



KÖPRÜNÜN ALTINA SU TAŞIMAK: HİNDİSTAN-PAKİSTAN SU İLİŞKİLERİ ÖRNEĞİ

BRINGING WATER UNDER THE BRIDGE: A CASE FOR INDIA-PAKISTAN WATER RELATIONS

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ABSTRACT

Water is sine qua non for life on the globe. From people's prosperity to the existence of all species, the essentiality of water engulfs almost all dimensions of human life. Its abundance, however, can result in destruction and its shortage can result in food insecurity and other climate change-induced effects. Within this context, there is a growing concern in two South Asian states - Pakistan and India - about the potential impacts of water scarcity resulting in future water wars. For almost 200 million people of Pakistan, the Indus River is the main source of water. A rapid increase in the population over the past decades has also created new pressures on water that was once a plentiful resource for the health and development of the country. On the other hand, the escalating tensions between Pakistan and India, which share the Indus flow, may also lead to violent confrontation in an already turbulent part of the world. In this context, this paper will try to answer three significant questions: (i) How water insecurity can lead to regional insecurity of South Asia? (ii) How can India and Pakistan counter water stress, specifically in the case of Indus Water Treaty? (iii) What is the main purpose of the multi-purpose dams built by India along the Kabul River in Afghanistan and the Indus River and how does Pakistan strategize itself to counter Indian moves? Taking notes from theories of International Relations, Human Security Framework and Regional Security Complex Theory would prove as how water stress can result in a full fledged conflict between Indian and Pakistan.

Keywords: Pakistan - India Water Conflict, Indus Water Treaty, Regional Security Complex Theory, Climate Change, Water Security, Water Wars

ÖZ

Su, dünyadaki yaşam için olmazsa olmazdır. İnsanların refahından tüm türlerin varlığına kadar, suyun gerekliliği, insan yaşamının neredeyse tüm boyutlarını içine alır. Bununla birlikte, suyun bolluğu yıkıma neden olurken, eksikliği ise gıda güvensizliğine ve iklim değişikliğine bağlı diğer etkilenelemlere neden olabilmektedir. Bu bağlamda, iki Güney Asya ülkesinde - Hindistan ve Pakistan - su kıtlığının gelecekte su savaşlarına yol açabilecek potansiyel etkileri konusunda artan bir endişe bulunmaktadır. İndus Nehri, yaklaşık 200 milyon Pakistanlı için ana su kaynağıdır. Son on yıllarda nüfusun hızlı bir şekilde artması, bir zamanlar ülkenin sıhhati ve gelişimi için bereketli bir kaynak olan su üzerinde yeni baskılar yaratmaktadır. Öte yandan, İndus nehri sularını paylaşan Pakistan ve Hindistan arasında artan gerilimler, dünyanın zaten patlamaya hazır bu bölgesinde şiddetli çatışmalara da yol açabilir. Bu bağlamda, bu makale üç önemli soruyu cevaplamaya çalışacaktır: (i) Su güvensizliği Güney Asya'nın bölgesel güvensizliğine nasıl yol açabilir? (ii) Hindistan ve Pakistan, özellikle İndus Su Anlaşması örneğinde, su gerilimine nasıl karşı koyabilirler? (iii) Hindistan'ın Afganistan'daki Kabil Nehri ve söz konusu İndus Nehri boyunca inşa ettiği çok amaçlı barajların temel amacı nedir ve Pakistan, Hindistan'ın bu hamlelerine karşı nasıl bir strateji geliştirmektedir? Uluslararası ilişkiler teorileri dikkate alındığında, İnsan Güvenliği Çerçevesi ve Bölgesel Güvenlik Kompleksi Teorisi, su geriliminin Hindistan ve Pakistan arasında nasıl tam bir ihtilafı sonuçlanabileceğini kanıtlamaktadır. Anahtar Kelimeler: Pakistan - Hindistan Su Sorunu, İndus Su Antlaşması, Bölgesel Güvenlik Kompleksi Teorisi, İklim Değişikliği, Su Güvenliği, Su Savaşları.

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Introduction

Owing to its role in a nation's growth and development¹ water security holds a pertinent place in the discourse of International Relations. Not only it is considered a pre-requisite for sustainable development of nations but has also become a center of academic debates and international negotiations such as negotiations on "Cooperative Framework Agreement (CFA) in the Nile Basin".² South Asia - comprising Afghanistan, Pakistan, India, Bhutan, Nepal, Bangladesh and Sri Lanka - contains less than 5% of the world's land area but hosts more than 1.8 billion people that is 21% of the world's population.³ Holding the most climate change affected zones of the globe⁴ with increasing population and water scarcity, South Asia has the ability to inflict humanitarian as well as security challenges.

Regional security of South Asia is often attributed to peace and harmony between Pakistan and India. This is because of the fact that both states are not only nuclear states but also host to an ongoing territorial dispute - Kashmir, which is often considered as a nuclear flash point.⁵

In addition to these problems, the adverse effects caused by climate change also provokes the water -related disputes between the two countries. Generally, Climate change, which is said to have occurred as a result of the increase in the amount of fossil fuels used, causes many problems by increasing the temperature of the earth. Climate change, which causes deterioration in vegetation and groundwater resources, adversely affects agro-based economies such as South Asian countries. The increase in temperatures by global warming, which is a result of climate change, not only negatively affects the agricultural sector, but also adversely affects human health and life with the damage it causes. In the studies conducted, it is seen that the average atmospheric carbon dioxide (CO₂) in the period before the Industrial Revolution was 280 ppm (parts per million), while this rate was 369.5 ppm in 2000. However, with the rapid increase in the effects of industrialization in the 21st century, there is a rapid increase in the amount of

1 David Grey and Genevieve Connors, "The Water Security Imperative: We must and can do more," *Official Delegate Publication for the 5th World Water Forum*, Istanbul, 2009, p. 58–62.

2 Musa M. Abseno, "The influence of the UN Watercourses Convention on the Development of a Treaty Regime in the Nile River Basin," *Water International*, Vol. 38, No. 2, 2013, p. 192–203.

3 See: *The State of the Worlds Land and Water Resources for Food and Agriculture Managing Systems at Risk*. Milton Park (Abingdon): Earthscan and Food and Agriculture Organization of the United Nations, 2011.

4 Tariq Waseem Ghazi and A.N.M Munir uz Zaman and A.K. Singh, "Climate Change & Security in South Asia: Cooperating for Peace," *Global Military Advisory Council on Climate Change*, paper no. 2, 2016, p. 4.

5 Zamir Ahmed Awan, "Kashmir: A Nuclear Flash Point", 18.08.2019, <https://moderndiplomacy.eu/2019/08/18/kashmir-a-nuclear-flash-point/>, accessed on Januray 27, 2020.

CO₂ released into the atmosphere. As a matter of fact, as of 2019, this ratio has reached the levels of 414.7 ppm.⁶ These warmings cause regional floods, drought and temperature fluctuations, as well as regional water scarcity, which we discuss in this article.

Currently, climate change has engulfed both Pakistan and India with water stress, a new security threat. As agrarian societies, the diaspora of both countries depends on sustained agricultural productivity for which the required water resource is a pre-requisite. Pakistan is extremely dependent on Indus Basin's water supplies to meet water demand. Indus River with its certain tributaries (Ravi, Jhelum, Chenab, and Sutlej) are also jugular vein for semi-arid Pakistan, which provide Pakistan with more than 140 million acre feet (MAF) of water per annum.⁷

Despite the signing of the Indus Waters Treaty (IWT) between the two countries, trans-boundary water issues have remained warm since 1960. During the 1970s, the issues resurfaced over the interpretation of some clauses of the IWT. At the outset, the issues were resolved through hectic bilateral diplomacy. Then, starting from the mid-1980s, efforts on the solution of the problem between the two countries failed, resulting in recourse to the dispute resolution mechanism envisaged in the IWT, involving the appointment of a "Neutral Expert and a Court of Arbitration."⁸ The trend is still continues and various other issues are in the same baskets. On the contrary, the temptation to use water as a weapon for political maneuvering is assuming terrifying magnitudes. Since decades, Pakistan's water shortage is getting severer because India is constructing dams and barrages on the River Chenab and River Jhelum, violating the IWT.⁹

In this study, the official document of the Indus Water Treaty is used as the primary source. Along with primary sources, the relevant reports by international institutions and organizations, publications by governmental and non-governmental institutions, objective research articles, media reports and internet resources are also consulted to understand logically the reasons of the disputes between India and Pakistan and its subsequent results. By addressing

6 NOAA, "Earth System Research Laboratories, Global Monitoring Laboratory, Mauna Loa, Atmospheric CO₂ Annual Mean Data", <https://www.esrl.noaa.gov/gmd/ccgg/trends/>, 2020, accessed on 15.04.2020.

7 State Bank of Pakistan's Annual Report 2016-17, "*Water Sustainability in Pakistan- Key Issues and Challenges*", <http://www.sbp.org.pk/reports/annual/arFY17/Anul-index-eng-17.htm>, accessed on 07.01.2020.

8 "Fact Sheet: The Indus Water Treaty 1960 and Role of the World Bank", 11.06. 2018, <https://www.worldbank.org/en/region/sar/brief/fact-sheet-the-indus-waters-treaty-1960-and-the-world-bank>, accessed on 17.01.2020.

9 Fahim Zaman and Syed Muhammad Abubakar, "Assessing India's Water Threat," *Dawn*, 13.11.2016, <https://www.dawn.com/news/1292901>, accessed on January 7, 2020.

the conjuncture of the 1960s when the IWT was signed and the historical background of the situation, the study is aimed to accentuate the political attitudes of both the states in the light of the Regional Security Complex Theory (RSCT).

Theoretical Framework

The Regional Security Complex Theory (RSCT) is helpful in comprehending and analyzing security condition within a specific region. It is also helpful in understanding as “how to integrate the wider agenda of security with a focus on regional level.”¹⁰ According to Buzan the security complex is “a group of states whose primary security concern link together sufficiently closely that their national securities cannot reasonably be considered apart from one another”.¹¹ Similarly, Buzan reformulates the definition of a complex as “a set of units with basic securitization, desecuritisation, or both which are so inter-linked that security issues cannot reasonably be analyzed or resolved apart from one another”. Moreover, as the relations among different states of the international system are composed of the patterns of enmity and hostility, the RSCT provides a standard framework for analyzing these patterns at the regional level.

However, the theory cannot be applied to every region. Because, according to RSCT, the world could be divided into regions with common problems, disputes, disagreements and internal dynamics. In this context, the new conflict areas of the international system will mostly stem from regional and inter-regional disputes. One of the regions defined within this scope of the theory is the South Asian Security Complex. For RSCT to be applicable, a region should possess some robust patterns such as security inter-dependence of states. In this sense, the interplay between geography, climate, biosphere and anarchy in the international as well as regional system facilitates the rise of regional security complexes (RSCs) whereby, owing to geographical proximity and other related characteristics, states are bound to a distinct regional dynamic, be it conflict or cooperation.¹² Making RSCT applicable, a security dilemma is looming over the region; as a result of wars between India and Pakistan, nuclearization of South Asia in 1998 and recent conflict over IWT owing to water stress. Hence, the article will utilize the theoretical framework of RSCT.

10 Barry Buzan and Ole Wæver, *Regions and Power: The Structure of International Security*, Cambridge University Press, New York, 2003, p. 40-42.

11 Ibid, p.44.

12 Ibid, p.44.

Importance of Water for Pakistan and India

Water is one of the most important substances on earth. *Water is life* is such a common expression that we use it almost as a cliché. However, this phrase is one of the most powerfully true messages the whole creation bears witness to. Pakistan uses almost 95% of its water for agriculture. According to vision reports that shared by the government, 60 % of Pakistani population is directly engaged with agriculture and livestock, and nearly 80 % of exports are based on above mentioned sectors. Though Pakistan is one of the countries with the largest glaciers in the world, it is among the 36 countries with the most water-stress. The population in Pakistan is increasing rapidly and the water demand is expected to go far beyond supply. If it happens - coupled with strained relations with the country's neighbours over transboundary water resources - the water crisis will pose a threat not only to the country's security and stability, but to its sustainability as well. On the other hand, according to a report published by the government, *One Nation-One Vision*, Pakistan aims to be among 10 top economies in the world by 2047.¹³ Given the significance of water to Pakistan's economy, getting the water issues resolved and making water resource management right would be essential to realizing this goal.

The per person water availability in Pakistan is low and decreasing year on year. Considering the adverse effects of climate change, Pakistan is located in the region with the highest water scarcity in the world, as well as among the countries with the highest water scarcity in the coming years.¹⁴ The anticipations are that "Pakistan is likely to suffer a shortage of 31 million acre-feet (MAF) of water by 2025."¹⁵ This situation has important impacts for millions of people who are engaged in agriculture for their livelihoods as well as the semi-arid Pakistan economy. Food security, malnutrition, droughts, floods and domestic migration caused by drought are among some basic examples of this situation. Given the role of water in thermal and hydroelectric power generation, it also has adverse implications on energy production; "for domestic and industrial supplies in

13 Pakistan 2025: One Nation, One Vision, *Ministry of Planning Development and Reform*,

2014, <https://www.pc.gov.pk/uploads/vision2025/Pakistan-Vision-2025.pdf>, accessed on 31.01. 2020.

14 "Pakistan third amongst countries facing water shortages", *The News*, 14.01.2019, <https://www.thenews.com.pk/print/418698-pakistan-third-amongst-countries-facing-water-shortages>, accessed on 31.01.2020.

15 Ghulam Nabi et. al, "The crisis of water shortage and pollution in Pakistan: risk to public health, biodiversity, and ecosystem", *Environmental Science and Pollution Research*, Vol. 26, No. 11, April 2019, pp: 10443-10445.

Pakistan's rapidly expanding urban centers; and for critical ecosystem services" such as those provided by wetlands and mangroves.¹⁶

On the other hand, India uses almost 80-85% of the its available water for agriculture.¹⁷ Looking at India, one of the fastest growing economies in recent years, it is seen that water resources affect India's economic sustainability and the livelihoods of millions of people. According to researchers, it is said that about 64% of the population of India makes a living from agriculture and agriculture-related sectors. In addition, the agricultural sector accounts for more than 50% of its workforce.¹⁸ However, despite the high dependence on water-based agriculture, water resources have been wasted largely due to the lack of irrigation facilities. As a matter of fact, nearly 55% of the India's cultivated land does not have irrigation facilities.¹⁹

Considering the importance of water on the economies of the both countries, the nature of the dam policy implemented by the countries is understood. In Pakistan, only two major dams have been constructed from 1947 to 2007, whereas India has constructed 65 dams during the same period.²⁰ Under India's BJP leadership with Narendra Modi as Prime Minister, the control of water - especially in Kashmir - has continued to be of "symbolic value" for India. Considering the competition in the region, the BJP government has a tendency to use water as trump for the sake of regional hegemony by constructing a gigantic river-linking project at an estimated cost of at least \$90 billion.²¹

At this point, the complex that Buzan calls the South Asian Regional Complex in the RSCT theory comes to light. According to Buzan, the security agenda of South Asia include some critical environmental issues like sharing of rivers although it was largely traditional dominated by military and political concerns. Because the increasing tension and frequent voicing of the water problem in recent years are constantly brings the two countries to the brink of war. This water-related issue, which has not been resolved for nearly 70 years has the potential

16 Imtiaz Ahmed, *South Asian Rivers: a Framework for Cooperation*. Cham: Springer International Publishing, 2018.

17 Rajesh K. Mall et al., "Water resources and climate change: An Indian perspective", *Current Science*, Vol 90, No. 12, 2006, p. 1614.

18 Rohitashw Kumar and Harender Raj Gautam, "Climate Change and its Impact on Agricultural Productivity in India", *Journal of Climatology & Weather Forecasting*, Vol. 2, No. 1, 2014.

19 Ibid.

20 Ayaz Ahmad et. al, "Water Resources and Conversation Strategy of Pakistan", *The Pakistan Development Review*, Vol. 46, No. 4, Part II, Winter 2007, p. 1000.

21 Keith Johnson, "Are India and Pakistan on the Verge of a Water War?" *Foreign Policy*, 25.02.2019, <https://foreignpolicy.com/2019/02/25/are-india-and-pakistan-on-the-verge-of-a-water-war-pulwama-kashmir-ravi-indus/>, accessed on 25.01.2020.

for conflict. It also has the potential to lead to a regional war under the shadow of nuclear weapons as envisaged in the RSCT.

The Modern History of Water Disputes Between Pakistan and India

In the following months after the partition of British India, tensions between two inheritor countries - Pakistan and India - have caused emergence of “water nationalism”. The partition of British India into two independent states also distributed water sources and irrigations system in many districts of the Subcontinent, especially in Northern India. The large eastern part of Pakistan and the northern part of India (Punjab region) have been fed with Indus River-based water which is known as IRS. It comprises the Indus, Jehlum, Chenab, Ravi, Beas and Sutlej rivers with many extended tributaries. The river is not only shared by Pakistan and India, but also shared by China and Afghanistan. They have been taking advantage of the river basin.²² In addition, the Kabul and Khurram rivers’ many tributaries have fed the related regions for centuries.²³

The IRS is one of the largests and significant river system in the world with its 1.165.000 km² sphere of influence. Adeel and Wirsing define that it ranks as the world’s 21st largest according to its drainage areas. Among the beneficiary countries, only India and Pakistan depend on this river system in many fields.²⁴

Historically, the bank of the IRS was the host of the ancient civilization which is called Indus Civilization. It led to the emergence of agricultural activity and ancient irrigations structure via South Asia. After the conquest of the subcontinent by Mughals (also known as Baburies), water canals network was established to facilitate irrigation activity in this area.²⁵ During the Mughal Period, various canals links were constructed. Later, when the British dominated over India they further developed the existing canal systems with the assistance of the technology of that time.²⁶

Additionally, with expanding and improving the condition of the existing canals, they also constructed several new canals to enhance the production of primary requirements for their industries. Over a period of time, they commercialized

22 Zafar Adeel and Robert G. Wirsing, *Imagining Indus: Overcoming Water Insecurity in the Indus Basin*. Switzerland: Springer, 2017, p. 6-7.

23 Ashok Swain, Environmental Cooperation in South Asia. In *Environmental Peacemaking*. Conca, K. & Dabelko, G. D. (eds). Woodrow Wilson Center Press, Washington, DC, 2002, pp. 61–85.

24 Zafar Adeel and Robert G. Wirsing, 2017, p. 6-7.

25 Y. Hikmet Bayur, *Hindistan Tarihi*, II. Volume, 1987, p.539-540. and Amit Ranjan, “Disputed Waters: India, Pakistan and the Transboundary Rivers”. *Studies in Indian Politics*, Vol. 4, No. 2, 2016, p. 192.

26 Undala Z. Alam, “Questioning the Water Wars Rationale: A Case Study of the Indus Waters Treaty.” *The Geographical Journal*, Vol. 168, No. 4, 2002, p. 342; and Ashok Swain, 2002, p. 66.

the agriculture and forced farmers to grow high income products like cotton and indigo with the help of new canal system instead of grain production only. This production system adopted by the British in the subcontinent caused periodic famines and starvations in various regions including India's water-rich areas.²⁷

In addition to the relevant economic gains, the improvement of existing canals and construction of new canals were also important to ensure political stability. In order to maximize power of the state, the link between agricultural activities and political stability was not ignorable. To serve this goal, the British established canal colonies in these areas. Since the control of canal system was in the hands of the state, the usage of water sources as well as agricultural activities depended on the desires of the rulers/authority. Along with these political reservations of imperialists, the canal system brought prosperity and wealth in the subcontinent. With the construction of the canals, the size of cultivated and irrigated land expanded and the income from agriculture sector and agricultural activities increased.²⁸

In 1947, Pakistan and India emerged as two independent states. The partition was religion-based and the border demarcation line was drawn according to the religious demography. Apart from the religious demography, there were many controversial issues like geographical disputed areas, administrative districts as well as the routes of irrigation water canals. The *well-knitted and inter-connected irrigation system* in North India was also to be shared between India and Pakistan. Until 1947, the lands of two riparian countries, India and Pakistan, had shared a single irrigation canal system. However, after the partition, the usage of water over canals emerged as a conflictual dispute between the two states until 1960 when the IWT was signed.

Road to Indus Water Treaty

Soon after the independence of Pakistan and India in 1947, water-related conflicts between two the new states started in several districts especially in Northern India. In order to resolve these disputes, they signed a Standstill Agreement in December, just four months after the partition.²⁹ By this agreement, both states accepted the pre-partition-level in terms of allocation of water. The agreement remained in force roughly 3 months due to the expiring of Arbitral Tribunal on

27 Amit Ranjan, 2016, p. 194.

28 Zafar Adeel and Robert G. Wirsing, 2017, p. 26-27.

29 Azhar Ahmad, "Indus Water Treaty: A Dispassionate Analysis", *Policy Perspectives*, Vol. 8, No. 2, July-December 2011, p. 75.

31 March 1948.³⁰ The following day, India cut off the water flowing through various canals to Pakistan.³¹ As a result of these mutual discourses, although the parties got together to discuss this conflictual situation for many times, but all went in vein. In this regard, Pakistan claimed that the canal system was constructed for water/irrigation requirements of all the districts of Punjab and the Pakistani Punjab had inherent rights over the canal waters. On the other hand, according to India's post-partition claim, India alone had rights over the water which rise in its territory.³² Before the partition of British India in 1947, S. Cyril Radcliffe, the Head of Boundary Commission, discussed water canals system but could not succeed to bring both countries to an agreement over the water related issues. After the partition, Pakistan had built a number of canals to supply 50 per cent of eastern rivers' water to west Punjab in Pakistan. However, these new link canals caused new challenges between the two riparian states.³³ The demarcation line had made India the upstream country along the IRS so India took the control over the canals waters as well as remaining sources of water.

Considering the restriction of water by India and delayed negotiations, Pakistan insisted on mediation by a third-party. Resultantly, the issue got international attention when Pakistan insisted on a third-party mediation. In response to initiatives by Pakistan, India rejected the idea of third-party mediation. Ultimately, the negotiations between two states without any mediation took 3 to 5 years but no results were obtained from the talks.³⁴

At that time, the President of the World Bank offered help to resolve the IRB-based water disputes. The negotiations started between two countries under the supervision of the World Bank after India reluctantly accepted the offer of mediation. Indian desire was the allocation of water according to the requirements of each country so the Working Party took into consideration India's proposal and included in negotiations all main rivers of IRS. After eight years of negotiations under the supervision of the World Bank, the IWT was signed between the two riparian states - Pakistan and India - over the IRS on September 20, 1960 in Karachi, the then capital of Pakistan.³⁵

³⁰ Ibid, p. 76.

³¹ Daniel Haines, "(Inter)Nationalist rivers?: cooperative development in David Lilienthal's plan for the Indus Basin, 1951", *Water Hist*, 6, 2014, pp. 133–151, and Undala Z. Alam, 2002, p.342.

³² Neda Zawahri and David Michel, "Assessing the Indus Waters Treaty from a comparative perspective", *Water International*, Vol. 43, No. 5, 2018, pp. 696-712.

³³ Amit Ranjan, 2016, p. 194.

³⁴ Zafar Adeel and Robert G. Wirsing, 2017, p. 54-55.

³⁵ World Bank, Indus Water Treaty. For details see: "India, Pakistan and International Bank for Reconstruction and Development", 1960, <https://treaties.un.org/doc/Publication/UNTs/Volume%20419/volume-419-I-6032-English.pdf>, accessed on 27.01.2020.

Akhtar specifies that Pakistan had reservations about the content of the treaty a week before the signing of the treaty. He further states that Pakistani diplomats conveyed the situation to the president of the World Bank in a letter, but they were softened by Western diplomats and mediators. They convinced Pakistan that the cost of withdrawal from negotiations would be heavy for it. He writes:

“... only weeks before the treaty was finalized, and after all parties had already signed off on polished drafts of the treaty, ... He worried the IWT might enable India to cement its territorial claims to the disputed territory of Kashmir, through which several of the tributaries of the Indus flowed. Underlying the worry about Kashmir was the intense downstream anxiety felt by Pakistan’s state elites. ... Eugene Black, President of the Bank, urged Pakistan to “let the matter drop.” William Iliff, the Bank administrator who directly oversaw the Indus negotiations, opined that Pakistani state elites were unlikely to back out of negotiations, because Pakistan would “lose the prospects she has of substantial financial assistance from friendly governments” and because “her economy and external financial credit will suffer a severe blow”. Eugene Black warned Indian and Pakistani state elites that if they did not sign a treaty quickly the Bank’s arrangements “for financing Indus settlement may be seriously jeopardized.”³⁶

As a matter of fact, the signatory of the Treaty, President of Pakistan Mr. Ayub Khan explained this in a radio speech a week before signing the IWT.

“We had no alternative, to the IWT, he lamented, but he was nevertheless deeply grateful to the Friendly Powers whose contribution to the Indus Basin Development Fund are a vital factor in making the terms of settlement acceptable to us.”³⁷

The IWT and Sharing of Rivers Between Riparian States

The IWT divided the water of Indus River and its main tributaries between Pakistan and India. As determined by the treaty, India gained control on Ravi, Sutlej and Beas, three eastern tributaries. On the other hand, three western tributaries - the main Indus, Jehlum and Chenab - were allocated to Pakistan. Considering the transboundary position of these western tributaries, the amount of 170.27 km³ waters was allocated to Pakistan and 62.21 km³ was granted to

36 Majed Akhter, “The hydropolitical Cold War: The Indus Waters Treaty and state formation in Pakistan”, *Political Geography*, Vol. 46, 2015, p. 68.

37 Ibid, p. 68.

India.³⁸ On the contrary, the complete and exclusive usage of the eastern tributaries was allocated to India.³⁹

This allocation was according to each countries' requirements. However, the disputed western tributaries flowed through the Indian-controlled Kashmir before reaching the Pakistani-controlled Kashmir.⁴⁰ As a result, the water disputes are interlinked with the 73 years of Kashmir issue.⁴¹ Though India signed the IWT which specify the allocation of waters, it has constructed various multipurpose dams on the western tributaries. According to Pakistan, India's actions over Indus River, which is a violation of the IWT, have caused the waters conflicts even more intensify between the riparian states.

From IWT to Today

As discussed earlier, according to the treaty, the control over the water flowing in "three eastern rivers" (Sutlej, Ravi and Beas) was given to India while the control over "three western rivers" (Indus, Chenab and Jhelum) was given to Pakistan. The IWT constitutes an undying binding regime on both India and Pakistan and cannot be changed unilaterally. It only allows for modification if properly concluded and approved by both states. It also allows for domestic and non-consumptive use of the river waters such as "run-of-river hydroelectric plants". Furthermore, Akhtar specifies that "there is no provision in the treaty which outlines a capacity limit for the run-of-river projects India can construct on the western rivers and so far there exist at least 43 such structures".⁴² To address the dispute, it is imperative for Pakistan to come up with a well-grounded case for objection, which is to conduct a study on design principles related to the implications for Pakistan's water supply from a torrent of such projects. The next strategy should be to urge upon arbitrating a threshold on the number of other projects.

Outlined in the IWT, India is also given a right to limited storage on the western rivers while with run-of river projects. There is a provision requiring it to inform Pakistan six months before the construction of such projects. Following information that given by the Indian government, Pakistan has the right to communicate its objections in writing in three months. In some specific instances, it

38 Neda Zawahri and David Michael, 2018.

39 World Bank, "Indus Waters Treaty", 1960, and Amit Ranjan, 2016, p. 197-199.

40 Zafar Adeel and Robert G. Wirsing, 2017, p. 77-82.

41 Ameesh Kumar Sharma, and N.S.Thakur, "Resource Potential And Development Of Small Hydro Power Projects In Jammu and Kashmir In The Western Himalayan Region: India", *Renewable and Sustainable Energy Reviews*, Vol. 52, December 2015, pp.1354-1368.

42 Shaheen Akhtar, "Emerging Challenges to Indus Water Treaty: Issues of Compliance and Transboundary Impacts of Indian Hydroprojects on the Western Rivers", *Institute of Regional Studies (IRS)*, Vol. 28, No. 4, 2010, pp.3-66.

is seen that India has violated the IWT regarding this clause with Pakistan. The case of Kishanganga Project is one of the typical example of the violation of the treaty by India.⁴³ Proceeding with the unilateral implementation, India has also overlooked objections by Pakistan to the projects in a few cases.

The disputes that emerged soon after the signing of the treaty highlighted a space in a conflict resolution mechanism which is triggered automatically in case of any controversy. As Akhtar stated, the objections were raised on Salal Hydro-electric plant when its construction started in 1970.⁴⁴ It was resolved later bilaterally. The issue of Baligarh Hydro-electric plant was also resolved by the third party involvement in 2010 while the dispute of Kishanganga project was settled through the court of arbitration.⁴⁵ The mentioned instances depict the inconsistency of dispute settlement mechanism. Hence, a dispute resolution mechanism must be implemented by standard procedures for a fair solution. The IWT signifies that the flow data of Indus river and its tributaries should be shared between Pakistan and India and daily discharge data from reservoirs. It is also pertinent to increase information sharing by using the latest technologies such as “real-time telemetry systems” for common monitoring.

Similarly, the treaty does not account for some specific issues that have arisen in recent years. In the treaty, the transboundary aquifers are not accounted for and over the abstraction of water from them has put the Indus Basin's water table at a risk. Another gap in the IWT is that it did not foresee the issue regarding pollution. According to Iqbal et. al, “water from the eastern rivers enter Pakistan heavily polluted carrying severe environmental implications for Pakistan.”⁴⁶ Likewise, the environmental flows are the issues which have recently been recognized and need to be coordinated between Pakistan and India to protect the downstream ecosystem. Besides, the lack of watershed or basin management also creates a negative environmental impact. In the end, climate change is developed as a serious concern for water systems around the world. For this reason, the appropriate measures must be taken immediately to prevent expected disasters.

43 The Economic Times, “Pakistan raises India's ‘violation’ of Indus Waters Treaty with World Bank”, 12.05.2018, <https://economictimes.indiatimes.com/news/politics-and-nation/pakistan-raises-indias-violation-of-indus-waters-treaty-with-world-bank/articleshow/64271901.cms?from=mdr>, accessed on 31.01.2020.

44 Shaheen Akhtar, 2010, pp.3-66.

45 Malik Muhammad Ashraf, “Arbitration on Water”, *The News*, 19.11.2019 <https://www.thenews.com.pk/print/585297-arbitration-on-water>, accessed on 01.03.2020. and Niluka Kadurugamuwa, “*Sharing of Trans-Boundary River Waters in South Asia; Geopolitics and Beyond*”, 2014, https://www.academia.edu/20045513/Sharing_of_TransBoundary_River_Waters_in_South_Asia_Geopolitics_and_Beyond, accessed on 25.01.2020, p.42.

46 Muhammad Mazhar Iqbal, et. al, “Modeling Approach for Water-Quality Management to Control Pollution Concentration: A Case Study of Ravi River, Punjab, Pakistan”, *Water*, Vol. 10. No. 8, 2018.

It is clear that the conditions of discussion about the securitization of trans-boundary water resources reduces the binary representation of Indian interests against Pakistani interests in the context of costs-benefits of hydro-power. Through this prism in South Asia, the national water resources can easily be associated with other issues. The depiction of the Indus River as an indicator of a “Neo-Malthusian crisis of environmental security”⁴⁷ is reflected in the number of pieces in the last few years which indicates that “*a water war in the region is imminent.*”⁴⁸ In this context, the securitization of the IRS and competition over the transboundary waters have become intensified in the past few years as China also becomes a persistent player in the “*geopolitics of water in South Asia.*”⁴⁹

Another significant aspect related to the IWT is its out-datedness that can be gauged from its ineffectiveness to resolve water issues between the riparian states under the principle of international law. Though the World Bank-brokered IWT has survived with a few challenges to the present day, the policy makers of both countries consider it as an outdated treaty and a paradox. Though the treaty is publicized by many scholars of international politics as a precedent of successful cooperation between these hostile states, it is also frequent target of complaints from officials on both sides.

Afghanistan - India Relations Over Water and Its Impacts On Pakistan: The Case of the Kabul River Basin and Shahtoot Dam Project

Afghanistan and Pakistan have planned several developmental projects on various rivers to overcome energy deficiencies and water scarcity in the region. The Kabul River Basin (KRB) is the major river that has been used for irrigation lands and hydropower generation by both the countries. On the occasion of size of cultivable land and the large number of people directly/indirectly dependent on land, the Kabul River has a significant role in improving the socio-economic condition of residents from both riparian countries.

In this regard, India has an unignorable role in dams which were planned to build in Afghanistan. In respect of regional hegemonic desires, India seeks to extend its penetration and influence against Pakistan which it defines as an enemy. In this manner, it has a key role in the building of various dams in Afghanistan, especially \$ 236 million-Shahtoot Dam Project which is constructed on the KRB.

47 Homer Dixon, and F. Thomas, “Environmental Scarcities and Violent Conflict: Evidence from Cases,” *International Security*, Vol. 1, No. 5, 1994, pp. 5–40.

48 Brahma Chellaney, *Water: Asia's new battleground*, Washington: Georgetown University Press, 2011..

49 Douglas P. Hill, “Trans-boundary water resources, crisis and uneven development in South Asia,” *South Asia Journal of South Asian Studies*, Vol. 36, 2013,; pp. 243–257.

The Shahtoot Dam, which is expected to be completed in 2021, has negative geo-strategic and economic implications for Pakistan. India's strategic initiatives evoke great concerns in Pakistan, a lower riparian country of the Kabul River.⁵⁰

As a matter of fact, considering globalizing world and importance of geopolitics, it should be noted that water is not merely a natural resource, it is also one of the substantial strategic resources. According to its geopolitical position, it is seen that water problems are used as a weapon for regional hegemony by external powers. In this context, the main questions to understand in this conflict are: what is the main purpose of India in encouraging the construction of dams in Afghanistan? Is India's main purpose to develop Afghanistan economically or to serve its own geopolitical interests? Should these large dams constructions merely be considered as external assistances?

According to World Bank researches regarding to climate change, a large number of people, mostly South Asians, will face internal or external migration due to water-based problems by 2050.⁵¹ States that become aware of this fact are trying to maximize their interests by storing water through dams, and thus strengthen their position geopolitically and geo-strategically. In addition, the water resources and especially transboundary waters are included in the geopolitical and strategical priorities of the regional players.⁵²

In this context, because of its strategic position and with assistance from India, Afghanistan is trying to build various dams in order to get rid of the adverse effects of climate change as well as economic lapse. However, considering transboundary waters and regional conflicts, it is clear that Pakistan is dissatisfied with this complex situation because the construction of Shahtoot Dam is seen as a strategic move by Pakistan due to the participation of India.⁵³

In terms of these mutual discourses, India states that the planned dams will contribute greatly to the economy of Afghanistan in various sectors from agriculture to health sector. On one the hand, by stating that the planned dams will contribute to Afghanistan in various aspects, India intends to extend its influence and penetration in the region in this way. On the other hand, in terms of

50 Sudha Ramachandran, "India's Controversial Afghanistan Dams", *The Diplomat*, Tokyo, 20.08.2018. <https://thediplomat.com/2018/08/indias-controversial-afghanistan-dams/>, accessed on 27.01.2020.

51 Asia Sentinel, "Climate Change-Induced Migration", 24.09.2019, <https://www.asiasentinel.com/p/climate-change-induced-migration>, accessed on 25.12.2019.

52 Neil S. Grigg, "Global Water Infrastructure: State of the Art Review", *International Journal of Water Resources Development*, Vol. 35, No. 2, 2019, pp. 181-205,

53 Anirban Bhaumik, *DHNS*, New Delhi, "Kabul dam construction may rekindle Indo-Pak water row", 2018, <https://www.deccanherald.com/national/kabul-dam-construction-may-687288.html>, accessed on 25.12.2019.

geopolitics, India also aims to surround Pakistan strategically.⁵⁴ Considering the internal conflicts in Afghanistan, Pakistan concerns that India will be permanent actor in the re-construction of Afghanistan in the aftermath of conflicts in the region.

Economic and Strategic Importance of the Kabul River Within the Framework of Water Scarcity

Being the sole source of supply water in the region, KRB includes nine Afghan provinces as well as two Pakistani provinces. Considering this river and its main tributaries, it has a significant role in the region's residents' live and livelihoods.⁵⁵ It is seen that it feeds nearly 25 million people who live in this basin and play a key role in terms of potable water for almost seven million Pakistanis and Afghans.⁵⁶

As a matter of fact, the water-scarcity problem which Kabul has been experiencing for several decades has further increased the importance of the Kabul River. From the point of view of its natural geography, Kabul and its surrounding areas are located in an arid region.⁵⁷ The region's an annual rainfall is just around 3622 mm and roughly 68 percent of potable water facilities which its residents attain. Under the light of the given data, the Shahtoot Dam Project is capable to supply with a breath for Kabul in various aspects.⁵⁸

In spite of the expectations of the Afghan government, the Pakistan is more concerned regarding India-backed projects. Owing to the fact that it is located in the same region and is under same natural condition with Afghanistan, it is also has water-scarcity problems. It is seen that the vast majority of its citizens depend on agricultural sector to live on (nearly %68), especially its northern province, Khyber Pukhtunkhwa.⁵⁹ Hence, there is no doubt that as much as economy of Pakistan is dominated by India-originated rivers it depends on the Kabul River also. In this term, the Kabul River has a considerable potential for irrigation. More than two million people who live in Peshawar city irrigate their land by

54 Shakeel Azam, "Kabul River Treaty: A Necessity for Peace-Nsecurity Between Afghanistan And Pakistan, And Peace in South Asia", *Gomal University Journal of Research*, Vol. 31, No. 2, December 2015. p. 139-140.

55 Iffat Pervaz, and M. Sheharyar Khan, "Brewing Conflict over Kabul River; Policy Options for Legal Framework". *ISSRA Papers*, 2014, p. 24-26.

56 Suliman Yousaf, "Kabul River and Pak-Afghan Relations", *Central Asia Journal*, Vol. 80, Summer 2017. p.99.

57 Thomas. J. Mack. et al., "Groundwater-level Trends and Implications for Sustainable Water Use in The Kabul Basin, Afghanistan", *Environ Syst Decis*, Vol. 33, 2013, p. 459.

58 Said Hashmat and Sadat Nasrat, "Sayed Afghanistan: Water management for peace", 2019,

<https://www.lowyinstitute.org/the-interpreter/afghanistan-water-management-peace>, accessed on 25.12.2019.

59 Mohammad Nafees, Shabir Ahmad Khan and Zahidullah, "Construction of Dam on Kabul River and its Socio-Economic Implication for Khyber Pukhtunkhwa", *University of Peshawar*, Pakistan, 2016, p. 4.

the relevant river and its tributaries.⁶⁰ Also the water of this river and its tributary is indispensable for Dera İsmail Khan, Banuri and North Waziristan's residents.

On the one hand, the Kabul river has a vital role on regional irrigation of agricultural land, on the other hand it plays a key role to generate electricity. Afghanistan, one of the lowest electricity consuming country in the world, has various hydropower dams on the Kabul River and its tributaries.⁶¹ Pakistan is also one of the countries that suffer from energy shortages. In this term, Pakistan produces about a quarter of the 1100 gigawatt hours of electricity generated from the Warsak Dam with water flowing from the Kabul River per year. As it is seen, the benefits of the Kabul River's for Pakistan are very important; if more India-backed dams are built on the Kabul River and its relevant tributaries,⁶² the vital interests of Pakistan in the region will be jeopardized.⁶³

In addition to economical affects, growing relations between Afghanistan and India also evoke concerns in Pakistan. New Delhi seeks to extend its penetration in Afghanistan on multiple fronts including water resources. It needs to be stated that Pakistan's main concern is not about building dams which are essential for development of Afghanistan. It primarily focuses on New Delhi's role in these projects and its devastating impacts on Pakistan in terms of national security and economy. In this context, Islamabad accuses New Delhi of damaging its agro-based economy by shutting off water that flows from Hindu Kush as well Kashmir. Also it blames both Kabul and New Delhi to make Pakistan's land barren by impeding flows of water.⁶⁴

In the grip of economic and political problems, Kabul argues that it has all kinds of saving rights on the Afghanistan originated rivers as a riparian state.⁶⁵ In this complex conjuncture, it can be said that these discourses bring Afghanistan into conflicts with Pakistan, a lower riparian country.⁶⁶

Owing to the fact that both Afghanistan and Pakistan are located in one of the regions where the most serious impacts of climate change are likely to be felt, it is essential for them to enter into negotiations over waters to avoid future

60 Suliman Yousaf, 2017. p. 100-102.

61 Bromand M. Tayib. "Impact Assessment of Climate Change on Water Resources in the Kabul River Basin. Afghanistan", *Ritsumeikan University*. Shiga, Japan, 2015. p. 64-67.

62 According to Pakistani experts Afghanistan aims to build more than 12 hydropower dams on Kabul River and its tributaries, 2011, <https://defence.pk/pdf/threads/india-to-help-afghanistan-build-12-dams-on-kabul-river.108204/>, and Mohammad Nafees, Shabir Ahmad Khan, Zahidullah, 2016, p. 4.

63 Sudha Ramachandran, 2018.

64 Shakeel Azam, 2015. p. 138-139.

65 Said Hashmat and Sadat Nasrat, 2019.

66 Hidayat Ullah Khan, 2019, <https://www.occupy.com/article/india-s-dam-building-boom-fuels-water-wars-between-pakistan-and-afghanistan#sthash.WhKuq9aA.dpbs>, accessed on 25.01. 2020..

water-based conflicts. It should be noted that the main source of KRB is glaciers. Since the main source of the KRB is glaciers, the management of water needs to be well planned.⁶⁷ In the view of the possible impacts of climate change, the countries' agreement is required to not only in terms of avoiding conflicts, but also in order to get rid of a possible drought or flood that stemming from water. As mentioned above, this region is a water-scarcity region, so it is indispensable to solve this specific problem before it turns violent.

Water as a Means of Conflict in South Asia

A rapid increase in the population over the past decades has also created new pressures on water in the South Asian region. Considering the importance of water for the semi-arid South Asian region, it is clear that possible water shortage can cause great damage to the agriculture-based economy of the region's countries. The importance of water for Pakistan, which has a fragile economy as well as for India, cannot be ignored. India attaches great importance to water resources, especially IRB, not only to get rid of the possible dangers of climate change, but also to maintain its position in regional hegemony.

Given the climate of the region, South Asia is one of the regions where water is used as a kind of weapon. Taking into account the historical rivalries and conflicts between India and Pakistan, it is seen that not only water scarcity but also abundance of water is used as a menace. For instance, as a result of the fullness level of dams during the monsoon season, a significant part of the agricultural areas in Pakistan are flooded by the opening of dam gates by India. On the other hand, India's potential to cut the flow of water flowing into Pakistan is damaging the agro-based Pakistani economy. This complexity also has caused regional droughts/floods in Pakistan and triggers the in-country migration as well as unemployment and epidemics.⁶⁸

Considering these risks, the importance of water for both state economies becomes evident. Especially when the seasonal droughts are taken into account, it is seen that Pakistan's economy suffered greatly from India-based water cutting. This has been reflected in the discourses of statesmen of both sides for many times in the context of water security. Pakistan occasionally accuses India of aggression over water and demands that the problem must be resolved within the framework of the IWT.

⁶⁷ Bromand M. Tayib, 2015. p. 94-95.

⁶⁸ Winston H. Yu, et al, *The Indus Basin of Pakistan-The Impacts of Climate Risks on Water and Agriculture*. World Bank, Washington, DC., World Bank, 2013, p.36-41.

Given the Kashmir issue, which has not been resolved for nearly 72 years, the Indian government considers that the multi-purpose dams to be established in Kashmir will contribute significantly to the country's economy in terms of energy and irrigation. Hence, the Kashmir region makes the water war multidimensional, as it hosts the main water resources. Considering these features, it is thought that the most important reason of a future Kashmir war will be the sharing of water resources.⁶⁹

As seen in the example of the India-Pakistan water tension, the sharing of water resources between the two countries brings the two countries to the brink of a regional war. While the RSCT's prediction that conflicts will arise from regional and inter-regional security problems is realized here, it is also revealed that an environmental problem has the potential to cause a conflict that could be felt in the global system.

Conclusion

This study analyses the various aspects of IWT, water resources, current water politics among Afghanistan, Pakistan and India, and the significance of water for Pakistan. The paper concludes that besides the menaces of water shortages and energy crisis, climate change is another serious challenge frightening policy-makers.

The article draws on the Regional Security Complex Theory to understand the nature of the ongoing water issue between Pakistan and India, which often causes regional conflicts. According to the RSCT, which was put forward as a criticism of Samuel Huntington's Clash of Civilizations thesis, the main source of conflicts after the Cold War is regional and inter-regional security problems and dynamics. In this context, in this study, which focuses on the Pakistan-India water tension, it is seen that two countries, which have common threats and security problems, approach the transboundary water as a regional conflict catalyst. As a matter of fact, when the policies of the both countries are examined in the context of the RSCT, it is understood that the insecurity and conflict potential arising from water will increase in the South Asia.

It is also observed that water insecurity can lead to regional insecurity in South Asia politically and economically. Political and economical context of IRB region has long been a conflict and competition rather than cooperation between Pakistan and India. The cross-border escalation and intra-state tensions over contentious issues have had three significant effects on external actors' view of the region's

69 Keith Johnson, 2019.

political economy: (i) “The external actors have been more inclined to approach to South Asia as a medium for their own interests rather than local actors. (ii) In part, as a result of persistent issues, the development relationships have been entirely intra-state in means and ends. (iii) Political relationships among states have been managed gradually in small steps rather than a larger vision”. Out of three, the third effect has is justified of distinct interventions – i. e., it has eased the tensions between Pakistan and India over many issues during last decades, as well as of successful management of the IWT.

In short - to bring water under the bridge - the existing water resources need to be analyzed. There is also a need of a comprehensive conservation and management strategy which could also cater water requirements for the future. In order to overcome the burning issue confronted with India, there is an urgent need to construct a few new mega dams which could serve the larger interest of the public of Pakistan. That is how the future generations can gain mutual advantages of water on the basis of equity and justice.

When it comes to explain the main purpose of the multi-purpose dams built by India along the Kabul River in Afghanistan and the Indus River, the most obvious answer to the question is India's desire to compress Pakistan over water resources. Indeed, as has often been seen in recent years, even in a verbal discussion between them for any reason, India threatens Pakistan to cut the waters. Considering the geopolitical importance of water resources and Indus River System (IRS) for regional hegemony, India's desire to compress Pakistan over water resources in recent years has been tried to explain by highlighting multi-purpose projects. Some of them are completed and few are under construction.

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