Weighing the Environmental Peacebuilding Dynamism between Pakistan and India: The Strategic Metamorphosis from Conflict to Cooperation

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Abstract

This research spotlights the interlinked environmental dynamism between India and Pakistan. Pakistan and India geographically share the most risked environmental space on earth; the region of South Asia. Both countries have always been engaged in enduring geopolitical conflicts and water-sharing disputes. But in the contemporary era, both countries face dire environmental challenges that severely impact their populations and drive a wedge between both states. This paper assumes that both countries share inevitable and joint environmental dynamics that set the pace for cooperation in the environmental sector. Therefore, the paper examines the potential of environmental cooperation and the prospects of a peaceful relationship between both countries. It explores the factors responsible for this shared dynamic, mechanisms needed to be carried out, and prospects of the future relationship between the two countries. The research employs the environmental

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peacebuilding framework as a theoretical toolkit for the case in examination and opts for expert opinion, document analysis, and thematic analysis as the methodological tools to reach the findings. Findings illuminate that adopting the environmental peacebuilding approach suggests a pathway of cooperation rather than conflict. The research presents findings in collaborative resource management, joint adaptation, mitigation strategies, shared participation in renewable energy initiatives, cross-border disaster management plans, and shared environmental conservation efforts that both countries can employ to foster mutual trust and cooperation. The suggested outcomes of the three-pronged approach, consisting of reconceptualisation, reorientation, and restrategising, can address environmental challenges and resume the dialogue process between both countries, which has been halted because of multi-dimensional political and security issues. These can also serve as a foundation for improved bilateral relations between both countries for a sustainable and peaceful South Asian environment.

Keywords: *Pakistan, India, environmental peacebuilding, conflict, cooperation, water/natural resources, disaster management*

Introduction

This study aims to examine the shared environmental challenges of Pakistan and India. It accentuates the shared environmental dynamism between both states that could become a viable source of conflictual relationship between them. This research employs the environmental peacebuilding approach that provides avenues to metamorphose the environmental domain from conflict to cooperation.

This research hypothesises that Pakistan and India share transboundary environmental challenges that could set the pace for ecological cooperation between both states and hence lead towards establishing peaceful relationships between conflicting states and belligerent neighbours. The study seeks to investigate why the environmental peacebuilding approach is essential to deal with the

transboundary ecological challenges of Pakistan and India and what mechanisms could establish environmental peace between both states.

Scant literature focuses on the environmental peacebuilding approach to address the antagonism between both states. The focus of these studies has been highlighting both countries' ecological challenges. For instance, Khan (2023) and Aslam (2022) have highlighted the shared environmental problems and suggested that there should be a joint mechanism to deal with these issues. This study peculiarly focuses on the ecological transboundary problems and dynamism of interdependence regarding these challenges or the certainty of dealing with these challenges jointly. Further, the emphasis lies on analysing whether such coordination has the potential of spilling environmental peacebuilding over to other conflicting domains.

The Historical and Contemporary Context

Pakistan and India have always been daggers drawn with each other in multiple conflicting domains. The prominent among these are the disputed territory of Kashmir and water-sharing sources between both countries. Both countries fought in 1948, 1965, and 1971 and confronted two significant war-like situations in glacial Siachen (1984) and Kargil (1999). There have been several border skirmishes and persistent low-intensity conflicts throughout the history of the bilateral relationship.

In the context of contemporary environmental dynamics of South Asia in general and Pakistan and India specifically, water resources and resultant disputes have become more relevant to the conflictual dynamic of the bilateral relationship. Water resources and consequent conflicts are not the only domains regarding the bilateral relationship between both countries. Instead, given the environmental dynamics, attention and cooperation are needed in several domains and challenges.

The current environmental situation in South Asia is constantly deteriorating. This region is plagued with the highest ecological risk in the world.[1] It is being affected in numerous ways. For instance, it is expected that as the earth's atmosphere gets warmer and more humid, South Asia will get severe heatstrokes along with the Persian Gulf and parts of China. Likewise, in Sub-saharan Africa and South Asia, the soil and air will be drier, and the percentage of water required for plants will be insufficient. This environment will serve as a breeding atmosphere for the plant-eating insects. There could be frequent famines and floods.[2] South Asia has already faced extreme heat waves, with temperatures reaching up to 50 degrees centigrade in some areas of Pakistan in April and May 2022.[3]

Both India and Pakistan are the major states of the South Asian region and are grappling with dire environmental challenges. According to the Global Climate Risk Index, Pakistan is the 5th most vulnerable country globally.[4] It is one of the countries immensely affected by catastrophes and consistently takes the due place on the list of most affected countries of the world, both in the long term and index of every year. From 2009 to 2019, it ranked 8th amongst the top ten countries.[5]

India, likewise, is struggling in the environmental domain through frequent heatwaves, floods, droughts, and cyclones. India is amongst the bottom ten countries in the climate risk management system.[6] Researchers have discovered that the mortality rate in India from 2001 to 2020 has increased because of climate changes and heat waves that have halted India's progress regarding the targeted Sustainable Development Goals (SDGs).[7]

Environmental Peacebuilding: Meaning and Framework

Given the abovementioned situations in both countries vis-à-vis their long conflictual relationship and tremendous environmental challenges, the ecological peacebuilding approach addresses

relationship challenges in multi-dimensional domains. Therefore, it is essential to understand the nuances of this approach.

Environmental Peacebuilding debates emerged parallel in political and academic domains in the 1990s. United Nations Environmental Program (UNEP) began discussing water in different forms, like its scarcity and mismanagement, as potential causes of future conflicts. UNEP also recognised that 40 per cent of armed conflicts are directly related to natural resources like water; therefore, environmental peacebuilding can be the best option for the peaceful management of natural resources in disputes.

According to Ide et al. (2021), environmental peacebuilding could be defined in multiple ways. It consists of various methods and processes that can manage integrated environmental challenges and assist in preventing, mitigating, resolving, and recovering them. Among multiple available definitions, the definition we opt for in this research is as follows: "the process through which environmental challenges shared by the (former) parties to a violent conflict are turned into opportunities to build lasting cooperation and peace."[8]

The theory of Environmental peacebuilding mainly deals with three different dimensions. Firstly, in the context of security, environmental peacebuilding advocates that an all-encompassing and sustainable management of natural resources could preempt conflictual situations based on the utilisation and consumption of natural resources. It further advances that inequitable allocations and distribution of natural resources also lead to conflict in the areas where natural resources are extracted. Besides, mismanagement of resource utilisation without the due share of adjacent or indigenous communities at the expense of human security could generate conflict and trigger violence.[9] Secondly, employment insecurity and poor economic indices lead to conflict and violence by raising the grievance scale amongst the populace. Therefore, in post-conflict conditions, ensuring the successful and sustainable address of environmental

issues helps achieve water and food security. Reducing the disaster risk factor through good governance is essential to deal with the destruction of ecological infrastructure. Thirdly, in the socio-political domain, the theory predicts that environmental issues are shared challenges that may bring different groups together despite hostile relations based on trust deficit. It also supports the idea that to address the ecological problems, a process of negotiations based on +ve sum coordination may lead towards achieving cooperation, integration and conflict prevention regarding other outstanding political issues among different actors or groups. This concept is considered the core idea behind environmental peacebuilding theory.[10]

There have been three generations of employing environmental peacebuilding approaches among scholars. The first generation dealt with the transboundary water challenges and instrumentalised the conservation areas as 'peace parks'. This generation focussed on cooperation at the international level. Experts in the practical domain played a key role by delivering empirical understandings and policies through multilateral platforms.

The second generation emerged after establishing the UN peacebuilding mission in 2005. It arose in 2009 and focussed on post-conflict situations at the intrastate level and concerning civil war dynamics. On the other hand, the third generation is quite recent and still in emerging status. It has integrated various fields and introduced the interdisciplinary pursuit in the environmental peacebuilding domain. Scholars from different fields focus on managing natural resources in post-conflict venues.[11]

The scholars have focussed on identifying different factors that pitch into the debate of environmental peacebuilding by highlighting the role of bottom-up approaches or communities, gender, artificial intelligence and monitoring and evaluation programs. They also, however, accentuate the need to identify the underlying tensions and prevent smokescreens or novel exceptions.[12]

Methodological Toolkit: Methods and Techniques

In order to explore the potential of environmental peace-building approach vis-à-vis shared environmental challenges of India and Pakistan, relationship between both countries has been taken as a case. Case study is a well knows and widely used method among qualitative researchers for in-depth and context-specific explanation and exploration of any phenomenon. For data collection, both primary and secondary sources have been utilised. The documentary data is mostly based on secondary sources with exceptions. To fill this gap, authors through to grab the opportunity to approach key peronnel in the policy making and decision-making circles. The interaction with these people ranged between taking a general view on our research theme to a brief interview based on four to five questions. It also included brief consultative and discussion meetings.

For data analysis, thematic analysis has been considered most relevant. Thematic analysis refers to finding patterns or themes in the data to make sense of any investigated phenomenon. We considered to examine this phenomenon through descriptive analysis, however, it did not seem to serve the purpose when it came to objectives of study and sharing findings in more comprehensible manner. For instance, the purpose of selecting thematic analysis as an analytical tool is to unravel the findings of research by making prominent themes of joint dynamic or shared spaces of environmental challenges and potential avenues for collaboration in a more explicit and clear manner. Besides, the collected data manifested categorisation or dimensions that linked to the variables of our study separately as well as in relation to each other. The themes that appeared in data analysis have been presented in the form of headings as follows.

Transcendence beyond Borders: Indo-Pak Ecological Challenges

In light of the above-mentioned theoretical premises of environmental peacebuilding, the relationship between Pakistan and India could be subjected to this approach. The environmental

peacebuilding approach could apply to the relationship between those states that face joint problems in ecological domains. Further, it is also important that problems be equally harmful to both states, and these should have a rigorous potential to oblige both parties to cooperate and consequently achieve peace.[13]

Water Resources and the Indus Waters Treaty (IWT)

The water sources, firstly, transcend the borders between both countries. Pakistan and India share the Indus River Basin as the primary water source for both countries' agricultural sectors. The billions of inhabitants from both countries depend on these water sources.[14] Six distributary rivers originate from this basin. The water from these rivers has been distributed between both countries under the Indus Waters Treaty signed in 1960. Pakistan has almost unobstructed water access to western Jehlum, Chenab, and Indus. India has such access to eastern Ravi, Sutlej, and Bias. The treaty also conditioned both parties to exchange information in case of construction, monitoring the water flow and mediatory process.[15]

The conflict on treaty violation has often been the case for already sour bilateral relationship. The conflict had emerged since the partition between both countries with the baggage of multi-dimensional conflicts and trust deficit and the geographical characteristic of Pakistan as the lower riparian and India as the upper riparian country. The dispute has prevailed since India started constructing water reservoirs on the water sources allocated to Pakistan. Our respondent said, "India is constructing water reservoirs violating the Indus Waters Treaty, so these constructions may become strategic issues in future, which may impact relations between both countries."[16] The distributary mechanism of water resources is becoming more important because of ecological challenges and the depletion of freshwater sources.

Although the IWT has survived wars and low-intensity conflicts, given the environmental challenges, it could not be the

case if left unattended. Further, according to US and British state officials, the cooperation on IWB can spill over into the Kashmir conflict between both countries because most rivers rise in Kashmir, and advantageously, it lies within the Indus River Basin.[17] However, IWT has been criticised for providing technocratic solutions to socio-political and historical problems. An extension of scholars have emphasised this treaty in the political and economic domains through hydro-diplomacy.

Trans-boundary Air Contamination

The Punjab regions of both countries are prominent in the agricultural sector. For cultivation purposes, conventional activities of burning crops occur in both countries, actively contributing to smog, affecting each country and transmitting air pollution across the border.[18] This conventional activity of burning crop leftovers is termed 'parali.' In northern India and Eastern Pakistan, the smoke keeps covering the sky. It causes smog in the winter season in both countries and causes serious health concerns for millions of people.[19]

Major cities of both countries have been at the top among the world's most polluted cities. Pakistan and India are among the world's top vulnerable countries regarding smog. It affects people, the environment, and the economy by reducing tourism and trade and making energy resources and healthcare systems more expensive. The cost per annum of air contamination for Pakistan and India is 5.88 per cent and 8.5 per cent of their GDPs, respectively.[20]

Environment-Sensitive Territories and Habitations

The areas ridden with environmental sensitivity and declared so by national or international authoritative bodies are called environmentally sensitive or protected areas. Siachen is the most extended glacial territory in the Karakoram range of the Himalayan mountains and the second longest in non-polar zones. This area is also one of the disputed territories between both countries.

Likewise, the conservation of shared ecosystems is very important for both countries. The habitations of the Indus Dolphin and Indian Bustard are important because both are precious and depleting species. The Indus Dolphin is one of the five species of dolphins worldwide, and its habitats are in the river Indus and its tributary Bias. Bustard is a bird species found in the Thar desert of Rajasthan state of India, Rann of Kutch (the disputed territory), and Punjab between India and Pakistan. According to the Protection of Environment Act 1972, it has been declared a scheduled species. These dimensions serve as the potential areas of environmental cooperation between both countries.

Torrents, Famines, and Heatwaves

In Pakistan, disasters are caused by floods and droughts almost every year. Pakistan has confronted extreme floods in 2022 that have cost the loss of approximately 3.3 trillion Rupees and damages of 3.2 trillion Rupees.[21] Likewise, in 2019, India suffered acute rainfall that caused displacement of 1.8 million people, 1800 deaths, and 11.8 million affected, along with financial losses of US$10 billion.[22] India has also faced six 'very severe' cyclones. The cyclone termed Fani in May 2019 affected 28 million Indians and caused 90 deaths in India and Bangladesh, along with financial damages of 8.1 billion US dollars.[23]

Heatwaves are also a common characteristic of weather patterns in India from March to June every year. 90% of India is vulnerable to heat waves. These are becoming frequent and long-term. [24] In 2019, India confronted a heatwave in 2016 that resulted in many causalities.[25]

Recommendations on Joint Avenues for Environmental Peacebuilding

The following mechanisms could be considered as joint avenues for a coordinated approach regarding environmental challenges and peacebuilding between India and Pakistan.

Collaborative Resource Management: Updating Indus Water Treaty

IWT provides the technocratic solution to a socio-political and historical problem of trust deficit. Further, it has been restricted as the treaty that has provided the distributary mechanism of the water resources rather than facilitating water cooperation to other domains. Besides that, the Indus River Basin has also been cited as the ecologically sensitive basin with a very high precipitation levels, making it the second most strained basin globally.[26]

It reflects that the Indus Water Treaty only limitedly addresses the problems related to the basin. For instance, the amount or quality of water is a common concern for both countries, irrespective of how this water is being distributed. The treaty, therefore, has insulated two conflicting parties that hinder the cooperative space, measures, and avenues. IWT needs to be updated in terms of restructuring its covenants and providing more areas of coordination other than the conflicting situations on water distribution.

Joint Adaptation: Mitigation Strategies and Disaster Management Plans

India has initiated a National Air Clean Program as a redressal mechanism.[27] Such actions could be adopted in coordination with the neighbouring country. Technological advancements and artificial intelligence could be better utilised through a joint mechanism and by creating an economic resource pool that could assist in predicting the weather patterns or monitoring and evaluating the targeted measures adopted by both countries.

Joint Environmental Conservation Efforts

The environmentally sensitive areas in India and Pakistan overlap with the geopolitically important conflicting points, for instance, Siachen. The joint mechanism to deal with this ecological sensitivity could help pave the way for managing geopolitical conflict. Likewise, the conservation of the ecosystem of the Indus

River and Thar desert is crucial for fauna and protecting associated cultures and livelihoods for the betterment of people on both sides.

It could also contribute in conserving and developing tourism venues and promoting international tourism between both countries and from across the world. It could regenerate and sustain economic activity. Complementarily, it has been stated and acknowledged internationally too that, in the shared environmental conservation efforts, the conservation areas are the lands that could help preserve natural and cultural resources, protect human health and employment opportunities, and contribute to sustainable development.[28]

Metamorphic Strategies from Environmental Conflict to Environmental Cooperation

An appraisal of environmental challenges faced by both countries reveals that despite of enormous potential for cooperation, the relationship dynamic and challenging environmental domains that are being emphasised at the policy level belong to the first generation of environmental peacebuilding approach. As mentioned above, first generation deals with managing water resources and joint conservation efforts.

However, the shared challenges and potential joint areas of cooperation between both countries are beyond the limits of the first-generation and delve into the second and third generations as well. As evident, geopolitical and geostrategic domains overlap with the environmental common grounds and set the pace for the post-conflict situations as happened in the case of the Indus Water Treaty. IWT emerged in a post-conflict scenario of 1948 war between both countries and has survived various conflicts and wars after that. However, the third generation of environmental peacebuilding proponents needs particular attention in this scenario.

To this end, three-pronged strategies are essential: re-conceptualisation, reorientation and re-strategising. It also

emphasises that these generations cannot be cut neatly into different domains, and that an integrated approach of these generations could help achieve the objective of peace and security.

Re-conceptualisation

It refers to the reconceptualisation of the concept of security from traditional to non-traditional security. As stated, we "are yet to recognise and realise the scale of the threat that non-traditional security poses to the region; thus, the entire regional security agenda is dominated by traditional threats where military threats take precedence over non-traditional security threats."[29]

Non-traditional approach pitches the debate of human security and brings forth the environmental dimension as the most immediate danger of war and traditional conflicts.

> As it has been stated that: "multiple things and variables come together to create openings. Practically one factor does not change relationships; there will be multiple things, and non-traditional issues, by definition, must be part of that discussion."[30]
>
> Another respondent highlighted that: "Melting of glaciers gives rise to other issues related to human rights and human welfare, which are not on the radar of a state that is paranoid about security. It is the tragedy of a security paranoid state; it should reduce its security and start work on this dimension."[31]

Therefore, reconceptualising the security dimension could help pitch the environmental peacebuilding approach into practice.

Reorientation

Reorientation needs the solution of geopolitical and geostrategic conflicts through non-conventional and environmental approaches and reorienting the policy by setting the environmental domain as a precursor of geopolitical conflict management. Although some view it in another way, for instance, one of the experts even prioritised the sub-dimension of environmental challenges to look at this matter in the following words:

> "When we discuss foreign policy, we should have water reservoirs as part of that conversation, but we need dialogue. So first thing is that the overall environment should be developed in such a way that may initiate dialogue, and once there is a dialogue, then climate can be included." [32]

Reorienting by changing the direction of the redressal mechanism contributes in a multi-dimensional way. As stated, "there will be two benefits of this; first, we will be able to study the melting of glaciers scientifically. Second, when we sit across the table with India on any issue, the situation may change, and we may start discussing other issues."[33]

> Further, it has been highlighted in the following words:
> "This (traditional conceptualisation) is evident from the amount of resources dedicated to military threats and the amount of resources compared to non-traditional security threats; there is a massive difference. Secondly, when the securitisation agenda is determined, we have to see speech act (what is being communicated) along with the allocation of resources."[34]

Re-strategising

Re-strategising makes space for novel techniques in foreign policy and the advocacy of cooperation between countries through geo-environmentalism and diplomatic conflict resolution techniques for instance, environmental diplomacy.

> Aptly stated by one of the respondents,
> "wouldn't it be suitable for the intelligentsia and civil society, media and academia of both countries to highlight that no doubt the Kashmir issue isn't getting resolved but we can initiate collecting data about melting glaciers in some areas with their intensity. Composite Dialogue is closed now, but it is not suspended. It may resume any time, and if it gets

resumed, then first of all, issues like environment, climate disaster and melting of glaciers should be included."[35]

Conclusion

This research has examined the interlinked environmental dynamism between India and Pakistan. Both countries have been and are facing dire environmental challenges that severely impact their populations and drive a wedge between both states. This paper has argued that both countries share inevitable and joint environmental dynamics that have the potential to provide a joint platform for cooperation in the environmental sector.

It has explored the factors responsible for this shared dynamic, mechanisms needed to be carried out, and prospects of future relationships between the two countries. The research has employed the environmental peacebuilding framework as a theoretical toolkit for the case in examination and opts for expert opinion, document analysis, and thematic analysis as the methodological tools to reach the findings.

Findings illuminate that adopting the Environmental Peacebuilding approach suggests a pathway of cooperation rather than conflict. The research presents findings in the domains of collaborative resource management, joint adaptation and mitigation strategies against air contamination and consequent smog, cross-border disaster management plans for natural and man-made disasters, and shared environmental conservation efforts that both countries can employ to foster mutual trust and cooperation to preserve ecological systems and endangered species.

The suggested outcomes have been consolidated in a three-pronged approach at the state level by focusing on the following principles: re-conceptualisation, re-orientation and re-strategising. These principles emphasise the non-traditional conception of security, precedency of the environmental dimension as a confidence-building measure for bilateral relationships, and novel diplomatic techniques. These can also serve as a foundation for improved bilateral relations in other domains for a sustainable and peaceful environment in South Asia.

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