



**Trans-Boundary Water Governance:
An Urgent Need of the Formulation of Pak-Afghan Trans-Border Water Governance
Mechanism**

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Abstract:

Trans-boundary watercourses drain larger parts and ensures the flow of fresh waters in different parts of the world. In trans-boundary watercourses, upper-riparians have an upper edge to deal with the water resources of the trans-border rivers while the lower-riparians have a compromising position. Kabul River Basin is one of the major trans-border water basins which drains the vast areas in Afghanistan and Pakistan. Recently, uneven weather patterns and climate change worldwide affected the national economies with an irreparable loss and created survival threat to human beings, and to other species. Pakistan is considered as one of the most vulnerable countries to face the impacts of the climate change. Dryness of fresh water resources is one of the impact of climate change that will ultimately affect the Kabul River along with other rivers of Pakistan. This study adopted qualitative research methodology by analyzing the secondary data to address the main research question which revolves around the adaptation of any formal water sharing mechanism between the two co-riparian countries. The study concludes that Pakistan should initiate hydro-diplomacy with Afghanistan, and enter into a formal bilateral trans-border water sharing treaty under the guidelines of the UN Convention 1997.

Key Words:

INTRODUCTION

Trans-boundary water management has always been one of the main agenda in the discussions, debates, and policy formulation processes in a vast number of national, regional and international socio- political and legal forums. Emergence of the Nation-State system from the European continent in the mid of the 17th century resolved the question of territorial sovereignty but the question of ownership and unlimited utilization of the trans-boundary watercourses remained unsettled. Nearly one and a half century after the emergence of Nation-State system, intra-state water sharing treaties and agreements came into existence in different parts of the world. Although, according to James Duncan (2014), 688 treaties have been signed between the co-riparian

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countries since 1820 and worldwide 263 trans-boundary watercourses exist, while trans-boundary basins hold 60percent of the total fresh water present on the Earth and also covers a huge surface area and human population (Duncan, 2014), but nearly 60percent of the trans-boundary watercourses have not come under the ambit of

Governance mechanisms or instruments throughout the world (Waqas 2022, 1174-75). The most famous trans-boundary river basins are Nile, Tigris, Euphrates, Ganga, Danube, and Indus. These basins irrigate vast lands, hold a larger number of wildlife and feed a huge human population in the Asia, Africa and European continent (Rahaman, 2009).

Pakistan and Afghanistan have historical, cultural, religious, and diplomatic and trade based relations. Although, being integrated by the cultural and religious ties, bilateral diplomatic relationships between Afghanistan and Pakistan historically have never achieved heights in the terms of friendliness and trust building. Afghanistan's geo-strategic location remained a determining factor to make Afghanistan relevant to the Global powers throughout the history. Pakistan can access the natural energy resources of Central Asian states and can develop trade relations with them through Afghanistan while on the other hand, Afghanistan can access the Arabian Sea through Pakistan (Khan A. , 2020). More or less similar dichotomy can be drawn on the trans-border watercourses of Afghanistan and Pakistan. Chitral River and Kabul River are the main trans-border rivers of Pakistan and Afghanistan. Chitral River originates in the Pakistani extreme Northwest District of Chitral and flows into the Kabul River near Jalalabad, Afghanistan. In other words, Pakistan and Afghanistan cannot abandon each other at any cost due to the huge interdependency on each other, something beyond the connotation of an 'immediate neighborhood'. The hydrology of the Kabul River has a vital role in the agricultural, domestic, energy and industrial sectors of both of the riparian countries. Kabul River originates from the Hindukush Range in the North -Eastern Province of Afghanistan named as Wardak. Its total length is 700 km and its total drainage area is approximately 70500 km squares (IUCN 1994, 2-4).

Kabul River is considered as one of the main tributaries of the Indus Basin and Indus River is considered as the jugular vein of the agriculture sector of Pakistan. Kabul River provides 26percent of the total river water flow in Pakistan and it is also a main source for domestic usages of millions of people in Pakistan. Pakistan constructed dams and installed power production stations on the Kabul River which shares input in the national power and energy sector of Pakistan. Pakistan's river management system is far better than Afghanistan but unfortunately not compatible with the international standards for the national level water management mechanisms. On the other hand, at regional level, Pakistan has also minimized her conflicts of water ownership and utilization patterns due to the rectification of the bilateral Indus water treaty (IWT) of 1960 (Usman 2012, 16-17). Although, IWT has certain loopholes in its formulation like lack of safety protocols against the contamination of water by the upper riparian state and it needs an urgent review in the recent wake of the impacts of climate change on the South Asian Region specifically Pakistan.

Maintaining status quo instead of formulating a sustainable bilateral trans-border water governance mechanism can be problematic for both the countries whenever any one of the country wants to update or adjust her water management system with its national level requirements. As Qaiser Bengali stated that water scarcity is not only the natural scarcity but it is also generated socially through the ineffective water management policies (Usman 2012, 9). Development of the

proactive and sustainable water management systems at national levels occupied the central theme in the international decision making and policy formulation forums due to the severe impacts of climate change on the natural water resources. Sooner or later, emerging water crises and the international obligations to minimize the environmental degradation and to overcome the impacts of climate change will compel Pakistan to develop and implement a grand strategy to manage her water resources in the best possible way. On the other hand, Afghanistan will also update and develop her water management system whenever it will be possible to the national government of Afghanistan. In the absence of a bilateral trans-border water management treaty or convention it will be difficult for both the countries to develop a national level strategy for water management. So, therefore, both countries should initiate hydro-diplomacy along with other types of diplomacy to conclude the viable, effective, and sustainable bilateral water sharing treaty. This study analyzes the constraints and possibilities for the adaptation of bilateral water utilization and ownership treaty by exemplifying the existing regional or international trans-boundary water utilization and ownership treaties.

This study focuses on these research questions: how Pakistan and Afghanistan manage their trans-boundary watercourse in the absence of formal governance mechanism? What are the main constraints and possibilities/options in the formulation of the trans-boundary water management treaty by Pakistan and Afghanistan?

METHODOLOGY

The research involved the scrutiny of some interconnected questions and issues focusing on the transboundary water governance between Pakistan and Afghanistan in the absence of formal governance mechanism. As per requirement, the study encompasses both evaluative and descriptive forms of research study. By analyzing the complex nature of relations between the two neighboring states Pakistan and Afghanistan, in post-Taliban government era, this study focuses on the options available for formulation of water treaty between both states.

Qualitative approach of research is applied in this research because it involved a thorough comprehension, understanding and analysis of the collected data while drawing findings, suggesting the recommendations and reaching the conclusion. The analysis of books, documents, periodicals, journals and scholarly articles, both offline and online forms the secondary base of the research. The substance analysis and study substantiates the subjectivity and objectivity of methodology to finish the research task. The research questions have been addressed by the scrutinized study of the content and also supported in shaping the conclusive remarks and chalking out some important suggestions

THEORETICAL FRAMEWORK

International relations and the Global politics can be studied by some of the main theories like Realism, Liberalism, and Constructivism. Realism being the most dominant theory in the IR believes in the egoistic, selfish, and competitive nature of human beings and an absence of the international government (Heywood, 2011). Although, statecraft of Afghanistan is not compatible with the contemporary statecrafts in the world but as a Nation-State, Afghanistan is also concerned about her national interests and has always tried to product them within and beyond her territorial limits. On the other hand, Pakistan as a Nation-State having a compatible statecraft with the contemporary

statecrafts is ready to invest her all kinds of resources to protect her national interest within and beyond her territorial limits as per realist thinking. Water as a natural nonrenewable resource is considered as a non-traditional security threat and its intensity became much higher in the recent wake of climate change throughout the world. In the case of Pakistan and Afghanistan, water is beyond the politics of climate change because it is the main source of livelihood for millions of people of both the countries. That's why, water has a vital role in shaping and reshaping of the intra-state relationships between Afghanistan and Pakistan. The perspective of strong realists or structural realists like E.H. Car and Waltz is applied to understand Pak-Afghan bilateral relationships. As per strong realists, power, conflict, self-interest, dominance, and competition cannot be minimized in the intra-state relations but there are other regulating forces also present in the international system like international norms, institutions and international political arena (Donnelly, 2005). Afghanistan as an upper riparian country can develop her capabilities to divert or contain the current flow of her waters into the territory of Pakistan in the absence of any intra-state water regulating mechanism. Furthermore, Afghanistan as a weaker state as compare to Pakistan has the capability to align herself with a rivalry power of Pakistan and it will become a security challenge for Pakistan in the presence of India's continuous enmity with Pakistan.

International Law as an instrument for the resolution of the intra-state disputes and conflicts can be divided into the domains of public international law and private international law. The main sources of International law are treaties, conventions, accords, judgments of the international court of justice, opinions of the international jurists, political scholars and the customary international practices. Public international law is mandated with the regulation of the international code of conduct of different states to minimize the threat of war and to manage the intra-state conflicts. After explaining the domain or ambit of the international law the question arises: Why any state should follow the international law? As per Andrew Heywood, international law should be followed by a state due to the fear of isolation, fear of punishment, for the protection of national interest and cooperation with the existing international norms (Heywood, 2011, 5). International water law also comprised customary water laws, international water treaties, conventions, and viable regional water sharing treaties. Despite being a separate set of laws for the resolution of intra-state water disputes, international water law has a similar weakness to the public international law because it lacks the implementation institution or structure.

Customary international water law is the dominant/main law for the trans-boundary water governance and this law is composed of complex set of laws and difficult for interpretation and implementation due to the changing circumstances. Instead of customary practices to settle down the intra-state disputes, formal treaties and conventions are more simple and implementable. Furthermore, understanding and interpretation of different sources of customary international law by the jurists, experts and scholars have a vital role to make it implementable for the specific cases. There are a number of loopholes in the customary international law; among them the adaptability with the rapidly changing circumstances is the main issue, like the evolving international system and emergence of inter-governmental and non-governmental political, social and economic organizations. Although, Helsinki Rules of 1966 are one of the major rational efforts by the jurists of international law for the codifications of different customary laws on the equitable and reasonable utilization of the trans-boundary water resources by the consideration of a number of other factors like pollution, flood control mechanisms and navigation rights (Dellapenna, 2001).

UN Convention of 1977 on the utilization of international water courses can be a supportive document for Afghanistan and Pakistan to develop a trans-boundary water governance mechanism. As per Ute Mager's analysis over the practicality of different articles of the convention depicts the possible policy adaptations for Afghanistan and Pakistan. Convention 1977 emphasized the establishment of joint mechanisms for the regulation/governance of the trans-boundary watercourses and stressed upon the sustainable, equitable, and protective utilization of the watercourses by the riparian countries. Furthermore, this Convention also supports the codification of the existing customary water laws between different co-riparian countries and also provides a dispute resolution mechanism for the settlement of water related issues in the case of rising any conflict between the basin countries in different regions of the world (Meager, 2015). Pakistan and Afghanistan can adopt the specific provisions of this convention for the establishment of Pak-Afghan trans-border water governance mechanism. This convention also endorsed the adaptation of already existing intra-state trans-border water treaties, accords, and agreements. Indus Water treaty of 1960 between India and Pakistan can be a precedence for the different co-riparian countries in the South Asian region to develop their trans-boundary water sharing mechanisms to avoid unnecessary conflict.

LITERATURE REVIEW

Afghanistan is a landlocked country with weak/poor socio-economic and political infrastructure. Although, Afghanistan is an old member of the community of the countries and is considered as an organic/ indigenously evolved multi-ethnic nation based state but historically Afghanistan remained a playground for the global and regional powers due to her geostrategic location. From British departure from the sub-continent in 1947 and the emergence of Shah Zahir as the sovereign King with the ambitions of the modernization of the Afghan tribal society under the inspirations of the West to his dethronement by his own cousin and brother in law Sardar Dawood in 1973, this era could be considered as a time of maximum internal political stability. From the previous five decades due to the continuous turbulence including wars, civil wars, terrorist and militant activities, Afghanistan is still far from achieving the political stability despite putting efforts from national, regional and international levels. Divisions in the Afghan society on the ethnic lines, religious lines and the terrain of the country plays the role of catalyst for the prolongation and strengthening of the political instability in the country (Khan H. M., 2021). On the other hand, presence of non-state actor's primarily internationally listed terrorist organizations deteriorated the political situation and also affected the territorial sovereignty of the country. A weak central government with a limited mandate in Afghanistan, made it difficult for the immediate neighbors like Pakistan to cultivate warm diplomatic relations for the regional peace and development (Threlkeld 2021, 9-10).

For a country to achieve social progress, economic development, warm diplomatic relations with different countries and worldwide recognition in the socio-economic domains, a stable political system with an effective/deliverable government arm is a prerequisite. Unfortunately, Afghanistan lacks this prerequisite. The incumbent Taliban Government has established its writ on the people of Afghanistan and retained peace in the society but it has no recognition worldwide. Furthermore, it has no expertise to tackle with the Global issues like climate change, pandemics, water crisis and

global warming etc. Trans-boundary or intra-state water governance is such an issue which is interlinked with the other global issues as well along with the domestic issues of a country.

Pakistan and Afghanistan not just shares a border of 1660 miles but have some larger similarities in the cultural, social, and religious affairs of the public life. Unfortunately, despite being immediate neighbors having a number of communalities both countries could not be able to develop smooth, cooperative, and warm diplomatic ties which are crucial for the regional trade, security, economic progress, peace, and social development. The main reason behind the cold diplomatic ties and uncooperative attitude between the two states is deep rooted in the historical claims over the internationally recognized borders. Despite being internally unstable and war torn state Afghanistan never recognized the Durand line which is an internationally demarcated border between the two countries. Presence of Pashtun population in a whelming majority along the Durand line further strengths the claim of Afghan governments. Presence of global powers like USSR and later on USA and non-state actors provided the justifications over the interference of Pakistan in the internal affairs of Afghanistan. Global and regional powers did not undermine the influence of Pakistan in the Afghan affairs and the recent engagement of Pakistan in the US-Taliban peace talks as some main facilitators is an example of relevance of Pakistan in the settlement of Afghan issues (Threlkeld 2021, 5-15).

Water disputes between Afghanistan and Pakistan have never been tensed just like the bilateral political relations but the in the absence of formal, treaty, convention or mechanism over the equitable and sustainable utilization of the water resources of the Kabul River, it will become a tense situation in the near future. Importance of Kabul River for the agriculture, household, industrial, and electricity generation for both countries cannot be negated. Alterations of the status-quo in the water utilization patterns by the Afghanistan as an upper riparian country can damage the national interest of Pakistan. Infrastructural developmental plans related to water storage, electric generation, and up-gradation of the irrigation system of Afghanistan with the help of regional powers, and international institutions in the recent past created huge panic among the concern circles in Pakistan. So, therefore an intra-state water sharing treaty or agreement can be helpful to lessen the causes of the tense diplomatic situation between the two countries (Ranjan, & Chatterjee, 2020). If rationally analyzed, absence of smooth bilateral relationships and an environment of mistrust and low confidence between both the countries, made complex and uncertain conditions to reach a conclusion on the trans-border water management issues.

Pakistan and Afghanistan are intertwined on a number of cultural, social, political, economic and religious common factors but there are geographical e.g. Durand line issue, trans-border terrorism and trans-boundary water sharing issues being e main irritants in the development of the warm diplomatic ties between the two neighbor states. Water as common natural resource between the two countries occupying the position of one of the non-traditional security threat which can be one of the alarming factor for war between the two countries. Water security is a complex phenomenon which is related to a number of political and environmental factors. On the other hand, environmental politics became one of the main political discourse in the international arena due to the environmental degradation and impacts over the lives and livelihoods of the majority of populations throughout the world from the previous two decades. Although, there are a number of best and worst water management mechanisms between different riparian countries in the world

but these mechanisms are not sufficient for riparian countries like Pakistan and Afghanistan etc. (Malik, 2019).

Protection of ecosystem for the sustainable development now became an obligation for the leading economies of the world after the UN-led sustainable developmental goals. Trans-boundary water governance is the main domain which impacts the commitments of the responsible nations to the international community related towards SDGs 2030. Pakistan as developed, responsible and stable country as compared with Afghanistan, has to work out for her international commitments along with the fulfillment of her national developmental agenda. Pakistan and Afghanistan without having any formal treaty cannot cope in future with the number of rising issues related to environmental protection, and development band peace in the region. A number of existing frameworks in the form of national, regional, and international water sharing treaties, conventions, and laws can be helpful in this regard. Authors by suggesting different frameworks and mechanisms in the last portion of their article concluded hydro-diplomacy as a significant framework for the establishment of the trans-border water governance system between Pakistan and Afghanistan (Waqas, 2022).

Pakistan as the 4th largest fresh water user country in the world entered in a list of water stressed countries in the wake of climate change. Furthermore, Pakistan is rapidly changing from a water stressed to water scared country due to a number of conventional and nonconventional reasons. In the first place naturally, Pakistan lacks water heads of the main rivers which are flowing in Pakistan. Secondly, Pakistan has hostile relationships with her immediate neighbors which owns the water heads and alter the river flow to Pakistan. Thirdly, Pakistan lacks storage capacity and it is only up to 30 days. Fourthly, provincial irrigation departments with outdated irrigation system and mechanisms lack the adaptation of an effective and rationale policies for the sustainable utilization of her available fresh water resources (Akbar, 2021). Agriculture sector of Pakistan is the most important sector which contributes nearly 21 percent to the GDP and 45 percent to the employment pole of the country. It consumes nearly 69 percent of the total available fresh water in the country. Agricultural sector not only provides food to the huge population but acts as one of the main source of foreign exchange to the country in the form of huge agricultural exports. It depends on the underground water and river water mainly with the seasonal rainfall as well as the main sources of irrigation (Khosro, 2021). Due to uncontrolled water boring procedures underground water levels in the country became deeper and deeper while due to the absence of bilateral treaties with the west neighbor, agriculture sector became more vulnerable in the wake of water crisis.

Furthermore, Pakistan is being hit by the global warming and climate change and facing severe climatic conditions to this global phenomenon. Climate change is the global issue which is caused by a number of human led activities by developed and developing countries of the world. Dilemma of this issue is that global led response to the climate change is insufficient to cope with the impacts of climate change on the developing countries like Pakistan. Pakistan as a developing country has insufficient resources to overcome the impacts of climate change on its agriculture sector in the forms of low productivity, unhealthy food items, and drying up of the fresh water resources (Shahid, 2021). Unfortunately, the existing water resources are not being sustainably utilized by Pakistan and on the other hand, the responsible authorities are not taking steps unilaterally with Afghanistan to secure the water flow from Afghanistan into Pakistan. As per Zain's research, dynamics of climate change are severe on Pakistan as compared to the other South Asian countries.

Glaciers are basically fresh water reservoirs and the main source of fresh water in the world is by their natural melting process but in Pakistan due to climate change, melting rate of the glaciers is high and Pakistan has no proper policy to overcome this issue (Mustafa, 2021).

Afghanistan has four River Basins and shares the water of these Basins with the Central Asian Republics, Iran and Pakistan. Domestically, Afghanistan lacks proper infrastructure for the sustainable utilization of her water resources and on the other hand Afghanistan lacks intra-state water governance instruments except the water sharing treaty of 1973 with Iran. Despite the presence of US and her allies nearly for the consecutive two decades. The UNICEF report 2022 on the availability of water resources and secure access to them by the population shows a horrible picture of the Afghan society. Nearly 80 percent of the population have no access to safe drinking water while 93 percent of children in Afghanistan are living in the water vulnerable regions. Most of the institutions related to health and education lack proper sanitation facilities and basic sanitation facilities are also not available to most of the people living in Afghanistan (UNICEF, 2022).

DISCUSSION AND ANALYSIS

This section analyzes constraints and possible options for the formulation of bilateral water management treaty between Pakistan and Afghanistan. Furthermore, it also focuses on the importance of a bilateral water management treaty between the two countries. As earlier discussed that Pakistan and Afghanistan despite being the immediate neighbors cannot be integrated in a smooth bilateral cooperation and diplomatic relationship due to a number of reasons. Afghanistan being an older nation- state as compared to Pakistan couldn't be able to cultivate smooth foreign relationships with her immediate neighbors specifically with Pakistan. Furthermore, continuous internal political instability and a number of foreign military interventions after the fall of Shah Zahir's regime in 1973 makes it impossible for Afghanistan to establish representative political institutions. Ethnic composition and terrain of Afghanistan further increases the difficulties of the Central Government based at Kabul because Afghanistan is home to eight major ethnic groups along with a number of other minor ethnic groups as well. Between these ethnic groups Pashtuns holds majority population (42 percent) but their dominancy is being challenged by the other major ethnic groups like Tajiks, Uzbeks and Hazaras. Shah Zahir as the King of Afghanistan had managed ethnic rivalries but after the Saur revolution of 1978 the ongoing power struggle between different ethnic and religious militant groups deteriorated the peace, lives, and economy of Afghanistan and opened doors of foreign involvement (Siddique, 2012). On the other hand, it made difficult for the external world whom to talk with among different rival groups. The emergence of pro-West, pro-Iran, and pro-Pakistan militant groups and religious groups compelled different international and regional actors to intervene and operate in Afghanistan and pushed Afghanistan into a long lasting civil war in the decades of 1980s and 1990s (Chandran, 2010). While the involvement of the foreign regional and international powers and non-state actors made it difficult for the Central governments in Afghanistan to negotiate independently with her immediate neighbors on the issues of major concern like trans-boundary water course and adapting an independent foreign policy. In this regard the Indian activeness in the infrastructural development in Afghanistan long since the ratification of the Friendship Treaty in 1950 as mentioned by Fahmida in her article, also have precautions for the Pak-Afghan bilateral relations (Ashraf, 2007). Taliban forces took control of Kabul on 15th August 2021 through their armed power from Ashraf Ghani led coalition

Government but after a period of one year not a single country seems to be ready for the formal recognition of the Taliban Government. Recognition matters a lot for any type of regime in any country to develop her diplomatic relations with the foreign world. Even Pakistan being an immediate neighbor who has smooth relationships with the Afghan Taliban and had previously recognized the Taliban regime in 1996, has not yet recognized the incumbent Taliban Government in Afghanistan (Holland, 221). Different actors in the World are loosely and carefully engaging themselves to the unrecognized Afghan Taliban regime to support the humanitarian projects only. An unrecognized Taliban Regime itself is a major constrain for Pakistan to engage herself with the Afghanistan on an issue of vital concern. Even Zabihullah Mujahid spokesperson of the Taliban regime stated that “unrecognition of our Government by the world under the US pressure is the biggest hurdle for us to develop diplomatic relationships with World” (Voice of America, 18th June 2022). Trade, traditional diplomacy and humanitarian engagement can be carried in the worse scenarios but bilateral treaties need a favorable regional and international environment. Even Afghan Taliban leadership never recognized the legitimacy of Durand Line as an international border who are considered as pro-Pakistan forces by the international media and political strategists. If Pakistan adopts a formal bilateral water sharing treaty with Afghan Taliban regime and Taliban forces lost their control over Afghanistan in the future, then this treaty will lose its legitimacy.

Americans with their allied forces remained nearly for two decades in Afghanistan to eliminate the terrorism and terrorist groups. According to Aljazeera News posted on 16th August 2021, USA invested 2.26 trillion dollars since 2001 in Afghanistan in the diverse fields like defense, infrastructural and social development of Afghans but USA did not invest to improve the existing irrigation mechanisms and to develop a national water governance system. Only few dams like Shahtut and Kamal Khan dams had received American funding otherwise all remaining dams except Friendship Dam were constructed by the Afghanistan in the past by their own resources. If international actors along with America have invested in the irrigation and paid attention to the water management system, then it could have compelled Pakistan to engage herself with Afghanistan to develop equitable and sustainable water sharing pattern on the trans-boundary waters. Although, water management at national level is under the ministry of energy and water in Afghanistan but in front of ineffective, weak and traditional water governance systems in different regions of Afghanistan it seems beyond the capacity of responsible ministry to develop better and modern water management systems in the country. Furthermore, the internal water governance mechanisms make it difficult for the ministry of foreign affairs to negotiate with the neighbor countries to develop patterns on the sustainable and equitable utilization of trans-border watercourses.

Pakistan’s slow response and less prioritized policies for the water sources management and securing her trans-boundary waters is also a constrain for the adaptation of formal water sharing treaty with Afghanistan. Pakistan as a lower riparian country should ensure her water security from her western neighbor by the adaptation of a formal accord but unfortunately, Pakistan less prioritized this matter and her responsible authorities are showing poor progress in this regard. When Pakistan got independence its per capita water availability was around 5600 cubic meters but now-a-days, it reached at alarming level of 1000 cubic meter (Pathan & Pathan, 2021). On the other hand, severe impacts of climate change made Pakistan a vulnerable country to meet up with

her annual water requirements. Ministry of Water Resources is a responsible agency to formulate policies, utilize resources, and cooperate with the national and international organizations with a similar agenda to conserve her water resources. Unfortunately, a newly founded ministry under the executive authority of a nonspecialized federal minister since 2017 does not fulfill her delegated mandate despite being authorized to utilize the budget up to 79 billion rupees yearly. Therefore, lack of engagement between the responsible ministries of Pakistan and Afghanistan made it difficult to formulate a formal mechanism for the flow of trans-border Rivers in different seasons of the year.

After analyzing the major constrains in the adaptation of a formal water sharing treaty between Afghanistan and Pakistan, this section discusses the opportunities for the adaptation of the formal water sharing treaty. Pakistan can inculcate the foundations of the hydro-diplomacy with the incumbent Afghan Taliban regime due to her cordial relations with them. Taliban leadership is being approached by a number of international and regional actors since Taliban's takeover of Kabul on 15th August 2021. Although, Pakistan as a main facilitator during US-Taliban peace deal in 2020, has adopted quite a rational policy towards the recognition of the incumbent Taliban regime by placing condition of recognition of the Taliban regime from the major powers of the world and the region (GROUP, 2022). Means, whenever Taliban Government shall be recognized by any regional or global partner of Pakistan then ultimately Pakistan will also recognize the Taliban Government.

Sustaining the status-quo will be a hard policy choice for Pakistan in this regard and it will benefit Afghanistan in the near future whenever Afghanistan achieves political stability to develop her water related infrastructure. Only in the form of customary practices related to Pak-Afghan trans-border water sharing patterns, Pakistan's position will be weak in front of international arbitration institutions in case of major alteration in the status-quo related to water sharing patterns by Afghanistan. On the other hand, water related conflict maybe changed into a full fledged war that will deteriorate peace, prosperity, and the economy of the region. Pakistan as an active player in the regional and international political arena has to ensure all types of security. Water security itself matters a lot and it has a major role in the determination of the economic, agriculture, and human security of Pakistan. As Zulfiqar mentioned that economic security matters a lot to Pakistan because Pakistan had suffered from a loss of billions of dollars due to the US led Global war on terror (Hussain, 2012). Pakistan facing recently the issue of economic crisis due to the fluctuations in the international economy and internal political crisis since April 2022. If the trans-border water resources of Pakistan are not protected, then it will further deteriorate the harsh economic conditions of the country.

Pakistan holds largest glaciers outside the Polar Regions in the World as per geological surveys (WASHINGTON POST, 12 August 2016). Unfortunately, these glaciers became a source of destruction for the people and economy of Pakistan in the recent climatically changed conditions as outburst of glaciers increases the ratio of floods in Pakistan and drains the naturally stored water in the form of glaciers and snow belts (Saifullah et. al., 2022). Pakistan's economy lost billions of dollars due to the recent floods in the months of August-September 2022. On the other hand, Pakistan waste huge amount of water in the absence of a sustainable water storage capacity. It is an eye opening situation for Pakistan to review her water policy at national and regional levels.

Pakistan has experienced the formulation and adaptation of the bilateral trans-boundary water treaty with India in 1960 while Afghanistan had also adopted a bilateral water treaty with Iran in 1973. Therefore, Pakistan and Afghanistan can be benefited from each other's experiences in this regard.

CONCLUSION

Afghanistan shares trans-boundary waters with the countries of Uzbekistan, Turkmenistan, Tajikistan, Pakistan and Iran while Afghanistan signed a single formal treaty with Iran for the allocation of the water of Helmond River in 1973. As per Hearn's, Helmond River is the jugular vein of the agriculture as well as domestic sector of Afghanistan which drains 43percent of the total area of Afghanistan. By the rectification of the Helmond River Treaty 1973, Afghanistan legalized the annual share of Iran and minimized the water based intra-state conflict (Hearn's, 2015). As earlier mentioned that Kabul River shares an input of 26percent in the total river waters in Pakistan and drains thousands of hectares of area. Pakistan constructed four major water canals and constructed hundreds of smaller irrigation canals. In simple words, livelihoods of millions of people in Pakistan specifically in KPK Province are affiliated with the flow of Kabul River. On the other hand, Afghanistan, in the absence of any formal water sharing mechanism has been working on nearly 12 projects on the Kabul River and the completion of irrigational and electric generation projects will affect the flow of the Kabul River into Pakistan.

Afghanistan's state craft became problematic since the dethronement of the Muhammad Zahir Shah's Monarchy in 1973 due to ongoing power struggle between different rival groups and continuous foreign involvement. The departure of the US Troops in the previous year and the Taliban takeover of Kabul on 15th August 2021 changed the regional political dynamics of Afghanistan leading her towards political stability. After the process of formal recognitions of the new Government of Afghanistan is over, then Pakistan can engage the Afghan Government to adopt a formal bilateral accord. As per realist thinking, Afghanistan will not initiate any dialogue on the Kabul Basin due to prevailed status-quo Afghanistan can unilaterally benefit herself from the Kabul Basin. So, Pakistan has to initiate the dialogue on the mutual sustainable and environment friendly utilization of water of Kabul Basin by recognizing her weak position as a lower riparian country.

Pakistan should avoid adapting any informal mechanism or drawing any compromised water sharing treaty with the State of Afghanistan. Therefore, Pakistan can follow the 'UN Convention 1997 on the non-navigational uses of international water courses' as a water sharing mechanism with Afghanistan. This convention not only gives space to the existing practices but also gives a route map to different co-riparian countries in case of unilateral or bilateral alterations in the flow of international waters. Secondly, this convention stressed on the equitable, sustainable and environment friendly usage of the international water courses. Thirdly, this convention has clear articles about the adaptation of the safety protocols against the contamination of the international water courses and talks about surety of the safety of human live and the lives of other species by the co-riparian countries (Ruth, 1998). Despite being immediate neighbors Pakistan and Afghanistan did not inculcate strong cordial and warm diplomatic relations due to a number of reasons other than water sharing disputes. Due to the wake of the recent wave of different weather patterns throughout the Globe Pakistan is facing the issue of global warming, glaciers outburst, and unexpected rainfall and floods. It is predictable that not only Pakistan but other countries of the

South Asian Region will have to face the severe droughts and water scarcity in the near future leading to intra-state water conflicts in the Region. Hence, before the situation worsen, Pakistan should motivate Afghanistan for an adaptation of the bilateral water sharing treaty.

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