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AN APPRAISAL OF PAKISTAN'S RIGHTS UNDER THE INDUS WATERS TREATY

SANA TAHA GONDAL*

Abstract

In recent decades, water shortage has become a serious concern for the global community. With the threat of drought and water scarcity looming over several nations, state practice with respect to water cooperation and transboundary water rights has developed rapidly. In light of these developments and the recent skirmishes between India and Pakistan, the Indus Waters Treaty of 1960 between the two states becomes questionable for being outdated and incapable of meeting the contemporary water, environmental, and ecological challenges facing them. There is, therefore, a pressing need to review the Indus Waters Treaty and to assess Pakistan's rights to transboundary waters shared with India under the rapidly developing customary international law.

Keywords: *transboundary water law, lower riparian, water governance.*

Introduction

The Indus basin's familiarity with disputes predates the partition of the sub-continent into the sovereign States of Pakistan and India; these disputes were particularly frequent between the provinces of Punjab and Sindh.¹ But after the Independence of India Act, 1947, the boundary that was drawn between the independent states of India and Pakistan also cut through the Indus Basin (shared by

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the now divided, East and West Punjab). Resultantly, Pakistan acquired the status of a lower riparian state, while India acquired the status of an upper riparian state.²

As the controller of the headworks of the Indus Basin, India has the power of controlling the water flow from the Indus Basin in Pakistan.³ This causes concerns for Pakistan, as being a single-basin country with heavy reliance on its agrarian produce, a consistent flow of water from the Indus Basin is crucial for Pakistan.⁴ The Indus Basin is heavily relied upon by the country for meeting its agricultural, industrial, and domestic needs.⁵ Global warming, on the other hand, is creating further stress upon Pakistan to meet its growing water demands.⁶

The challenge faced by Pakistan is not restricted, however, to climate change and global warming. It is further aggravated by the tense relations between India and Pakistan.⁷ There is a history of conflicts over water between both states and most of these conflicts have arisen over the construction of dams by India, e.g., the Baglihar and Kishanganga dams along the western rivers.⁸ The grievance of Pakistan being that dam construction usually causes diversion of natural water flows, which can be a source of conflict in international relations, but the Indus Waters Treaty 1960 (IWT),⁹ the current treaty governing water-sharing between India and Pakistan, expressly allows for inter-tributary transfer¹⁰ with certain limitations.¹¹

To further aggravate the situation, India has planned to start more than sixty-seven dams for hydropower generation and its dam-failure record is alarming, with nine of its dams having collapsed.¹² As the lower riparian, this is a cause of concern for Pakistan in terms of safety of its infrastructure.¹³ Furthermore, India also has not shared its environmental impact reports (EIA) for all dams to evaluate their transboundary impact on Pakistan.¹⁴

However, this tactic of using water as a diplomatic weapon is not novel to India and Pakistan. It is common for sovereign states

worldwide to use water as a weapon for their political goals or as a weapon during military operations.¹⁵ India and Pakistan have also used similar tactics in the course of their water-sharing relations. Although the IWT succeeded in preventing major armed conflicts over water and survived three armed conflicts between India and Pakistan, there has nonetheless been tension between the states over the current water-sharing mechanism given in the IWT, e.g., the 2012 attack on the Wullar Dam construction site in India-occupied Kashmir (IOK) and the 2016 attack on the Uri military base. Disagreements over water-sharing have also been taken to dispute resolution forums, mostly resolved through negotiations or mediation.

It is one of the aims of international law to avoid conflict and support cooperation among states.¹⁶ In light of the abovementioned circumstances, it becomes imperative to look at the legal regime that governs these two sovereign states regarding sharing of the Indus Basin for determining the rights of Pakistan with regard to it.

While domestic legal regimes within sovereign states govern the relationships between them and their subjects, the law that governs inter-state relations is called *jus gentium* (international law or law of nations), primarily made up of treaties and customs.¹⁷ While treaties need to express assent of states, customary international law (CIL) can be formed by *pactum tacitum*, i.e., tacit consent.¹⁸ Treaties and CIL are both primary sources of international law, however, treaties are backed by the principle of *pacta sunt servanda*,¹⁹ and take precedence over CIL.²⁰ The rights of Pakistan with respect to the Indus Basin are also acquired under treaty law (IWT) and CIL.

Legal Arrangements between India and Pakistan

The dispute concerning the Indus Basin between India and Pakistan dates back to the partition of the sub-continent.²¹ Being a bilateral dispute, the agreements catering to the Indus Basin have also been bilateral in nature. Both Pakistan and India have not ratified

universal treaties directly applicable to this dispute, i.e., the universal treaties applicable as *traites lois*, which largely codify the already persisting CIL practice of states.²² The obligations under CIL bind both Pakistan and India despite their refusal to formally ratify the universal treaties on the matter.

The 1947 Standstill Agreement

The first agreement between the two states *vis-à-vis* the Indus Basin was the Standstill Agreement, signed on 18 December 1947, that led to the continuing inflow of water in Pakistan from India, as it did before partition for one year.²³ However, with the expiration of the agreement in April 1948,²⁴ the government of Indian Punjab (or East Punjab)²⁵ closed the Upper Bari Doab Canal and Dipalpur Canal, blocking Pakistan's water inflow through the rivers Ravi and Sutlej.²⁶ It is opined by Niranjan Das Gulhati that this act was done to avoid setting a precedent for future, where Pakistan could claim rights over the lower canals.²⁷ Over the course of years, however, the absolute claims of sovereignty over transboundary watercourses have been rejected by CIL, and also by the state practice of India and Pakistan.²⁸

Two standstill agreements were signed, subject to further ratification, after this provocation by the East Punjab (Indian) government. However, the West Punjab government (in Pakistan) refused to ratify them.²⁹ Instead, the then Prime Minister of Pakistan, Liaqat Ali Khan, proposed that an inter-dominion conference be convened to settle the dispute.³⁰

The 1948 Delhi Agreement

The inter-dominion conference led to the signing of the Inter-Dominion Agreement (also known as the Delhi Agreement) in May 1948, which offered a temporary arrangement to both the countries, albeit, offering no permanent solution.³¹ The Delhi Agreement assured Pakistan that India (the government of East Punjab specifically) would not "withhold water from West Punjab without giving it time to tap

alternative sources."³² Furthermore, Pakistan had to pay a monetary amount as seigniorage charges (charges levied by the upper riparian state for supply of water to the lower riparian state).³³ This was based on the precedent set during the British rule over the sub-continent.³⁴ India later claimed that the acceptance of seigniorage charges by Pakistan was an implied recognition of India's sovereignty over the rivers. But Pakistan continuously argued that the same amount was paid for maintenance costs.³⁵ Furthermore, the amount paid to India was disputed by Pakistan and both the countries had mutually decided that Pakistan would submit the amount to the Reserve Bank of India, but the undisputed charges would be paid to East Punjab, and disputed charges would be retained in escrow until a future decision was reached in this regard.³⁶ After some time, Pakistan disputed the manner of signing the agreement and the contents therein. This agreement also fell apart by 1950.³⁷ It was expressly terminated on 19 September 1960 with the signing of the IWT.³⁸

The 1960 Indus Waters Treaty

A series of unsuccessful communiques that followed the Delhi Agreement stalemate,³⁹ David Lilienthal⁴⁰ proposed that the two states abandon their political argument over water rights and instead entrust that discussion to the engineers of both the countries to decide. He proposed that the World Bank intervene, with its financial support that both the states had sought,⁴¹ to resolve the matter.⁴² This proposal, also known as the Lilienthal Proposal, was well-received by both the states.⁴³ With the intervention of the World Bank as a mediator and after twelve years of discussions, finally, the IWT was signed in 1960 and ratified in January 1961.⁴⁴ The conclusion of IWT was a milestone in the history of the Indo-Pak conflict over water.⁴⁵

Claims of Sovereignty over the Indus Basin

After 1950, both the states had argued over their rights for a time, with the other state unwaveringly denying them. India believed

it had sovereign rights over the Indus Basin and, hence, an inherent right to unfettered use of its waters. Pakistan, on the other hand, believed it had an inherent right to the natural flow of the Indus Basin, which should neither be controlled by upper riparian India nor be diminished incidentally by the construction of dams. Pakistan was also claiming absolute rights to the waters of the eastern rivers, in particular, Ravi and Sutlej.⁴⁶

India and Pakistan believed that water flowing into or through their territory was subject to their sovereignty. Both states believed that they could develop their resources as they wanted.⁴⁷ The effect on the other riparian or the consequence was not the concern of either India or Pakistan.⁴⁸ However, the stance of both states changed during negotiations mediated by the World Bank over the course of twelve years' worth of negotiations.

Principle of Benefits versus Principle of Equity

The 1954 proposal by the World Bank, for a treaty for the states, imposed financial liability on India for each canal built in Pakistan for replacement of water from eastern rivers, because India would benefit from these alternate canals. This is known as the principle of beneficiary-pays or principle of benefits. Friedreich Berber, a German international law specialist hired by the Indian government, demonstrated to the Indian government that the replacement works would not benefit India. Rather, instead of the 'principle of benefits', both the states would mutually reap more benefit under the 'principle of equity', and the cost of the replacement works to be built, which were necessary for India, could be shared by both states, as opined by Berber.⁴⁹ However, the principle of beneficiary-pays was inculcated in the IWT despite Berber's observations.

Acknowledging Claims under Customary International Law

Under international law, India claimed 20 per cent of the water flowing in the Indus Basin and a sovereign claim over the eastern

rivers, notwithstanding the other sources of water that India had.⁵⁰ Pakistan, on the other hand, claimed the right to draw upon the eastern rivers and stressed the fact that India could indulge into alternative sources to satisfy its needs while Pakistan could not.⁵¹ Pakistan also claimed that India could not, under CIL, cause appreciable harm to existing uses of the Indus waters.⁵²

It is interesting to note that a lot of actions of Pakistan and India were driven by the motivation of not setting a precedent that would lead to their relinquished claim over the Indus Basin in the long run, e.g., the claim of absolute sovereignty.⁵³ But both states, while refuting the other's rights under CIL, claimed the same for their own benefit.

Rights of Pakistan under the Indus Waters Treaty

IWT as a Sub-Optimal Treaty

The IWT has been oft-praised in the past, due to its unique character of the physical division of waters,⁵⁴ its withstanding of the political rivalries between India and Pakistan,⁵⁵ its unique dispute resolution mechanism,⁵⁶ and the fact that this treaty has a third party, the World Bank, as a signatory.⁵⁷ However, despite its *sui generis* nature, the IWT is a sub-optimal treaty owing to the fact that it distributed the rivers of the Indus Basin as opposed to developing water as part of an integrated basin management approach.⁵⁸ The 'eastern rivers' (rivers Sutlej, Beas and Ravi)⁵⁹ were allocated to India,⁶⁰ while the 'western rivers' (rivers Indus, Jhelum and Chenab)⁶¹ were allocated to Pakistan.⁶² This physical division of rivers has also been credited for being a reason for the treaty's success,⁶³ but merits critique for producing a sub-optimal result. An optimal result could only have been acquired if "all the potential uses [were] considered simultaneously."⁶⁴ International watercourses, if partitioned, result in decreased availability of water and encourage waste of water.⁶⁵ Read with the opinion of Berber mentioned above, even at the time that the

IWT was signed, it seems, the preference for cooperation over division was clear. But it was, perhaps, not possible in light of the continuous political strife and competing claims of sovereign ownership over the Indus Basin between India and Pakistan.⁶⁶

Absence of Seigniorage Charges

The seigniorage charges, subject to much controversy before the signing of the IWT, were expressly done away within the treaty. Article 5(7) pronounced that other than payments mentioned in the IWT,⁶⁷ parties would not be entitled to claim any 'charge for water' (i.e., seigniorage charges) from the other or claim any payments for observing the treaty for that matter.⁶⁸ In the absence of subsequent demands for seigniorage charges by India, the practice can be termed as something of the past between the two states.

Exchange of Data

The IWT also makes provisions for exchange of data monthly (to be provided to the other state party within three months from the date to which the data relates).⁶⁹ Data relating to the hydrology of the rivers or canal or reservoir operation connected to the rivers, along with data related to any other provision of the IWT, may also be requested by the parties from one another.⁷⁰

Future Cooperation

The provision for future cooperation in the IWT (Article 7) touches upon the present issues between India and Pakistan. The provision, however, is not binding if construed linguistically. The parties, recognising their common interest in the 'optimum development' of the rivers declared "their intention to cooperate by mutual agreement."⁷¹ Regarding undertaking engineering works on the rivers, the parties "may, by mutual agreement, cooperate" in the matter.⁷² This reflects the possibility of future agreements that dealt with the Indo-Pak dispute but were never reached. However, if the engineering works cause interference with waters of the rivers,

affecting the other party 'materially', then the other party is to be notified of its plans and provided with data related to the works to inform it of the nature and magnitude of the effects of those works on the rivers.⁷³ If the works would cause interference but not materially affect the other party even then the data and notification procedure is to be followed.⁷⁴

Even though the IWT provides for future cooperation by exchanging data, no projects have been submitted under the 'future cooperation provision' for consideration, neither have issues of water quality been addressed by India and Pakistan after the conclusion of the IWT.⁷⁵

Dispute Resolution Mechanism under the Indus Waters Treaty

A Permanent Indus Commission (PIC) was set up under the IWT framework for the exchange of data between the parties,⁷⁶ for giving notices or responding to the other party,⁷⁷ and for other matters enumerated in Article 8 of the treaty.⁷⁸ For the settlement of questions, differences, or disputes,⁷⁹ which arise with respect to the IWT, the mechanism has been given in Article 9. 'Differences' may be resolved by the PIC or a neutral expert, while 'disputes' may be resolved either by the PIC or by any other means deemed sufficient by the PIC other than an agreement or even by setting up a Court of Arbitration.⁸⁰

Although negotiations precede formal mechanisms of dispute resolution under the IWT, it must be noted that the mechanism for dispute resolution in the IWT is not hierarchal. The reference to the neutral expert is not an appeal from the PIC, rather an alternate means of dispute resolution.⁸¹ This is reflected in the recent clash of opting for different dispute resolution mechanisms by India and Pakistan. A disagreement arose between the two states regarding the Kishenganga and Ratle hydropower plants planned by India along the western rivers.⁸² The matter was referred to the World Bank, albeit both states sought different processes to resolve the dispute.⁸³ India wanted the appointment of a neutral expert, while Pakistan sought resolution through arbitration proceedings.⁸⁴ However, the World Bank paused the process to protect the IWT, in light of the resentments that were apparent

between Pakistan and India and encouraged the parties to resolve their differences amicably and mutually through alternative means.⁸⁵

Another aspect of the dispute resolution mechanism under the IWT is that the decision of the neutral expert is not appealable and would be considered final and binding.⁸⁶ The award of the arbitrator would also be final and binding.⁸⁷ This means that once a decision or award is rendered or an agreement reached, the dispute, difference, or question is considered to be *fait accompli*.⁸⁸ The IWT does not in itself envisage any possibility of revision or appeal of these decisions or awards.⁸⁹

Threats of Unilateral Revocation of Indus Waters Treaty

In light of Article 12 of the IWT, the threat by Indian Prime Minister Modi regarding unilateral revocation of the IWT⁹⁰ becomes void of substance. Article 12 (4) provides that the IWT may only be 'terminated by a duly ratified treaty'⁹¹ and Article 12 (3) states that the treaty may only be amended by a further agreement.⁹²

Even though the Vienna Convention on the Law of Treaties, 1969 (hereinafter the Vienna Convention)⁹³ allows for termination of treaties in certain circumstances,⁹⁴ the same will not be applicable to the IWT. This is because the principles enshrined in the Vienna Convention apply to India and Pakistan as CIL⁹⁵ and not as the text of the convention.⁹⁶ Therefore, the Vienna Convention will apply to the IWT to the extent that it does not conflict with the treaty.⁹⁷ In case of a contradiction, such as the conditions of termination in the IWT and the Vienna Convention, the treaty law would prevail as *lex specialis*, as held in the case of North Sea Continental Shelf Cases⁹⁸ and confirmed in the Baglihar decision of the Neutral Expert.⁹⁹ Furthermore, the principle of *pacta sunt servanda*,¹⁰⁰ which is recognised by the Vienna Convention as a universally recognised principle,¹⁰¹ governs treaties and has to be applied in good faith as per Article 26 of the convention and in accordance with the dictum laid down in Hungary v Slovakia¹⁰² and Pulp Mills case.¹⁰³ India's unilateral revocation despite Article 12(4) of the IWT would be contrary to this duty to apply treaties in good faith. Furthermore, the principles of termination envisaged by the Vienna Convention cannot override the IWT because of being CIL and only applying in addition to the IWT, not by overriding it.¹⁰⁴ Therefore, the termination of the IWT can only be

realised through an agreement between India and Pakistan and not unilaterally because of Article 12(4) of the IWT.¹⁰⁵

Hence, the rights of Pakistan under the IWT are secure, subject to further amendments or termination by both the states.¹⁰⁶ Pakistan has not shown willingness to amend the IWT in light of recent events.¹⁰⁷

Rights Beyond the Indus Waters Treaty to Remain Intact

Article 11 of the IWT lays down that the treaty only governs rights and responsibilities of Pakistan and India with respect to matters regarding the use of rivers and incidental thereto,¹⁰⁸ but no recognition or waiver is to be assumed of any rights or claims that are not expressly recognised or waived in the treaty. The IWT would not establish any principle of law or any precedent for either party.¹⁰⁹ Interestingly, the IWT does not cover matters that Pakistan often claims in its arbitrations,¹¹⁰ and this provision comes as more of a relief to Pakistan due to the nature of the IWT being technical and confined.

Disputes under the Indus Waters Treaty

The first difference that arose to be dealt with by the IWT was regarding India's Salal Project on the Chenab River in 1970. Pakistan objected to the design and the storage capacity of the Salal project and the same was resolved through negotiations by the states, culminating in an agreement in 1978 (the Salal Agreement).¹¹¹

The next difference was regarding the Tulbul Navigation Project (the Wullar Barrage) Dispute. Though Pakistan referred the Wullar barrage dispute to the PIC, the same has not yet been conclusively resolved.¹¹² With several prolonged pauses in the negotiation processes between the two states, Pakistan has expressed willingness to refer the dispute to arbitration. But so far both states have been negotiating time and again.

The most recent dispute between the two states was on Kishenganga and Ratle hydropower plants.¹¹³ The matter was referred to the World Bank, albeit both states sought different processes to

resolve the dispute. India wanted the appointment of a neutral expert, while Pakistan sought arbitration proceedings. The World Bank paused the process to protect the IWT and encouraged the parties to resolve their differences amicably and mutually through alternative means.¹¹⁴ The matter remains unresolved.

The Baglihar Difference

One of the two differences that yielded a legal outcome was the Baglihar Project, which was referred to the World Bank for the appointment of a neutral expert and for resolution of the difference thereof. Raymond Lafitte was appointed by the World Bank as a neutral expert and the International Centre for Settlement of Investment Disputes of the World Bank (ICSID) coordinated the process.¹¹⁵ Lafitte interpreted the IWT in light of the Vienna Convention, which reflected CIL in the area of treaty interpretation.¹¹⁶ Neither India nor Pakistan has ratified the Vienna Convention (although, Pakistan has signed it),¹¹⁷ and yet the neutral expert applied the convention while interpreting the IWT as it codified principles of CIL. This shows that, despite not having ratified a particular convention or treaty, the principles of CIL can be and have been applied to interpret the IWT.¹¹⁸ This is confirmed in several judgments including that of the ICJ, where it was held in the Pulp Mill case that a bilateral treaty between the parties had to be interpreted in accordance with the recently developed state practice.¹¹⁹

Giving effect to the principles of integration and effectiveness, Lafitte determined that the treaty would be interpreted in light of new technical norms and standards, i.e., new at the time of the decision in 2007, and not the norms at the time of signing the treaty in 1960.¹²⁰ Lafitte observed as follows:

The Treaty is not particularly well-developed with respect to its provisions on sediment transport... The Treaty reflects the status of technology on reservoir sedimentation in the

1950s. The consequence is that the provisions of the Treaty which explicitly mention sediment acquire a special significance.¹²¹

Lafitte also took into consideration factors such as climate change and its effects, which were not as prevalent in the mid-twentieth century.¹²² He relied on the ICOLD bulletin of the Commission of Large Dams¹²³ while deciding one of the questions raised before him.¹²⁴ It should also be noted that India herself relied on the case of *Hungary v Slovakia* judgment, where the International Court of Justice (ICJ) declared that new norms of international environmental law were to be considered while implementing a water-sharing treaty.¹²⁵ The ICJ also held that prevailing standards of the time were to be considered when evaluating the risks attached with a project.¹²⁶ This also hints at the interpretation of the treaty in light of the developments in the norms and customs that did not necessarily exist at the time of the conclusion of the IWT.

Kishenganga Arbitration Award

When the Kishenganga Project was initiated by India for the construction of Gurez Dam on Kisheganga River (Neelum River in Pakistan), Pakistan objected to India's plans on diverting the flow of the river. This diversion would allegedly have interfered with the flow of Kishenganga to Pakistan and also have severe environmental consequences in the form of harming the species in the river. The matter, not being resolved by the PIC, was taken to the Permanent Court of Arbitration (PCA), which rendered its decision in 2013.¹²⁷ The PCA decided in its final award that India could divert water from the Kishenganga river so long as the minimum flow of water was maintained in the river for Pakistan, i.e., the right to divert waters by India is not 'absolute'.

India's Entitlement v Pakistan's Rights

The court observed that taking into consideration the existing uses of Pakistan, India had a stronger claim to having a priority right *vis-à-vis* the use of waters of Kishenganga for hydro-electric power generation, owing to the fact that India was using the Kishenganga river for hydroelectric power generation when Pakistan was not.¹²⁸ However, Pakistan's existing uses are to be considered by India, i.e., for its agricultural and hydroelectric uses in accordance with Annexure D, Paragraph 15(iii) of the IWT.¹²⁹ Reading this paragraph of the IWT in light of CIL, the PCA decided that India would operate the plant in a manner "that ensures a minimum flow of water in the riverbed of the Kishenganga/Neelum downstream" of the said plant.¹³⁰

Therefore, though India is entitled to inter-tributary transfers while constructing and operating hydroelectric projects under Annexure D of the IWT, the same is subject to limitation under Paragraph 15(iii) and CIL, whereby Pakistan and its 'existing' agricultural and hydroelectric uses may not be 'adversely affected' by such inter-tributary transfers.¹³¹

Interpreting Indus Waters Treaty in light of Customary International Law

The PCA's decision is a landmark in interpreting the IWT in light of CIL, confirming the approach taken by Lafitte in the Baglihar decision. Placing reliance upon the case of Hungary v Slovakia,¹³² the PCA held as follows:

It is established that principles of international environmental law must be taken into account even when (unlike the present case) interpreting treaties concluded before the development of that body of law. ... It is therefore incumbent upon this Court to interpret and apply this 1960 Treaty in light of the customary international principles for the protection of the environment in force today.¹³³

In deciding that developed principles of CIL apply retrospectively to treaties concluded before the development of such principles, the PCA relied on the Iron Rhine Arbitration Award.¹³⁴ This principle has been further confirmed by the ICJ in the Pulp Mill case.¹³⁵

Limitations of Jurisdiction of Permanent Court of Arbitration

Keeping in mind CIL on trans-boundary harm and protection of the environment, the PCA decided that 'states have a duty to prevent, or at least mitigate' significant harm to the environment when pursuing large scale construction activities.¹³⁶ But, the PCA had no authority of overruling the express terms of the IWT pertaining to India's right to divert waters in accordance with Annexure D, Paragraph 15(iii) on the pretext of upholding environmental considerations.¹³⁷ The IWT prohibited this, in the opinion of the PCA, and it could only mitigate or limit significant harm.¹³⁸

Regarding the application of CIL to negate the provisions of the IWT, the PCA held as follows:

If customary international law were applied not to circumscribe, but to negate rights expressly granted in the Treaty, this would no longer be "interpretation or application" of the Treaty but the substitution of customary law in place of the Treaty.¹³⁹

This observation of the PCA has two implications: the first being that in case of contradiction between CIL and the IWT, the provisions of the IWT would prevail, albeit interpreted, as far as possible, in light of CIL; the second implication being in the right advanced upon India under Annexure D, paragraph 15(iii) to divert rivers under the IWT, some aspects of CIL have been undermined and cannot be fully implemented while giving effect to the letter and spirit of the IWT.

Another interesting aspect of this Award is that the PCA did not allow *res judicata* to apply to the life of this decision and acknowledged the possibility of change and uncertainty in terms of the minimum flow, which could be reconsidered later due to climate change or factors beyond the control of either India or Pakistan.¹⁴⁰

The PCA, deriving its powers from the arbitration clause in the IWT,¹⁴¹ could only give effect to the provisions of the IWT. But the ICJ would have broader jurisdiction if approached successfully by the two States on this dispute.

The ICJ would apply CIL, not because of the interpretation mechanism given in the IWT, (Annex G), but because of Article 38 of the ICJ Statute.¹⁴² Therefore, the ICJ would be able to rely on CIL, which goes beyond the confines of the IWT in settling the dispute. This, as opposed to an arbitration tribunal that can only derive its jurisdiction from the agreement itself and cannot have jurisdiction beyond the confines of that very agreement,¹⁴³ might be helpful in the case for Pakistan, relying on previous judgments of the ICJ in *Hungary v Slovakia*, for example.¹⁴⁴

Critique/Analysis of the Indus Waters Treaty

As discussed above, Article 3 of the IWT allocates unrestricted use of the western rivers to Pakistan and India is not permitted to interfere with the flow of these waters¹⁴⁵ except for some cases mentioned in the treaty and regulated by Annexures C, D, and E of the IWT. Under Annexure C, India can make unlimited use of the western rivers for irrigation purposes subject to the limitations mentioned in the Annexure itself. The Annexure corresponds to Annexure B, which allows Pakistan to draw water from the eastern rivers for irrigation purposes. Annexure E pertains to the construction of storage works by India along the western rivers. Annexure D pertains to the generation of hydroelectric power by India using the western rivers. India claims that its construction of varying dams and barrages in the past and

currently in progress are consistent with the provisions of IWT. However, Pakistan's concerns go beyond the technical confines of the treaty, rather it is against the upstream manipulation of water-flow which becomes more threatening with increased hydropower projects as undertaken by India.¹⁴⁶

The world-renowned water engineer, John Briscoe, addressed the threat to Pakistan by India's continuous building of dams. The Baglihar incident confirmed the fears of Pakistan when India decided to fill the dam at a time when it would harm the Pakistani farmers the most. However, the Pakistani government did not go for claims under breach of the IWT but decided to address the matter through PIC set up under the IWT.¹⁴⁷

In the face of the extensive plans for the development of hydropower projects and dams for storage of water, the flows of Chenab River to Pakistan are negatively affected. This is particularly apparent in the dry years when, even though the water flow varies, the entitlement of India to these waters is fixed, leading to difficulties for Pakistan in dry seasons.¹⁴⁸

The IWT largely addresses engineering concerns and any mechanism for dispute resolution would also be in technical in nature and provide solutions for engineering works and water management. This brings forth the problems of security concerns faced by Pakistan, which are by their very nature extraneous to the treaty.¹⁴⁹ The purpose of the treaty is not to ensure every single right that Pakistan or India may have against one another, but only to confirm the rights that have been created by the IWT itself.

The failure of the IWT in laying down general principles that might govern the two states, and focusing upon the fixed usage and quantity of the use of water, inadvertently leads to the problem of a stagnant and inflexible treaty. With varying needs of both countries, shifts in prioritising the use of water and ever-developing principles of international law, the problems that have surfaced and are likely to

surface prove this point amply. Even the highly technical nature of the IWT makes its interpretation difficult by anyone other than those equipped with knowledge of engineering, making this not a legal but a technical solution to the problem.¹⁵⁰

Conclusion and Recommendations

Pakistan has rights under the IWT that are only limited in nature and not fully representative of its current concerns. Although Pakistan may have rights under CIL, the PCA expressly noted that it did not have the jurisdiction to enforce them, rather was 'prohibited' to do so, unless the principles of CIL were used to interpret the treaty and not surpass it. This clearly shows that even if the IWT is interpreted in light of CIL, the rights of Pakistan are not fully ensured due to the *sui generis* provisions of the IWT.

However, when it comes to rights, as secured under CIL, the rights of Pakistan also amount to the rights of India. CIL does not impose specific obligations upon downstream or upstream riparian states with respect to their geographical placement, rather the obligations are imposed on states collectively sharing a basin, i.e., India and Pakistan would both share reciprocal rights and obligations.¹⁵¹ Hence, the incorporating of CIL in an updated and revised treaty would be beneficial for both Pakistan and India. It would secure the rights of both states and ensure the goodwill essential for their mutual cooperation in this area.

India has also shown its willingness to cooperate with co-riparian states in the past.¹⁵² The absence of India to cooperate with Pakistan will impliedly mean that it has consented to the same treatment from China, Bhutan, and Nepal.¹⁵³ The Indian National Water Mission, 2011, with respect to the Indus Basin specifically encourages conflict management. Paragraph 3.18 of the Mission on conflict management in international basins states:

For the Indus basin, without disturbing the present arrangements, international cooperation towards a more optimum use of the basin under increased stress due to reducing resources, growing demands, and impaired ecology, needs to be promoted.¹⁵⁴

This shows the acknowledgement of India of the importance to enter into further cooperation with respect to the Indus Basin with Pakistan and China. In the Plan of Action within the National Water Mission,¹⁵⁵ it is recommended that possibilities for optimised Indus development be discussed with Pakistan.¹⁵⁶

It has been observed that the IWT is a sub-optimal treaty,¹⁵⁷ giving Pakistan the right to restricted use over the eastern rivers, and absolute use of western rivers, and *vice versa* for India.¹⁵⁸ This physical division ignores the CIL obligation to protect and preserve the Indus Basin in both states,¹⁵⁹ and hence, should be revised by India and Pakistan.¹⁶⁰ The Indus Basin should be utilised and protected by both states in a manner that may ensure its protection for future generations, as opposed to exploiting it to the fullest against competing uses of one another.¹⁶¹

Article 9 of the IWT provides that consultations are to be conducted when the treaty is to be interpreted or applied. There should be an additional mechanism of consultations when the treaty may be silent on a matter, but the rights and interests of either party are at stake. This would be more in line with CIL, as compared to the current scheme of consultations in IWT.

It would be advisable for Pakistan to have an institutional framework in the treaty that would ensure periodical revision of rights of both states *vis-à-vis* the Indus Basin. In light of the growing needs of both states and stressed resources shared by both, such a mechanism would prove to be vital for the future.

The dispute resolution mechanism, as discussed, is non-hierarchical in the IWT. This is particularly important in light of the

restricted jurisdiction of the Permanent Court of Arbitration (PCA) and the lack of legal knowledge of the neutral expert. The International Court of Justice (ICJ) should not be approached for this matter for two reasons: the first being that this will undermine the cooperative spirit of goodwill, which is essential under CIL,¹⁶² as well as an integral part of the IWT,¹⁶³ second, because India has made a declaration with respect to the jurisdiction of the ICJ, which excludes the ICJ's jurisdiction over India in matters of interpretation of treaties.¹⁶⁴ Hence, matters of interpretation of the IWT cannot be taken to the ICJ. Hence, the dispute resolution mechanism should be revised, so as to ensure that the final and binding decision, when referred to an expert, is rendered by someone who is well-versed with the law applicable to both states and is free to apply CIL in addition to the IWT.

Lastly, it is recommended that legal and water resource experts be engaged to develop a specific and focused narrative of Pakistan against India. Pakistan also shares the Kabul River Basin with the upper riparian, Afghanistan. In the absence of an agreement with Afghanistan, Pakistan has rights against it, and *vice versa* under CIL. The two states have contemplated entering into agreements before, albeit unsuccessfully. Attempting the same feat again will be beneficial for both, India and Pakistan.¹⁶⁵

Notes and References

- ¹ As was suggested by Undala Alam in her review of this case study (personal communication, October 30, 2006) "The provincial governments of Punjab and Sind developed their irrigation independently and in direct competition of one another. This was long before the 1935 Act made water a provincial responsibility. There were two commissions (Anderson and Rau) set up to resolve the Punjab-Sind dispute, neither of which were ultimately successful."; Undala Zafar Alam, *Water Rationality: Mediating the Indus Waters Treaty* (DPhil Thesis, University of Durham 1998).
- ² That is, the water flows from India into Pakistan vis-à-vis the Indus basin.
- ³ Raja Nazakat Ali, *Indus Water Treaty: A Geo Political Study* (DPhil thesis, University of Kashmir 2013), 90.
- ⁴ Asma Yaqoob, "Climate Change and Institutional Capacity in the Indus Basin" (2016-2017) *Quarterly Journal of the Institute of Regional Studies*, Vol. XXXV, No. 1; Muhammad Faheem and Asghar Khan, "Water Security in South Asia: Challenges and Prospects" (2018) *Regional Studies*, 36:3.
- ⁵ *Indus Water Treaty and Managing Shared Water Resources for the Benefit of Basin States – Policy Issues and Options'* (2010) IUCN <http://cmsdata.iucn.org/downloads/pk_ulr_d1_2.pdf> accessed 27 April 2017.
- ⁶ Shaheen Akhtar, "Emerging Challenges to Indus Water Treaty, Issues of Compliance and transboundary impacts of Indian hydroprojects on the Western Rivers" (2010) *Regional Studies*, Vol. XXVIII, No.4, Autumn 2010, pp.3-66.
- ⁷ Asma Yaqoob, "Climate Change and Institutional Capacity in the Indus Basin" (2016-2017) *Quarterly Journal of the Institute of Regional Studies*, Vol. XXXV, No. 1; Muhammad Faheem and Asghar Khan, "Water Security in South Asia: Challenges and Prospects" (2018) *Regional Studies*, 36:3.
- ⁸ Muhammad Faheem and Asghar Khan, "Water Security in South Asia: Challenges and Prospects" (2018) *Regional Studies*, 36:3.

- ⁹ The Indus Waters Treaty 1960 (India-Pakistan) (signed 19 September 1960, entered into force 12 January 1961) 6032 UNTS 125 (hereinafter IWT), Annex A.
- ¹⁰ Inter-tributary transfer, also known as trans-basin diversion.
- ¹¹ The IWT, Annex D Para 15 (iii); *Indus Waters Kishenganga Arbitration (Pakistan v India)* (2013) ICGJ 478.
- ¹² Arshad H. Abbasi, "Indus Water Treaty between Pakistan and India" (2012) PILDAT Position Paper 1/2012, 11 <http://www.pildat.org/publications/publication/FP/IndusWaterTreatybetweenPakistanAndIndia_PakIndiaDialogueIII.pdf> accessed 27 April 2017.
- ¹³ Abbasi, "Indus Water Treaty between Pakistan and India."
- ¹⁴ Arshad H. Abbasi, 'Indus Water Treaty between Pakistan and India' (2012) PILDAT Position Paper 1/2012, 11 <http://www.pildat.org/publications/publication/FP/IndusWaterTreatybetweenPakistanAndIndia_PakIndiaDialogueIII.pdf> accessed 27 April 2017.
- ¹⁵ Preety Bhogal and Katarzyna Kaszubska, "The Case Against Weaponising Water," (2017) ORF Issue Brief 1/2017 <<http://www.orfonline.org/research/the-case-against-weaponising-water/>> accessed 27 April 2017.
- ¹⁶ Ibid.
- ¹⁷ International law defines the legal responsibilities of States in their conduct with each other, and their treatment of individuals within State boundaries; See 'Uphold International Law' (*United Nations*, 30 April 2017) <<http://www.un.org/en/sections/what-we-do/uphold-international-law/>> accessed 30 April 2017.
- ¹⁸ See Andre da Rocha Ferreira et.al., *Formation and Evidence of Customary International Law* (2013) 1 UFRGS MUNJ 182.
- ¹⁹ Vienna Convention on the Law of Treaties (adopted 23 May 1969, entered into force 27 January 1980) 1155 UNTS 331 (hereinafter Vienna Convention), art 26.
- ²⁰ Charter of the United Nations and Statute of the International Court of Justice (adopted 24 October 1945) 1 UNTS 16, Statute of the International Court of Justice, art 38.
- ²¹ India and Pakistan were separated via the Independence Act, 1947.
- ²² These are law-making treaties, as opposed to *traits-contrats* (contractual treaties).

- ²³ Raja Nazakat Ali, *Indus Water Treaty: A Geo Political Study* (DPhil thesis, University of Kashmir 2013), 90.
- ²⁴ *Ibid.*, 90.
- ²⁵ Alam, *Water Rationality: Mediating the Indus Waters Treaty*.
- ²⁶ The upper Bari Doab Canal and the Dipalpur Canal; Undala Zafar Alam, *Water Rationality: Mediating the Indus Waters Treaty* (DPhil Thesis, University of Durham 1998).
- ²⁷ Alam, *Water Rationality: Mediating the Indus Waters Treaty*, 63.
- ²⁸ Asma Yaqoob, "Climate Change and Institutional Capacity in the Indus Basin."
- ²⁹ Alam, *Water Rationality: Mediating the Indus Waters Treaty*.
- ³⁰ *Ibid.*
- ³¹ Inter-Dominion Agreement, Between the Government of India and the Government of Pakistan, on the Canal Water Dispute Between East and West Punjab (India-Pakistan) (signed 4 May 1948), 794 UNTS 45 (hereinafter Delhi Agreement).
- ³² Delhi Agreement.
- ³³ *Ibid.*
- ³⁴ Seigniorage charges were taken by Punjab from Bikaner state for supply of water and maintenance costs for Ferozepur headworks; Alam, *Water Rationality: Mediating the Indus Waters Treaty*.
- ³⁵ Ariel Dinar and others, *Bridges over Water: Understanding Transboundary Water Conflict, Negotiation and Cooperation* (United States, World Scientific Publishing Co. Inc. 2013) 270.
- ³⁶ Alam, *Water Rationality: Mediating the Indus Waters Treaty*.
- ³⁷ The then Finance Minister, Ghulam Mohammad, later claimed that the agreement had been signed without allowing the representatives to change 'a word or a comma', as a condition for restoring the flow of water. Attempts were made to take this dispute to the ICJ, but India did not submit to the jurisdiction of the ICJ. Pakistan tried to unilaterally declare the agreement void and expired, but India resisted this contention. In 1950, Pakistan stopped depositing the amount in the Reserve Bank in hopes of entering into a negotiation with India. The flow of water was not stopped by India in result of this halt in payments, but it continued to demand the full payments from Pakistan. See Chaudhri Muhammad Ali, *The Emergence of Pakistan* (Pakistan, RSP 1973).

- ³⁸ The IWT, Annex A.
- ³⁹ Failures to refer the matter to arbitration, failure to refer the matter to ICJ, failure to reach a solution which was conducive to both parties; Undala Zafar Alam, *Water Rationality: Mediating the Indus Waters Treaty* (DPhil Thesis, University of Durham 1998).
- ⁴⁰ Former Chairman of Tennessee Valley Authority, Tennessee (US) and interested in India because its possible importance to the US, visited the sub-continent in 1951
- ⁴¹ Both India and Pakistan had applied to the World Bank for loans.
- ⁴² Alam, *Water Rationality: Mediating the Indus Waters Treaty*.
- ⁴³ Ibid.
- ⁴⁴ Ibid.
- ⁴⁵ Ariel Dinar and others, *Bridges over Water: Understanding Transboundary Water Conflict, Negotiation and Cooperation* (United States, World Scientific Publishing Co. Inc. 2013) 270.
- ⁴⁶ Alam, *Water Rationality: Mediating the Indus Waters Treaty*.
- ⁴⁷ Ibid.
- ⁴⁸ Ibid.
- ⁴⁹ Because Pakistan was relying on international law and trying to approach international organizations such as the ICJ and ILC, India engaged Berber to develop her counter-narrative. Friedrich Berber explored the principle of community property in his writings, concluding that any disposition over a transnational river would require cooperation of all the states who share the watercourse. No state can unilaterally dispose of or claim the waters of a jointly shared river. However, Berber also argued in favor of the Harmon doctrine for a time before taking this view in his book 'rivers in international law'.
- ⁵⁰ Alam, *Water Rationality: Mediating the Indus Waters Treaty*.
- ⁵¹ Ibid.
- ⁵² Ibid.
- ⁵³ Ibid.
- ⁵⁴ Salman M.A. Salman, "The Baglihar Difference and its Resolution Process – a triumph for the Indus Waters Treaty" (2008) 10 WP 105.
- ⁵⁵ Ali, *Indus Water Treaty: A Geo Political Study*, 90.

- ⁵⁶ Salman, "The Baglihar Difference and its Resolution Process – a triumph for the Indus Waters Treaty."
- ⁵⁷ Ibid.
- ⁵⁸ Alam, *Water Rationality: Mediating the Indus Waters Treaty*.
- ⁵⁹ The IWT, art. 1 (5).
- ⁶⁰ The IWT, art. 2 (1): 'unrestricted use of India'. Once the waters cross the boundary into Pakistan, Pakistan may use them unrestrictedly, but it cannot make claims from India to release water with respect to the eastern rivers (see art. 2(4)). However, Pakistan cannot acquire rights over the use of these rivers by means of prescription and depends upon India for the releases it makes, if any, in the eastern rivers (see art. 2(9)).
- ⁶¹ The IWT, art. 1 (6).
- ⁶² The IWT, art. 3 (1): 'unrestricted use' of the waters of western rivers by Pakistan, and India is under obligation to let these flow into the territories of Pakistan (Art. 3(2)). India shall not allow interference (withdraw or obstruct- Art. 1 (15)) with the western rivers in its territory and let them flow into Pakistan, except for domestic use, non-consumptive use, agricultural use and generation of hydro-electric power (see Art. 3 (2)).
- ⁶³ Alam, *Water Rationality: Mediating the Indus Waters Treaty*.
- ⁶⁴ Ibid.
- ⁶⁵ Ibid.
- ⁶⁶ Ibid.
- ⁶⁷ The IWT, Art. 5 deals with financial provisions.
- ⁶⁸ The IWT, Art. 5 (7).
- ⁶⁹ The IWT, Art. 6.
- ⁷⁰ The IWT, Art. 6 (2).
- ⁷¹ The IWT, Art. 7(1).
- ⁷² The IWT, Art. 7 (1) (c).
- ⁷³ The IWT, Art. 7 (2).
- ⁷⁴ The IWT, Art. 7(2).
- ⁷⁵ Ariel Dinar and others, *Bridges over Water: Understanding Transboundary Water Conflict, Negotiation and Cooperation* (United States, World Scientific Publishing Co. Inc. 2013) 270.

- ⁷⁶ The IWT, Art. 8 (1) (a).
- ⁷⁷ The IWT, Art. 8 (1) (b).
- ⁷⁸ The IWT, Art. 8 (4).
- ⁷⁹ 'Questions' arise at the first instance under the IWT, which are resolved through PIC and mutual agreement. Thereafter, if questions cannot be resolved, then they amount to 'differences', which, if fall within the purview of Part I of Annexure F, then they are to be referred to a Neutral Expert. Differences falling under Part II of Annexure F can be dealt with by the PIC, or by Neutral Expert, if referred by the PIC. If differences cannot be resolved through Neutral Expert (i.e. in his opinion the difference amounts to a 'dispute'), or if they do not fall within the purview of Annexure F, then they are treated as 'disputes'. Disputes are to be resolved through negotiations or mediations, or through a Court of Arbitration, should the governments deem arbitration better than negotiations or if such negotiations or mediations fail; See IWT, Art 9, Annex F and Annex G.
- ⁸⁰ The IWT, Art. 9 (5).
- ⁸¹ Salman, "The Baglihar Difference and its Resolution Process – a triumph for the Indus Waters Treaty," 105.
- ⁸² Mian Ahmad Naeem Salik, "A New Round of Water Talks between Pakistan – India" (2017) Institute of Strategic Studies Issue Brief 1/2017 <http://issi.org.pk/wp-content/uploads/2017/03/Final_IB_Ahmad_Salik_dated_28-03-2017.pdf> accessed 27 April 2017.
- ⁸³ "Fact Sheet: The Indus Waters Treaty 1960 and the World Bank" (*The World Bank*, 24 January 2017) <<http://www.worldbank.org/en/region/sar/brief/fact-sheet-the-indus-waters-treaty-1960-and-the-world-bank>> accessed 1 May 2017.
- ⁸⁴ Ibid.
- ⁸⁵ Anwar Iqbal, "World Bank Pauses Arbitration in Water Dispute," *Dawn*, 14 December 2016. <<https://www.dawn.com/news/1302223>> accessed 27 April 2017; "Fact Sheet: The Indus Waters Treaty 1960 and the World Bank."
- ⁸⁶ Salman, 'The Baglihar Difference and its Resolution Process – a triumph for the Indus Waters Treaty.'
- ⁸⁷ The IWT, Annex G, para 23.
- ⁸⁸ A complete action in no need of revision.

- ⁸⁹ Salman, "The Baglihar Difference and its Resolution Process – a triumph for the Indus Waters Treaty."
- ⁹⁰ "Blood and water cannot flow together: PM Modi at Indus Water Treaty meeting" *IE Nation* (India, 27 September 2016) <<http://indianexpress.com/article/india/india-news-india/indus-water-treaty-blood-and-water-cant-flow-together-pm-modi-pakistan-uri-attack/>> accessed 27 April 2017.
- ⁹¹ The IWT, Art 12 (4).
- ⁹² The IWT, Art 12 (3).
- ⁹³ Vienna Convention.
- ⁹⁴ *For Example*, the principle of *rebus sic stantibus* (fundamental change of circumstances) in Article 62 of Vienna Convention. The test for invoking this principle, however, is very rigorous and cannot be invoked for the IWT; See Ijaz Hussain, *Political and Legal Dimensions: Indus Waters Treaty* (Oxford, OUP 2017) 364-368; Vienna Convention, Part 5.
- ⁹⁵ *Case Concerning Kasikili/Sedudu Island (Botswana v Namibia)* (Merits) [1999] ICJ Rep 1045.
- ⁹⁶ The Vienna Convention has not been ratified by India while Pakistan is a signatory to it; See 'Depositary' (*United Nations Treaty Collection* 27 April 2017) <https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXIII-1&chapter=23&Temp=mtdsg3&lang=en> accessed 27 April 2017.
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- ⁹⁸ *North Sea Continental Shelf Cases (Federal Republic of Germany v Netherlands)* (Judgment) [1969] ICJ Rep 3.
- ⁹⁹ Prof. Raymond Lafitte, 'Baglihar Hydroelectric Plant: Expert Determination – Executive Summary' (12 February 2007) <<http://siteresources.worldbank.org/SOUTHASIAEXT/Resources/223546-1171996340255/BagliharSummary.pdf>> accessed 27 April 2017.
- ¹⁰⁰ Vienna Convention, Art 26.

- ¹⁰¹ Vienna Convention, pr.
- ¹⁰² *Case Concerning the Gabčíkovo-Nagymaros Project (Hungary v Slovakia)* (Merits) [1997] ICJ Rep 7.
- ¹⁰³ *Case Concerning Pulp Mills on the River Uruguay (Argentina v Uruguay)* (Merits) [2010] ICJ Rep 14.
- ¹⁰⁴ *Indus Waters Kishenganga Arbitration (Pakistan v India)* (2013) ICGJ 478.
- ¹⁰⁵ A. G. Noorani, 'Law of the Indus' *Dawn* (Pakistan, 23 March 2017) <<https://www.dawn.com/news/1290031>> accessed 27 April 2017; IWT, art 12 (4).
- ¹⁰⁶ Ahmer Bilal Soofi, "Filling the Missing Gaps in the Indus Water Treaty" [2016] IP 1; Ijaz Hussain, *Political and Legal Dimensions: Indus Waters Treaty* (Oxford: OUP, 2017).
- ¹⁰⁷ Anwar Iqbal, 'Pakistan not to accept alterations in Indus Waters Treaty' *Dawn* (Pakistan, 17 December 2016) <<https://www.dawn.com/news/1302848>> accessed 1 May 2017.
- ¹⁰⁸ The IWT, Art. 11 (1)(a).
- ¹⁰⁹ The IWT, Art. 11 (1) and (2).
- ¹¹⁰ Soofi, 'Filling the Missing Gaps in the Indus Water Treaty,' Hussain, *Political and Legal Dimensions: Indus Waters Treaty*.
- ¹¹¹ Ali, *Indus Water Treaty: A Geo Political Study* (DPhil thesis, University of Kashmir 2013), 90.
- ¹¹² Lafitte, "Baglihar Hydroelectric Plant: Expert Determination – Executive Summary."
- ¹¹³ Salik, "A New Round of Water Talks between Pakistan – India."
- ¹¹⁴ Iqbal, "World Bank Pauses Arbitration in Water Dispute"; "Fact Sheet: The Indus Waters Treaty 1960 and the World Bank."
- ¹¹⁵ Lafitte, "Baglihar Hydroelectric Plant: Expert Determination – Executive Summary."
- ¹¹⁶ Ibid.
- ¹¹⁷ The Vienna Convention has not been ratified by India while Pakistan is a signatory to it; See 'Depositary' (*United Nations Treaty Collection* 27 April 2017) <https://treaties.un.org/pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXIII-1&chapter=23&Temp=mtdsg3&lang=en> accessed 27 April 2017.

- ¹¹⁸ Salman, *The World Bank Policy for Projects on International Waterways: An Historical and Legal Analysis* (LJDS, The World Bank 2009).; Ref. from Article 31-32 of Vienna convention on law of treaties
- ¹¹⁹ *Case Concerning Pulp Mills on the River Uruguay (Argentina v Uruguay)* (Merits) [2010] ICJ Rep 14.
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- ¹²⁴ Abbasi, "Indus Water Treaty between Pakistan and India."
- ¹²⁵ Ibid.
- ¹²⁶ *Case Concerning the Gabčíkovo-Nagymaros Project (Hungary v Slovakia)* (Merits) [1997] ICJ Rep 7.
- ¹²⁷ *Indus Waters Kishenganga Arbitration (Pakistan v India)* (2013) ICGJ 478.
- ¹²⁸ Ibid., Para 81.
- ¹²⁹ Ibid., Para 84.
- ¹³⁰ Ibid., Para 84.
- ¹³¹ Ibid., Para 84.
- ¹³² *Case Concerning the Gabčíkovo-Nagymaros Project (Hungary v Slovakia)* (Merits) [1997] ICJ Rep 7.
- ¹³³ *Indus Waters Kishenganga Arbitration (Pakistan v India)* (2013) ICGJ 478, Para 85.
- ¹³⁴ Ibid.; *Case Concerning Pulp Mills on the River Uruguay (Argentina v Uruguay)* (Merits) [2010] ICJ Rep 14; *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica v Nicaragua)* (Merits) [2015] ICJ Rep 1; *Iron Rhine Arbitration (Belgium v Netherlands)* (2005) ICGJ 373.

- ¹³⁵ *Case Concerning Pulp Mills on the River Uruguay (Argentina v Uruguay)* (Merits) [2010] ICJ Rep 14.
- ¹³⁶ *Indus Waters Kishenganga Arbitration*, Para 112.
- ¹³⁷ Ibid.
- ¹³⁸ Ibid.
- ¹³⁹ Ibid.
- ¹⁴⁰ Ibid.
- ¹⁴¹ The IWT, Annex G.
- ¹⁴² The IWT, Art. 38.
- ¹⁴³ IWT, Annex G.
- ¹⁴⁴ Soofi, "Filling the Missing Gaps in the Indus Water Treaty"; Hussain, *Political and Legal Dimensions: Indus Waters Treaty*.
- ¹⁴⁵ The IWT, Art 3.
- ¹⁴⁶ Soofi, "Filling the Missing Gaps in the Indus Water Treaty"; Hussain, *Political and Legal Dimensions: Indus Waters Treaty*."
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- ¹⁴⁹ Soofi, "Filling the Missing Gaps in the Indus Water Treaty"; Hussain, *Political and Legal Dimensions: Indus Waters Treaty*.
- ¹⁵⁰ Ali, *Indus Water Treaty: A Geo Political Study*, 90.
- ¹⁵¹ See Chapter 3.2.
- ¹⁵² See Chapters 2 and 3.
- ¹⁵³ See Chapter 2.1.2.
- ¹⁵⁴ National Water Mission 2011 (Ind), para 3.18. (a).
- ¹⁵⁵ Ibid., para 2.1.
- ¹⁵⁶ Ibid., para 2.1, Table F (iii).
- ¹⁵⁷ See Chapter 1.2.1.2.
- ¹⁵⁸ The IWT, Art 2 and 3.
- ¹⁵⁹ See Chapter 3.6.
- ¹⁶⁰ Hamid Sarfraz 'Revisiting the 1960 Indus Waters Treaty' (2013) 38 WI 204.
- ¹⁶¹ Ibid.
- ¹⁶² See Chapter 3.3.

¹⁶³ The IWT, Preamble.

¹⁶⁴ 'Declarations Recognizing the Jurisdiction of the Court as Compulsory' (*International Court of Justice*, 7 May 2017) <<http://www.icj-cij.org/jurisdiction/?p1=5&p2=1&p3=3&code=IN>> accessed 7 May 2017; Also See *Case Concerning the Aerial Incident of 10 August 1999 (Pakistan v India)* (Jurisdiction) [2000] ICJ Rep 12.

¹⁶⁵ Sardar Muhammad Tariq, *Pakistan Water Security Dilemma – Approaches To Rejuvenating The Indus Water Treaty* (Margalla Papers, Special Edition, 2011) 63.

INDIA-PAKISTAN NUCLEAR DOCTRINES: A COMPARATIVE ANALYSIS

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Abstract

The nuclear policies of India and Pakistan are consistent with their longstanding acrimonious relations. This is reflected in their respective nuclear doctrines. Both states also use their nuclear policies to frame their relations with other states regarding development and use of their nuclear weapons. The nature of the Indian and Pakistani nuclear postures reflects their differences in the deployment of nuclear weapons in wartime or peace. Pakistan follows a credible minimum deterrence policy. It relies on maintaining the minimum number of nuclear warheads sufficient to deter India. However, its authorisation process is often criticised. India follows a broader strategy to counter China. It includes the development of missile defence and second-strike capability through sea-based nuclear forces. This contradicts its stance of credible minimum deterrence. The documented Indian nuclear doctrine presents a dichotomy in policies and actions and demonstrates a vague picture of its objectives and goals. The evolution in the nuclear policies of India and Pakistan requires them to elaborate their nuclear doctrines in order to make them transparent and reduce the ambiguities in the operationalisation of their policies.

Key Words; *credible minimum deterrence, transparency, NCA, NFU, cold start*

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Introduction

The security strategy of a state entails all possible options for it to maintain and propagate its national security objectives. These options include both conventional and nuclear resources. Nuclear weapons give a state a clear edge over the adversaries that do not have nuclear weapons. However, the possession of nuclear weapons demands a greater level of responsibility in terms of state behaviour in international relations. So states seek to adopt a nuclear policy that serves the national security objectives but at the same time does not threaten other states that do not have a direct conflict with it. In other words, the nuclear policy of a state is meant to deter a potential threat from any other state. The nuclear doctrine implies the policy of a state regarding nuclear weapon use and their role in the overall strategy.

There is a difference between nuclear posture and nuclear doctrine. Nuclear posture is related to strategy while the nuclear doctrine is a policy document regarding the development and employment of nuclear weapons in times of peace and war. The nuclear doctrine includes certain rules and principles which a state implies according to its nuclear policy. These rules and principles do not explain how nuclear weapons would be deployed. It only indicates the redlines of a state after which nuclear weapons use may become inevitable.¹ On the other hand, the nuclear posture indicates the level of deployment of nuclear weapons according to the level of threat through a prescribed strategy developed in line with the nuclear doctrine.

The nuclear doctrine of a state concentrates and focuses on its nuclear policy regarding efficient employment and management of its nuclear forces. It develops the strategy about the use, purpose, and situations in which nuclear weapons can be utilised. Command and control system pertaining to this policy makes sure that these weapons are being employed according to policy. In other words, the

nuclear doctrine helps the state to describe its nuclear policy towards other states in case any ambiguity prevails regarding its nuclear weapons and policy. Moreover, it facilitates a state to have strict control over the authorisation of deployment procedures. A well-stated nuclear doctrine elaborates the purpose, vitality, and the conditions for use of nuclear weapons.²

India and Pakistan conducted nuclear tests in 1998. Since then they have been continuously increasing quantitative and qualitative capabilities in nuclear development. Pakistan does not have a well-documented comprehensive nuclear doctrine. On the other hand, India has produced two documents presented as its nuclear doctrine. A draft nuclear doctrine was announced by India in 1999, which included the preconditions for the deployment of nuclear forces and outlined the circumstances for the possible nuclear use.³ This was followed by another document in 2003, which updated the components of the doctrine.

The official statements of both states also indicate their nuclear doctrines. For Pakistan, the statements by the Foreign Office, ministers for defence, heads of state, government press releases of the National Command Authority, and the statements by the Director General Strategic Plans Division (SPD) and the army chief have outlined the basic characteristics of its nuclear doctrine.⁴ It constitutes the overall policy of Pakistan regarding nuclear weapons, which stipulates that it is to deter any external aggression that jeopardises Pakistan's security and is considered a threat to its strategic forces.⁵ The nuclear doctrines of India and Pakistan have kept on evolving with the changing geostrategic situation of the region.

The purpose of this study is to analyse the nuclear doctrines of India and Pakistan. For that, it is important to understand doctrine, posture, and strategy. The evolving nuclear policy has certain ramifications for the strategic stability of the region. The analysis of requirements of nuclear doctrines in the South Asian context has led

to the conclusion that the strategic environment of the region poses challenges to the adoption of transparency in nuclear doctrines. Furthermore, Narendra Modi's reign in India has implications for deterrence stability owing to his belief in the possibility of a limited war without escalation into a nuclear exchange. This has resulted in confusion about the nuclear policy and nuclear doctrine of India. These factors are discussed in this study.

Historical Background

India and Pakistan share over half a century of animosity. Their relationship since independence in 1947 has been one ranging from mutual mistrust to times of armed conflict. Pakistan considers India a major external threat to its security and this security dilemma has been the primary driver of its nuclear weapons development. The two states have fought three wars in 1948, 1965, and 1971 and engaged in limited conflicts in 1999 2001-2002 and heightened tensions in 2008 after Mumbai attacks, Pathankot incident, and the most recent Uri attack of 2016. There have been frequent skirmishes across the Line of Control (LOC), and the border between India and Pakistan. India has been accusing Pakistan of its involvement in terrorist activities inside India. Pakistan has always sought friendly relations with India⁶ but India's desires of regional hegemony restrain it from developing peaceful relations with Pakistan.

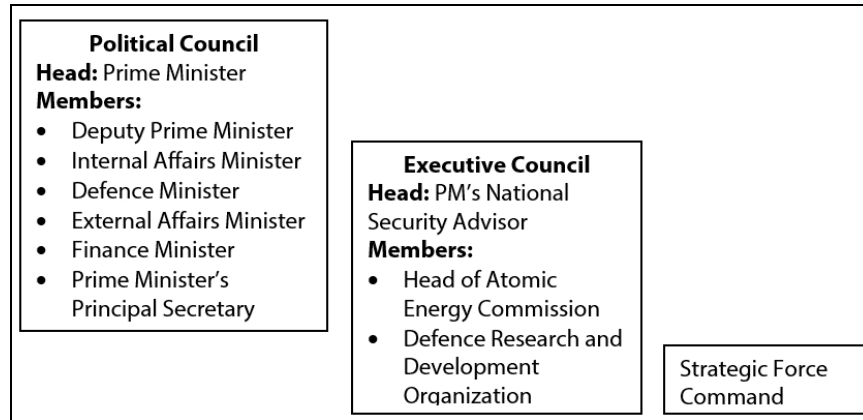
India has been an aspirant of becoming a dominant power in South Asia. It has a large area, population, industry, economy, and conventional and nuclear war power. On the other hand, Pakistan has faced asymmetry in all these factors vis-à-vis India.⁷ However, nuclear weapons have neutralised the threat from conventional superiority of India and also ensured a sense of stability in the region in terms of power balance.⁸ Pakistan started its nuclear program when India conducted its first nuclear test in 1974 at the Pokhran desert site. The security situation of the region has been dynamic and evolving since

then and so are the nuclear policies of both the states. The evolving security dimensions have increased the sense of mistrust while the divergent nuclear policies have only put the stability of the region at risk.

Evolution of the Indian Nuclear Doctrine

After the Indian nuclear tests, the first policy document was released in 1999 under the National Security Advisory Board. It was headed by Brajesh Mishra who was the then National Security Adviser of India.⁹ The official nuclear doctrine was subsequently released in 2003. It was a brief document containing provisions for establishing a command and control structure for nuclear weapons.¹⁰ According to this document, the Nuclear Command Authority (NCA) was given the mandate of nuclear decision making.¹¹ NCA is a two-layered body consisting of an Executive Council and a Political Council. The Prime Minister chairs the Political Council, which is empowered with the authority to decide about the use of nuclear weapons. The chairman of the Executive Council is the Prime Minister's National Security Adviser.¹² This Council provides input to the Political Council regarding strategic affairs and also implements the decisions of the Political Council.¹³

The overall administration of strategic forces is done by the commander-in-chief of the Strategic Forces Command. The doctrine also outlined that there must be a reasonable amount of civilian staff and nuclear and missile experts from the Nuclear Energy Commission and Defence Research and Development Organisation (DRDO). Historically, there has been a rift between the forces and the headquarters for control of strategic arsenal. So this composition of strategic forces command neutralised the rift between the forces.¹⁴ The organisational diagram of the NCA appears in the following figure:

Figure 1:**The Organisation of the Indian Nuclear Command Authority (NCA)****Elements of Indian Nuclear Doctrine**

Important characteristics of Indian nuclear draft doctrine are as given below:

1. India adheres to a policy of credible minimum nuclear deterrence.¹⁵
2. The primary objective of Indian nuclear weapons is to deter any threat to India and its forces. Furthermore, India will not start a nuclear strike but only use nuclear weapons as a response.¹⁶
3. India would only use nuclear weapons in retaliation.¹⁷
4. India will not threaten the non-nuclear states with nuclear weapons.¹⁸
5. India is committed to No-First-Use (NFU) of nuclear weapons.¹⁹
6. The credible minimum deterrence requires that:²⁰
 - (a) India maintains a minimum amount of nuclear forces that are operational and survivable,
 - (b) India has a full-bodied system of command and control of nuclear forces,
 - (c) India establishes early warning systems and response capabilities complemented by effective intelligence,

- (d) India maintains a comprehensive strategy and establishes a programme for the training of personnel to fulfil this strategy, and
 - (e) India shows persistence in the employment of nuclear forces when needed.
7. It has the mechanism to exercise control over the import and export of nuclear-related materials.²¹
 8. It would continue to observe the suspension of further tests of nuclear weapons.²²
 9. The doctrine also emphasises that India is committed to the objective of nuclear non-proliferation and disarmament and it will support any international treaty provided that it is verifiable and non-discriminatory.²³

Evolution of Pakistan's Nuclear Doctrine

Pakistan does not have an officially declared nuclear doctrine. However, that does not imply that its nuclear policy has not evolved through time. Pakistan's nuclear doctrine has been dynamic and evolving. After the nuclear tests, it was imperative that some principles and rules of operation would be announced. Although Pakistan has not presented a formal documented nuclear doctrine, it has chalked out a nuclear use strategy that has been communicated through several official statements that account for its nuclear doctrine. Major General (retired) Mahmud Ali Durrani stated about the nuclear doctrine of Pakistan:

While Pakistan has not formally announced any nuclear doctrine, the President, Foreign Minister, and Foreign Secretary have mentioned on various occasions its main elements, such as restraint and responsibility, a minimum deterrent posture, avoidance of an arms race, non-use against non-nuclear states, and participation in universally

applicable non-discriminatory multilateral arms control negotiations.²⁴

He also stated:

The unofficial view of the Pakistani establishment was obtained through a series of meetings with senior policymakers within the Pakistan Army, the Ministry of Foreign Affairs, and at the highest level of the Strategic Plans Division (SPD), the military organisation that oversees almost all aspects of Pakistan's nuclear weapons program.²⁵

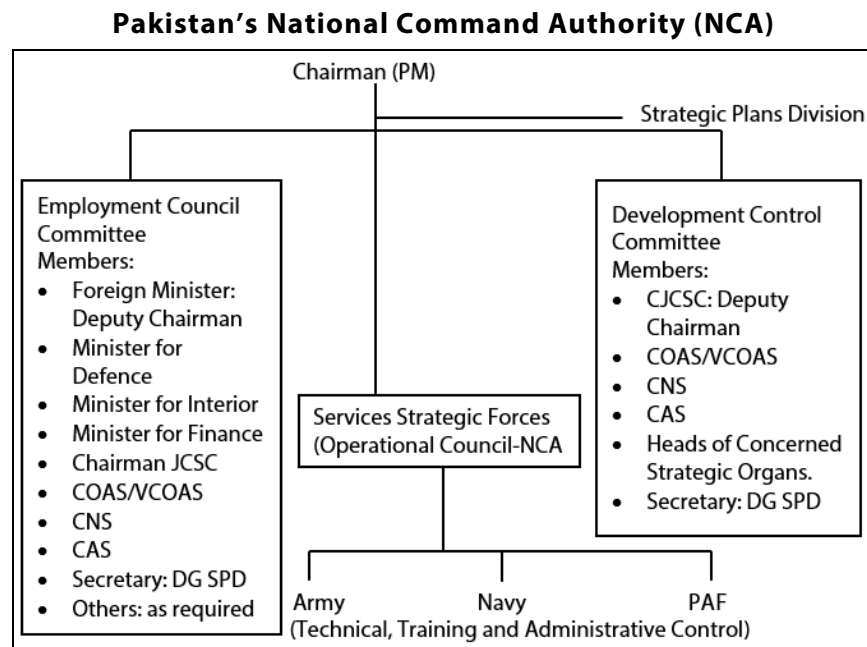
The nuclear doctrine defines the structure for nuclear weapons administering body and sets out rules and principles for command of strategic forces. Pakistan formulated its National Command Authority (NCA) in 2000, which is the highest body having the mandate to formulate policy and plan and implement the decisions regarding nuclear weapons. The Prime Minister heads this Authority. It consists of the Strategic Plans Division (SPD), which serves as the secretariat, and consists of the strategic force command of the three armed services.²⁶ There are two bodies working under the SPD:

1. The Employment Control Committee (ECC), which is the main policymaking organ of the NCA and is headed by the Prime Minister; and
2. The Development Control Committee (DCC), which implements the policy decisions of the NCA.²⁷

The Strategic Plans Division (SPD) oversees the implementation of strategic decisions and the development of strategic forces.²⁸ The Strategic Force Command consists of three forces: army, navy, and air force. The respective services commands have their control over administrative and technical aspects. However, policy decisions are taken by the NCA under advice from the Chairman Joint Chiefs of Staff Committee.²⁹ The army strategic force command

possesses ballistic and cruise missiles, while the air force strategic command has the aircraft capable of delivering nuclear weapons. The naval strategic force command was the last to be established in 2012³⁰ and there is no public information as to whether they already have nuclear delivery systems and weapons or whether this capability is still evolving.³¹ The organisational diagram of Pakistan's NCA is shown in the following figure:

Figure 2:



The ultimate decision to use nuclear weapons remains centralised and it has a significant civilian authorisation in the body. In a statement by the NCA on 6 January 2003, it was announced that no individual is authorised to take the nuclear use decision; rather this decision would be taken through unanimous authorisation.³²

Indo-Pak crises in 2001-2002 also became an instrument in the evolution of Pakistan nuclear doctrine as the crisis brought both states to the brink of a nuclear confrontation. Pervez Musharraf, former president of Pakistan, once said, "Nuclear weapons are the last resort. I

am optimistic and confident that we can defend ourselves with conventional means, even though the Indians are buying up the most modern weapons in megalomaniac frenzy."³³ He also said, "nuclear weapons could be used, if Pakistan is threatened with extinction, then the pressure of our countrymen would be so big that this option, too, would have to be considered. In a crisis, nuclear weapons also have to be part of the calculation."³⁴

Elements of Pakistan's Nuclear Doctrine

The official press statements of the Inter-Services Public Relations (ISPR) and interviews with Director General SPD, Army Chief, and other relevant officials of the ruling elite largely determine Pakistan's nuclear doctrine. Importantly, the majority of its components are veiled in secrecy.³⁵ Some characteristics of the Pakistan nuclear doctrine are as given below:

1. The nuclear policy of Pakistan is directed at addressing the threat from India and Pakistan's nuclear deterrence is Indo-centric.³⁶ Pakistan is compelled to react to India's actions in the South Asian security environment. So Pakistan's nuclear doctrine seeks to deter Indian nuclear threats and counter India's conventional and nuclear aggression.
2. Pakistan follows the credible minimum deterrence policy and does not desire to indulge in an arms race with India.³⁷ Pakistan seeks Full Spectrum Deterrence in line with the Credible Minimum Deterrence policy,³⁸ according to the dynamic security environment of the region. This policy does not imply the overall deterrent capability that would encompass everything. Rather it manifests the minimum deterrence power enough to cater to evolving security threats. At the same time, Pakistan would not hesitate to deter all types of threats and aggression whether internal or external while maintaining the capability of full-spectrum deterrence.

3. Pakistan maintains a first-use option and has established a reliable C4I network (Command, Control, Communications, Computers, and Intelligence).³⁹ To counter any threat to its security and defence, Pakistan would not be reluctant to use the nuclear option. The first-use option is financially affordable to build and manage for Pakistan. It also seeks to balance Pakistan's conventional differences with India as the regional security environment forced Pakistan to maintain the balance with India.
4. All the decision-making regarding deployment, employment, and policy would be done through NCA.⁴⁰ It maintains that there must be a network of safety and security features established to guarantee control over nuclear assets. All the organs of the NCA work in accordance with nuclear policy and in coordination with each other in this regard.
5. The nuclear assets of Pakistan are safe, secure, and under strict control to avoid unintended or accidental use.⁴¹ It shows that being a responsible nuclear weapon state, Pakistan is very much committed to the robust control of strategic weapons. Through NCA, Pakistan has established a foolproof security system for nuclear assets. So there is no danger of accidental or unauthorised use of nuclear weapons.
6. Pakistan supports nuclear-weapon-free zone treaties in Latin America, the South Pacific, and South Africa. This means that Pakistan would not threaten, deploy, or use nuclear weapons there.⁴²

A Comparative Analysis

India and Pakistan have different strategic compulsions. Both have their peculiar security preferences and their nuclear weapons cater to their very strategic needs. Their nuclear policies differ in focus as Pakistan's nuclear policy revolves around India only whereas India

has a broader spectrum that includes China as a major adversary. These differences in strategic and nuclear policies are very important to keep in mind when analysing the nuclear doctrines of both countries.

Indo-Centric/Sino Centric

The threat perception of Pakistan emanates from India. Pakistan faces an existential security dilemma vis-à-vis India. India and Pakistan have never been able to have friendly relations. There is a huge asymmetry in the conventional capabilities of India and Pakistan. This has led to the development of nuclear weapons by Pakistan in response to Indian nuclear development. So Pakistan's nuclear doctrine elaborates that the purpose of its nuclear weapons is to deter India only, whereas India has to deter Pakistan as well as China. Therefore, its nuclear doctrine caters to the Chinese threat also. In that case, Pakistan cannot match India in terms of firepower and nuclear warheads. India is determined to acquire the triad of nuclear forces consisting of army, navy, and airforce.⁴³ As far as Indian ambitions are concerned, it seeks regional hegemony and wants to overcome China in this competition by developing more sophisticated weapons and their delivery systems. So, it can be said that the nuclear policy of Pakistan is to deter India and India seeks to deter China. India has cold relations with China and wants to curtail the latter's influence in the South Asian region. The strategic rivalry for regional hegemony further compels India to enhance its nuclear forces. To compete with China's influence and nuclear capabilities, India intends to increase its ties with the world powers. In this regard, its cooperation with the US and Russia is increasing particularly.

India is growing its military potential and developing ties with the US to get access to the latest weapons systems in order to increase its power and stature in world politics. In the last twenty years, India has become the main importer of US weapons and ammunition.⁴⁴ India has become a major strategic partner of the US and the weapons

sales have been amounting to \$8 billion since 2001. The US is supplying the most sophisticated military hardware to India.⁴⁵ According to the analysis of Mansoor Jaffar (Editor of *Al Arabiya Urdu* based in Islamabad):

To limit China's influence in the region, the U.S. has embarked upon the strategy to promote India as its major military partner in Asia and South East Asia. Washington is trying to rearrange a military alliance comprising India, South Korea, Japan, Australia and Singapore to make enemies feel its undeniable presence in the region, and friends receive a strong message against giving up her American ties. To achieve the same objectives, the U.S. held joint naval exercises in the Indian Ocean in 2007 with India, Australia, Japan and Singapore to give a clear message to China. The friendly naval relations between Delhi and Washington were established after the Tsunami relief operations in late 2004 and both countries entered into a new strategic defense framework agreement in 2005.⁴⁶

Although India has not bought any nuclear reactor from the United States under this agreement, its benefits have been measured by improvements in diplomatic, military, and economic relations between India and the United States. *Times of India* has reported that during Modi's visit to the United States in June 2016, both states agreed on the construction of six nuclear reactors in India by the American company Westinghouse.⁴⁷ This agreement, in fact, has opened the doors of nuclear trade for India.

Perhaps the biggest advantage that India has yielded out of this strategic partnership is the US support for India in the Nuclear Suppliers Group (NSG) that has enabled it to not only trade with the United States but also with other nuclear technology exporters like Japan. The US has assured India of its support for its entry into the NSG as a member.⁴⁸

The Indo-US nexus has another dimension, i.e., to curtail Chinese influence in global politics as well as the regional security framework. India has agreed to the Logistics Exchange Memorandum of Agreement (LEMAO) and Defense Technology Trade Initiative (DTTI) with the US to foster defence ties.⁴⁹

Delivery Systems

The Indian nuclear doctrine manifests that the Indian nuclear forces will be triad based.⁵⁰ In addition to nuclear forces, its strategy also focuses on conventional weapons. This allows India to raise the threshold of conventional conflict but also gives it leverage to avoid conventional warfare due to nuclear deterrence. This is a dangerous proposition because any conventional attack on an adversary having nuclear weapons poses a serious risk.⁵¹ Pakistan follows the total war policy in terms of nuclear weapons delivery systems. Its delivery system comprises of the air force and ballistic missile system of army.⁵²

Based on the conventional military power of India, it has been developing an offensive cold start doctrine in order to wage a limited war against Pakistan without escalation of the conflict to the nuclear level. The primary objective of this doctrine is to instantly mobilise integrated battle groups placed near the Pakistani border and launch a pre-emptive strike in order to capture territory and destroy forward military installations of Pakistan. The quick action is the key to this strategy because it is deemed to be successful only if it is done within 72 hours without affording any time to Pakistan to react and before the international community is involved.⁵³

In order to sustain its missile capacity, India has been developing its Ballistic Missile Defence (BMD) system. Pakistan's Indo-centric approach pushed it to the response of developing short-range missiles. To respond to the Indian Cold Start doctrine and to sustain its minimum nuclear deterrence, Pakistan has developed its short-range missiles Hatf-IX. It has the capability to carry any type of warhead either conventional or nuclear. This short-range missile system, along

with the medium- and long-range missiles, has neutralised the effects of instability in the region imposed by Indian cold start strategy and BMD system.⁵⁴

Continuous innovation and modernisation of the Indian and Pakistani nuclear forces is taking place. However, it is important that they do not follow the pattern of arms race because there is no effort to match the number of warheads or missiles; rather Pakistan's nuclear development is in response to Indian strategic enhancements. There are four innovations of nuclear forces that have changed the strategic environment of the region:

1. Cruise missiles;
2. Short-range tactical nuclear weapons;
3. Sea-based nuclear deterrence; and
4. Ballistic missile defence (BMD) system.⁵⁵

India plans to operationalise its sea-based deterrence in the near future with the trials of nuclear submarines already underway.⁵⁶ The Indian strategic advantage because of its larger size, a stronger economy, and industrial strength further enhance its superiority and intentions to have a triad-based delivery system. In this regard, Pakistan will have to seek collaboration with other states, particularly China, to compete with India.

Indian Cold Start and Pakistan's Warfighting Doctrine

In April 2004, Indian armed forces developed the cold start doctrine, which is a Pakistan specific strategy aimed at destroying Pakistani armed forces.⁵⁷ In the South Asian security environment, Indian cold start doctrine has increased regional instability. It seeks to hold Indian superiority in conventional forces. The objective of this strategy is to instigate a conventional attack on Pakistan in order to cause significant damage to its army and economic infrastructure before the intervention of the international community.⁵⁸

In response to the Indian cold start doctrine, Pakistan has been conducting warfighting exercises since 2009 as a result of which

Pakistan has operationalised a new concept of warfighting, which would pre-empt Indian cold start and respond to it. This response entails an overall combined response from all the forces.⁵⁹ The main distinction of this concept is that it can nullify the promptness of Indian cold start doctrine by enabling Pakistani troops to mobilise quickly in lesser time than India.

The development of tactical weapons by Pakistan is a worrisome factor for India. On 24 April 2013, Shyam Saran, the former chairman of the Indian National Security Advisory Board opined that Pakistan's short-range tactical missiles are an attempt to restrict India from conventionally responding to terrorists operating across the border. He alleged that tactical nuclear weapons enabled Pakistan to carry out its cross border terrorism activities with impunity.⁶⁰ He termed it as nuclear blackmail as if Pakistan responded to a conventional strike with the tactical weapons, it would annihilate the whole region. He declared that "[I]f [India] is attacked with such [tactical nuclear] weapons, it would engage in nuclear retaliation which will be massive and designed to inflict unacceptable damage on its adversary."⁶¹ Such a security environment in the region can result in the outbreak of a war between two states having sophisticated weapons systems in their possession.

India has always associated terrorist activities in India and Kashmir with Pakistan. The Modi government brought about a paradigm shift in the strategy and pursued a more aggressive approach, which has banked on the limited war concept. In September 2016, twenty soldiers were killed in an attack on an Indian army post in the Uri sector of Kashmir. India has claimed that it carried out surgical strikes inside Pakistan territory and destroyed militant hideouts. Pakistan denied any such event and declared it as an exchange of fire across the line of control.⁶² While there are no solid proofs for such Indian claims, Modi has been quite successful in diplomatically propagating its policy and maligning Pakistan at international forums.

The Policy of Nuclear First Use and NFU

The Indian nuclear doctrine indicates that it adheres to the policy of "NFU". Whereas Pakistan's nuclear doctrine maintains that it would resort to nuclear use if its national integrity is jeopardised. According to Rifaat Hussain:

Given Indian advantage in conventional forces, Islamabad cannot commit itself to a policy of no nuclear first use (NFU). Doing so would only make it safe for India to fight a conventional war with Pakistan with impunity. Banning use of force between India and Pakistan is a more realistic approach towards conflict prevention than NFU declarations.⁶³

However, Pakistan would only opt for the first use of nuclear weapons if it is faced with the following situation:⁶⁴

1. If Indian forces penetrate into Pakistani territory beyond a specific limit;
2. If India captures Lahore or any other city of strategic or economic importance;
3. If India is able to destroy an unacceptable level of the conventional military force of Pakistan;
4. An Attack on any strategic asset or dams or civilian nuclear installation that jeopardises its military or economic security including Chashma, Mangla, Tarbela, and Kahuta;
5. If Pakistan is strangled so adversely that it seriously affects its warfighting capability; or
6. Indian advances for the capture of territory in Kashmir.

Elaborating the conditions of use of nuclear weapons clearly, the former DG SPD Lt Gen (Retd.) Khalid Kidwai has stated that Pakistan would think about using nuclear weapons only "if the very

existence of Pakistan as a state is at stake.”⁶⁵ According to him, “it is well known that Pakistan does not have a ‘No First Use Policy. ‘Nuclear weapons are aimed solely at India. In case that deterrence fails, they will be used if:”⁶⁶

- India captures a major territory of Pakistan;
- If Pakistan’s forces, i.e., army or air force is significantly destroyed;
- India tries to economically strangle Pakistan and destroys its industrial base; or
- Political destabilisation is caused by India which results in an internal security risk.

During the crises of Brasstacks 1986-87, the Kargil 1999, and the 2001-2002 confrontation, India abstained from escalating the conflict with Pakistan because of the fear of Pakistan’s nuclear response. If India attacked, Pakistan could have retaliated with conventional forces.

Proposal for a Nuclear Restraint Regime

Pakistan has proposed several regional mechanisms to improve relations between the two states. The proposal of Nuclear Restraint Regime was also an attempt to offer a confidence-building measure to India. Although Pakistan’s proposal for a nuclear restraint regime seems logical, it is not practical in the South Asian context. India cannot accept a dialogue that does not address its security concerns with regard to China. Therefore, a broader global regime that also includes China into the equation would be more feasible and result-oriented.⁶⁷ Pakistan in principle supports the Nuclear Non-Proliferation Treaty’s objectives and introduction of the Fissile Material Treaty. But Pakistan’s position with regard to its signing of any nuclear-related arms control and disarmament mechanism would be based on the conditions of national interest and the geostrategic environment of the region.

Credible Nuclear Deterrence

Pakistani and Indian nuclear doctrines demonstrate that both states follow policies of maintaining a deterrence that is credible and minimum, however, the emphasis on credible or minimum varies. Both credible and minimum are relative terms and keep on evolving. It is an intriguing question because what is the minimum number of nuclear weapons that is credible and what is the credibility of minimum numbers? And how to determine it? Considering the asymmetry in size and capabilities of India and Pakistan, it is very difficult to ascertain the exact number of weapons, which is minimum as well as credible. Having said that, it is clear from the nuclear doctrines that both the states are not seeking a nuclear arms race and their main emphasis is on the credibility of deterrence. Pakistan has stressed time and again that it does not seek to indulge in an arms race with India, however, it will adopt full-spectrum deterrence in order to deter any threat to its security. For the deterrence to work, its prompt and effective communication is very essential. For the first time, covert nuclear threat emanated from Pakistan during the crisis of Brasstacks in 1986-87. Abdul Qadir Khan indicated in a statement that Pakistan has the nuclear capability. He said, "Nobody can undo Pakistan.... We are here to stay and let it be clear that we shall use the bomb if our existence is threatened."⁶⁸

The Kargil crisis of 1999 resulted in the withdrawal of Indian and Pakistani forces due to the presence of nuclear deterrence in the region. Nuclear deterrence posture was calculated by both the states and they were openly exchanging nuclear threats during the crisis. This encouraged both states to avoid escalation. With the evolution of nuclear doctrines and postures, it became more evident during the 2001-02 India-Pakistan military standoff that could nearly produce a major war between them. At that time, both countries exchanged several nuclear threats that served as communicating the red lines for nuclear exchange. For example, the statement by General Pervez

Musharraf during the 2001-02 conflict was a clear warning to India, "We do not want war. But if war is thrust upon us, we would respond with full might, and give a befitting reply."⁶⁹ Nuclear deterrent forced the two sides to withdraw their forces. The existence of nuclear weapons did not eliminate crises but these were not converted into full-fledged wars under the nuclear umbrella.

Conclusion

Nuclear doctrines are intended to provide guidelines for states about the employment of weapons. Nuclear doctrines always have importance for the nuclear-weapon states, especially for Pakistan and India keeping in view the very short response times. With the nuclearisation of the states, it was imperative for them to delineate their nuclear postures. The nuclearisation of South Asia raised international concerns regarding nuclear proliferation and security of the facilities because of the adversarial relations between India and Pakistan. There is no transparent and comprehensive nuclear doctrine presented either by Pakistan or India. A comprehensive nuclear doctrine by India and Pakistan would contribute to deterrence stability in South Asia as both states are on the way to enhance their qualitative and quantitative nuclear weapons capabilities. Although India presented a draft doctrine and Pakistani policymakers have mentioned their nuclear policies on various occasions there is a need to present the officially endorsed and well-documented nuclear doctrine in order to eliminate ambiguities in the communication of their nuclear policies.

The nuclear doctrines of India and Pakistan have evolved over time and would continue to evolve with the changing strategic dynamics of the region. History indicates that any nuclear development by India that disturbs the nuclear balance in the region prompts a response from Pakistan to neutralise the threat. The Indo-US strategic partnership has provided an advantageous position to

India, which has strengthened its strategic capabilities, including nuclear weapons, ballistic missiles, and missile defence potential. A former Indian intelligence official has reportedly stated, "Under the deal, India will get the capability to produce 50 warheads a year."⁷⁰

Similarly, the development of a ballistic missile defence system in South Asia by India challenged the regional stability because it can give India second-strike capability, which adds to the security dilemma of Pakistan. In response, while maintaining the indo-centric approach, Pakistan would either follow the same path that is unlikely considering the economic and technological conditions or it can go for an increase in its number of missiles with variable ranges. Such situations would further threaten regional stability.

It is important that both Pakistan and India document their doctrines. This would not only improve the strategic environment of the region but also contribute to the overall stability of the international system. The clearer the doctrines, the lesser would be the chance of ambiguities and it would also decrease the trust-deficit between them besides providing a systematic control over their nuclear arsenal. They must concentrate on and debate finalising their nuclear doctrines as it is a requisite of their nuclear weapon policy. It is vital that both the states should improve the negative control in addition to the positive control of their respective nuclear forces so that nuclear weapons will not be used mistakenly or in an unauthorised way.

It is high time that India and Pakistan take practical steps and start confidence-building measure that could lead to comprehensive negotiations including conventional and nuclear issues. In this regard, C Raja Mohan has outlined three possible strategies to improve the relations between India and Pakistan:⁷¹

1. The stabilisation of nuclear relationship through a commitment to the CBMs relating to regional cooperation;

2. Bring about transparency and predictability of military positions on the Line of Control and international borders; and
3. By using peace at the border, both states can develop interdependence.

However, these steps can only improve the conflict situation in the region and cannot eliminate the conflict itself. The nuclear doctrines of India and Pakistan vary because their relative threat perceptions vary. While Pakistan has to counter India, India has to counter Pakistan as well as China. A comprehensive and well-elaborated nuclear doctrine that properly defines the objectives and conditions for the use of nuclear weapons can help improve transparency about nuclear policies as well as improve the strategic environment of the region. Although the nuclear policies of India and Pakistan keep on evolving, the documented doctrines can strengthen deterrence and relative command and control systems.

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PRESS-GOVERNMENT RELATIONS IN THE SUBCONTINENT UNDER THE EAST INDIA COMPANY

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Abstract

This paper briefly reviews press-government relations during the East India Company's Rule (1600-1857) in South Asia. The paper begins with a short background on the beginning of the press in pre-colonial India. It examines the nature and evolution of the press during the Company's Raj and its relations with successive viceroys and other colonial rulers. The paper also reviews tactics of the colonial rulers to suppress the vernacular press. Under the authoritarian concept of the press and sociological perspective of conflict theory a historical descriptive, and analytical approach has been adopted in this paper to review relevant literature and derive conclusions. The analysis revealed that the press in the subcontinent emerged owing to Britain's colonial ambitions to collect information about rival powers, Christian preachers, and dissenting employees Company. The last was the prime reason that led to an adversarial relationship between the press and the regime in India from the very beginning. Initial press criticism of the regime was justifiable but also very scandalous. The Muslim press was mainly targeted on the eve of the 1857's War of

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Independence. Regime's ties with a few newspapers also remained cordial as some leaflets even supported the suppression of the native people and the press in 1857. Some anti-press laws, i.e., the Censorship of Press Act (1799), the Licensing Act (1823), the Press Act (1835), and the most draconian law, the Gagging Act (1857) were also enforced during the Company's regime.

Keywords: The company, authoritarian theory, conflict theory, sociological framework.

Introduction

As a practical process, academic discussion, and mega research activity, the sub-area of the press-government relations is a vital, influencing, hotly debated, and an extremely complex sector in political communication inside the broader field of mass communication. Both the government and the press (nowadays the media) are the two key, very dynamic, mutually interdependent, but adversarial organs of the modern-day state. The press is mainly dependent on the government's advertisement money for its survival and news about various sectors of the government and its day-to-day activities to fill the space. Similarly, the government is reliant on the press to showcase its functioning and propagate its political agenda before the masses.¹ This relationship develops interdependency. The most important role of the press is to perform its watchdog role to protect the fundamental rights of the people, to check the government not to misuse its power and authority, and to hold the regime accountable to the public.² This core function of the press causes adversarial press-government relations.

Although in some rough form the press existed in the subcontinent in ancient times as well as during the Muslim rule (712-1857),³ the foundation of modern press system in the Indian subcontinent was laid down by some Englishmen during the period of the East India Company's expansionist campaign to bring the entire India under its colonial occupation.⁴ This initial press had come into

existence in reaction to the endless excesses and misuse of authority by the East India Company's rulers and massive corrupt practices within the rank and file of its employees. This arduous initiative to expose all the malpractices of the Company's elite was undertaken by some former and nonconformist employees. Hence, from the very first day, the press in India was founded on the basis of an intense rivalry between the Company's regime and its pioneers.⁵ This relationship has been briefly reviewed in this paper.

Theoretical Perspective

This study has been conducted under the authoritarian concept of the press, one of the four traditional theories stated by Siebert in 1950,⁶ and the Sociological framework of the conflict theory posited by Lewis Coser and Ralf Dahrendorf in the 1950s. The authoritarian theory holds that the press must at all times be loyal and obedient to the regime to maintain order in society and achieve its political objectives. It further states that the press must abstain from any sort of criticism of the regime, its functionaries, and the prevailing societal order. Furthermore, and in case of any violation, the regime reserves the right to punish the press by imposing fines, closing newspapers, or confining journalists.⁷ The conflict theory assumes that societies exhibit structural power divisions and resource inequalities, which lead to conflicting interests.⁸ According to Karl Marx, societies are always in a state of unending struggle between the powerful and the powerless to gain control over the limited economic resources. Instead of the public will, the powerful maintain social order through the use of force and dominance and, thus, the poor and the weak classes are brutally suppressed.⁹

Both of these theories are applicable to this study, as the East India Company's regime during its unjustified rule over India, suppressed the press and the native people with an authoritarian mindset and used all means and ways to tame the newspapers and

silence all critical voices. The sociological critical theory also seems very relevant in this study, as the Company's regime kept a rigid control over all the financial and other resources, plundered the wealth of India, and deprived the native people of all basic human (civil, political, and economic) rights. In this case, the press as a powerless and suppressed group struggled very hard for its own rights as well as the people's rights and consequently faced all brutalities of the regime.

Background

The well-recorded history of the press in the subcontinent is traced back to September 1556, with its first arrival from Europe¹⁰ along with the advent of European merchants and Christian missionaries in the southern Indian coastal areas. No formal press system was operative in the subcontinent before the arrival of the Western nations in this region. However, traces of some sort of royal espionage and information system mainly established for domestic security to watchfully monitor and preempt any sort of internal revolt and penetration of disguised spies into the enemy's territory to defend the sultanate from external threats can be found in the ancient era of Chandragupta Maurya,¹¹ and during the Muslim period as well.¹²

Around the 15th century, impressed by the enlightenment movement, some European empires thought of launching civilising missions across the world with the formation of colonies and trade ties. With this intent, Spain and Portugal made an imaginary division of the globe through the Treaty of Tordesillas on 7 June 1494 and began its colonisation process in different parts of the world.¹³ After Vasco da Gama had built trade ties with the Calicut dockyard—a centre of the spice trade in the southwest of India, King Manuel I (1469–1521) of Portugal also started portraying himself as the Lord of Arabia, Persia, and India.¹⁴ In the early 16th century, Spain had secured its colonial position in Southeast Asia, as in 1524 Charles V created the Council of

the Indies as a lawmaking body for the colonies.¹⁵ France and Great Britain also followed suit. Beginning with the formation of the French East India Trade Company by Colbert in 1664, France maintained its colonial possessions in India until 1763.¹⁶

The British East India Company was formed under a Royal Charter conferred by Queen Elizabeth I on 31 December 1600 to exploit trade opportunities in the South and East Asia. Earlier, the Spanish and the Dutch had already monopolised mercantile, especially the spice, trade in the region. The British naval fleet defeated the Spanish and Portuguese flotillas in 1588 and 1612, respectively.¹⁷ First, the English mercantile cavalcades fortified their positions at the shores of southern India. Later on, they started incursions into mainland India in the eastern and south-eastern parts. By the end of the 18th century, the Company's occupation had stretched up to Delhi until the dethroning of the last Mughal ruler Bahadur Shah Zafar in 1857.¹⁸ During this expansionist campaign in India, months-old newspapers and magazines would be supplied from Britain through the sea route, which would usually take months to reach India.

Causes of Evolution of the Press in Modern India

One main cause of the evolution of the press in modern India was the European powers' intent to colonise the world under the garb of civilising and enlightenment movements. A counterpart to these plans was the church protectionist strategy to defend and propagate Christianity.¹⁹ So another reason for the opening of the press in India was to preach Christianity and convert the Indians to it.²⁰ While busy in annexing the whole of India, the unfair mercantile activities, vested monetary interests, and the lust for power and influence led to mutual rivalries and disputes within the rank and file of the Company's top-most officials.²¹

This rivalry caused split of the British nationals into two opposing camps: One consisted of the Company's Loyalists and the

other mostly comprised of retired and ousted employees who were arch-critics of the Company's policies and actions.²² In the last quarter of the 18th century, some of the dissenting employees of the East India Company initiated news pamphlets, to pinpoint and criticise illegal activities and non-stop transgressions of the Company and its top brass. In retaliation, the Company's adherents and defenders also resorted to the criticism of the adversaries in a similar fashion by issuing pro-Company leaflets and consequently pioneering the beginning of formal newspapers in India.²³

Another reason for the need of local newspapers was the prevalence of an environment in India in which the native masses used to get news and information in the form of oral or interpersonal communication and the British colonialists had to consume months old newspapers and magazines arriving from the UK on ships via the sea route.²⁴ Moreover, desirous of reading in their native language,²⁵ the English citizens encamped in the Indian subcontinent wanted newspapers that would provide them with a variety of readings and information. They needed to know about their compatriots working in the whole of India, the news about activities of other European contenders in the region, such as the French and the local Indian rulers and princes, and to be well acquainted with the overall activities of the East India Company.

The Beginning of the Press in India

The first-ever attempt to introduce a newspaper in the subcontinent was made by a British citizen William Bolt in Calcutta, who had earlier remained an employee of the Company for about 13 years and had then quit his job in 1768. Bolt had also fixed a placard on the door of the Calcutta Council Hall in 1768, aiming to induce someone to start the trade of printing press. His crusade against the Company's interests displeased its apex management, which led to Bolt's arrest and subsequent expulsion to England. According to

Padmanabhan, Bolt attempted to start his newspaper in India in 1776 in order to beat a retreat under the disapproving gaze of the Court of Directors of the Company, but all his attempts were skillfully and successfully spoiled.²⁶

Another Englishman who succeeded in launching a newspaper during the Company's rule and ushering in a new era of press-government relations in the region was James August Hickey. His news gazette appeared in such an environment in India where no indigenous and formal news publications existed and the British citizens would read old newspapers. The first-ever issue of Hicky's *Bengal Gazette* or *Calcutta General Advertiser* appeared on 20 January 1780, along with a lofty and imaginative commitment to put the news into a new pattern of neutrality, factuality, and accuracy under the East India Company's rule.²⁷ Hicky's news publishing style resulted in direct confrontation with the Company's executives. Andrew Otis painted a picture of the situation in these words:

The extent of corruption in the city was staggering, and embezzlement and nepotism were rampant. After a rival paper was set up in November 1780 with support from the EIC, and allowed to post its copies for free, Hicky started to believe his newspaper was being punished...it marked the beginning of Hicky's war against the EIC in print...The next week, he started an anti-tyranny, anti-corruption, and pro-free speech campaign using his newspaper as his platform, and words as his weapons.²⁸

Niazi pin-pointed that right from its very birth, journalism in the Indian subcontinent emerged as non-conformist to the rulers and for that reason, the newspapers' owners and journalists had to suffer. According to him, the pioneering idea of starting a newspaper was hit upon by Hicky, while he was imprisoned by the Company's heads.²⁹ Hicky is also remembered as the founding father of scandalous and

vulgar press reporting. However, his journal laid the foundations of the struggling character and adversarial nature of journalism in South Asia.

East India Company's Relations with the Press

The pioneer press in India was the product of acrimony with some British citizens and the East India Company owing to the latter's serious illegalities, unlimited corruption, and the misuse of unrestricted power by the Company's executives. All initial newspapers during that time were launched, owned, and managed by the British nationals. In response, the Company also encouraged and sponsored pro-regime magazines to defend its unaccountable activities in the subcontinent. Hence, from the very first day of the birth of the press in India, the foundation of hostile relations between the press and the Company's rulers were laid down.³⁰ Padmanabhan remarked that the East India Company was not favourably disposed towards the press; its officials were suspicious of journalists and newspapers from the very beginning and were also intolerant of any kind of criticism. However, the early press in the region survived and somewhat succeeded in functioning just because of the Englishmen who obtained strength and inspiration from the free press in the UK.³¹ Moreover, punitive measures against the Anglo-press, its proprietors, and journalists included fines, bans, closures, confiscation, limited imprisonment of newspapers' owners, and their ultimate exile to England.

The early press in India was also not as ideal, impartial, and objective as could be thought of. Critics have questioned Hicky's claims of truth and neutrality, as he drastically attacked the Company's loyalists but spared Sir Filip Francis, the leading opponent of Governor-General Warren Hastings (1773-1785) and a member of the four-member council appointed by the Prime Minister Lord Frederick North, to rule the British possessions in India. Sir Francis was a key supporter of Hicky, who dedicated an ample portion of his two-pager

news-sheet for insulting and launching scandalous attacks on the personal lives of the Company's employees as well as Governor-General Hastings.³² Resultantly, Hicky was detained and fined for his serious allegations against the Company and disobedience to the rulers. He was the first-ever journalist and editor in the subcontinent to be fined and imprisoned. So was his newspaper to be seized and finally closed.

Hicky also attacked the first church missionary at Calcutta John Zachariah Kiernander blaming him for selling a printing machine to his (Hicky's) opponent and a pro-Company newspaper, the *India Gazette*, which was jointly owned by two British merchants, B. Messenk and Peter Reed.³³ The *India Gazette* worked as a spokesperson for the Company, vehemently responding to allegations of Hicky's magazine and even counterattacking him. Hicky's Gazette ceased publication on 23 March 1782 after Warren Hastings issued orders to confiscate his printing types. His *Bengal Gazette* lived for a brief and eventful span from 1780 to 1782.³⁴

The East India Company also locked horns with another well-known newspaper, the *Bengal Journal* launched by Thomas Jones in 1785.³⁵ In the start, its US-origin editor William Duane was more placatory to the regime. He entered into an accord with Lord Hastings to publish the Company's official ads and in return got discount in postal charges. The French Revolution of 1789 also stirred the French colonies in Asia and on 3 May 1790, in Chandernagore a few miles away from the British-administered Calcutta, a horde of local citizens expelled the Frenchmen from the city who sought asylum in Calcutta.³⁶ The Calcutta-based English Commandant Cornwallis was at daggers-drawn with his French counterpart Canaple in Chandernagore, owing to Canaple's impartiality in the Company's military struggle against Tipu Sultan in Mysore.

Meanwhile, Duane printed material in support of the French Revolution and also published an unverified report of Cornwallis's

death in a fight with Tipu Sultan. Duane had attributed this news article to Canaple.³⁷ It invited the wrath of Viceroy John **Shore** (1785-1786), who ordered Duane to offer his regrets to Cornwallis. In a conciliatory meeting over the matter, instead of apologising, Duane argued in favour of 'the rights of man'. As a result, he was imprisoned in Fort William for some time. Duane fiercely expressed his outburst against the nexus of the local British and French commander, for jointly curbing the liberty of the press.³⁸

Duane's stiff resistance confirmed his passion for press freedom under the Company's rule.³⁹ It led to his resignation from the journal's editorship and he started another magazine under the title *Indian World*. Duane's objectivity, steadfastness, and expertise caused an upsurge in the circulation of this paper, as he unearthed the Company's unlawful activities, internal irregularities, and the dismal condition of the English soldiers on a regular basis. Resultantly, the Company's authorities compelled Duane to auction his assets as well as the magazine. The last issue of the *Indian World* appeared on 17 December 1794. Duane was also arrested for some time, his entire possessions were impounded and ultimately he was sent back home in 1795.⁴⁰

Antagonism towards the East India Company's regime of the press was not limited to only one or two newspapers. When the *Bengal Hurkaro* edited by Charles Maclean, adopted a critical tone on the Company's policies, its editor was forced to leave India in 1798. The *Madrass Gazette*, initiated by R. Williams in 1795, was also targeted owing to its objective and critical reporting.⁴¹ The Company's regime censored the *Madrass Gazette* and another critical newspaper the *Madras Courier* set up by Richard Johnson, an official printer. In Madras, for the first time, censorship was introduced by the regime in 1795, when the *Madras Gazette* was forced to get all official orders from the Military Secretary vetted, before publication. Later on, both these newspapers were deprived of free-of-charges postal services and

when the magazines protested, the burden of these charges was shifted to the readers at the receiving end.⁴²

Apart from the hostile press, there existed some pro-Company newspapers, which were either launched by some of its loyal servants or favoured by the Company. The first-ever newspaper in Bombay under the title *Bombay Gazette* was launched on 25 June 1790 by W.S. Cooper and another one, the *Bombay Herald* began on 13 July 1790. Both were loyal to the East India Company and disseminated the activities and interests of the regime with a sympathetic tone. They avoided any sort of conflict with the regime to win official recognition and favour and thus survived.⁴³ In the last two decades of the 18th century, around two dozen weekly or monthly magazines appeared in the Indian subcontinent under the Company's rule. The total circulation of these English-language newspapers reached around 3,000.⁴⁴

In 1795, the Company's government turned against the *India Herald* and ordered rigorous scrutiny of its content before publication.⁴⁵ In fact, this newspaper was being published without any authority by one Humphreys, who was later on, arrested for unauthorised publication of the magazine.⁴⁶ Another British citizen, James Silk Buckingham launched a bi-weekly *Calcutta Journal*. It became a premium newspaper in no time, owing to its high-quality content and excellent presentation. This news-sheet also exposed the crimes and offences of the Company and its officials with logical and factual criticism. According to Buckingham, the editor of the *Calcutta Journal*, "The prime responsibilities of an editor are to remind time and again to the rulers their obligations, to caution them rigorously about their mistakes and to propagate unpleasant realities." This professional and objective approach led to the revocation of Buckingham's license and his subsequent deportation to England in 1823,⁴⁷ which is another remarkable instance of hostility between the press and the regime of the East India Company.

The fervent desire of the Company's higher echelons to control the press reached a new extreme in 1799, when the British business tycoons, traders, and the Agency House of the Company mutually agreed to establish additional newspapers. All aspirations for an independent press and normal press-government relations during the East India Company's era faced a real test in the era of Governor-General Richard Wellesely (1798-1805) when the regime interpreted any sort of criticism in newspapers as lurking Jacobinism. During this period, under the new press rules and regulations of 1799, no newspaper could be published until the entire proofs, along with advertisements of the newspaper, were to be put up to the regime and got a prior official nod. Any breach of this law would mean the ultimate expulsion of the editor from British India.⁴⁸

In September 1952, the Indian Government formed a Press Commission headed by Justice G.S. Rajadhyaksha along with 10 other members. The commission published its recommendations in 1954, which also included the history of the press in India as a background to the report. Sheri J. Natarajan, former Editor of *The Tribune* was also a member of this commission, who later on compiled the background of the report under the title *History of Indian Journalism*, which is considered an authentic work on the birth of the press in India, press-government relations in the Colonial era, and the untiring efforts of the press for its freedom and its trials and tribulations.⁴⁹

The native press of the subcontinent played an important role in the political struggle and resistance for freedom from the foreign rule by the native Indians. The Hindi paper *Patriot* started in 1853, *The Mirror* and the Bengali language Weekly *Amrita Bazar Patrika* fervently disapproved of misdeeds of the colonial rule, called for attention to problems of the people, and vigorously advocated for grant of civil rights to the people. *Amrita Bazar Patrika* went all guns blazing against the ruling imperialists through its reportage and editorials. It is also

termed as the first native Indian newspaper, which exercised investigative journalism.⁵⁰

The 1857 War of Independence also caused racial division in the press along the lines of the British Press and the Indian Press. The British journalists whimpered in coarse blood revenge against the Indians for the rebellion, whereas the vernacular press compassionated with the mutineers. The native press adopted a nationalistic tone and appealed directly to the masses because it spoke their own language.⁵¹ On this occasion, the colonial press was almost spared to exercise freely and the Indian languages newspapers were sternly suppressed. Ironically, some local newspapers, such as the *Punjabi*, the *Lahore Chronicle*, the *Mofussilite*, and the *Bengal Hurkaro* also took the side of the Company's regime and supported restraints over the non-compliant native press.⁵² Thus, the genocide of Indians at the hands of the Company regime to curb the revolt further worsened relations of the native press with the foreign rulers.

During the critical days of the Indian War of Independence, an English language newspaper *Friend of India* in Seerampur city was issued a warning on account of publishing an article on the centenary of the famous battle of Plassey. The licence of another journal *The Hindu Intelligencer* of Calcutta was revoked on account of its criticism of the government. Some Muslim-owned Urdu and Persian newspapers *Doorbeen*, *Sultan-ul-Akhbar*, and the first Hindi language magazine *Samachar Sudhavarashan* were also punished on the pretext of provoking the mutiny. The licence of another Urdu newspaper *Gulshan-i-Naubahar* was also annulled and its entire press equipment was confiscated.⁵³ During the War of Independence of 1857, the overall tone and tenor of the Urdu press was mostly anti-British and pro-insurgents. After observing the anti-British attitude of the Urdu press, Lord Canning, the then Governor-General of India, remarked that the vernacular press had inculcated the bold and aggressive

attitude in the Indian people under the guise of publishing news. This job was done in a very shrewd and clever way, he said.⁵⁴

During the uprising of 1857, Maulana Muhammad Baqir (father of Maulana Muhammad Hussain Azad), and Editor of the *Delhi Urdu Akhbar* was the first Muslim journalist who was martyred by the British regime on the vague suspicion of having killed an Englishman, the Principal of Delhi College Mr Taylor.⁵⁵ In fact, Maulana Baqir had given him refuge in his home for several days and had made every possible effort to save him from the mutineers. Another Muslim journalist, the Editor of *Sadiqul Akhbar* Jamil-ud-Din was put on trial and jailed for three years.⁵⁶

The rebellion of 1857 dealt a severe blow to the Muslim press. Several newspapers were violently sealed by the British Raj and many others were forced to shut down owing to severe financial crises. Natarajan revealed that in 1853 the total number of Urdu language newspapers throughout India was 35 and in the post-Revolt period after 1857, this figure sharply fell to 12; and that out of this meagre number, only one newspaper was under the supervision of a Muslim editor.⁵⁷ Another conflicting figure is stated by Tahir, Naghmana, and Baloch, that before the 1857 Independence War, the total volume of the Indian Urdu press was 103, which comprised of the newspapers and the printing presses as well.⁵⁸ Another contemporary research scholar, Dr Tahir Masood, listed some 122 Urdu newspapers in India prior to 1857.⁵⁹ Veteran journalist Zamir Niazi asserted that during the post-1857 period and the last quarter of the 19th century, 32 Urdu newspapers were being published across India.⁶⁰

Salient Features of the Press during the East India Company Era

Following are some of the salient features of the Indian Press while in its infancy and during the era of East India Company:

- 1) Circulation of each of these newspapers was very limited that ranged from 100 to 200 copies and readers were mainly British nationals largely associated with the Company. The regime was not much concerned about any possible impact of these papers on the residents. The only concern before the Company's high-ups was the possible dissemination of the massive wrongdoings of this mercantile enterprise to the UK, which could have earned a bad name for them.⁶¹
- 2) The main sources of news for these papers were the handwritten leaflets of the Indian states, handouts of military officers about wars and conquests, statements and day-to-day official and social engagements of the Company's elite, and administrative and commercial affairs of the Company. Another key source of news for the English press was the months-old UK's newspapers that would be supplied to India through the sea route.⁶²
- 3) The first of the Indian press was founded by the retired and banished employees or conflicting Britons due to their personal grudges or enmities with the Company or its top officials. Beside genuine criticism, they also made personal attacks on the ruling class and their families and, thus, founded vulgar and scandalous journalism.
- 4) The Company's regime also sponsored and supported the launch of newspapers that would defend and propagate its official stance. It caused division in the press, aggravated ties with the regime, and also led to the beginning of a pro-regime and conformist press.
- 5) In the first three decades (1770-1800) of publication of newspapers during the Company era, no press laws existed in India to regulate the newspapers. In case of any complaint against the newspaper or its editor and dispute with the

regime, other criminal laws and rules and regulations would be applied to punish the press.

- 6) Several tactics were used to gag the press. If a Briton inimical to the Company's interests or its high-ups planned to launch a paper, he would be instantly deported to the UK. If a journal caused distress to a top member of the British community and it did not submit an instant apology, at first, postal facilities of the paper would be withdrawn. If it continued displeasing the authorities, it had to pass through the censorship process. If the editor was irreconcilable and un-amenable to the dictates of the rulers, he was ultimately sent back.

Press Acts and Laws Introduced by the Company's Regime

Despite experiencing several punitive measures, the pioneer English press functioned freely and fearlessly during the initial three decades of its inception. Moreover, the vernacular press originated during the 19th century and became the voice of the native people and also contributed to levelling the ground for the 1857 War of Independence. Desi (native) newspapers played a key role in setting the stage for the revolt. Apprehensions of the Company's regime regarding press freedom and its possible outcomes constantly increased. Until 1799, the British-origin press was handled and controlled without any press laws. However, when the number of newspapers increased, later on, it was felt necessary by the Company's regime to have laws to regulate them. The following key laws and acts were introduced from time to time.

- i. The first-ever press law 'the Censorship of Press Act' was initiated by the Company's regime under Governor-General Lord Wellesley (1798-1805). All newspapers were required to carry the names of the proprietor and editor and the content was to be examined by

the regime prior to publication. Another main purpose was to prevent the publishing of defamatory content against British citizens. Journals, pamphlets, and books were also brought under the ambit of this law in 1807. Lord Wellesley was personally very harsh towards the newspapers. Press laws of his time fixed news journals to have names of the printer, editor, and proprietor on top of the page, identify themselves to the regime's Secretary and to place all intended news material before him for prior and formal approval. Sunday was made a mandatory off-day for the Newspapers. Failure to obey these press regulations was an instant exile from India. Reproduction of Western press content was also proscribed.⁶³

- ii. In 1823, John Adam (January to August 1823) introduced the 'Licensing Act' forcing all publishers to obtain a license from the regime for their publications, failing which could cost them Rs.400 fine and ceasing of the press. The press freedom granted by Lord Hastings was ended through this act, which was later repealed by Lord Charles Metcalf (1835-36). A well-reputed editor Raja Rammohan Roy filed a memorandum against the Press Ordinance (1823) to the Apex Court and the Privy Council and then closed publication of *Mirat-ul-Akhbar* in protest against this oppressive law. Roys' petition is known as 'The Charter of the Freedom of the Press'.⁶⁴ He also protested in 1827 against another unfair and prejudiced law 'the Jury Act' that initiated discrimination against the press even in the courts of Justice.⁶⁵
- iii. Unlike Wellesely, Minto, Adam, and Amherst, Lord Metcalfe (1835-36) was liberal-minded and favoured a free press in India. Hence, he introduced the Press Act (1835), which is also called the 'Metcalf Act'. He also annulled the License Regulating Act of 1823, won the label of 'Liberator of the Indian Press'⁶⁶ and thus enjoyed a good relationship with the press.

- iv. The 1857 War of Independence resulted in the notorious 'Gagging Act' by Lord Canning (1856-1862). All types of curbs were imposed on the press that largely affected the native newspapers. However, eager to recover his level of approval in India after the 1857 bloodshed, Canning limited the timespan of this act up to one year, which ended on 13 June 1858.⁶⁷
- v. During 1857, the 'Licensing Act' was also enforced to curtail pro-revolt and anti-British publications. This law empowered the regime with the right to stop all sorts of publication and circulation of books, magazines, newspapers, and other printed material.⁶⁸

Having faced the unsuccessful revolt in 1857, India was brought under the direct British rule in 1858. It was further decided to harden control over the native press. Hence, in 1878, the Vernacular Press Act-IX was promulgated. Being a discriminatory law, it was also called as 'the Gagging Act'.⁶⁹ It was followed by the introduction of many other anti-press laws until 1947.

Personal Attitudes of the Company's Rulers towards the Press

Personal attitudes of Governor Generals played a pivotal role in press-government relations during the East India Company's rule. Governor-General Lord Wellesley (1798–1805) was personally very harsh and oppressive against the press. Press laws and regulations during his rule proved as stumbling blocks in the way of the development of the Indian press. Following Wellesley, Lord Minto (1807-1813) almost treated the press in the same manner. Due to such a dreadful environment, the press could not progress during Wellesley and Minto's periods.⁷⁰

Lord Hastings (1813–1823), replacing Minto, possessed liberal and progressive views regarding the press and education. He relaxed restrictions on the press, which were applauded by both the Indian

and European Communities. However, he introduced some general rules to guide editors in order to avoid publication of news that may affect the government's authority or damage the general public's interests.⁷¹ The situation reversed when John Adam (January-August, 1823) succeeded Hastings as the acting Governor-General. He instantly withdrew the government's leniency towards the press, because Adam had earlier served as the Chief Censor in the previous regimes.⁷²

Like Adam, Lord Amherst (1823-1828) also continued the same pattern of gagging the press, viewing that the Court of Directors of England never supported a free press in the Indian Colony. During his time, Warden, the Chief Secretary of the Bombay Municipality was the real owner of the *Bombay Gazette* and *Bombay Courier*. When these newspapers reported their anti-Company coverage, Adam had to introduce the 'Press Regulations of 1825', barring employees of the Company to have any type of connection with the press. The press witnessed another period of respite when William Bentinck (1828-1835) succeeded Adam in 1828. He initiated reforms in press regulations. He was also in favour of the Indian native languages press. As Bentinck's reputation as a reformer grew, the Indian language newspapers began to flourish.⁷³

Lord Metcalf (1835-36) was also a liberal like Bentinck and believed in press freedom.⁷⁴ On his invitation and initiative, Lord Macaulay—a renowned liberal scholar and politician—drafted a press act supposedly to be amalgamated into the code being drafted by the Law Commission. Macaulay favoured the new Act and termed the existing Licensing Act as erroneous. On 3 August 1835, supported by Metcalfe, the Council unanimously passed the new Press Act, which is termed as the most liberal press act in the Indian history.⁷⁵ The new law was made applicable to the entire territories of the East India Company. This Act favoured the growth of the Indian press.⁷⁶ After Metcalfe, Lord Auckland (1836-1842) also supported the liberal press

and a harmonious relationship was maintained between him and the editors of the Calcutta's newspapers.

Conclusion

Under the framework of the authoritarian concept about the press and the sociological perspective of the conflict theory, this brief review inferred that the birth of press in Modern India was the result of European powers', especially Britain's, colonial, expansionist, and mercantile expeditions in South Asia, Church Missionaries' Movements for preaching of Christianity, reading legacy of the English people, monitoring of other Western and native rivals in the region by the Company's regime, the rivalry of dissenting employees with the East India Company, intra-Company rifts, and misuse of power. However, the main cause of the emergence of the press in the subcontinent was the defiance of some former employees of the Company to criticise its policies and activities through newspapers, which also led to an adversarial relationship between the government and the press in India from the very beginning.

The initial but unsuccessful effort to introduce a newspaper in India during the Company's era was made by William Bolt in 1776. James August Hicky was the first one to launch a newspaper titled *Bengal Gazette* or *Calcutta General Advertiser* in 1780. Hicky made valid and justifiable criticism over the Company's regime but also introduced sensational, scandalous, and biased journalism in India. His relations with the Company's regime remained very conflicting, which ultimately resulted in his detention and closure of his newspaper. Relations of the East India Company with other newspapers—such as the *Bengal Journal*, the *Indian World*, *Bengal Hurkaro*, *Madras Gazette*, *Madras Courier*, *India Herald*, *Calcutta Journal*, the Hindi language *Patriot*, *The Mirror*, the Bengali Weekly *Amrita Bazar Patrika*, etc.—also remained awful. In the beginning, the Company's regime regulated the press through the application of other rules and procedures.

From the analysis, it was also disclosed that the native newspapers, especially the Muslim-owned press was particularly targeted during the critical days of the 1857 War of Independence on the suspicion of being pro-rebellion. Even the Muslim editor of *Delhi Urdu Akhbar* Maulana Muhammad Baqir was murdered by the Company's Regime. Relations of the regime with a few pro-Company newspapers, such as the *Bombay Gazette* and the *Bombay Herald* remained very cordial. Some other newspapers such as the *Punjabi*, the *Lahore Chronicle*, the *Mofussilite*, the *Bengal Hurkaro* and several other little famous leaflets also supported the Company's regime on account of its 'crush the mutiny campaign' and suppressing the native press and, hence, won the favour and support of the regime.

It was also revealed that some press related laws, mostly of suppressive and authoritarian character, were also introduced during the Company's era. These included the first-ever press law 'the Censorship of Press Act' during Wellesley's (1798-1805) era, the 'Licensing Act' introduced by John Adam in 1823, the 'Press Act of 1835' by Metcalfe, and the most awkward law 'the Licensing or Gagging Act' ushered by Lord Canning during the 1857's War of Independence.

During the entire period of the East India Company's regime, the press was dealt with in a manner of official suppression and tight control. However, the nature of press-government relations during the Company's era was also affected by the personal attitudes of its various rulers. For example, Governor Generals such as Wellesley, Minto, Adam, and Amherst were personally very ruthless and rigid against the press. They introduced many anti-press rules and regulations and the press suffered a lot during their times. On the other hand, some rulers of the Company, such as Hastings, Bentinck, Metcalfe, and Auckland, owing to their liberal outlook, gave some respite to the press and eased a few restrictions over the newspapers. Press-government relations during the time of these rulers remained a

bit cordial. From the above brief review, it may be concluded that, overall, adversarial nature of press-government relations prevailed in British India during the era of East India Company.

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ACCESS TO WATER FOR ALL: A CASE OF DHAKA

MARZINA BEGUM*

Abstract

Water is literally the essence of life and unsafe water is a threat to human lives. Dhaka, the capital of Bangladesh, is one of the most densely populated cities in the world. Its nearly 20 million residents face tremendous difficulty in accessing safe water for their daily lives. A crisis of governance in terms of administrative and financial incapacity hinders supply of clean water. Added to that are disproportionate uses of water, knowledge gap about safe water, violation of law, and absence of ideas on sustainable water management. The Dhaka Water Supply and Sewerage Authority (DWASA) is not well-equipped to provide safe drinking water due reasons such as limited number of water treatment plants. This paper examines challenges to water management in Dhaka have been examined. It details how the existing authority of water management delivers services and how different stakeholder exert influence in the sector. Adopting a qualitative approach, the paper undertakes in-depth analysis to measure the current magnitude of the water crisis in Dhaka city. However, this is a qualitative research paper and descriptive in nature, based on secondary data along with personal observation.

Keywords: *Water governance, DWASA, Safe Water*

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Introduction

The United Nations (UN) has acknowledged access to water as a fundamental human right. The UN Human Rights Declaration (2002) states:

The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible, and affordable water for personal and domestic uses. An adequate amount of safe water is necessary to prevent death from dehydration, reduce the risk of water-related disease, and provide for consumption, cooking, personal, and domestic hygienic requirements.¹

Water is a valuable commodity for the survival of human beings because of its use in various ways. The crisis of access to water is not a new phenomenon in Dhaka. Nearly 20 million people now live in Dhaka megacity and the continuous increase of population further complicates the status of access to safe water. Groundwater depletion is a major challenge in front of the Government of Bangladesh, where the levels of groundwater are falling drastically due to excessive extraction to meet its growing demands. Although the Government of Bangladesh is trying to encourage the use of surface water among Dhaka city dwellers, it is very far from reaching the target. Moreover, the Government of Bangladesh is conducting various activities, ranging from short-term to long-term plans of action to resolve the water crisis in the city. The Government of Bangladesh has already established different regulatory frameworks, such as the National Water Policy, 1999, and the National Water Supply and Sanitation Act, 2014, for safe water management. On the other hand, the roles and functions of the Dhaka Water and Sanitation Authority (DWASA) have been restructured by the DWASA Act introduced in 1996, making it an autonomous organisation. Considering the existing water management crisis in Dhaka, however, the study explores the present

conditions of water management and re-examines the weakness of providing safe water in Dhaka. With regard to the methodology, the paper mainly relies on secondary literature. It also randomly observes the level and ways of water uses of 16 apartments in Dhaka in order to cross-check the reliability of the secondary data. Through its research, the paper attempts to answer the following questions:

- What are the challenges for better water distribution in Dhaka city?
- Is the existing authority adequately equipped for providing safe water services to Dhaka city dwellers?

Exploring Water Governance and its Crisis

The Global Water Partnership (2003) has defined water governance as a concept that relates to the range of political, social, economic, and administrative systems in place that influence the uses of water and its management.² It is worth mentioning that the concept refers to administrative arrangements depending on the needs of a specific region for the purpose of successful water management.³ It has been pointed out that improving water governance does not necessarily mean establishing new institutions or infrastructure or major changes in the plan of action, it could rather focus on institutional cooperation, developing policy, and enhancing the transparency of activities in the sector.⁴

Water is also considered an important economic good for sustainable livelihood.⁵ Poor quality of water threatens human health, which increases expenses in health treatment. Water is commonly perceived as a natural resource, which is a basic need required for the survival of human beings in their daily lives. Water is found in rivers, lakes, reservoirs, and shallow aquifers for the common uses and consumption of human beings. Access to freshwater in the world is not easy because of the natural composition of glaciers and deep aquifers.

Although this natural resource is renewable, it is very fragile. It is important for the existence of human beings because it dissolves nutrients and transfers them to cells. Added to these benefits, water regulates the level of global temperature and also supports the removal of waste products.⁶ Safe water is identified as the water that does not cause any significant risks to human health over lifetime consumption.⁷

It is important to note that the world now faces a serious crisis with respect to increasing water scarcity.⁸ Water scarcity is defined as a condition where a person does not have access to 1,700m³/year of water. There are several causes of water scarcity, such as excessive population growth, urbanisation, industrialisation, and climate change. Some structural reasons are also blamed for water scarcity.⁹ A study conducted by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) found that 3 people out of 10 in the world, or 2.1 billion, lacked access to safe and readily available water at home.¹⁰

Inadequate access to and poor quality of water endangers the lives of human beings. It is important to note that people living in developing countries suffer from health problems because of poor quality of water supply. Poor and marginalised populations, especially those living in the slums and remote villages, suffer the most due to inadequate and poor access to water.

The Status of Dhaka Residents' Access to Water

The Constitution of Bangladesh mentions the fundamental rights of its citizen and acknowledges the role of the state in providing the basic necessities of life to human beings, such as food, clothing, accommodation, education, and medical service. Given the context, access to water right is recognised under food, however, no article or clause refers to access to water as a right explicitly.

It shall be fundamental responsibility of the State to attain, through planned economic growth, a constant increase of productive forces and a steady improvement in the material and cultural standard of living of the people, with a view to securing its citizens through the provision of the basic necessities of life, including food, clothing, shelter, education and medical care.¹¹

Water crisis basically relates to a crisis of governance in the face of a number of challenges related to ensuring access to water effectively. Access to safe water is considered one of the important indicators of a country's development. For an individual, internationally accepted standard of water consumption is 110 Litres Per Day (LPD). A study has shown that one-third of the total population of Dhaka city receives only 40 LPD.¹² For exploring the water crisis, the reduction of groundwater, haphazard pipelines of water supply, illegal connection of water lines, misuse of supply water, pollution of surface water by industrial and garment wastes, dirty and foul-smelling supply of water, and shortage of preservation of surface water are the root causes of water crisis in Bangladesh.

During the summer season, especially from March to May, DWASA fails to extract sufficient water to fulfil the demands in the city. Therefore, many residents face acute water shortage every year.¹³ 78 per cent of the city's total water requirement is met through the extraction of groundwater. It is, however, estimated that the level of groundwater is depleting at a rate of 2-3 meters per year in many places in Dhaka.¹⁴ It is also predicted that the groundwater level will go further down to 120 meters by 2050.¹⁵ Even the treated water is supplied with dirty and stinky supply lines in different areas. Considering the challenges of safe water in Dhaka, DWASA itself encourages the city residents to boil tap water before drinking. At present, the people living in apartments are using water filters in order to get safe water. Despite the use of water filters, the level of water

quality is continuously degrading and puts immense strain on treatment costs with respect to water-related diseases in Bangladesh.

Water is distributed unevenly in different parts of the city and a huge quantity of water is being wasted and polluted. Furthermore, the residents of Dhaka are now living with unhygienic water as complaints from respondents about muddy water with bad smell are reported. In response, residents boil water before drinking and many of them use water-purifiers. Due to lack of trust in water purifying companies, some users boil water even before putting it into purifiers for their mental satisfaction. It is worth mentioning that the Bangladesh Council of Scientific and Industrial Research (BCSIR) is responsible for verifying the quality of any product. While several water-purification companies are operating across the city, such as APEC Water Technology, Water Fine Treatment and Filters, Aqua-Pure Technology Ltd and others, only one purifier brand, i.e., Unilever's Pure It brand has passed the BCSIR test.¹⁶

Several companies are also selling bottled water. Among them are Pran, Mum Mineral Water, and Fresh Drinking Water. Average prices of 1 litre bottled water are approximately 20 Taka (around 24 cents). It is hard for the poorer residents, however, to buy bottled water for their daily needs for survival. Residents, who have low purchasing powers suffer more than the middle- or upper-class people in Dhaka. The underprivileged are unable to have access to personal water purifier or bottled water at home. They do not even have direct access to the water supply which is supposed to be provided by DWASA because they are largely slum-dwellers.

In emergency situations, slum-dwellers buy water from the few available water service provider agents without considering its quality.¹⁷ Under high demand in critical situations, they have to at times pay more money for water compared to middle- and high-income residents. Several studies have shown that the residents complain about extra payment and wastage of time in water

collection. Usually, housewives and schoolgoing children have to spend additional time for this purpose, which has an effect on all household activities of a woman. In addition, women are spending more time at the cost of their leisure to collect drinking water for their family members. The rest of the household water-related works are completed near the water supply spot on availability like a direct tap, pond, river, local mosque, deep tube wells or others.

Challenges of Water Governance in Dhaka

Following are the main challenges for water governance related to access to water in Bangladesh:

- Increasing demand for water and high pressure on traditional groundwater sources;¹⁸
- Negative impacts of climate change that disrupt water cycle, thus, impact the availability of safe water for human and environment health;¹⁹ and
- An increased level of pollution due to unplanned location of industries and problems of poor sanitation.²⁰

Water crisis remains one of the major problems of Dhaka city residents. This crisis has occurred due to the increased pace of urbanisation, polluted surface and groundwater, and lack of commitment of the government to take initiatives for providing adequate and safe water to its citizens.²¹

The government needs to bring appropriate, effective, and affordable solutions in response to governance challenges with respect to the water supply.²² Many experts also fear that drinking water could become gradually more unsafe due to the effects of changing climatic conditions.²³ The same findings have also been echoed by pointing out that the availability of safe drinking water is expected to further worsen, as Bangladesh faces changes in climatic conditions.²⁴ According to a UN study, there will be a 50 per cent increase in the demand for water in Dhaka city by 2030.²⁵

Ownership Pattern

There is a huge debate about the ownership pattern of water services in Bangladesh whether it should be transferred from the public sector to the private sector, but development partners focused on the privatisation of water services. Bangladesh Water Act of 2010 also encourages changes in the ownership patterns. At present, many residents in Dhaka city heavily rely on private water distributors as buying water-purification filter or bottled water without compromising its quality is beyond their reach. There is a clear lack of proper management and regular monitoring of water purification services that have led to adverse impacts on health conditions.

Poor Implementation

As stated earlier, DWASA is a water service providing organisation in the public sector. The body is entrusted with the task of providing an adequate supply of water and related services to the residents of Dhaka. Jurisdictionally, DWASA covers more than 360 sq km area and with 12.5 million people who need almost 2,110 million litres per day.²⁶ However, for compliance, DWASA faces a number of challenges, including a high rate of population growth, unplanned development of city's planned and slum areas, and lack of resources for providing access to water for all.

Under the First Master Plan of the city in the 1950s, most underground pipelines were laid first for an area of 320 square kilometres. At the time, the population of Dhaka was only 6 million. Under the Second Master Plan of Dhaka city, introduced in 1996, DWASA covered an area of 590 sq km. The estimated population of Dhaka at the time was nearly 10 million.²⁷ The Government of Bangladesh has taken different initiatives to recover from the present water crisis in Dhaka city, including dredging Buriganga River, digging Dhaleswari, Pungli-Bangshi, and diverging water from Jamuna River for the survival of the Buriganga River.²⁸ In reality, these initiatives were not implemented successfully.

Excessive Pumping of Groundwater

A study conducted by the University of Delaware in 2016 mentioned that excessive pumping of groundwater to supply water for city residents could pose risks to future citizens who will live outside the city. It is important to note that Dhaka has now over 15 million residents and faces many challenges of water management. However, efforts are being undertaken by the Government of Bangladesh to sustain water quantity and to improve its quality with respect to water supplies. Despite the efforts, over-pumping is the main factor responsible for the decreased level of groundwater. It is important to note that the level of groundwater dropped more than 200 feet over the last 50 years. These levels are expected to continue to decline at a rate of up to 9 feet every year.²⁹

Unsafe Water

Bangladesh has made remarkable progress on Millennium Development Goals (MDGs) by significantly reducing the rate of population growth without access to an improved water supply. However, there are still significant challenges faced by Bangladesh in ensuring safe water. The International Centre for Diarrhea Disease Research Bangladesh (ICDDR) in a study found E Coli bacteria in 63 per cent water supplied by DWASA.³⁰ Doctors also opined that the city people were suffering from water-borne diseases throughout the year. On the other hand, residents also complained of stinky and filthy water being provided by DWASA.³¹

The surface water is polluted by organic components, toxic metals, and other pollutants and the situation is continuing for a long time now, where the quality of water has become questionable.³² *Asian Water Development Outlook* published in 2016 says that 80 per cent of the 250 industries are dumping chemical pollutants into Buriganga and Sitalakkha rivers near Dhaka. It is worth-mentioning that traditionally these two rivers have been an important source of surface water for the city. Added to that, every day four thousand

tonnes of solid waste and 22 thousand tonnes of tannery waste is being dumped into the Buriganga River.³³ A continuously overlooked consequence of these actions is the water crisis in Dhaka. When the river became too polluted, DWASA started depending on groundwater as a source of drinking water.³⁴

On the other hand, Bangladesh Agricultural Research Council (BARC) published a study stating that almost 97 per cent of the drinking water in jars, which was mainly used in offices and restaurants, had Coliform bacteria.³⁵ Based on an analysis of 35 brands of bottled water, BARC also discovered that there were considerably fewer minerals in jar water as compared to water supply by DWASA.³⁶ Furthermore, the residents of Dhaka complain that DWASA could not carry out their responsibilities or even they don't trust all the private jar companies. Sometimes television reports on jar businesses and their crimes influence people's negativity about water safety.

Poor Coordination and Monitoring

There is a lack of coordination between various departments with regard to the water supply.³⁷ The underground water pipelines are damaged due to age and disrepair or disruption by other agencies like gas pipeline services, telephones, and internet line services. World Bank, in a study in 2016, blamed the government bodies saying that they did not avoid duplication of effort and paid very little attention to the periodic maintenance of the water supply system.³⁸ The Bangladesh Standards and Testing Institution (BSTI) is mandated to verify the quality of water purification products, be it bottled water or jarred water.

However, without consulting the BSTI, DWASA has allowed 38 companies to do business. Many of them do not have legal approval and sometimes many distributors do not renew their work permits.³⁹ Respondents also complained of a lack of monitoring systems of DWASA as ineffective. Although the Government of Bangladesh has been establishing new water pipelines with the expansion of the city,

the old ones are not being repaired periodically. In addition, inadequate supply has forced people to rely on some alternative paths for water collection.

For the improvement of service performance of DWASA, the World Bank and Asian Development Bank (ADB) are working together, where ADB generally provides technical and financial assistance for continuous water supply services in Dhaka. The Department for International Development (DFID) basically worked for the slum improvement with DWASA. Water Aid and Dustha Shastha Kendra (DSK) worked together in the slums and provided potable water to the slum people. In most of the cases, the private and international organisations prefer to work through planned public-private partnerships (PPP) in order to make water more accessible.

Conclusion and Recommendations

Water supply management in Dhaka city very much depends on groundwater, as all the sources of surface water are being destroyed and polluted due to illegal activities in the sector. Even though DWASA has claimed to initiate the use of surface water instead of groundwater, it does not show any signs of implementation. Shortage of safe water has long-term consequences for the sustainable development of Bangladesh and the people who are living in Dhaka city are really vulnerable. The Sendai Framework, the Millennium Development Goals (MDGs), and now the Sustainable Development Goals (SDGs) focus on the need for safe and sustainable uses of water. From the above discussion, the following recommendations for access to water in Dhaka city can be drawn:

- The government should develop awareness programs among residents about the existing water crisis and future demand in the city. To avoid water-related hazards, governments should develop integrated water resource management to run safe water supply services. All concerned organisations need better

coordination and effective communication to achieve the objective.

- DWASA needs effective and reasonable solutions for the provision of safe water to the residents of Dhaka. The authority should introduce appropriate behaviour of sustainable uses of the water resource and ensure strict monitoring of healthy commercial water purifiers.
- The government should develop a sound mechanism for receipt of formal complaints at DWASA to provide fair services to the residents. Besides this, monitoring systems need to be improved.
- DWASA must be empowered by recruiting skilled and eligible manpower in the sector, as water complexities are related with different specialised fields of knowledge like preservation of water, water purification and decontamination, distribution of water, water treatment, water line supply design, water campaigning, water administration, etc. Extensive investments are also necessary to sustain development in the water management sector.
- The government should revise and integrate safe water policy for the residents of Dhaka city that must deal with access to and the use of water, which will make it easier to achieve the SDGs.
- The government should show more concern about the rivers of Dhaka and protect them from pollution and illegal construction, dredging them every year for smooth water flow and maintain them as an important source of surface water.
- Public-Private Partnership (PPP) approach should be employed for better services of water.
- As an important natural resource, water should be distributed and used properly and the authority should apply an

affordable charge of water as all the underprivileged people also have the right to get safe water for their living.

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