

Revisiting the Indus Waters Treaty

Muhammad Saad*

Muhammad Ammar Alam**

Abstract

Pakistan and India share an acrimonious past full of mistrust despite centuries of shared history. In addition to a common culture, languages, ethnicities and tradition, the two nations also share the Indus Waters. However, these waters have been subject to constant tension and conflict. Considering the emerging threat of water scarcity in the South Asian region, especially Pakistan, a future war on water between the two nations cannot be ruled out. Water has remained the only avenue of cooperation between the two states as is evident by the Indus Water Treaty (IWT) of 1960. Being the lower riparian state, Pakistan remains wary of the Indian hydropower projects being initiated at the western rivers of the Indus basin. In this context, this article sheds light on the shortcomings of the IWT by highlighting its focus on the engineering and technical aspects while accentuating its failure to address the grey area that India can potentially exploit being the upper riparian state. However, the treaty cannot be abandoned completely; rather, it can be used as a reference point for reaching a more comprehensive compromise and agreement between the two nations.

Keywords: Water Scarcity, Indus Water Treaty, South Asia, World Bank

* Muhammad Saad is the graduate of the School of Economics, Quaid-i-Azam University. He is an Assistant Editor at the Centre for Strategic and Contemporary Research.

** Muhammad Ammar Alam is the graduate of the School of Economics, Quaid-i-Azam University. He works as an Operations Associate at the Centre for Strategic and Contemporary Research.

Introduction

The Republic of India and the Islamic Republic of Pakistan share an acrimonious past replete with mistrust and hostility. Despite their differences, the two neighbours share a long history, culture, a common language, a common border and of course the waters of the Indus system. After the subcontinent was partitioned in 1947, the resources were to be divided between the two fledgeling states on an equitable basis, at least in theory. Geographically speaking, India is quite lucky in the sense that it inherited the headworks of the broad system of canals and became an upper riparian state. Meanwhile, the territorial division was not so kind towards Pakistan as it had to contend with the complications of being a lower riparian state. It is worth mentioning that the demarcation of the boundaries was done in complete disregard of hydrology as almost 80 per cent of the areas that depended on irrigation from the canals were located in Pakistan.¹

Therefore, the Indus Basin waters have remained a bone of contention between Islamabad and Delhi since the partition. This fact is reiterated by the various disputes that have sprouted up between the two states over water, including the one in 1948 where at one point, East Punjab decided to cut off the water supply to the canals entering Pakistan in a unilateral decision. Hence after four battles between the belligerent states in a mere 70 years of existence, a possibility of a future war on the water cannot be ruled out.

However, it is worth pointing out that water is probably the only area, in bilateral relations, where both Islamabad and Delhi have seen eye to eye and had significant progress.² This cooperation in the realm of water is epitomised in the 1960 Indus Waters Treaty (IWT), which is hailed by many as one of the rare moments of successful conflict resolution between the belligerent neighbours. The IWT was signed on 19 September 1960 between the two nations in a bid to lay down a comprehensive framework for managing mutual issues relating to

¹ Shafqat Kakakhel, "The Indus Waters Treaty: Negotiation, Implementation, New Challenges, and Future Prospects." *Criterion Quarterly* 9, no. 2 (2014).

² Amitabh Mattoo, "The Water Factor," *The News International*, May 2010.

water and procuring possible solutions. However, this treaty is hardly equitable in its nature of distribution, unlike most international agreements. On the contrary, it divides the five main Indus Basin rivers between the two countries with India getting the eastern ones, namely Ravi, Beas and Sutlej; while Pakistan ended up with the western ones which include Chenab, Jhelum and the Indus.³

The IWT has lived through decades of Pak-India antagonism as both countries recognise the centrality of cooperation to sustain long term access to these waters. However, owing to the brewing water crisis in South Asia, especially Pakistan, the treaty has come under the spotlight once again. In recent years, water has reemerged as the apple of discord between the hostile neighbours as doubts have emerged on both sides of the border regarding the efficacy of the treaty in preserving the respective national interests of the two countries.⁴

This paper will accentuate the concerns of Pakistan with regards to the IWT. In the first part of the paper, the water security threat faced by Pakistan is discussed in the light of the hydropower projects of India. Following this, the paper looks at the adverse effects on the environment (in Pakistan) induced by the peculiar use of eastern rivers by India. It argues that India should be mindful of the potential damage that their hydropower plants would cause to the natural ecology of the region's river system, considering international norms and precedents.

Water Security Concerns of Pakistan

The Indus River sprouts out of the highlands of Tibet and is spread over an area of 1.12 million square kilometres, of which 47 per cent is a part of Pakistan. It flows through Jammu and Kashmir, enters the country through Gilgit-Baltistan and then runs through the provinces of Khyber Pakhtunkhwa (KP), Punjab and Sindh. The River Chenab originates from the Indian state of Himachal Pradesh and flows into Punjab through Jammu and Kashmir. Meanwhile, the Jhelum River stems from the western part of Jammu and Kashmir, joins the Neelum

³ Indus Waters Treaty 1960 (signed in Karachi on September 19, 1960), Article III.

⁴ Hamid Sarfraz, "Revisiting the 1960 Indus Waters Treaty," *Water International* 38, no. 2 (2013): 204-216.

River at Muzaffarabad and then flows into Punjab.

According to the Article three of the IWT, Pakistan has unrestricted access to the western rivers. Under the terms of the treaty, India is obligated to permit the flow of these rivers and not interfere or stem their flow except under certain special purposes which include the use of water for energy, agriculture or domestic use. These avenues are discussed in significant detail in the Annexures C, D and E of the treaty.

Over the past 10 years, Delhi has embarked upon an ambitious hydropower project which is to be spread across the Himalayan region. There are almost 60 hydropower projects of varying sizes at the head of the western rivers which include both Jhelum and Chenab. Delhi has stressed on numerous occasions that such projects are in conformity with the IWT and are developed to meet Indian needs.⁵ However, Pakistan's concerns are far reaching than the technical aspects of the treaty. Islamabad is rather more worried about the Indian potential to interfere with the natural flow of the western rivers. In particular, the timing of the flow from these rivers is of cardinal importance since the plains in the country depend heavily on the adequate supply of water during the planting season. Due to this very reason, India's capability to tamper with the natural flow of the rivers was hardwired into the treaty 'by limiting the amount of live storage in each and every dam that India would construct on the two rivers'.⁶ Hence, in essence, the IWT acted as a safeguard for Pakistan against the manipulation of the river flow by their upstream neighbour.

However, a decision by a neutral expert in Baglihar, Professor Lafitte, undid this safety net by presenting a reinterpretation of the treaty that granted New Delhi some leeway when it came to drawing water from the dams at lower

⁵ Sardar Muhammad Tariq, "Pakistan-India Relations: Implementation of Indus-Water Treaty – A Pakistani Narrative," *Pakistan Institute of Legislative Development and Transparency*, last modified January 1, 2011, <https://pildat.org/parliamentary-development1/pakistan-india-relations-implementation-of-indus-water-treaty-a-pakistani-narrative>.

⁶ John Briscoe, "War or Peace on the Indus?," *The News International*, Apr. 3, 2010.

levels unlike what was agreed in the IWT.⁷ Nonetheless, Pakistan did get some respite after the Permanent Court of Arbitration on Kishanganga case cast the interpretation of the Baglihar expert aside because Mr. Lafitte failed to include the strategic and political aspects in his analysis.

Therefore, the construction of hydropower projects by India threatens to gag the flow of water to Pakistan. One may argue that the negotiators of the treaty should have had the foresight to reach a compromise, which would have side-stepped a possible water security threat for Pakistan that is slowly surfacing due to the permitted use of the western waters by India under the treaty. However, one can point to some crucial factors that are exacerbating this hazard to such an extent that the IWT is on the brink of being undermined.

Factors Exacerbating the Water Security Threat

i) Climate Change and Paucity of Water

Hydrologists typically assess the scarcity of water by taking a look at the population-water equation. As per the standard set by the United Nations, any area whose annual supply of water drops below 1,700 cubic metres per person qualifies to be labelled as ‘water stressed’. A level below 1,000 cubic metres is considered to be at the point of water scarcity while anything below 500 cubic metres is to be classified as ‘absolute scarcity’.⁸

If we look at the current condition of Pakistan, keeping in view the standards mentioned earlier, the country is likely to be classified as a water scarce country in the near future, considering the fact that its water per capita is close to a 1,000 cubic metres, which represents a drastic fall from 5,000 cubic metres per person during the early years of independence. The country already ranks third in the most water-scarce countries list, as per the International

⁷ Raymond Lafitte, “Indus Waters Treaty 1960: Baglihar Hydroelectric Plant - Expert Determination on points of difference referred by the Government of Pakistan under the Provisions of the Indus Water Treaty,” *World Bank*, last modified February 12, 2007, <http://siteresources.worldbank.org/SOUTHASIAEXT/Resources/223546-1171996340255/BagliharSummary.pdf>.

⁸ “Water Scarcity,” *United Nations*, accessed May 28, 2018, <http://www.un.org/waterforlifedecade/scarcity.shtml>.

Monetary Fund (IMF).⁹ The country has the most water intensive economy in the world and has the fourth highest rate of water use.

The climate change phenomenon aggravates the problem, something that is not adequately taken into account in the IWT. Today, almost 50 to 70 per cent of the water supplied to the Indus comes from the Himalayan glaciers.¹⁰ But due to the rampant collapse of the glaciers, thanks to global warming, the flow of the rivers is being altered which spells bad news for the farmers who depend on this water for irrigation. Such changes in climate can also be held responsible for the rapidly drying rivers and the fall in the overall levels of water.¹¹ It is worth mentioning that although the rapid melting of glaciers can potentially act as a counterweight to total drought-like conditions in the country in the short-term, the reduction in the size of the glaciers in the long run, would cripple their ability to supply water to the Indus.¹²

In addition to this, the pattern of monsoons is also being altered by climate change. Currently, the monsoons are responsible for replenishing the rivers in tandem with the feed from the Himalayan glaciers, thus highlighting their importance. A rise in the number or duration of jarring weather patterns such as droughts or floods can have profound implications for the future of Pakistan's water reserves.

However, it would be entirely unfair and foolish to blame climate change alone for the problem of water scarcity in the country. Other reasons can be traced back to the population boom, development needs and poor management of water reserves. Such a dire situation puts into perspective the guarded stance of Pakistan when it comes to the safety of western rivers guaranteed by the

⁹ Gabriel Domínguez "Water Scarcity 'Is Pakistan's Worst Nightmare,'" *Deutsche Welle*, last modified July 2, 2015, <http://dw.com/p/1FrdQ>.

¹⁰ Shafqat Kakakhel, "The Indus River Basin and Climate Change," *Criterion Quarterly* 10, no. 3 (2015).

¹¹ G. Rasul, A. Mahmood, A. Sadiq and S. I. Khan. "Vulnerability of the Indus Delta to Climate Change in Pakistan," *Pakistan Journal of Meteorology* 8, no. 16 (2016): 104.

¹² Committee on Himalayan Glaciers, Hydrology, Climate Change, and Implications for Water Security, "Himalayan Glaciers: Climate Change, Water Resources, and Water Security," (The National Academies Press 2012)

IWT.¹³

ii) Internal Subtleties and Local Needs

Since their independence, both India and Pakistan have undergone a population boom and have had exponential growth of their respective economies. However, the economies of both these nations still rely quite heavily on agriculture. Both the countries have their sights set on higher rates of economic growth and inclusive development, with India in particular, leading the line in this regard with ambitious development targets on every front. In this context, the Indus Basin holds the key (especially for Pakistan) as its water has the potential to send the economy sky-rocketing to higher growth rates due to its importance for both agriculture and energy generation.

There are various internal subtleties at play here as both nations are eager to address the misgivings of the locals of Kashmir and Gilgit-Baltistan.¹⁴ In particular, the people of Jammu and Kashmir find the IWT quite irksome as they cannot use the waters from the Indus for their own use without an approval from the Indus Commission. On the other hand, the people of Azad Jammu and Kashmir, along with the locals of Gilgit-Baltistan, suffer from the protracted energy crisis that has a negative impact on not only their industrial production, but also on tourism which is a source of sustenance for many in the area.

Keeping this in mind, it is not a shock that Delhi has decided to initiate high-level hydropower projects, especially at the head of Chenab and Jhelum with political considerations in mind. According to John Briscoe, a significant reason for the success of the IWT over such an extended period has been because ‘for decades India did very little to develop the hydropower resources on Jhelum and Chenab in the Indian-held Kashmir’.¹⁵ However, this is no longer

¹³ Ashok Jaitly, “South Asian Perspectives on Climate Change and Water Policy,” In *Troubled waters: Climate change, Hydropolitics, and Transboundary resources* ed. David Michel and Amit Pandya (Washington: Stimson, 2009), 17-31.

¹⁴ Ashok Swain, *Managing Water Conflict: Asia, Africa and the Middle East* (London; Routledge, 2004).

¹⁵ John Briscoe, “Troubled Waters: Can a Bridge Be Built Over the Indus?” *Economic & Political Weekly* 45, no. 50 (2010).

the case.

iii) The Perspective of Security

Looking at the perspective of national security and defence, Pakistan has enormous concerns over the Indian hydropower projects. The canal network of Chenab acts as the first line of defence for Pakistan in case India decides to breach the international borders conventionally. This canal network has been subject to extensive studies by the defence experts over the years for its great strategic potential. If these canals dry up, it will deal a big blow to the defensive plans of the 'green army' as the Indian forces would find it easier to cross deep into the territory of Pakistan.

Moreover, due to the construction of dams by India on the upstream western rivers, the chances of floods in Pakistan will rise exponentially in case these dams breakdown. Therefore, it is easy to understand why such Indian projects are viewed through the lens of suspicion by policymakers in Islamabad.

iv) The Baglihar Fiasco

As mentioned earlier, the decision by the neutral expert in the Baglihar case had severe repercussions for Pakistan as its security concerns were cast aside in favour of the contemporary global trends and best practices. These concerns were pushed into the spotlight when India decided to fill the Baglihar, knowing about the potential harm it would cause the farmers in the downstream areas. This act was in clear violation of the IWT as it resulted in the historic lowering of Chenab River to only 20,000 cusecs, and led to a loss of Rupees five billion in agriculture.¹⁶

Even though the events were in direct violation of the IWT, Pakistan chose to deal with the issue amicably, via goodwill and collaboration, by taking up the problem with the Indus Water Commission. Nonetheless, this event had set a precedent and fuelled the mistrust of Delhi in the eyes of majority in Pakistan.

¹⁶ Ahmad Fraz Khan, "India Filling Baglihar Dam in Violation of Treaty," *Dawn*, last modified August 23, 2008, <https://www.dawn.com/news/416108>.

Failure of IWT to Address Pakistani Concerns

Keeping in mind the current situation, what can be the possible avenue of action that Pakistan can adopt to address its security concerns vis-à-vis the upstream Indian hydropower projects on the western rivers? Word from New Delhi is that the Permanent Indus Commission, which came into being under the terms of the treaty, is a forum that is best for resolving all water-related conflicts. However, it is worth noting that the amount of dams and other projects that Delhi can undertake under the IWT on the western rivers is a grey area that is not under the scope of the treaty.

This drawback of the IWT can be illustrated by a hypothetical example illustrated by Ahmer Bilal Soofi and Jamal Aziz in their paper.¹⁷ ‘Suppose the Government of Pakistan chooses to adopt the IWT framework in addressing its concerns over the proposed 30 storages under construction upstream of the western rivers. Although these storages may store water within the permissible quota of the upper riparian, Pakistan wishes to challenge them, not on engineering grounds, but rather on a security perception basis. Assume that, as per the Indian version, the aforementioned concerns fall within the mandate of the Indus Water Commissioners. Pakistan would, thus, write a formal letter to the Indian Commissioner, conveying its concerns over the expansive Indian hydropower development on the head-works of the western rivers as being disproportionate to the electricity and agriculture requirements of the upper riparian in that region. Pakistan would also highlight its fears of possible misuse of the said storages, providing India with excessive ability to accelerate, decelerate, or block the flow of the rivers, thus providing strategic leverage in times of political tension or war. The Indian Commissioner’s most likely response would be to state that the storages were being constructed strictly in accordance with the IWT and that they will store the quantity that is permitted thereunder. The Indian response would also dismiss the issue of security and misuse as being extraneous to the treaty and therefore outside the jurisdiction

¹⁷ Ahmer Bilal, Soofi, and Jamal, Aziz, “Filling the Missing Gaps in the Indus Waters Treaty,” *RSIL Law Review* 1, no. 1 (2017).

of the Commissioner.’

This is something that the IWT is not equipped to deal with as it is mainly concerned with only issues like the management of water and engineering.¹⁸ Things like threats to security or the misuse of engineering are not taken into account by the IWT which allows the upper riparian state to gain an unfair advantage as it can build considerable storages over a long period of time.

What Lies Ahead?

i) Taking up security apprehensions outside the framework of the IWT

As discussed earlier, no provision in the IWT allows Pakistan to take up its concerns regarding Indian dams and hydropower projects under the ambit of the treaty on the international forum. Hence, since the exploitation of the grey zone under the agreement is outside the IWT’s scope, these concerns should be discussed bilaterally rather than by abortion of the treaty’s terms and spirit.

The ineffectuality of bringing these security concerns to the limelight under the IWT’s framework was on display at Kishanganga.¹⁹ Even though an eminent international lawyer like James Crawford QC was in Pakistan’s corner along with other members of the legal team, they failed to convince the Permanent Court of Arbitration regarding the request for relief in the context of the project’s legality.²⁰ Even though Pakistan managed to squeeze through some minor technical advantages from that award, the primary goal in the public’s eyes – banning the project – could not be attained.

Therefore, Islamabad must realise that it is not possible for the IWT to cater to its strategic and security apprehensions that Delhi might use the construction of dams and its hydropower projects on the upstream of western

¹⁸ Ahmer Bilal Soofi, “Beyond the IWT,” *Dawn*, last modified March 04, 2013, <https://www.dawn.com/news/790175/beyond-the-iwt>.

¹⁹ Indus Waters Kishenganga arbitration (Pakistan v. India), partial award. Partial Award on the Interim Measures Application of Pakistan dated 6 June 2011, PCA 82842, (The Permanent Court of Arbitration, The Hague, 2013).

²⁰ Ibid.

rivers to its advantage at the hour of need and in times of war. However, this does not mean that Pakistan should abandon the treaty itself, as the IWT has stood the test of time and wars, and it is a strong confidence-building measure between the two hostile neighbours. The policymakers in Islamabad need to reinterpret the IWT within the confines of international law. The treaty was not meant to keep an eye on the politically motivated decisions of the Indian government to initiate hydro projects on the Western rivers. This is something that is outside the scope of the treaty.

The treaty fails to enumerate the exact number of upstream projects that the two countries might have agreed upon in the highly detailed annexes of the IWT. It does not identify any potential sites for the upstream dams or projects, nor does it provide a specific timeline that needs to be followed for completing their construction. It is clear, hence, that the particular number of dams and projects that India can pursue do not come under the scope of the IWT and it should be taken up outside the ambit of the treaty. Therefore, if Islamabad wants to comprehensively challenge Delhi on the large number of upstream projects and dams, it must revert to the dispute settlement mechanism and sit with the Indians at the table to solve the matter bilaterally or highlight it on international forums.

ii) Addressing the Climate-induced Water Scarcity Issue

There exists a constant tension between India and Pakistan over the former's alleged blockage of waters flowing from the Indian-held Kashmir. According to some analysts, this is a clear violation of the IWT.²¹ From the media in Pakistan to its general public, all seem to be convinced that their nemesis, India, is violating its obligations under the treaty.

Meanwhile, the Indians have a slightly different perspective, deeming allegations hurled at them from Pakistan to be unfair. They are of the view that the water levels in the region are falling over time because of the negative

²¹ Ahmer Bilal Soofi, "Water War With India?," *Dawn*, last modified February 20, 2010, <https://www.dawn.com/news/521147>.

implications of climate change. From the perspective of international law, this presents an interesting and complex scenario where the scope and jurisdiction of the IWT is questioned. As of itself, the treaty has no relation whatsoever with the water scarcity problem. In fact, during the negotiation of the treaty, the possibility of a future water scarcity problem was quite minute and unimportant considering other things higher up on the priority list. Therefore, it can be seen that there exists no provision that explicitly provides a course of action for both countries to follow in case of water scarcity. The only remotely related rule of the IWT states that both the countries are obligated under the treaty to let the river waters flow without any sort of intervention.

Moreover, the allegations from the Pakistani side are not backed by any tangible evidence that can be used to highlight the obstruction of water flow from the Indian side. In this context, if the Indian stance is to be taken as the correct one then this issue cannot be taken up under the ambit of the IWT and thus, Pakistan would be pursuing a solution in the wrong alley.

Now there remains the question of who is to be the authority that determines whether the lower levels of water flowing into Pakistani rivers is due to water scarcity induced by climate change or because of the obstruction by the Indian projects and dams. To this end, both the countries need to agree on an impartial study and research conducted by a third party which can be any international organisation like the UN or the World Bank. Such a determination would clarify the whole issue and after clarification of the problem, both the countries could work together to come up with a viable solution. However, even if the lower levels of water in Pakistani rivers is due to climate change, India cannot be granted complete absolution.²² As an upper riparian state, it has to own the responsibility to take necessary steps to reduce the scarcity of water under the spirit and rules of international law. Hence, it has to effectively manage the water resource that comes under its jurisdiction and control.

²² Aaron T. Wolf and Joshua T. Newton, "Case Study of Transboundary Dispute Resolution: The Indus Water Treaty," *Oregon State University*, accessed May 28, 2018, http://www.transboundarywaters.orst.edu/research/case_studies/Documents/indus.pdf.

Conclusion

It is pertinent to understand that the IWT is of paramount importance and it would be unwise for both the countries to do away with the treaty and repeal it. Not only has the treaty served as an apt avenue of building trust and cooperation between the two countries, but it has also stood the test of time as it has been in effect for over half a century. Moreover, this treaty can be used as a basis for building towards a more inclusive and comprehensive framework that is updated to meet the concerns of both the states. In this regard, it would be unwise to involve an arbiter in this matter, as it would not only be costly, but also a time consuming process. Instead, such efforts, time, and money can be spent far more efficiently by directing the resources towards bilateral dialogues and discussions which aim for a better future for both Pakistan and India.

Recommendations

It is pertinent for both India and Pakistan to be mindful of the contemporary developments in the realm of international law, particularly with reference to customary international law, while they are interpreting or dealing with one another in the context of the IWT. During the negotiation of the treaty, the current understanding of the ecology and the environment did not exist, and neither state had any idea of the environmental and legal complications that would arise in the future.

Under the terms of the treaty, both the states are under obligation to share data with each other regarding the flow of the rivers so that the other country may be better prepared to deal with emergency situations like floods. There is a dire need to strengthen the lines of communication to purge them from political influence, and to ultimately build an effective and strong mechanism to share and deal with information in an efficient manner. With regards to the natural flows of the river, the Court has observed that ‘there were difficulties of cooperation... not present, the appropriate environmental flow could well

involve a regime of variable releases'.²³

Moreover, it has been noted over and over again that the Permanent Indus Commission is only equipped to deal with the engineering and technical side of the treaty. Hence, it is pertinent to ensure that some sort of bilateral communication is initiated at a large scale, both on the political and legal fronts, so that both parties are mindful of the fact that water issues are increasingly becoming dire and should be on top of the priority list. Thus, it is necessary for the riparian neighbours to cooperate with one another in this realm.

The environmental factors need to be taken into account as well in this context along with the ecological repercussions of the river flows. India should remain mindful of the fact that its malign intentions may hurt the life at the southern banks of the rivers. Delhi should exhibit a show of restraint and cooperation as it is now clear that taking a unilateral lead on water related issues with impunity is among the top barriers to good relations between the two neighbours, and regional development.

In addition to this, these South Asian neighbours also need to consider their commitments made in the UN Summit 2015 during which the Sustainable Development Goals (SDGs) were agreed upon. Building on the success of the Millennium Development Goals (MDGs), the SDGs issue a rallying cry to all the world's nations to take ownership of the 17 goals that were agreed to be achieved by 2030. Keeping in view that the SDGs are a crucial factor during the formulation of the national policy of all the UN members, Pakistan and India have a responsibility to safeguard and 'restore the use of territorial ecosystems by the year 2020', as per the goal 15 of the SDGs.

In addition to this, India has traditionally pursued its interest with impunity, especially when it comes to the matter of the eastern rivers. It is now quite clear, thanks to contemporary studies on environment and the rules of international law that such a modus operandi is not sustainable. Even though the IWT permits

²³ Indus Waters Kishenganga Arbitration, Final Award (Pakistan v India) (The Permanent Court of Arbitration, The Hague, 2013), footnote 154.

India to use the eastern rivers, it should do so by being mindful of the ecological and strategic factors that affect the lower riparian state of Pakistan. As the upper riparian state, India needs to operate in a responsible manner with respect to its dealings and projects on both the eastern and western rivers.

Coming towards the case of Pakistan, it is clear that the country needs to better equip itself for dealing with seasonal floods. It needs to upgrade and enhance its infrastructure to increase the catchment areas to better deal with such disasters, and create and develop storage sites that are strong and adequate to deal with a massive influx of water. No longer can the government hide behind the traditional excuse of surprise and point fingers to the 'unforeseen circumstances'. The government should focus on the national preparation for floods, and it should be made an integral part of the yearly business of the national government in the country.

Pakistan should also be mindful of the habitations and settlements on the riverside, and aid them in relocation to safer and better settlement areas that are immune or least affected by climate induced changes. While there should not be a need to state this explicitly, the state has the responsibility to protect its people from annual disasters, by employing all its resources to the prevention of the event and the subsequent aid of the people²⁴. In this respect, the national policymakers can consider forming partnerships with developed nations like Denmark and the Netherlands, which have centuries of experience of living in below sea level conditions, to obtain the techniques and the expertise required to avoid floods and other disasters.

Moreover, the country should also make sure that its *modus operandi* with regards to the Indus River waters is in accordance with the rules of international law and the ecological studies. While presenting the final award, the Court was of the following view: 'Meaningful development in this area need not be at odds with careful consideration of environmental effects'.²⁵ Hence, Pakistan is

²⁴ (Constitution of the Islamic Republic of Pakistan, Islamabad, 1973), Article 147.

²⁵ Indus Waters Kishenganga Arbitration, Final Award (Pakistan v India) (The Permanent Court of Arbitration, The Hague, 2013), Supra at 14, Para 101.

also obligated to promote studies that are necessary to determine the potential impacts of not only the Indian use of the Indus River waters (eastern and western rivers) but also the effects of its hydraulic projects.