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WATER FOR PEACE: A COLLABORATIVE GOVERNANCE FRAMEWORK FOR THE INDUS RIVER BASIN

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ABSTRACT

This paper analyzes the strategic importance of water resources in the wider context of India-Pakistan relations, and in particular in the Indus River Basin, which is a lifeline for both states. Using a neo liberal theoretical approach, this study analyzes how the Indus River water conflict can be converted from a source of tension to a platform for cooperation and peacebuilding through the transboundary governance of the Indus River system. The study provides insight into the historical context, legal frameworks (e.g. the Indus Water Treaty and the evolving geopolitics between India and Pakistan) and the risk of water as a driver of conflict in South Asia, but also into the potential of collaborative water governance as a mitigation strategy. The paper calls for creative, cooperative solutions and suggests a multilateral institutional mechanism that not only deals with the equitable sharing of water resources, but also ensures long term stability and shared prosperity. The importance of international mediation, collective action, and long term diplomatic engagement is brought out in this study to ensure that water provides an instrument for peace rather than an instrument of international discord and provides a sustainable pathway for the resolution of complex water issues between India and Pakistan.

Keywords: Indus Waters Treaty, Hydropolitics, Climate Change, Water Security, Collaborative Water Governance

1. Introduction:

Since India and Pakistan have been at odds, water has been a key factor, both as a resource for the survival of both nations, and as a political leverage tool. Because both countries rely on the Indus River Basin flowing through them, they have a very problematic geopolitical relationship. The Indus Waters Treaty (IWT), which was signed in 1960 for the allocation of water rights between India and Pakistan, is yet to end water conflict in the region. Signed under the aegis of the World Bank, dividing the six river Indus system between the two countries, the Indus Water Treaty was applauded as a model of conflict resolution. According to the treaty, India took possession of the eastern rivers (Beas, Ravi and Sutlej) and Pakistan, the western rivers (Indus, Jhelum, and Chenab). The treaty handled immediate water sharing problems but did not address broader political issues on Kashmir, which remains a contentious point. Water management has always been at the heart of India Pakistan relations especially as the region is of strategic importance, being the source of water for the entire Indus river system. Whether it is about the ongoing control over Kashmir and its water resources, or about the states' broader political and territorial claims, both states have used water as a leverage (Bhat, 2020).

The context of the dispute can be used to show how the split of British India in 1947, and control over water sources has been a major factor in its development. When the two countries were partitioned, India took control of the rivers that fed Pakistan's West Punjab area, resulting in an immediate tension. During the first Kashmir war, Pakistan's access to water from Indian-controlled Kashmir was severed in 1948, causing the conflict to worsen. The problem of water access was not limited to irrigation, but also to strategic dominance. Pakistan considers the Indus system as a lifeline as it is heavily dependent on water resources for agriculture and industry while India considers control over Kashmir as a means to regional power status (Bhat, 2020).

While the IWT has assisted in mollifying some of the instant disputes over water, the worry is that India might modify the flow of rivers to Pakistan that could cause the IWT to be endangered and water to be used as a source of conflict rather than cooperation. In addition to this development, there is an emerging necessity for a larger, more collaborative water management scheme between the two nations that goes beyond the terms of bilateral treaties and incorporates the principles of sustainable and equitable water sharing to address the environmental and geopolitical complexities of the Indus River Basin. The linkage of water resource management with territorial disputes makes clear the need for a new framework that promotes cooperation rather than conflict, and makes water a source of peace rather than division. The framework contemplates international cooperation to reinforce existing mechanisms to make sure that water is a catalyst of peace, stability and regional cooperation, not a weapon of

conflict. The need for collaborative management is more urgent than ever in light of increasing threat of climate change and water scarcity. The Indus River Basin is not only a resource to be contested, but also an opportunity for India and Pakistan to join hands in solving their common problems and to create a sustainable future for the both countries.

Objectives of the Study:

- To recommend a framework for long-term, peaceful transboundary water governance in the Indus River Basin by identifying and assessing the best tactics and approaches for resolving the water dispute between India and Pakistan involving the role of international organizations and mutually beneficial cooperation.

2. Research methodology:

The research methodology relies on a qualitative approach, utilizing secondary sources to gather valuable insights. Newspapers, academic journals, research articles, reports and books will serve as the secondary sources of information. Additionally, relevant blogs, research institute publications have also been consulted and analyzed to conduct the study.

3. Discussions and Results:

Over the past decades, numerous proposals have been made to resolve the Kashmir issue, primarily focused on political, ideological, and human rights concerns. However, the Kashmir conflict has often been overlooked as a matter of economic security and territorial integrity, particularly in relation to water resources. Both India and Pakistan initially kept the water dispute separate from Kashmir, leading to the establishment of the Indus Water Treaty (IWT) in 1960. The outcome of this separation was that, for fifty years, the Indus River system and the Kashmir dispute were not directly linked, but this is no longer the case. Today, the Kashmir conflict is inextricably tied to the region's water resources, and any peace process between India and Pakistan must recognize this connection (Krampe, 2019).

If India were to gain control over Azad Kashmir, it would gain authority over the Mangla Dam and other key upper storage sites along the Indus River. On the other hand, Pakistan's control over Jammu and southern Kashmir would secure its jurisdiction over the Salal Dam on the Chenab River and several other dams in the region. Alternatively, if Kashmir's autonomous status were restored, it could disrupt the IWT's framework, requiring new terms and conditions. A past proposal, rejected by India, was to divide Kashmir along communal lines, a move that could have preserved the IWT and facilitated cooperation between the two countries. Modern scholars have increasingly examined the complex relationship between the Kashmir issue and the water conflict. As Sundeep Waslekar suggests, India and Pakistan must shift their

perspective and treat water as a unifying resource rather than a divisive one. Despite international laws that recognize Pakistan's rights to the eastern rivers, India has maintained full territorial control over them, contributing to tensions (Claps, 2019). For lasting peace, both countries must move beyond entrenched positions and explore cooperation on water management. Without this, disputes over the western rivers could escalate into conflict, potentially even military action, as both sides might resort to defending their treaty rights. This situation highlights the need for stronger, more cooperative governance frameworks.

3.1 Strengthening the Indus Water Treaty (IWT) and Water Governance:

A more coordinated approach is needed to address environmental challenges, including climate change, which affects both India and Pakistan. Rather than abandoning the IWT, the two countries should focus on strengthening it through the Permanent Indus Commission (PIC). Water management remains a pressing issue, particularly in the shared provinces of Punjab and Rajasthan, which span both countries. Establishing a transboundary commission could help address climate change and ensure fair management of water resources (Habib, 2004).

3.2 Addressing Transboundary Smog:

Smog, exacerbated by traditional crop burning practices, has become a major issue in both India and Pakistan, particularly during the winter months. While India has launched the National Clean Air Program (NCAP), Pakistan lacks a comprehensive monitoring framework for air quality. The two countries must work together to share monitoring data and mitigate the health and environmental impacts of smog (Khan, 2021).

3.3 Climate Justice:

Climate change disproportionately impacts both India and Pakistan. In 2021, Pakistan incurred \$4 billion in damages from floods and droughts, despite contributing only 1% to global emissions. Pakistan has called for climate compensation at international forums, and the UN has responded with a resolution on "loss and damage." Both countries, along with Bangladesh, should continue to advocate for international assistance, particularly to address the effects of climate change in South Asia (Krampe, 2019).

3.4 Encouraging Bilateral Trade:

Transboundary sustainability challenges, such as water management and pollution, present an opportunity for India and Pakistan to cooperate economically. Despite the current trade volume of just over \$2 billion, the potential for growth is significant. Greater economic cooperation could help the two nations achieve their Sustainable Development Goals and improve the livelihoods of their people, fostering regional peace and stability (Khan, 2022).

4. Suggestions:

4.1 Policy Recommendations:

Both countries must address the water-climate nexus, particularly through joint development of water management policies. These should address the equitable sharing and utilization of water resources, implementation of conservation practices, and resilience planning against adverse impacts of climate change. Updating the assumptions underlying the bilateral treaties by incorporating the climatic conditions and understanding the consumption needs of water would enhance the content of such treaties as blue peace treaties.

4.2 Strategies for Integrated Water Management:

The problems created by climate change can only be handled through an integrated management strategy. This strategy should encompass collaborative management of cross-border water resources along with appropriate climate proofing measures to infrastructure and more efficient water use. Both countries should come up with collective planning that captures the water resources dependence in the Indus Basin.

4.3 Water Resource Management Needs Improvement:

India and Pakistan need to improve the way they share and utilize the water resources available to them. Creating a common data database that contains information on real-time hydrological, meteorological, and climatic activity will help in resource management abundance through improved predictive capability regarding water availability. Such data transfer will help understand disasters better for relief and control or use of water resources when there are unforeseen events.

4.4 Existing Water Transfer Agreements:

Updated agreements between India and Pakistan on the use of water resources are required in light of new realities arising from climate change. These agreements must cover adaptive changes, mechanisms for mediating disputes that arise from the shared water resources and mechanisms for equity in water distribution. Daily commitments from both parties will facilitate the work of a coordinating body in charge of implementation of the agreements established and shall develop better strategies to resolve conflicts arising from the agreements.

4.5 Infrastructure that has the capacity to withhold the effects of climate change:

Development of infrastructure that will withstand the adverse impacts of climate change is essential for addressing the effects of climate change on the Indus River Basin. This also includes system transformations such as modernization of irrigation systems for efficiency, construction of flood control structures, and provision of water

fences among others. Infrastructure development should consider the future climate scenarios in planning to ensure the durability of the infrastructure.

4.6 Watershed Management Initiatives:

The sustainability of the Indus Basin and its efficient management also require watershed management initiatives. It is not just about reforestation and preventing deforestation measures, but also cultivation of soil saving agriculture methods and practices of land management. Both countries must collaborate on projects that increase management of watersheds and the recovery of critical ecosystems.

4.7 Community-Based Approaches and Public Awareness:

Local ownership and environmental integrity can be nurtured by in-situ water conservation practices, and community based approaches to water management are important for that. Effective management of water resources is important and this can only be achieved through policy changes at the ownership level as well as participation of local people's beliefs and culture into the management of water. Citizens should be informed about the need of conserving water and the effects of climate change on Indus River Basin through public awareness campaigns. Such campaigns promote water conservation orientation, climate change danger education, and involvement of communities in conservation development activities.

4.8 Technological Innovations and Economic Incentives:

By the prudent investment of technological innovations, water management practices of a few countries in the Indus River Basin can be improved. Technologies that can be used in water planning include remote sensing, advanced irrigation techniques, and climate modeling advanced security systems. On this basis it is essential that both countries do encourage and finance research and development toward these ends. When it comes to conservation and adoption of prudent practices for water use, a more business-like approach may give the push. Such measures would include, for example, paying to encourage use of water saving equipment, removing taxes related to conservation and giving grants to businesses that carry out strategies that reduce the usage of water. Thus, these economic tools should be designed to conform with the principles of water conservation and social equity objectives.

4.9 Mechanisms of Resolving Conflicts:

It is important to put in place strong mechanisms for the resolution of water disputes that may arise. These mechanisms ought to incorporate a systemic approach for resolving disputes, and finding a resolution to the issues at hand. The establishment of independent bodies of arbitration or reconciliation can help in containing disputes and preserving partnership relations.

4.10 Working with the International Bodies:

Working together with the international bodies can be beneficial in the management of the Indus River basin. Organizations such as United Nations, World Bank, and region-based bodies can in turn maximize book and raise financing and offer best practices on issues relating to water and climate change.

4.11 Long-term Implementation Review and Assessment:

It is necessary to formulate long-term monitoring and evaluation strategies in order to understand water availability and climate change consequences over time. Such programs must gather and analyze quantitative data on water resources, climate factors and environmental factors to support management decisions and adjust management practices if necessary.

4.12 Future Research Directions:

Further study should address unavailable issues and new developments that had hitherto never been associated with the water climate links in the Indus Basin region. Some specific areas of interest may include assessment of climate change on water quality, approach of new water saving practices and the hydrological impacts of water shortage on society. Anthropogenic climate change is likely to inevitably pose challenges for research and there will be a need to search for new approaches.

5. Conclusion:

This paper finds that the intricate relationship between climate change and water security poses significant challenges for both Pakistan and India already grappling with the repercussions of environmental degradation and water scarcity. The historical context of the Indus Waters Treaty highlights the need for cooperative governance of water resources, yet the current geopolitical scenario raises concerns about the potential weaponization of water and the implications for bilateral relations. Both countries must prioritize sustainable water management practices and invest in infrastructure to mitigate the effects of climate change. Ultimately, the path forward requires a commitment to collaborative water governance recognizing that climate change is not merely an environmental issue but a pressing security concern that demands immediate and concerted action from both the states. By working together to address these challenges, Pakistan and India can not only safeguard their water resources but also promote peace and stability in a region increasingly threatened by climate-induced crises.

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