the current differences between India and Pakistan on settling the disputes over the designs of the Kishenganga hydroelectric project being built by India on the Jhelum River in conformity with the Final Award of the Court of Arbitration in December 2013 and the Ratle hydro-electric project.
- Pakistan should propose to India a comprehensive dialogue on trans-boundary waters, which should address all issues of concern to the two countries. The agenda of the dialogue should include but not be limited to, measures to enhance the efficacy of the Permanent Indus Commission to serve as an effective institutional mechanism for promoting wide-ranging cooperation, including expeditious consideration of India's uses on the western rivers of the Basin in conformity with the IWT.
- The Government of Pakistan should consider supporting the recommendations made by several India- Pakistan Track-2 dialogues held in recent years calling for joint studies by the relevant technical institutions and experts of the two countries to generate credible knowledge to serve as basis for decision making on topics and issues whose importance was not well understood during the years the IWT was negotiated. These include:-
 - Protection of the watershed of the western rivers passing through India and Indian-

occupied Jammu and Kashmir with a view to preventing pollution of the river flows entering Pakistan.

- Scientifically, credible assessments of the impacts of climate change on the Indus River Basin, including through a network of hydro meteorological monitoring stations for monitoring the behavior and dynamics of KKH high altitude glaciers whose snow and ice melt feed the Basin and exchange of data and related information on precipitation, stream flows, and water quality, tracking monsoon trends and variability, and utilizing remote sensing technologies and telemetry.
- Monitoring the quantities of river flows and agreeing measures to respond to observed reduction in river flows resulting from prolonged periods of drought or other impacts of climate change aimed at precluding misunderstandings and boosting mutual trust. Such measures are necessary given that the IWT does not specify the amounts of waters for each Party.
- Assessment should be done of the cumulative effects of cascades of hydro-electric projects on the western rivers built or planned by India, on India's capability to manipulate the flows entering Pakistan and AJK and measures aimed at addressing Pakistan's concerns in this regard.
- Environmental flows in the three Eastern rivers to be allowed by India in order to restore the ecological sustainability of the Indus River Basin.
- A comprehensive investigation of the state of trans- boundary aquifers and measures aimed at ensuring their sustainable use, including development of appropriate regulatory systems for sustainable ground water management.
- Identification of areas of cooperation in promoting integrated water resource management in the Indus River Basin with special focus on enhanced agricultural water management and water saving techniques.
- The Government of Pakistan should take steps to empower and strengthen the Pakistan Commissioner for Indus Waters by raising the status of the Commissioner and providing adequate qualified human resources in engineering, environmental conservation, water, hydrology, glaciology, and law. The office of Pakistan Commissioner for Indus Waters should be relocated to Islamabad.
- As part of efforts to protect Pakistan's trans-boundary water resources, Pakistan should initiate high level consultations with Afghanistan leading to negotiations on a treaty concerning the optimum utilization of the shared Kabul River based on mutual benefit. Pakistan should seek the assistance of the World Bank or another third party to facilitate the consultations and negotiations.
- Pakistan's water security, which is an essential prerequisite of our food and energy security, depends on integrated water resource management based on sustainable supply and demand, including adequate water storage, proper maintenance of water infrastructure to minimize losses in transmission, conservation of water and enhanced water use efficiency, storage of flood water, rain harvesting, introduction of water saving irrigation techniques, and ensuring the quality of water for human consumption and irrigation. The long pending National Water Policy should be finalized without further delay. Finally, there is a need to ensure effective coordination among the various water-related institutions and statutory bodies currently functioning in unconnected silos. The water wing of the Federal Ministry of Water and Power needs to be strengthened.

Findings and Recommendations of Roundtable

- During the roundtable a framework was recommended based on trans-boundary cooperation in four areas including bridging knowledge gaps, the Project of Himalayan Glaciers, Coordinating

Climate change adaptation and the Telemetry System and Confidence Building Measures.

- The motto “half the water, twice the output” should be practically implemented.
- The Pakistan's Irrigation System is collapsing and for that an effective water policy should be made immediately and concrete steps should be taken in the same direction.
- Projects like Recycling of the Water should be initiated.
- The best possible alternate in the current scenario would be the merger of the already existing water management institutes coupled with empowerment.



Opening Session

Opening Session

Inaugural of the Seminar

The national seminar titled Hydro Politics around Pakistan: Reassessing the Efficacy of the IWT, was held at ISSRA on 17 January 2017. It aimed at identifying the prevailing water crisis in the country, the efficacy of the Indus Waters Treaty and the future dimensions of hydro-politics across Pakistan. The deliberative exercise was divided into three different sessions. The seminar started with a brief inaugural ceremony. Khawaja Muhammad Asif, Federal Minister for Water and Power was invited as the Chief Guest at the event. The opening session encompassed welcome address by the President NDU, and a keynote address by the Chief Guest. Salient points of the speeches made by President NDU and Federal Minister for Water and Power are as under:-

Welcome Remarks

Lieutenant General Rizwan

Akhtar, H. St, HI (M)

Salients of the Inaugural Speech

- On behalf of National Defence University, the President NDU, welcomed all participants and guests to the seminar. While emphasizing on the efficacy of IWT, he said that the conduct of this seminar on water security is well timed and focused. It enables to revisit the efficacy of over a five-decade old legal instrument on Indus basin waters and the challenges that we may face in the wake of political manipulation in the contemporary geopolitical setting. In this backdrop, a recent threat from India to block the flow of water into Pakistan serves as a critical point of reference for the exercise.
- Certainly, this calls for a free, open and impartial inquiry that aims at crystallizing an expert view on the best possible way forward. To recall, issues of water scarcity and management continue to overwhelm the contemporary international scene, serving as a critical

reminder in the evolving concept of national security. It is widely debated that future wars will be called as 'Water Wars'. Therefore, it is important that we revise our strategies and prepare ourselves for conflict management while exploring newer avenues for cooperation.

- In South Asian context, the IWT has been the most outstanding achievement that established a technical formula and mechanism for water division of the Indus Basin Rivers System in an otherwise politically volatile region. The legal instrument has so far sustained and delivered despite major upheavals in Pakistan-India relations. However, efficacy of the Treaty has



now come into question amid unresolved political issues between the two countries, Indian manipulation of the treaty, our inapt handling of the issue, and the growing imperative of climate change affecting fresh water resources both at regional and international level.

- Undoubtedly, gains of the Treaty remain central in the contemporary water regime between the two South Asian neighbors.

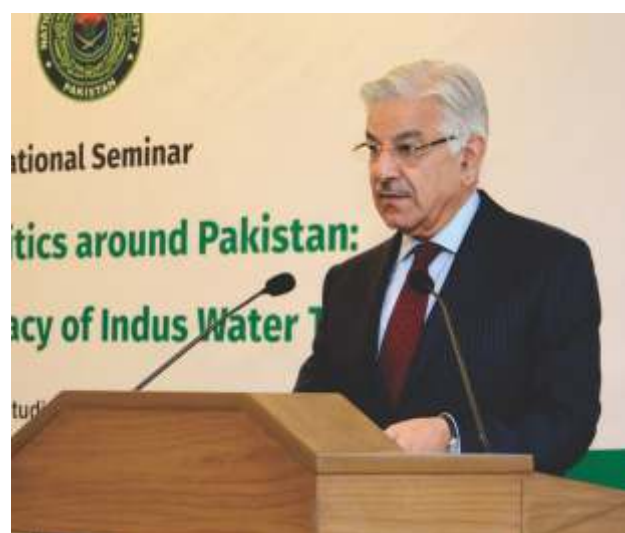
However, at present, there is an immediate need to counter the possibility of using loopholes in this instrument for political manipulation. Similarly, there are varying views on re-visiting the treaty and using different approaches to its rejuvenation by focusing on bilateralism and international pressure to assure adherence to it.

- It can rightly be said that the inputs during this seminar will unfold answers to outlined questions and enable the policy makers to devise a way forward. Ultimately, the debate also relates to the question on how Pakistan will sustain the water division and assure water flow from India while sharing the benefits with the other side.

Keynote Address by the Chief Guest, Khawaja Muhammad Asif, Federal Minister for Water and Power Salients of the Speech

- While addressing the audience of the seminar the Federal Minister for Water and Power deliberated that the waters regime in South Asia and in most other regions of the globe is intrinsically linked with national security and all that this entails. We have just heard a very comprehensive introduction to the seminar and relevance of its theme in pursuit of our national interest. I quite agree that in this era of insecurity, water issues assume critical importance. This is particularly true for our region and for Pakistan at least on two accounts; first, poverty of Asia in fresh water availability and second, Pakistan being a single basin country with predominant share of its fresh water (81%) coming from external sources.
- Against this backdrop, any threat to water flows or its management, whether natural or man-made, calls for a resolute response from our

side. In recent months, we have come across irresponsible statements from our neighborhood threatening to switch-off water flows to Pakistan or to scrap or sidestep the IWT 1960. Whether these statements hold validity or not is another debate, they have provided enough ground to question the intentions of our hostile neighbor, thus, adding further complexity to the South Asian strategic environment. On our part, we stand by our international responsibilities and to guard against any encroachment in the domain of our national security.



- Concurrently, the waters regime as envisaged in the IWT continues to take the brunt of Indian mindset and their inclination to interfere with the waters, exclusively reserved for Pakistan. The potential to interfere is widened if not actualized, in the backdrop of conflicts between the two countries. The Pakistani case in the current setting lays emphasis on achievement of the Treaty and dividing the rivers rather than the waters. Given the constraints of a lower riparian, ruptured basin and loss of leverage (i.e. Eastern rivers); Pakistan remains committed to the need for a multi-pronged strategy based on water rationale to protect its water rights within the existing parameters of the Treaty. Pakistan also intends to flag its concerns on issues such as transparency in information sharing. Our focus, therefore,



remains on implementation of the Treaty in letter and spirit.

- The question of upper and lower riparian is essentially a misnomer in the IWT context. In the first place, Pakistan needs to stick to the Treaty, while emphasizing on its true implementation. Secondly, we need to keep in mind that the country's water dilemma is aggravated in the absence of an effective water storage capacity, water conservation and management strategy. The situation can be improved through a multi-pronged and time efficient management and a strong political will to translate plans into reality. We should put our house in order and take meaningful steps to enhance our storage capacity. Thirdly, climate change and behavior of glaciers due to global warming need to be thoroughly researched in order to assess the water flow and prevent future disasters.
- The seminar provided for the unification of

academicians and experts, and a platform to brainstorm on challenges and opportunities that come in the wake of current debate on Indus waters regime. It is my earnest hope that the discussion would address questions related to the so-called inadequacies of the Indus Waters Treaty and take a critical and analytical approach towards the suggestions coming to us for .benefit sharing, in the wake of new realities.

- There has been no success in the water issue in the last many decades. Lack of adequate management on behalf of the authorities has resulted in water shortage in the country. The core issue lies with its management and distribution. Many debates took place in the Parliament; Senate and other forums across Pakistan but no significant development has taken place.
- As far as the water projects are concerned, the government has not taken substantive steps for the development of hydel projects, e.g. .Bhagliar

Dam. project was started in 1994 but the government woke up in 2005. Similarly, .Kishanganga. was dealt with the same attitude with a political blame game. Likewise, .Neelum-Jhelum. was not accepted and .Ratlay. is also under dispute in the International Court of Arbitration. Pakistan has been facing acute problems while formulating the water projects. The role of World Bank and political pressure of national and international forces has always remained dominant.

- Pakistan is also bound to the IWT and has been negotiating on it. The government does not plan to cave under any international pressure and plans to safeguard its national stance at any

cost.

- The government has also been working on the water management but lapses in water consumption and water management system exist. Above all, water should be taxed and priced at all levels ranging from domestic, commercial to industrial so that the importance of water can be realized. Creating awareness amongst the masses to manage and utilize water appropriately is another debate and requires serious pondering by the policy makers. The government is diligently pursuing the water issue, however still a dire need of a robust water management system exists.

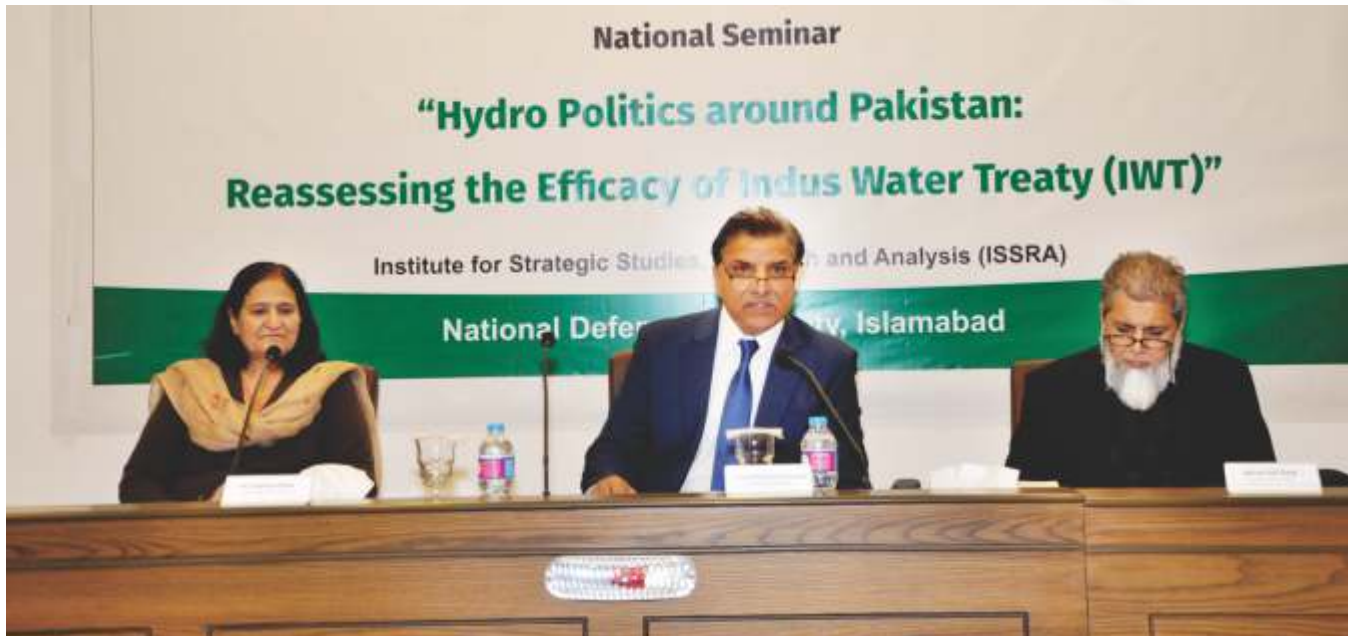




Session I

Session I:

Hydro Hegemony in South Asia: Indian Ambitions and Implications



Session 1 had two panelists namely Ms. Zaigham Habib, Hydrologist, water expert, Mirza Asif Baig Pakistan Commissioner for Indus Waters and the session was chaired by Lieutenant General (Retired) Muzammil Hussain, Chairman WAPDA. It was divided into two parts. First part incorporated "Hydro Hegemony in South Asia: Implications for Pakistan" by Ms. Zaigham Habib, whereas, the second part incorporated "Indian Hydro Power Projects: A Strategic Review" by Pakistan Commissioner for Indus Waters.

Hydro Hegemony in South Asia: Implications for Pakistan by Ms. Zaigham Habib

Ms Zaigham highlighted that in order to understand hydro hegemony in South Asia, it is imperative to know the mechanisms, strategies, frame work and components of hydro politics. In addition, India's hegemonic practices in South Asia have special repercussions for Pakistan, and therefore, require special attention of the policy makers and security establishment of Pakistan.

The main argument is that Pakistan needs to resort firmly to the agenda of framing power

through legal means and channels, keeping in view the tactics to counter hydro hegemonic designs of India. Pakistan's strategy must emphasize on the institutional capacities of building a comprehensive narrative which could be emphatically advocated and propagated at international level. In addition to this, the immediate short term agenda should be to constitute and correct the representation of the Indus Basin profile, assessment of climate change along with finding and defining the anti-coercive tactics in order to counter Indian hydro-hegemony.

Hydrologists, Zeitoun and Warner define



hydro hegemony as hegemony at the level of the river basin. This form of control can be in the stronger riparian's favor and defines behavior of a regional great power with respect to its co-riparian. Its cardinal principle is domination. However, the new global discussion does talk of hydro hegemony as positive, neutral and negative. As illustrated, Hydro hegemony is part of the geographical hegemony of big powers as all over the world, big powers depict a hydro hegemonic trend. Egypt, for example, was a hydro hegemonic power in the past but once it lost its power as a regional giant; its hydro hegemonic controls were also lost.

The pillars of power in hydro hegemony include geography, material power and bargaining power. In the current global world politics, bargaining power has attained momentum as it increases or decreases the role of a country as a regional hegemon.

There are four resource control tactics and strategies of a hydro hegemon. These strategies include getting consolidated control, resource capturing, containment and integration, which are to be exercised in an international context where there are weak international laws and global political trends. Keeping these strategies in view, it is understood that a hydro hegemon does not always exercise physical powers but uses these strategies to attain its goals. For instance, India, as hydro hegemon in South Asia, is in a position to define the rules of the game as it displays special hegemonic trends viz-a-viz its neighbors.

Renowned journalist Selina – Who narrated interesting aspects in her article titled, “Big brother, little brothers' comparing China's and India's trans-boundary river Policies”. She talks of China as positive hydro hegemonic as it co-operates multilaterally with other Mekong riparian, while calling India a negative hegemon due to its limited sovereignty view while sharing water with Bangladesh and Nepal in the Ganges. India is conducting a big international media campaign against China as being a big water hegemon of the region but in reality China is successfully

cooperating with its neighbors multilaterally.

According to the latest studies, India scores high on three pillars of hydro hegemony by wielding most power in South Asia as a political, economic and military might. India's hydro hegemonic paradigm works, firstly, by using normative and utilitarian mechanisms of hydro hegemony and gets access to upstream waters despite being lower riparian as compared to Bhutan and Nepal. Secondly, its neighbours view its actions with suspicion and feel difficulty to conduct discussions on matters of mutual interest. Thirdly, India's insistence on maintaining secrecy about hydrological data contributes to mistrust in the region. Meanwhile, India emphasizes more on bilateral agreements and uses international and regional politics in its favour. Also its presence in almost every international and technical forum of the world helps it in the building of its cases well before time, hardly letting any other country know about its hydro projects. It simultaneously pushes for water dialogue and bilateral agreements when it suits its agendas best, exploiting them to achieve its goals. Finally, its involvement in Afghanistan waters has made the situation more complex.

India's hydro hegemonic practices have numerous implications for Pakistan. Most important is the water security, which has been marginalized in terms of decreasing river flows, ground water pollution of the trans-boundary aquifers, and increased flood risk in eastern rivers during heavy monsoon, causing disproportionate climate change and higher cost of operating the water network. Coupled with this, is the Pakistan's water profile which has been in a mess since 1960 with inconsistent and wrong reporting of data at national and international levels. This situation is further complicated as Pakistan has been established as bad water manager internationally in terms of basin management, water resource development, and internal water conflicts. Also, climate change has impacted the water resources, resulting in a decreased snow cover, glacier melting, and more rainfall. Moreover, enhanced internal water

conflicts account for less water, higher competition and contested allocations. In particular, regional and global water politics link Pakistan's water issues to terrorism and campaign for maligning Pakistan.

Efficacy of the IWT; a Strategic View

by Mirza Asif Baig

A thorough examination of different articles and provisions of the IWT unravel its importance and relevance to Pakistan. This treaty has granted Western rivers Indus, Jhelum and Chenab to



Pakistan while the Eastern Rivers of Sutlej, Beas and Ravi to India. The Eastern rivers, while entering Pakistan, exhibit weak water flow as India has already used them aplenty for its plains, but the water of Western rivers enters Pakistan with a good flow as plain areas on the Indian side of the rivers are limited. This feature of the treaty is of great benefit to Pakistan and is one of many important factors which determine the efficacy of Indus Waters Treaty for Pakistan.

The main argument is that a number of mechanisms and provisions of the IWT determines its efficacy from Pakistan's perspective. These provisions also suggest that the treaty is an instrument of efficacy for Pakistan. In case of problems and difficulties, a serious and realistic approach may be employed. India is in a position to

harm Pakistan but cannot do much against it. So, instead of getting panicked, Pakistan should take this situation as offering bargaining position. A persistent and consistent approach to deal with the Indian intentions is the need of the hour.

The basic bargain of the treaty is that Eastern rivers are for India with 33% 'Average Annual Runoff' (MAF) and the Western rivers for Pakistan with 137 MAF. In addition to this, India is limited to 701,000 acres beyond the area irrigated in the treaty. It should be noted that if India does not have any storage to supplement irrigation, this value reduces to 270,000 acres. Limits of permissible storage are specified to 3.60 MAF.

Article II of the treaty says: 'All the waters of Eastern rivers' shall be available for the unrestricted use of India. After the transition period, Pakistan shall have no claim or right to the release of water from India.' Article III invokes that India shall be under obligation to let flow all the waters of the Western rivers, and shall not be permitted any interference with these waters except for domestic, non-consumptive, and agricultural use. The generation of hydroelectric power is permissible, but under restrictions.

These restrictions ensure the availability of water to Pakistan without hindrance. In case India generates or builds projects on Pakistani share of waters, it should be made bound by imposing design and operational restrictions. Furthermore, there are design restrictions on run of river plants too. In case, India builds a water reservoir, then it will store water only in high flow of water season and that season has also been mentioned in the treaty.

In addition to design restrictions, there are storage restrictions on India as well. India is permitted to store on Jhelum with 0.5 % as general storage, 0.25% as power storage and 0.75 % as flood storage. Likewise, on Chenab 0.60% of power storage is allowed, whereas, general and flood storage is not permitted. These restrictions ensure the availability of water to Pakistan without stoppage.

Wrap Up by the Chair

The chair thanked DG ISSRA for providing him a chance to be present at NDU and more importantly for a subject which was so important and so crucial to Pakistan's national security. He said that the issue was of trans-border, dynamic and geopolitical construct. He underscored the importance of taking practical measures rather than talking about the issue vigorously.

He acknowledged that Pakistan was short of water because of glacier melting, climate change and the situation had been complicated by Indian water manoeuvres. He further opined that there had been an ever growing population stress on Pakistan and nothing was done to handle it. He also, spoke of duality of international financial donors, who found it difficult to fund for Basha and Mohmand dams, but they were ready to finance for Dasu.

He believed, as a chair of the session, that Pakistan was not going to go anywhere by making tall claims on the IWT. He lamented that he tried his best, first, to go through the treaty to find out its efficacy but didn't find any provision which could stop India from making number of water projects on the rivers. Second, there was no clause mentioning how much water is to be stopped in Pondage. Third, there was no clause that would stop India from environmental flow required in Sutlej, Beas and Ravi. Last but not the least, in case of dispute, the work had to be stopped but the treaty was silent about it.

The Chair was of the view that treaty did not have the capacity to implement whatever decisions



had been taken and in the midst of very weak national institutions, political posturing and emotional arguments given on ethnic or provincial lines would not help Pakistan either. The government must know what was needed to be done.

He wished all the thinkers good luck and expressed his resolve to put his best foot forward by contributing as Chairman WAPDA. With reference to the trans-boundary issue of the IWT, he underlined the importance of a complete, holistic and integrated view of the whole issue. He expressed his dismay over the fact that International forum would not provide help in this regard any time soon.

He concluded by saying, "Pakistan must give preference and priority to its national interests over the integrity of the treaty, but the truth lay somewhere in between." He expressed hope that by the end of the seminar, there would be some concrete conclusions to be worked on.



Session II

Session II:

IWT Under Stress and its Efficacy

Session two comprised two panelists namely Engineer Suleman Najib Khan and Sardar Muhammad Tariq, and was chaired by former Chairman WAPDA, Engineer Shams ul Mulk.

IWT Under Stress: Challenges Due to Political Manipulation b

Engineer Suleman Najib Khan

Pakistan has been richly endowed by nature as it is situated around a natural river system. This is the main reason that Pakistan has been able to keep agriculture as its mainstay for its economic growth. Due to this factor, Pakistan is one of the nine countries on the planet that can have a hydro-based energy component to provide more than 50% of its



total electric energy needs in the 21st Century. However, unfortunately in terms of value addition to surface water, in Pakistan, the estimated value addition stands at about US\$ 0.5/ m³ as compared to the world average of US\$ 8/ m³. In fact, in highly developed economies, a value addition of US\$ 30/ m³ of surface waters has been achieved as a result of cascading of dams which has a multiplier effect on the economy and interestingly, this does not include

a value on water for human consumption in these countries. We must be cognizant of the fact that every MAF of water, whether through normal flows or flood waters, lost to the sea will have highly potential cost to the economy.

In this way, a greater impact on our economy came once India occupied J&K and started manipulating Eastern rivers which are Ravi, Sutlej and Beas (1948). This threatened agriculture in Punjab, which is precisely the reason why BRBL, BS LINK 1 and MRL canals were built. A major report by David Lilienthal (Director TVA) came out in 1951 which was prepared on the instructions of the US President Truman, later known as Lilienthal's report. It attributed carelessness of the authorities to the division of land at the time of partition as a result of which the heads of water bodies in Pakistan were lent to India even though major agricultural land lies in Pakistan.

After serious consideration for about a decade, a flawed treaty was signed, named as 'IWT' between Pakistan and India in 1960. It gave Pakistan the right to the three Western rivers and India the right to the three eastern rivers. Also, India could use the water from Western rivers for domestic, consumptive and agricultural use in its limited storage works.

India has been building dams on its waters but in Pakistan, building of dams has always been subjected to controversy. The propaganda against Kalabagh Dam (KBD) in KPK and Sindh has been creating problems since 1980s, which includes narratives about purported water logging in Mardan, Charsadda, Swabi, Pabbi and Nowshera and the blocking of drainages in Peshawar and Kohat. From Sindh, it became a case of lower riparian psychosis, compounded by the fact that Sindh's ground water is brackish for the most part. They consume surface water directly or through shallow seepage wells. Flood (salaba) irrigation on a 14 km wide strip keeps both the Pirs and Waderas

happy and prosperous, thus, denying the original claims that excessive water causes water logging. Sindh uses five times more irrigation water than Punjab. The present leadership of Mr. A.N.G. Abbasi, Mr. Nisar Memon and Mr. Raghieb Abbas Shah made a vitriolic propaganda that Mangroves would vanish and there would be sea water intrusion if KDB is built.

Our predicament arises due to the mergers and acquisition of WAPDA which led to the devolution of the institute by separating its Power & Water Wings when we only should have handed over its bulk power distribution functions to the provinces under Article-157 of the Constitution. It is now history when WAPDA's balance sheet was PKR 2,500 million in 1969, when the federal budget for the year was PKR 1,750 million. Today WAPDA's balance sheet is unable to finance major hydro projects.

Considering the above mentioned discourse, it is recommended that NTDC must return to WAPDA while the GENCOs (thermal stations) should be privatized. Nexus between WAPDA and PCIW should be revived through CIBSA. Together they can neutralize internal & external threats of the enemy. It can be observed that PCIW has been in a state of paralysis and criminal negligence. The solution is the formation of a think tank for hydrological analysis. Both PCIW and IRSA absolutely lack the required punch due to deficient technical depth and commitment. The PCIW secretariat is under-equipped to face a relentless upper riparian neighbour. Above all, Pakistan needs to understand that our dilemma stems from our ignorance, which is evident from how CIBSA is in dire need of help.

When it comes to the ongoing dam projects in Pakistan, Tarbela Dam HPP Extension using Tunnel 5 (T-5) is being pursued without a feasibility study. No additional energy is available except during high floods when sediments and turbine corrosion is very high. In fact, after the construction of Diamer- Bhasha Dam, there will be little possibility to even operate T-4. Also, surplus flows in

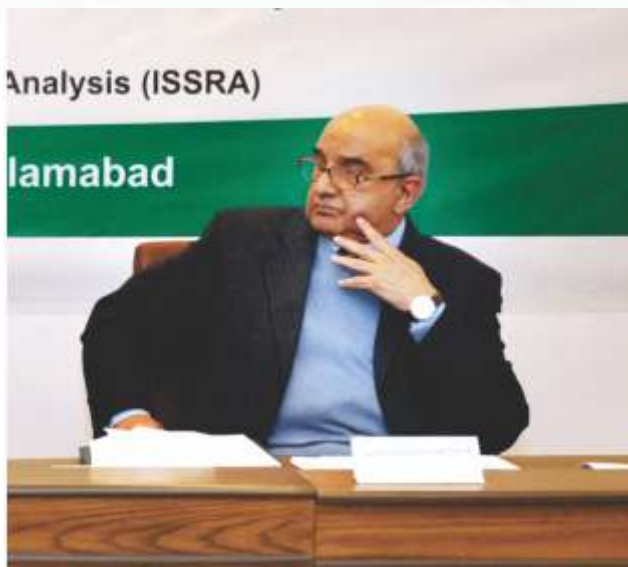
dry years would not be available especially after construction of upstream DBD and DASU HPP. T-5 is actually a conspiracy to eliminate the downstream Akhori off-channel storage, ignoring the fact that it is a vital reservoir in the post-Tarbela scenario. Tarbela reservoir can be modeled for power optimization when there is a downstream reservoir for irrigation (Akhori), which is indispensable.

Apocalyptic floods like that of 2010 can be turned into a net gain for the economy. Assuming, we had storage of around 30 to 40 MAF instead of the depleted 11 MAF live storage available in 2010, the flood peaks could have been attenuated and generally contained. Overflow of banks in the plains of Punjab and Sindh would have been manageable and a bounty of fresh water could have been stored for the economic growth of Pakistan.

Another suggestion for hydro development was that Diamer-Bhasha Dam may be built as a lower / safer dam at the present alignment with a structure height of 200m above river bed (around 249 m above rock bed). It will be capable of generating 3,400MW and provide an annual energy of 15,000GWh. The reduced height also permits the upstream Raikot HPP (1,800MW) and off-sets the loss of electrical energy due to 1,100MW reduced power capacity of a lower DBD. By building a lower/ safer structure, the DBD design could be changed from the lighter RCC (Roller Compact Concrete with protective plastic membrane) to a heavier more stable CFRD (Concrete Faced Rock-filled Dam). DBD + Raikot HPP cascade is a far more superior, safer, cost effective and less time consuming method.

IWT Under Stress: Imperatives of Climate Change by Sardar Muhammad Tariq

The speaker discussed how climate change has become a heated debate in the current century and how it has encouraged Pakistan to focus on the role played by climate change to bring the IWT under



stress. Politically, the IWT has always been a point of contention for the belligerent neighbors and has been rejected by India every time and at some instances by Pakistan also.

Decade long negotiations led to the formulation and signing of the treaty in 1960 and it determines the division of the rivers between the two countries after the partition. Both the countries wanted a share of the Eastern and Western rivers. India demanded a share in the Western rivers, whereas, Pakistan wanted a share of the Eastern rivers originating from India. The results of the negotiations lead to an agreement on the distribution of rivers, which was ratified in the form of the IWT in 1960.

However, the Government of India (Lok Sabha) reacted violently and was not able to uphold the pact. India got an additional 30 MAF of water, while Pakistan suffered a shortfall. Pakistan was supplied with 75% of water to provide for 90% of its irrigated land as India required the additional quantity of water to accommodate the growing population and to maintain its current growth rate.

The water shortage has raised conflicts between the two countries. India has constructed 56 large dams and plans to build 171 new hydro power projects in the Indian held Kashmir to add 180 BCM of storage by 2050. Despite having a large number of dams; India still faces inadequacy in its water storage capacity. It has always had an eye on

the Western rivers for energy and water storage as it tries to control the flow of water coming to Pakistan by creating structures on the Western rivers by utilizing different provisions and loopholes of the treaty to violate the restrictive clauses of the agreement for the detriment of Pakistan.

India being the upper riparian is in a position to control the flow of water coming to Pakistan. It uses it as a political tool to manipulate the flow of water. Technically, India can cause floods and shortage of water in Pakistan, thus, putting Pakistan in a vulnerable position. The current trends are an indicator of the existing political and hydrological pressure on the IWT, therefore, it can be said that climate change can further aggravate the situation and increase the hostility between the two countries.

Climatic changes can have damaging effects on the water resources of India and Pakistan. Studies indicate that the melting of glaciers and the change of monsoon pattern can reduce water level up to 30-40%. The risk of floods and draughts would be raised. The raised sea level as a result of global warming would result in the disturbance of saline water in the delta region which would cause ecological changes on both sides of the border.

Following remedial measures can be taken to overcome the issue. Population management and control system can be devised. Rain water harvesting can save water in the agriculture sector. Ground water can be efficiently managed and additional storage can be established. Initiatives can be taken by the Pakistani government to control pollution and the simple principle of 3R's can be implemented i.e. 'Reduce, Recycle, and Reuse'. Changes in both the, hardware and software of Pakistan are to resolve the issue before it turns into a major crisis.

Interactive Session

During the interactive session, the participants raised questions about reasons for not building larger dams, especially the Kalabagh Dam in Pakistan; issues related to the Kabul River; impact of building new dams on the generation of electricity

and on electricity costs in Pakistan.

In response, it was stated that Pakistan has been in a dire need of not one but multiple small and medium sized dams and politicians have time but again surrendered to the Indian lobbying against building of dams in Pakistan. We must realize that those who oppose the construction of dams in Pakistan are the real enemies of Pakistan. India wants encirclement of Pakistan in any case and by any means and can use water as a military tool for its nefarious designs. Even Afghanistan can halt the water flowing in the river Kabul which forms a major tributary of the river Indus. Once new dams are built in Pakistan, the electricity produced by new dams will be extremely cheap and will



potentially cover for the energy shortfalls by the existing three dams.



Session III

Session III:

Looking Ahead: Policy Options



Session three comprised two panelists namely Dr. Shaheen Akhtar and Mr. Ahmer Bilal Soofi. It was chaired by Ambassador Shafqat Kakakhel.

Quest for Re-Interpreting the IWT: Pakistan's Dilemma by Dr. Shaheen Akhtar

In order to re-interpret the IWT and understand Pakistan's dilemma, following questions need to be addressed: What are emerging challenges to Pakistan's water rights under the IWT, especially on the Western rivers of the Indus basin? What is Pakistan's dilemma as a lower riparian in reinterpreting /renegotiating the IWT? Can India abrogate the IWT? Can India interrupt water flows into Pakistan as an upper riparian state? What can be done to ensure better functioning of the treaty and to enhance cooperation in meeting the emerging challenges of climate change and

efficient uses of Indus waters?

The main argument is that given the constraints of a lower riparian, ruptured basin and loss of leverage (i.e. Eastern rivers), changing climatic patterns, and demographic, economic and political challenges, Pakistan needs to adopt a multi-pronged strategy driven by water rationale and hydro diplomacy to protect its water rights/ security within the broader parameters of the IWT.

Pakistan is one of the world's driest countries with an average annual rainfall of about 240 mm. It is a 'single basin' country and its dependence on external water resources is 76%. The population and economy are heavily dependent on an annual influx into the Indus river system. The basin accounts for 21% of GDP, 45% employment, and more than 60% of its exports. Pakistan is shifting from water stressed to a water scarce country. The per capita water availability has fallen from 5,600 cubic meters



per person in the 1950s to 1066 cubic meters in 2010. It is projected to hit 800 cubic meters annually by 2025. The drivers for water stress range from future development, economic growth to climate change, glacier melt, fluctuations in precipitation patterns and a rapidly rising population (increasing ground water use, and direct withdrawals from the river).

Agriculture sector is the largest consumer of water. In Pakistan and India, extensive irrigation is placing the river Indus under heavy stress, with about 90% of the available flow being utilized. Pakistan consumes 96.03% and India uses 86.46%. Over pumping and inefficient irrigation techniques have led to sharp decline in groundwater levels, loss of wetlands and salinization of agricultural lands. Pakistan has an extremely low water storage capacity amounting to 30 days of water storage in the Indus basin, whereas, India can store for 120-220 days, Egypt up to 700 days and the US for 900 days. According to international standards, storage capacity is ideally recommended to be around 1,000 days especially seeing the climate of Pakistan.

In 1947, partition of the subcontinent drew line cutting across the Indus basin system, leading to the disruption of a well-established irrigation system. The disruption of flows to Pakistan in April 1948 exposed Pakistan's vulnerability to the Indian control over the headwaters of the Indus basin

system. Pakistan water rights under IWT are referred to in Articles II, III & IV. Article III states that Pakistan shall receive "unrestricted use of all waters of Western rivers". Article III (1) and Article III (4) of the Treaty preclude the building of any storages by India on the Western Rivers, except to a limited extent carefully laid down in Annexures D and E, which also specify technical conditions relating to engineering structures and features, such as limits on raising artificially the water level in the operating pool, pondage levels, crest level of the gates (where a gated spillway is considered necessary) and location of intakes for the turbines. Article IV (2) clearly stipulates that any "non-consumptive use made by any party would not materially change the flow in any channel to the prejudice of the uses on the channel by other party."

Growing water stress in the two countries coupled with looming climatic threats to the Indus basin system and change in demographic, hydrological, political, economic and energy environment is putting the Indus water regime created in 1960 under enormous strain. Pakistan as a lower riparian is on the receiving end of the change, which has raised alarm bells in the water insecure Islamabad. Being a lower riparian, Pakistan is faced with a dilemma as to how to reinterpret the IWT that ensures its water security in the coming decades without compromising its water rights under the treaty.

For the last many years, an intense debate around Indus II is going on in India that suggests a renegotiation of the IWT in which India would be seeking water sharing on the Western rivers. There are two views on Indus II debate in India. B. G. Verghese refers to Article VII about 'Future Cooperation' and argues that Indus II can be built on Indus I on the basis of benefit sharing on the Western Rivers. This would give India a position vis-a-vis the western rivers which it does not have at present in the IWT. Ramaswamy R. Iyer on the other hand argues that existing treaty does not offer any scope for Indus II as it is a treaty that has divided the river system. "If we want a new relationship b/w the two countries on the Indus, a totally new treaty

will have to be negotiated; which should not grow out of the existing treaty; because otherwise questions will be raised about the coexistence of two divergent treaties.” Article XII of the IWT states, the provision may be modified by a duly ratified treaty between the two governments. There is a need to use Article VII on “future cooperation” to maximize utilization of the Western rivers for mutual benefits in a sustainable and optimal manner. According to Article VII, the two parties “recognize that they have a common interest in the optimum development of the rivers” and “they declare their intention “to cooperate by mutual agreement, to the fullest possible extent.” It discusses the installation of hydrologic and meteorological observation stations and some drainage or engineering works subjected to mutual agreement.

This article provides opportunities to meet the threats emerging from climate change in the Indus Basin which was not originally accounted for during its signing in 1960. Article VII can also be utilized for cooperation in trans-boundary watershed management. Being lower riparian, Pakistan has no access to the upper catchments of the Western rivers as these lie in the Indian controlled territory. Issue of pollution of the waters of the rivers of the Indus system can be addressed through Article IV (9).

The melting of the Hindu-Kush-Karakoram-Himalaya glaciers will have serious consequences for the Indus basin. Both sides need to form a group of experts to study the behavior of glaciers whether advancing or decreasing. The largest challenges stem out from inadequate information and monitoring, and limited scientific understanding of these high elevation glaciers. The International Centre for Integrated Mountain Development (ICIMOD) based in Nepal is already focusing on the issue. India, Pakistan, China and Afghanistan are a part of it and should work together. Both, India-Pakistan need to declare all glaciers a protected area. Siachin must be demilitarized. Internal water resources management gains utmost importance especially

when the physical separation of the Indus tributaries has hampered the possibilities of efficient integrated basin management.

The principles of Integrated Water Resources Management (IWRM) and sharing along with the best practices in water conservation techniques in agriculture, industrial and domestic uses need to be integrated in national water management policies. A proactive foreign policy engagement can play an important role in water management, ranging from technical support to capacity building along with creating awareness amongst the masses. The current worldview is that water is a global asset, which no country can be allowed to waste and its persistent wastage by Pakistan is viewed with disbelief. India has devised a strategy to use this to its advantage and is pushing the idea of Treaty II, thereby, building a case that since the surplus waters of the Indus are being wasted by Pakistan, India should be entitled to store this water on the upper Indus, Jhelum and Chenab to fulfill its needs.

IWT and International Law: Options for Pakistan by Mr. Ahmer Bilal Soofi

A technically sound legal interpretation of the IWT is vital at this point of history. There is no team of experts in Pakistan, which can be identified as having interpreted the treaty, which is in fact a



misfortune. There are numerous legal issues which arise during the interpretation of the treaty. There is, other than the treaty, a complete jurisprudence on the upper and lower riparian countries and water sharing mechanisms between them. Nonetheless, treaties are the main governing document and basic sources of international law. The IWT was in fact signed before the development of international water laws. Hence, the behavior of Pakistan and India was identified initially through customary laws.

In this regard, we need to examine India's role as a lower riparian of China for building a case in the customary law domain. As far as the treaty is concerned, the dispute difference and position of revoking the treaty needs to be examined. The area, which is not covered in the treaty, is the permission of making dams; hence, we need to be making bilateral arrangements for questioning India's attempts of making dams as it is a political decision.

Nonetheless, two things are in focus: minimum water flow should be guaranteed for the maintenance of the ecological system and to enhance the responsibility of the lower riparian through managing resources and building dams. Hence, Pakistan has a legal case for building dams.

The way forward rests in the notion of understanding the difference in approaches, implementing the Paris Convention (2015), raising the issue on an international and bilateral level and capacity building of the Office of the Indus Waters Commissioner. Firstly, there is the engineer's viewpoint that India does not violate the IWT by constructing dams so long as it releases the minimum water flow. A national security analyst's view is that it enhances India's capacity to use water as a weapon and a lawyer's view point is that in order to raise the 'water weapon' issue, the IWT mechanism should not be invoked.

Secondly, the main aim of the Paris Convention is to lower greenhouse gas effects/emissions. Pakistan, as a developing State, needs to move away from fossil fuel based energy generation and shift from non-renewable to

renewable sources of energy. The optimal option for Pakistan is vested in hydro-electric power generation. The developed States are under an obligation to finance developing States to implement their obligations under the Paris Convention, 2015.

Thirdly, taking up the issue of building dams as a bilateral agenda item outside the IWT framework and to 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.

And finally, for capacity building, there is a need for initiating an internship program for lawyers in the Indus Waters Commissioner's office in Lahore.

Interactive Session

During the interactive session, the participants were keen in deliberating on the issues of interpretation of Modi's statement on 'drying Pakistan up', restrictions on India in the IWT, future of the IWT and water issue between Pakistan and India. It was opined that firstly, Modi's statement builds a legitimate case for Pakistan in the United Nations Security Council as it is not only a state-level intervention and a national security threat for Pakistan, but also a case against the maintenance of international peace and security.

Secondly, as a matter of interpretation, the IWT does not restrict the construction of hydro-electric projects. There are only two-fold restrictions: design of the hydro-electric project and operational constraints, i.e. entire water cannot be retained.

Thirdly, in order to move forward on the water issue, the Government of Pakistan must in good faith propose a comprehensive dialogue on the issues. The treaty should not be paralyzed, while our focus should be managing institutions between both the countries and Track-II initiatives should be promoted. In addition, a positive role should be played by the civil society and formal officials of both countries in initiating a dialogue on issues and

topics, which are not the subject of the treaty. Nonetheless, a scientific analysis of effects of violations by India on the climate and environment of the region should be conducted. The Indus Waters Treaty not only divides the rivers but does not quantify river waters. Hence, emphasis should be laid on moving forward towards mutually beneficial steps.

Ambassador Kakakhael, while closing the session, highlighted following recommendations:-

- The Indian Government's recent bellicose statements hinting at a review of the Indo-Pakistan IWT (1960) has brought the treaty under severe strain. The high level meeting convened by Prime Minister Modi on 26 September 2016, is reported to have ruled out any move for either a review or unilateral abrogation of the treaty, however, Pakistan should make renewed efforts to ensure that the treaty remains intact. In this regard, it is suggested that the Government of Pakistan develops, as a component of its national security doctrine, a policy in consultation with the provincial governments and the AJ&K Government and duly endorsed by the Parliament, reiterating its unequivocal commitment to the preservation of the IWT and its implementation in letter and spirit. Pakistan should state its readiness to cooperate with India in the full and effective implementation of the IWT, including its Articles 6 and 7 providing for regular exchange of data and other relevant information and future cooperation respectively as well as the dispute settlement mechanism stipulated in Article 9 of the treaty. Pakistan should declare its resolve to resist and foil any attempt to violate or deviate from the commitments spelt out by the IWT and toward this end seek the assistance and support of the United Nations and other relevant multilateral organizations and forums.
- The Government of Pakistan should participate in a spirit of good will and mutual trust in the consultations initiated by the World Bank to

resolve the current differences between India and Pakistan on settling the disputes over the designs of the Kishenganga hydro-electric project being built by India on the Jhelum river in conformity with the Final Award of the Court of Arbitration in December 2013 and the Ratlay hydro- electric project.

- Pakistan should propose to India a comprehensive dialogue on trans-boundary waters, which should address all issues of concern to the two countries. The agenda of the dialogue should include, but not be limited to, measures to enhance the efficacy of the Permanent Indus Commission to serve as an effective institutional mechanism for promoting wide-ranging cooperation, including expeditious consideration of India's uses on the Western rivers of the Basin in conformity with the IWT.
- The Government of Pakistan should consider supporting the recommendations made by several India- Pakistan Track 2 dialogues held in recent years calling for joint studies by the relevant technical institutions and experts of the two countries to generate credible knowledge to serve as basis for decision making on topics and issues whose importance was not well understood during the years the IWT was negotiated. These include:-
 - Protection of the watershed of the Western rivers passing through India and Indian-occupied Kashmir with a view to preventing pollution of the river flows entering Pakistan.
 - Scientifically, credible assessments of the impacts of climate change on the Indus River Basin, including through a network of hydro meteorological monitoring stations for monitoring the behavior and dynamics of KKH high altitude glaciers whose snow and ice melt feed the Basin, and exchange of data and related information on precipitation, stream flows, and water quality, tracking monsoon trends and variability, utilizing remote sensing technologies and telemetry.

- Monitoring the quantities of river flows and agreeing measures to respond to observed reduction in river flows resulting from prolonged periods of drought or other impacts of climate change aimed at precluding misunderstandings and boosting mutual trust. Such measures are necessary given that the IWT does not specify the amounts of waters for each party.
- Assessment should be done to measure the cumulative effects of cascades of hydro-electric projects on the Western rivers built or planned by India, on India's capability to manipulate the flows entering Pakistan and AJK and measures aimed at addressing Pakistan's concerns in this regard.
- Environmental flows in the three Eastern Rivers to be allowed by India in order to restore the ecological sustainability of the Indus Basin.
- A comprehensive investigation of the state of trans-boundary aquifers and measures aimed at ensuring their sustainable use, including development of appropriate regulatory systems for sustainable ground water management.
- Identification of areas of cooperation in promoting integrated water resource management in the Indus River Basin with special focus on enhanced agricultural water management and water saving techniques.
- The Government should take steps to empower and strengthen the Pakistan Indus Commissioner's office by raising the status of the

Commissioner and providing the Office adequate qualified human resources in engineering, environmental conservation, water, hydrology, glaciology, and law. The office of the Pakistan Indus Commissioner should be relocated to Islamabad.

- As part of efforts to protect Pakistan's trans-boundary water resources, Pakistan should initiate high level consultations with Afghanistan leading to negotiations on a treaty concerning the optimum utilization of the shared Kabul River based on mutual benefit. Pakistan should seek the assistance of the World Bank or another third party to facilitate the consultations and negotiations.
- Pakistan's water security, which is an essential prerequisite of our food and energy security depends on integrated water resource management based on sustainable supply and demand, including adequate water storage, proper maintenance of water infrastructure to minimize losses in transmission, conservation of water and enhanced water use efficiency, storage of flood water, rain harvesting, introduction of water saving irrigation techniques, and ensuring the quality of water for human consumption and irrigation. The long pending National Water Policy should be finalized without further delay. Finally, there is a need to ensure effective coordination among the various water-related institutions and statutory bodies currently functioning in unconnected silos. The water wing of the Federal Ministry of Water and Power needs to be strengthened.



Closing Session

Closing Session

The session was closed by the delivery of vote of thanks by the Director General of ISSRA, Major General Ghulam Qamar.

Vote of Thanks by DG ISSRA

The comprehensive and exhaustive discourse on Hydro-Politics across Pakistan clinched after three thematic/deliberative sessions. While wrapping up the intellectual discourse, Major General Ghulam Qamar, HI (M), DG ISSRA paid a vote of thanks to all moderators, speakers, invitees/participants of the seminar and particularly to the organizing team of ISSRA upon the conclusion of successful event.

He deliberated that a thorough and intense deliberative exercise spread over the whole day and three thematic sessions has reviewed and analyzed the current scenario facing IWT. It has crystallized issues that need to be addressed and proposed recommendations that may be relevant to our response to the Indian threat to violate/abrogate the IWT. The seminar on “Hydro-Politics around Pakistan; Reassessing the Efficacy of the IWT” was one of the milestones in the series of deliberative exercises undertaken. The quality of data input was also indeed thought-provoking and stimulating.

In the end, he mentioned that the recommendations made in this seminar will certainly provide strategic/policy guidelines and help in outlining a mechanism to enhance and strengthen Pakistan's position vis-a-vis the IWT. He also congratulated all distinguished experts and scholars, for a job well performed and paid credit to the distinguished panelists and other guests who joined and participated in the seminar.





Post Roundtable Report

**Hydro Politics in South Asia and
Water Management Within the Country**

23 February 2017

Post Roundtable Report

Hydro Politics in South Asia and Water Management Within the Country

23 February 2017



General

To follow up the seminar (Hydro politics around Pakistan) organized by DS Branch on 17th January 2017, a roundtable discussion was held on 23rd February 2017 to refine the recommendations of the seminar and to get the valuable input from water experts, stake holders, and policy makers.

Roundtable comprised three sessions. First session started at 1000 hrs, where Dir DS gave a 10 minutes presentation to brief the participants on the recommendations of the seminar. In session II, four nominated participants made presentations. The focus was on the policy options available with Pakistan to tackle upcoming water issues / conflicts within the country and in the region. In session-III, floor was open for an interactive session.

Participation

- Dr. Pervaiz Amir (Environmental Expert)
- Kaiser Bengali (Water Economist)
- Mr. Faisal (DG South Asia, MoFA)
- Mr. Tauqeer Shaikh (CEO, LEADS, Pakistan)
- Brigadier® Shauqat Qadir (DVF, ISSRA)
- Mr. Shamsul Mulk (Former Chairman, WAPDA)
- Dr. Shaheen Akhtar (HOD IR-FCS, NDU)
- Mr. Suhail Awan (NSW Alumni)
- Dr Muhammad Faisal (DG South Asia MoFA)
- Dr Fareeha Bhugti (Director India, MoFA)
- Shahid Hameed (Rep WAPDA)

- Syed Naseer Ahmed (Planning Commission)
- Ms. Midhat, (DS, Economy, NDU)
- Ambassador Shah Jamal, (DS, IR, NDU)
- ISSRA Faculty (All Dirs / DDs / SOs and all RFs/RAs and Interns).

SESSION-I

Session-I Speaker: Brigadier (R) Masroor Ahmad, Topic: Findings & Recommendations of Seminar: Hydro Politics Around Pakistan: Reassessing the Efficacy of IWT

While elaborating the recommendations made during the seminar, speaker presented the findings and recommendations which are mentioned in “Executive Summary of the seminar.

SESSION – II

Speaker-I. Qaiser Bengali

The speaker initially raised the concerns on the already given solutions and recommendations as being Pakistan centric. It was emphasized that Pakistan narrative of the IWT regarding the obligations towards the treaty clauses is unrealistic in nature. Because of the fact that India has the support of international community and has power balance in its favour, it is very likely that the Indians indulge in dirty politics. Cooperation can only be made on common grounds that could hinge on issues related to climate change and Siachen Glacier. It was further argued that Pakistan has been raising concerns at various forums, but has not done the proper homework to make its case stronger.

Speaker-2: Dr Shaheen Akhtar, Topic: Hydro-Politics in South Asia: Regionalization of Water Issue

The main argument made by the speaker focused on the changing demographics, technological, economic and ecological trends and how they have underscored the need for adopting the multi-lateral cooperative approach for sustainable development and management of trans-boundary rivers basin in the South Asian region.

Various issues were brought under discussion,

including the major drivers of hydro-politics in South Asia, Trans-boundary water debate in the region, issues of water sharing in Indus, Ganges and Brahmaputra Basins, and the possible water cooperation framework in the region. Issues related to how South Asia is already under severe water stress and the growing population, urbanization and industrialization having become the major drivers of hydro-politics came under discussion. As far as major issues related to water sharing are concerned, low per capita water availability and a high relative level of water use makes South Asia one of the most water scarce regions in the world. Due to this, most of the South Asian governments are seeking control of the great rivers of the regions as a solution to the growing water demands.

It was further discussed that the issue of cross border water distribution, utilization, management and mega irrigation hydroelectric power projects are gradually taking central stage in defining inter-state relations between upper and lower riparian states. Water hegemony, water nationalism and political relations are the new trends that are shaping UP the debate on the hydro-politics in the region.

Despite the treaties present on paper, there exist serious differences over water sharing, water management and hydropower projects, which continue to spoil relations amongst the South Asian states. In the end, recommendations were made keeping in view the fact that controlling huge amount of water flow in the Ganges-Brahmaputra-Meghna basin provides unique opportunities for all states. Increasing storage capacity and managing excessive use of water by agriculture sectors can spare more water for power generation in the Indus. India's cooperative approach on effective functioning of the IWT can lower tension between India and Pakistan and there is a dire need for a policy shift towards water management.

Speaker 3: Dr. Pervaiz Amir, Topic: Hydro-Diplomacy in South Asia: an Issue of Human Security

South Asia is home for 23% of world's

population, but due to poor governance, it is facing diverse problems of poverty and no access to clean water due to which the water MDG (Millennium Development Goal) has not been achieved. The speaker preceded his argument by mentioning the paradigms of security (National Security and Human Security) in which water can play and is playing an important role. Because, water is an integral element of Energy-Water-Food-Security cycle, it was argued that the conflicts have already started emerging in Delhi, Tharparkar, Karachi and Balochistan, which have serious implications for Pakistan's national security. In the Speaker's point of view, diplomacy has an important role to play, but hydro-politics will drive the levels of internal as well as external conflicts.

The purpose of discussion was to share views on environment and human security implication of water and its mismanagement. While discussing environment and water security amongst masses, the attention was brought towards shift in food security priorities and politicization. The increase in deforestation and no protection of tree covers to land is directly affecting the quality and quantity of underground water resources.

The human body itself is mostly composed of water and humans, therefore, need water to sustain life. As Pakistan experiences population growth, the demand of water is also increasing and with the upcoming of CPEC, the water consumption and demand will see a further rise in future.

The speaker conferred about the spreading of diseases caused by the unavailability of water as well as vulnerability of water to population in Pakistan. It was discussed that insecurity of water results in internal strife, poor nutrition, village conflicts, environmental suffering, livestock suffering, extremism and opportunities to terrorist recruitment networks.

In concluding remarks, emphasis was laid on the need of water demand analysis at all levels, social responsibility to save water and chalking out strategies for the lands with the paths of rivers for

securing water rights and entitlements for sustainable environment.

Speaker- 4: Ali Tauqeer Sheikh, Topic: How real is the Climate Change Threat for Pakistan?

Intending to answer the question given in the title, the speaker referred some reports of the Pakistan Meteorological Department about the changing climate conditions of Pakistan, which indicate that the winter is shrinking and summer is expanding year by year. The Northern areas of Pakistan are facing floods, while the South is facing droughts and water shortage. The heat wave resulted by climate change every year is becoming intense and causing loss of human life.

It was argued that the growth in population directly affects the Water-Energy-Food Nexus and the cost of disasters is a threat to Sustainable Development Goals. According to the Water Board, Ministry of Finance and National Disaster Management Authority, floods are a major source of financial losses.

Interactive Session

In the second session, a number of questions were raised pertaining to solving of the water crisis, and summarized as following:-

- What could be the best regional approach to solve the issue and inclusion of international community such as China?
- How can we synergize all water related departments for deliverance?
- Creating a supra body mechanism by bringing together legislature and political backing.
- Using an intellectual forum to solve the water issue, brining academicians on the board.

According to Syed Naseer Ahmad, representative of the Planning Commission of Pakistan, regionalizing of the issue would be of no use in the present environment of South Asia, where the countries could not get together for the SAARC Conference, which was planned to be held in Pakistan. Before making China a part of the

dialogue process, its interests should be gauged first. It has to be understood that China is the upstream riparian on many of Asia's most important international rivers, including Mekong, Brahmaputra, Sutlej, Indus, Salween, and Irrawaddy, therefore, its national interest will prevent it from committing fully to reducing upper riparian rights. An alternate to this could be the creation and inclusion of a scientific body, which should be able to provide impartiality. The international clout of American Society of Civil Engineers and International Hydrology Organization can prove to be useful and helpful for the country. Pakistan has institutional capabilities, but lags behind in professional international representation and this can be overcome with the help of personal linkages through proper channels.

Engineer Shams ul Mulk commented that while we talk about institutional failure and zero deliverance, we should remember that it was WAPDA that made Tarbela Dam and the reason institutions do not work, is because they are not built on their respective job descriptions. He said that the IWT safeguards Pakistan water in the Indian rivers but it gets wasted due to our own fault and policy lags. The successful signing of the IWT treaty was on part of WAPDA and efforts are being made for its redemption. Institutional framework of the IWT doesn't have capacity to deliver, and if there is no delivery, there is no success. He further added that we should stop slamming ourselves and our potentials by giving examples of foreign countries and should keep in mind Pakistan's position in the regional complexities. Lack of development and success in Pakistan can be attributed to having an aggressive neighbor, India. Instead of living in constant fear of India scrapping the IWT, it is important to work on the Kabul river waters. Pakistan has been using its water without any proper agreement. Recently with the help of India and the World Bank, Afghanistan is building 13 dams on the Kabul River Basin, reducing the flow of water in Pakistan's channels. It is vital to our interests that we secure the water by signing a

bilateral treaty with the Afghans and use the capacity/capability of Pakistan Army's Engineers Corps for construction of dams.

Discussing the development of a Supra-body, Mr. Suhail Awan: Executive Director HRD and NSW Alumni pointed out how our past depicts a trend on the failure of institutions and their inability to move ahead after a certain point, primarily due to institutional politics. "Your domain, my domain" narrative has always stopped the potential and growth of institutions. To solve this, a Supra-Model should be made that takes every representative of all present institutions and departments working on hydro issues on board. This will provide a multi-dimensional working environment. The framework of the body should focus on nationalistic belief and addressing regional issues. The nexus of Afghanistan, India and Central Asian states on water issue demands that we adopt a proactive approach. At present, all organizations and departments are doing individual work and lack coherence amongst them, therefore, the current situation demands that we act in unity. He stressed that Pakistani institutions lack in implementation, and that could be achieved through a Supra body.

Mr. Ali Tauqeer Sheikh, CEO LEAD Pakistan gave zero sum approach and talked about benefit sharing. He suggested that Pakistan should invest upstream and reap benefits downstream. Through this, Pakistan can help Afghanistan with its Kabul River Basin hydro projects. He further added that Pakistan should devise a mechanism for Chitral River, which shall fulfill the water needs of FATA. This will help eradicate terrorism by uplifting the socio-economic conditions of the area. Data sharing should be made through think tanks and scientific channels and a progressive approach be adopted with the inclusion of scientific actors. In this regard, collaboration with India and Afghanistan on data sharing should be made.

The Director Inter-disciplinary Research, COMSAT, Dr. Muhammad Abid suggested that numerical projections and predictions can be helpful for the future floods. Simulations should be

done on the data sharing amongst the concerned people.

Dr. Muhammad Faisal, DG South Asia, Ministry of Foreign Affairs deemed all suggestions given post seminar as unrealistic. According to him, the suggestions on collaborating with Afghanistan and helping them with the construction of dams cannot happen with the Modi government. Lack of presence of media and civil bodies is the reason that has impeded the projection of water related issues. The creation of new institutions will, therefore, be an unworkable strategy. The best possible alternate in the prevailing scenario would be the merger of already existing institutions coupled with empowerment. It is necessary to come out of the

IWT, since hydro-politics and the IWT are two different subjects and require separate discussions, with separate forums.

Vote of Thanks

At the end, DG ISSRA, Major General Ghulam Qamar thanked the participants and guest speakers. He appreciated the positive contributions made by all the participants and highlighted that the roundtable had been extremely rewarding and though provoking. It opens the doors for making a comprehensive strategy to deal with not only trans-boundary water issues but also suggests ways and means for better water management within the country.



Photo Gallery



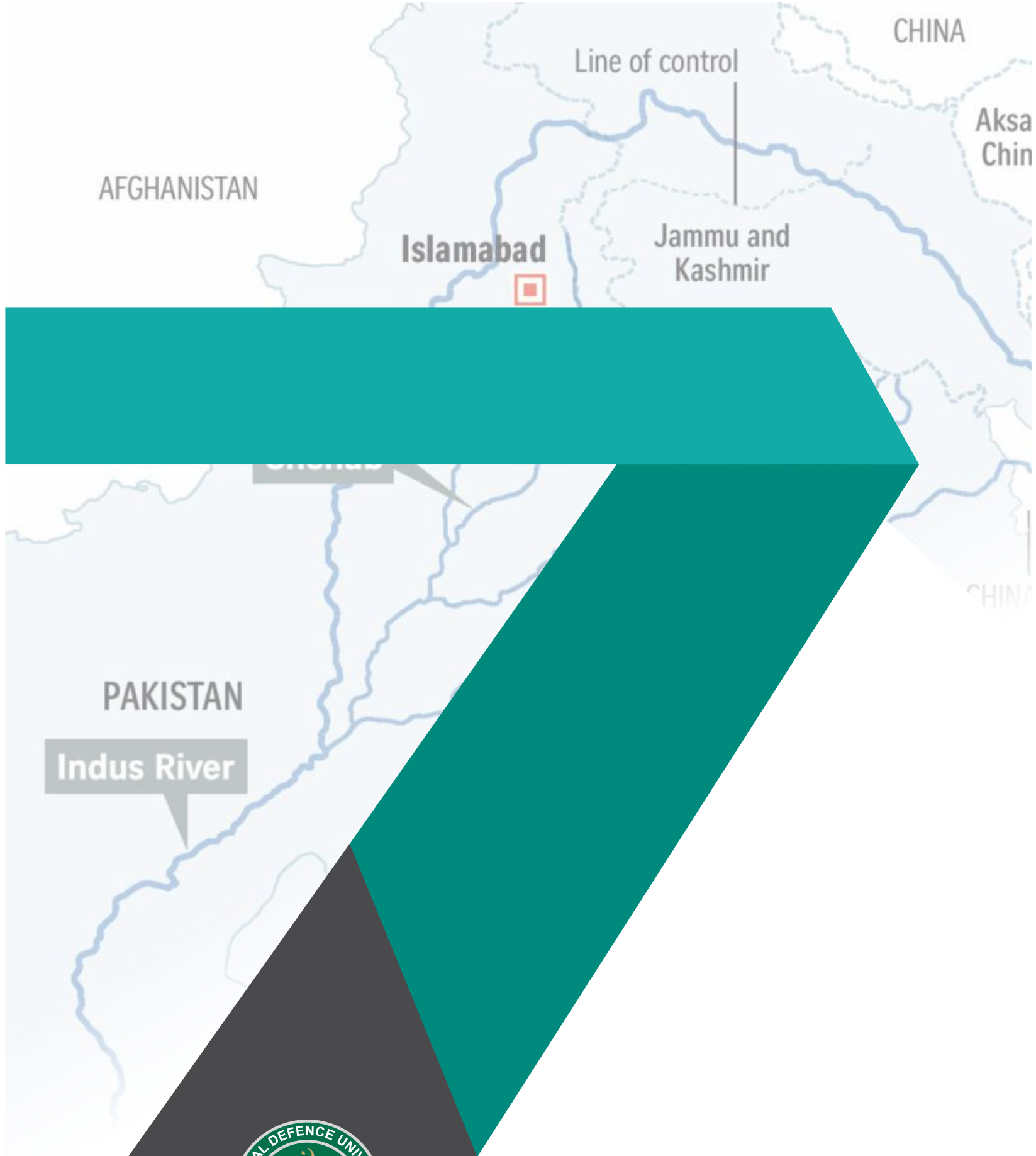












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