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Journal of Politics and International Studies

Vol. 7, No. 1, January–June 2021, pp.17–35

Hydropolitics and Conundrum of Transboundary Water Issues: A Case Study of South Asia

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ABSTRACT

South Asia is bestowed with abundant natural resources and active manpower. A wide range of glaciers in Himalayan and its consecutive ranges make one of the biggest water systems in the world. Ganges-Brahmaputra-Meghna and Indus basins quench the thirst of almost one-fourth of the world population living in South Asia. However, hasty and unfair boundary demarcation, power asymmetries and unfair distribution of water have triggered water insecurity in the region. This study analyses the securitization of transboundary water in South Asia. Moreover, this study considers in detail the subject of hydropolitics in the context of South Asia. The prospects of conflict and cooperation over transboundary water sharing have also been discussed. The special focus has been brought to investigate the dynamic interplay of power politics over water between India and Pakistan and its ultimate impact on the region. The results suggested that water is no longer a political issue in South Asia, rather it has now become a security issue and can pose threats to the sovereignty of states and their populace. However, the hydro hegemony of India and nuclear parity between India and Pakistan urge the South Asian states to cooperate rather than inciting war and conflicts over water issue.

Keywords: *Hydropolitics; South Asia; Water Insecurity*

Introduction

From Water Politics to Water Security

Water politics and water security are the most contested topic of the present era. Politics over water resources began in the 1990s and the notion of hydropolitics was justified by different authors (Lowi, 1995; Ohlsson, 1995). Hydropolitics is a distinct field of study applied to systematically analyse the inter and intrastate cooperation and conflict over shared water resources. Thus, hydropolitics is a pure state-centric and nationalistic strategy. Until the end of the Cold war, the concept of

security was only limited to the nationalistic and militaristic approach by defying the worth of ecological and non-traditional aspects of security.

Copenhagen school of thought has a large contribution to widening the concept of security. The two admired architects of this school namely Barry Buzan and Ole Wæver added ecological, political, societal and ecological issues to the domain of security (Buzan & Wæver, 1983). However, the traditional theorists severely criticized such a widened concept of security. They annotated that inclusion of all life-threatening factors to the domain of security would make the security an ambiguous and meaningless term (Daniel, 1990). Buzan et al. (1998) tried to justify his views by defining the criteria for security and political issues. According to securitization theory of Copenhagen school, an issue becomes a political issue when it involves governmental decisions, or it enters the public policy domain. However, an extremely politicized issue is termed as a security issue. There are four factors which constitute the securitization process i.e., securitizing actor, existential threats, referent object and audience. An issue only qualifies as a security issue when it poses an existential threat to a referent object by a securitizing actor and generates an instantly collective reaction from a wider audience. In this case, the referent object may be people or state.

The water remained an extremely politicised issue and it entered the security domain as it achieved the threshold to impact social, political, economic and environmental security of states. Water can be studied at three levels i.e. global, regional and local. It qualifies the characteristics of security threat at every level as it is capable enough to pose existential threats to nations and even instigate conflict so-called water wars. In the following sections, water war rationale and international water-sharing principles have been discussed. Subsequently, the Political and geographical reasons for the water conflict and water-sharing treaties in South Asia have been critically analysed. Then, a comprehensive conclusion has been made from the results of the collected empirical data.

Water War Rationale

Hence, water has become a security issue owing to global water scarcity and an alarming decrease in per capita water availability. The rationale of water wars was continued to exist in the mainstream discourse of the 1990s and still, numerous scholars are debating to elaborate on the water war thesis (Dolatyar, 2002). The proponents of water war thesis argued that water is crucial for the socio-economic development of nations. If the nations are lower riparian and they have to rely upon the water that comes from outside their borders, then they perceive such kind of dependency as an existential threat. The scarcity of water at domestic level makes states vulnerable and this vulnerability requires action by a state, or even by states sharing a basin, which ultimately leads to conflict and then so-called water wars (Gleick, 1993). The opponents of water war thesis view it as groundless hyperbole and remonstrate that water is not a casual factor but may serve as a contributory factor in conflict. They argued that no war was fought on water and neither such incident will occur in future. At worst, scarce water resources can only lead to instability or aggravate the existing conflict (Homer-Dixon, 1999). Generally, states try for cooperation and ratify water treaties despite having constrained relations. One of the two valuable counter-arguments presented by the opponent is that

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renewable resources like water can't be harnessed easily and become the asset of a state. Second and above all, countries with water scarcities are mostly poor and therefor can't wage war against resource-rich country. However, water war can erupt under a certain circumstance when the downstream nation is superior in military capabilities vis-à-vis upper stream, is extremely dependent on water transboundary river whose flow is restricted by the upper riparian.

In South Asia, probabilities of a water war are negligible. Alam (2002) proposed another concept of water rationality explaining why states don't engage in war because of resource competition. He offered the Indus Water Treaty as a case study which had survived over 40 years of extreme provocations. Even then, the Indus Water Treaty is not an epitome of successful cooperation over shared river basins rather it is a better example of water conflict resolution and identity assertion. The treaty wasn't founded on the principles of integrated river basin management. It was merely a reluctant sequel to the geopolitical division of resources of the British empire. The World Bank initially proposed the joint development of the Indus Basin but failed in doing so.

International Water Sharing Principles and South Asia

At the beginning of the 20th century, four international water sharing theories were evolved which were different. These theories were criticized by many for their inadequacy to reasonable and faring sharing of international waters. However, South Asian countries have adopted one or more principles to assert their claims over transboundary rivers. These principles or theories were based on practices of states and work are done by experts in the field of water.

Absolute Territorial Sovereignty

The most controversial principle is absolute territorial sovereignty also known as Harmon doctrine. This doctrine/theory gave free hand to a country in diverting and disposing of the course of an international river according to its requirements without taking into account the harms and adverse impact on the riparian state. Consequently, it gives no right to the lower riparian state to claim the free flow of an international river. In other words, the principle of absolute territorial sovereignty denies the presence and legalization of international law to share transboundary rivers. This principle was rigorously criticized by many scholars and it was described by legal experts as "radically unsound" (Smith, 1931). The USA herself did never showed adherence to this principle while signing water treaties with its neighbours i.e., Canada and Mexico. Moreover, it was also rejected by many arbitral, The World Bank and the International Bank for Reconstruction and Development.

The conclusion of Arbitration Tribunal in the case of Trail Smelter was:

'...no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein when the case is of serious consequence and the injury is established by clear and convincing evidence.' (Uprety & Salman, 2002).

In 1949, the International Court of Justice confirmed in Corfu Channel the principle of the state's responsibility for violations of international law, which happened

inside the territory of the state and harmed the other. In this regard, the 1957 Lake Lanoux case in Arbitral Tribunal concluded that

'...according to the rules of good faith, the upstream State is under the obligation to take into consideration the various interests involved, to seek to give them every satisfaction compatible with the pursuit of its own interests, and to show that in this regard it is genuinely concerned to reconcile the interests of the other riparian State with its own.' (Arbitration, 1957).

Thus, it is generally believed that the principle of absolute territorial sovereignty is illogical and does not deserve to be the part of laws regarding the sharing of the international watercourse (McCaffrey, 1996).

Though, the principle of absolute territorial sovereignty failed badly in a tribunal of international laws and rejected by many wide ranges of the theorist (Lipper, 1967), however, Harmon doctrine is still followed by many countries to assert their claims over international waters. This principle is adopted by most countries which are considered as hydro-hegemon at the regional level. These hydro-hegemons not only harm the lower riparian by diverting the natural flow of an international river but also threaten the small upper riparian countries. The exploitation of international water from transboundary resources by a hydro-hegemon is evident in South Asia. In South Asia, India is sole hydro-hegemon which divert the natural flow of international rivers thus affecting lower riparian Pakistan and Bangladesh. India, as well as, took benefit of landlock nature of her upper riparian Nepal and Bhutan and enforce them to ensure the free flow of an international river.

Absolute Territorial Integrity

The second principle is absolute territorial integrity. This principle favours the right of riparian countries and requires continued free flow of an international river into the riparian territory. Thus, it enforces the upper riparian country not to restrain the natural flow of international water to the lower riparian. This principle allows the minimal use of water from an international river by upper riparian state and therefore it is like common law doctrine which talks about riparian rights (Teclaff, 1985; Getches et al., 1997). Principally, this principle is the precise inverse of the principle of absolute territorial sovereignty because it is proposed to favour the rights of lower riparian. This principle counterpoints with the principle of absolute sovereignty in such a way that it is biased and unfairly favours the rights of only lower riparian. It ensures the safety of lower riparian from any damage caused by the upper riparian. It denies the rights of upper riparian states and condemns the due blockage or inversion of water from an international river by upper riparian states. Therefore, this principle also cannot be accepted as an international water law. Because, like the principle of absolute territorial sovereignty, this principle failed in taking into account the fair and reasonable interests and rights of both riparian states.

In South Asia, all the lower riparian countries follow and claim for the absolute territorial integrity and thus deny the right and interest of an upper riparian country. The most notable lower riparian countries are Pakistan and Bangladesh and to some extent Afghanistan. India is upper riparian to Pakistan and Bangladesh and lower riparian to Bhutan and Nepal. India follows both absolute territorial sovereignty and absolute territorial integrity. India claims sovereignty vis-à-vis Pakistan and

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Bangladesh and integrity vis-à-vis Bhutan and Nepal. India succeeds in its asserted claims due to its hydro-hegemony.

Limited Territorial Sovereignty and Limited Territorial Integrity

The third principle is the combination of the above mentioned two theories of absolute territorial sovereignty and integrity. This principle asserts that water is the property of each co-riparian country and each state should reasonably use the water of an international river in such a way that their usage doesn't intend to harm the other co-riparian. In essence, this principle accepts the right of all co-riparian over an international river. This theoretical principle was applied in a memorable decision issued by the Dutch Government in 1862 while hearing the case of the Meuse River between Belgium and Holland. The decision letter stated that:

'The Meuse being a river common both to Holland and to Belgium, it goes without saying that both parties are entitled to make the natural uses of the stream, but at the same time, following general principles of law, each is bound to abstain from any action which might cause damage to the other. In other words, they cannot be allowed to make themselves masters of the water by diverting it to serve their own needs, whether for purposes of navigation or irrigation.' (McCaffrey, 2001)

Thus, it can be deduced that the principle of limited territorial sovereignty and limited territorial integrity is the most reasonable way to share and govern the water of an international river. This principle is the base of the principle of "equitable and reasonable utilisation" which is the customary international law (Bogdanovic, 2001). It reconciles the co-riparian states having conflicted interest on an international river. It simultaneously acknowledges the rights and interests of each riparian country and entitles each state with a reasonable and equitable share of water from an international river. These shares are enough for their territory and do not deprive the other riparian states of water. Thus, the principle of "equitable and reasonable utilization" is the basic principle in modern international laws about sharing and usage of water. However, the principle of limited territorial integrity and territorial sovereignty are the roots of this principle. Though this principle ensures the rights of all riparian, it has not yet been practised in South Asia.

Community of Interest

The fourth principle is the "community of interest". This principle refers to the formation of a community of all co-riparian states sharing the waters of an international river. According to this principle, the entire basin of an international river is like an economic unit. The rights of every co-riparian over the water of an international river are legally vested or divided in the community of riparian countries by agreements or proportionality basis (Lipper, 1967).

The Permanent Court of International Justice discussed the River Oder case according to the principle of the community of interests and concluded the case in the following sentences:

'This community of interest in a navigable river becomes the basis of a common legal right, the essential features of which are the perfect equality of all riparian States in the use of the whole of the course of the river and the exclusion of any

preferential privileges of anyone riparian State in relation to the others.' (Rieu-Clarke, 2012).

Principally, this principle favours the development of an optimal and integrated river basin by overlooking the political boundaries. Therefore, it is also referred to as an idealistic principle which has no realistic backgrounds and thus cannot be applied in solving the water disputes. The factors which undermine the practicability of this principle are widely present in South Asia. Although the application of such principle deems unfit in South Asia, it was found to be the only reasonable way to settle the water disputes in South Asia. The world Bank tried to make a "community of co-riparian states" in Indus Basin while mediating between India and Pakistan. However, World Bank failed badly to do so due to harsh political realities across the borders. Therefore, the world Bank abandoned this theoretical approach and agreed to another proposal intended to divide the Indus Basin (Uprety & Salman, 2002). The contradictory factors of this principle include nationalism, lack of mutual trust among the co-riparians and lack of political will.

Political and Geographical Reason to Water Conflict in South Asia

The major Himalayan network of transboundary rivers salves about one-fourth part of the world dwindling in fertile landform of South Asia from being worthless for cultivation. Unfortunately, the region which was known for its ecological congruence and well-managed water system is now facing desperate ecological imbalance and relentless water panorama. The dearth of water is a greater challenge to low riparian states of South Asia. There is intense controversy over sharing of water among the co-riparian states. This controversy is mostly India centric where the hegemonic nature of India generates competition over resources and thus India violates the existing water-sharing treaties. India intentionally violates the international laws and commits unilateral diversion of water which creates an atmosphere of mistrust and aggravated conflicts (Ranjan, 2016).

The decade long conflicts over transboundary rivers along with dangerous disruption in the ecosystem have adversely affected the bilateral relations in South Asia, shrunk the economic growth and evoked violence. Although the partition of 1947 was based on religion, the water passage and railway lines were also taken into the account by Boundary Commission which was consigned to demarcate the border between India and Pakistan. Even then, partition led to unequal distribution of waters and India gained much control over the Himalayan water tributaries due to its spacious geography (Ranjan, 2016). Partition disrupted the well-planned irrigation canal system. After partition, the Sutlej Valley canals, and headwork of Upper Bari Doab canal caved in India but the land which was cultivated by their waters became the part of Pakistan. The source of major rivers of Pakistan remained in India thus contributing some other dimensions of instability in South Asia (Ranjan, 2015). Moreover, the Redcliffe line also segregated the Ganga basin delta along with its serving port Calcutta and Chittagong. Both sovereign states fought wars to resolve the delicate boundary disputes but resulted in the creation of another autonomous country namely Bangladesh thereby laid the foundation of perpetual boundary disputes. Accordingly, states especially India is not willing to compromise on sharing the water of common rivers.

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There are certain political and geographical reasons for such behaviour over water sharing and water-related conflicts in South Asia. The very first reason is water stress which is endemic to whole South Asia and causes human insecurity in the underdeveloped region. Swifter population growth and climate change have plummeted the annual water availability by about 70% since 1950 (Ranjan, 2015).

The second physical reason is floods and droughts due to climate change. The Himalayan glaciers are continuously melting on the account of global warming. The region has to face both droughts and floods at different periods. The upper riparian countries release the undesirable, rough and unseasonal water to low riparian states and sometimes they block the free flow of water to satisfy their own need. Moreover, it is a tragedy in the South Asian context that several environmental issues are going to be politicised. Different stakeholders undermine any cooperation which settles down the grieving conflict over water distribution and inflames the nationalism. Water nationalism is the major bone of contention which provokes India to neglect existing water treaties and Pakistan to execute water war against India (Hill, 2006). There is a competition of claims over water bodies in South Asia to achieve national development goals. Weaker nations allege their stronger neighbours for roguery over water resources. In a different part of world multilateral approaches are being applied to river basin development. However, there is no such effective collaborative agreement on common water resources in South Asia which produces a superiority complex in South Asian countries, and they believe that they are the only owner of common rivers (Khalid, 2011).

South Asian Rivers have certain importance in the cultural and religious heritage of subcontinent. Ganga and Jamuna are considered sacred in Hindu culture. According to Hindu folktales, rivers are a sign of identity and spirituality. Therefore, Indian leadership remonstrate the proclaiming of sacred rivers as international rivers (O'Donnell & Talbot-Jones, 2018). Furthermore, Hindu nationalist leadership used water issues as a source of political gain. The political leadership of west Bengal exerted political pressure on Manmohan Singh to withdraw from Teesta river agreement with Bangladesh otherwise they would either dissolve the government or step down the coalition (Kumar, 2013).

South Asian water issues become more complicated when exploited by local bigoted leaders as political motives. India takes undue advantages of its geographical dominance regarding Pakistan and Bangladesh by constructing illegal dams over international rivers. This geopolitical imbalance produces suspicion over regional autonomy of smaller states having the same colonial past. Water sharing is a very complicated problem to go about. United Nation has enacted laws regarding environmental protection and water-sharing such as 'No Harm Law' which obliged the states to prevent the risk of ecological harm to other states. The other law namely 'Equitable Utilisation' entitle each basin state to use a reasonable amount of water from international drainage basin in its territory (Uprety & Salman, 2011).

Water Allocation Treaties in South Asia

South Asian states have a golden opportunity to cooperate over their conflicts especially water issues which may bring peace and prosperity in the region. Different water treaties are signed between South Asian nations to resolve their water disputes but couldn't fully be implemented instead of Indus water treaty which

lasted two major wars and implemented successfully till 1980 (Ali, 2008). India and Pakistan both accuse each other of manipulating the treaty in its favour, while Pakistan has strong resentments about India. Pakistan argues that India is deforming the clauses of the Indus Water treaty by forming dams such as Wullar Barrage and Kishan-Ganga Hydro-power projects. There is a dire need to renew the treaty as the issues of climate change and construction of dams over Indus, Jhelum and Chenab was not effectively discussed in the treaty (Ahmad, 2011).

India mostly depends upon Ganges-Brahmaputra-Meghna Basin whose per capita annual water availability is 3,500 cubic meters while in contrast the Indus Basin, the major source of water for Pakistan, has 1,330 cubic meters water availability (Babel & Wahid, 2008). Asian Development Bank listed Pakistan as the most water-stressed country. Pakistan is facing water scarcity and it is predicted that its per capita annual water viability will decrease to 711 cubic meters in 2037 (Azad, 2015).

Another treaty in South Asia is 30 years long Ganga Water Treaty of 1996 between India and Bangladesh which is considered as unsatisfactory by realistic politicians of Bangladesh. The major problem with this treaty is the sharing of the acute insufficient water of Ganga between two states during the dry season (Mital, 2016). Bangladesh has high annual per capita water availability (8,051 cubic meters) but has water security issues with its upper riparian India whose unfair behaviour results in monsoon floods and water shortage in Bangladesh occasionally (M. N. Khan, 2016).

India and Nepal have signed several water treaties since the beginning of the 20th century. These agreements include 'Sarada Agreement' of 1920, 'Koshi Project Agreement' of 1954, 'Gandak Agreement' of 1959 and 'Mahakali Integrated Treaty' of 1996. The Sarada and Gandak agreements were signed to meet the irrigation necessities of Northern India while Koshi agreement was devised to flood control that devastates the northern part of India (Jha, 2013). The treaties are criticized for being India centric and ignore Nepal water needs. India strongly opposed the Nepalese ambitions to construct hydroelectric projects to meet its energy demand and increase its revenue by exporting electricity (Gyawali & Dixit, 1999).

India had no as such dispute with Bhutan over sharing of water. Bhutan and Nepal have 109,000 and 8,900 cubic meters' annual per capita water availability respectively which is highest than any South Asian country (M. N. Khan, 2016). However, Indian hegemonic behaviour to these states hinders them to avail their water resources by dictating them on the construction of hydro projects (B. Khan, 2008). Moreover, India has also water conflicts with China and this conflict is more dangerous than a border dispute. The major source of water for India and China is Tibet which lies in China (Zhang, 2015).

There is some regional-based cooperation over water sharing instead of bilateral agreements. One of such cooperation is the Hindu Kush–Himalayan Hydrological Cycle Observing System (HKH-HYCOS) project which was initiated by Pakistan, Bangladesh, Bhutan and Nepal in 2001 to protect the livelihoods and lives of the Hindu Kush and Himalayan region from excessive floods (Shrestha et al., 2015). These kinds of cooperation are necessary to overcome the climate-induced natural

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disasters. Conflicts in South Asia over water either provoke war or become the source of cooperation.

Hypothetically the water disputes in South Asia are a major bone of contentions which may provoke war. Indian behaviour in this regard is more obnoxious due to its unilateral approaches towards shared waters and brazenly construction of dams especially on Pakistan's rivers. Here we take a brief look at bilateral water conflicts in South Asia. The Conflicts are due to Indian hegemony and asymmetric distribution of power in South Asia. Conflicts over rivers have not effectively addressed yet despite several treaties and agreements. Indo-Pak water disputes are directly inherited by territorial division of India by British Raj. India took control of major rivers and disrupted sophisticated unitary canal system founded by Mughal Empires and technically advanced by British Raj. Genocide committed from both sides had produced emotions of intense dislikes which halted the chance of any immediate successful agreement over water issues (Riffat & Iftikhar, 2015).

India is constantly violating Indus Water Treaty by diverting the flow of water unilaterally in the form of constructing dams and barrage over Pakistan's rivers which has brought Pakistan at the edge of acute water shortage. India constructed Wullar Barrage with the storage capacity of 0.32 million-acre feet which impacts the free flow of Jhelum in Pakistan especially in the dry season. This will negatively impact the water capacity of multipurpose Mangla Dam which irrigates the major agricultural portion of Pakistan (A. Khan, 2017). Despite apprehensions of Pakistan India accomplished the construction without providing essential information demanded by Pakistan. India claimed that it has the right to build Wullar barrage and it may negotiate with Pakistan on changing its structure, but Pakistan strongly condemned such activity as it was the clear breach in Indus Water treaty. Another example of Indian transgression is Kishan-Ganga hydropower project which is constructed over Jhelum river tributary namely Kishan-Ganga or Neelam in the disputed territory of Kashmir. Pakistan would confront 27% of water deficit in case of maximum diversion of natural flow by this project (Iftikhar, 2011).

Pakistan seeks the advice of the International Court of Justice after Indian unwillingness to resolve this matter bilaterally on the bench of Permanent Indus Commission. World Bank allowed India to construct this dam with certain restrictions by considering the Indus Water Treaty which guarantees the natural flow of Jhelum water to low riparian Pakistan ("India Permitted," 2017). According to the Indus Water Treaty, India is obliged to share data about dams and hydro projects to Pakistan right before the six months of construction. India always violated this clause along with other mandatory articles of the treaty (Qureshi, 2018).

Overall India has constructed total 4,700 dams for the last 50 years but the exact number of dams over western Pakistani rivers is yet to be calculated. However, construction of hydropower projects over western rivers was allowed by the Indus Water Treaty, but the design of such projects is necessary to be approved by the Indus Commission of Pakistan. According to Naveed Qamar, Federal Minister for Water and Power Pakistan, India has constructed 17 and 16 power generation plants over Chenab and Jhelum respectively while 6 more plants are under construction and further 10 are likely to be constructed in future (Taj, 2011). Pakistan is panic about insufficient data sharing to Indus Commission about the hydropower projects

such as Hanu Small, Chutak, Nimoo Bazgo, Baglihar, Wullar Barrage, Dul-Hasti, Uri-II, Marpachoo and Kishenganga hydropower and some other plants. The design of these projects is a direct violation of the Indus Water Treaty (Akhtar, 2011).

Another tactic adopted by India to construct illegal dams is to delay the bilateral solution of the water issue to complete the major construction of dams before that Pakistan tend towards the Court of Arbitration. In this way, India also takes benefit of this time lag by providing on-ground shreds of evidence to the third party for the continuance of nearly completed projects. Baglihar and Kishan-Ganga projects are examples of such insidious behaviour of India. Furthermore, India has been showing reluctance about sharing immediate flood data and scale of water in its dams during the crucial season of monsoon since 1999 (Wasif, 2017). This reluctant behaviour coupled with the release of choked and flood water towards Pakistan has resulted in five major devastating floods in Pakistan. Indus Water Commission of India has also reluctant to delay scheduled meetings with its Pakistani counterpart which resulted in unacquainted information about Indian dams. According to some analyst, the building of dams over western rivers will provide the opportunity to India to put political pressure on Pakistan by blocking the water. Some positive gestures were also seen when India allowed Pakistan to inspect are several incomplete hydroelectric projects in Indian Kashmir in 2010 and both estranged states agreed to launch telemetry system to quantify rivers flow (Iqbal, 2014).

There are three major rivers Ganges, Brahmaputra and Meghna along with 51 other minor which entered in Bangladesh territory after irrigating India. Ganges, Brahmaputra and Meghna drainage basin is spread over India, Nepal, Bhutan and Bangladesh (1.75 million square Km) while Bangladesh receives 7 per cent of the total catchment area. Around 10% of world population inhabits around Ganges river basin which makes it most densely populated and consequently most contentious (Ranjan, 2015). The dispute erupted between India and Bangladesh when India decided to construct Farakka Barrage in west Bengal and roughly 11 miles away from East Pakistan border in 1961. The major purpose of this barrage was to divert the water of Ganges River towards its distributary 'Hooghly' so that the sediment deposition of Calcutta Port could be easily flushed out rather than mechanical dredging (Rahman, 2017). Farakka Barrage is not only a source of conflict with Bangladesh, but the Bihar and Uttar Pradesh states of India have some reservations regarding this dam (Mazumder, 2004). This project was challenged by Pakistan during two decades of the 1950s and 1960s and later by Bangladesh.

India denied accepting the controversial nature of Farakka Barrage due to its repeated claim over Ganges Rivers. India doesn't accept the international status of Ganges River due to two reasons. First is the religious affiliation of the Hindu community of India with this river and the second because India occupies 80 per cent of total Ganges drainage basin (Ranjan, 2015). Indo-Bangladesh Joint Rivers Commission was founded to resolve the dispute amicably but in vain. Then Bangladesh tried to raise the problem at the international platform. At the 7th Islamic Foreign Ministers Conference at Istanbul, Bangladesh was supported by Turkey over Indian hegemonic behaviour towards riverine Bangladesh and requested India to accept the international status of Ganges and help the reconstruction process of retarded Bangladesh. Bangladesh also raised the dispute in United Nation in August 1976, but Bangladesh could not come up with enough support to its determinations

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(Ganai & Thanikodi, 2016). Consequently, a Consensus statement was approved which led to a partial accord known as the India-Bangladesh Water Agreement of 1977 for 5 years. After its expiration, other MoUs were declared in 1982 and 1985 and there were an intense debate and contestation over water distribution and augmentation of Ganges river equal flow in Hardinge bridges (Bangladesh) and Farakka Barrage (India) during the dry season. To address these issues a 30-year long Water Sharing Treaty was signed in 1996 after an extended turbulent phase of negotiations. However, this treaty is still questionable due to acute low to flood causing water availability in the Ganges River as a result of abrupt seasonal variations (Rahaman, 2006).

The other source of tension between India and Bangladesh is the transborder water sharing of the Teesta River and the construction of dams over this river at the point of Gazoldoba. Although India had drafted an effective agreement with Bangladesh but could not go through it due to strong opposition from West Bengal statesman. Another rising hostile situation is the construction of Tipaimukh Barrage over the Barak River which will severely affect the Sylhet district and haor ecosystem of Bangladesh (Mital, 2016).

Although Nepal is upper riparian to India but faces much opposition from India for building dams and hydropower projects to support its economy and energy deficiency. There is a lot of mistrust, reservations and suspicion about India due to its enforced, unfair and discriminatory treaties with Nepal. For example, the Gandak agreement bounds Nepal from constructing such projects which reduce the water flow to India. Thus, India has attempted to halt economic development and posed a question on Nepalese sovereignty. India prevented the progress on Marshyandi-1 hydro project by invoking Gandak Agreement. India exploits Nepal due to its economic dependency and delicate administration (Jha, 2013).

Nepal is most rich in water resources and it has the potential to generate 83,000 megawatts of electricity. India wants to explore its potential for its benefit because northern India is facing a severe power deficit which was observed as 20,000 megawatts (Ranjan, 2015). For this purpose, India tries to use Nepal territory and its rivers. India obliged Nepal to construct barrages quite nearer to Indian borders which in turn deprives Nepal of a reasonable share of waters to irrigate its land effectively. Moreover, Tanakpur barrage was constructed when Nepal donated 2.9 hectares of its land to India after a hasty MoU of 1991 without the approval of Nepal's parliament. However, the validity of the Gandak agreement was also challenged in the Supreme Court of Nepal (Tabassum & Idris, 2004). The most controversy in Nepal is present over the unilateral Mahakali river treaty which was ratified in 1996. This treaty permits the construction of multipurpose Pancheshwar dam. Various objections are being raised since its declaration which hampered its successful implementation (Salman & Uprety, 1999).

India behaviour toward Bhutan is not more different from Nepal. However, in Bhutan India took benefit of Bhutan autocracy and persuade her to sign hydropower agreements in its privilege. Bhutan can generate 30,000 megawatts of hydroelectricity. According to 35 years long Power Purchase Agreement, Bhutan was obliged to import 5000 megawatts of electricity to India and its amount was raised to 10,000 megawatts in 2008 (M. N. Khan, 2016).

Another important water conflict in South Asia is over the Kabul River which is a western stream of the Indus river. Hydro-geographically, Afghanistan is made up of four basins out of which Eastern Kabul basin is concerned with Pakistan and covers 12% of Afghanistan area. The contribution made by Kabul river to Pakistan's water system is 16.5 Million Acre Feet while the major portion of Kabul river passes through Afghanistan which is upper riparian to Pakistan (Pervaz & Khan, 2014). Despite being upper riparian, Afghanistan has not constructed any big dam on Kabul River due to continuous involvement in conflicts. However, rising Indian influence and economic assistance encouraged her to plan storage reservoirs on the Kabul River. Afghanistan has planned 12 dams to build on Kabul River to develop its economy by generating electricity and efficiently irrigating its arable land. The overall storage size of these dams is 4.7 Million-acre feet which are nearly equal to Mangla Dam, Pakistan. However, in this case, Pakistan has to face a 17% drop-off in its annual water intake while the strange fact is that there is no bilateral agreement or treaty between two nations to address this problem ("Sharing Water," 2011).

Pakistan can also affect the Kabul River flow in Afghanistan because the major share to Kabul River (approximately 8.5 Million-acre feet) goes through Pakistan in the form of Chitral River. In these circumstances, the water war between Afghanistan and Pakistan will affect the relation of Afghanistan because Pakistan is the first upper riparian to Afghanistan. Afghanistan's water management skills are declared worst in the world which made him the country with the lowest water storage potential (Pervaz & Khan, 2014).

In addition to transboundary river conflicts, there are serious disputes over water sharing among provinces of South Asian countries. The politics over water has plagued Pakistan and various states of India. The distribution of waters of Ravi, Sutlej and Beas is a source of conflict between Indian states of Rajasthan, Haryana and Punjab. Other disputes include Yamuna river dispute, Krishna-Godavari dispute, Mahadiya river dispute, Vansadhara river dispute, Mullapriya dispute and Bhabli river dispute. Most interstate disputes in South Asian countries are due to the spread of fake information within local public by some opportunistic politician. The Cauvery river dispute between Karnataka and Tamil Nadu and Indus water dispute between Punjab and Sindh and interprovincial conflict in Pakistan over mighty Kalabagh Dam Project are an example of the frivolous attitude of some politicians (Iqbal, 2015).

Conclusions

This study was devoted to critically examine the geopolitics of water in South Asia. The analysis of transboundary water issues in South Asia has depicted some remarkable results.

The first of such results was India's unilateral behaviour regarding water. India is unilaterally diverting the natural flow of international rivers. India is also taking benefit of its hegemony and geography and imposing illegal practices over other states. These illegal practices include the construction of dams, diverting the natural flow of international rivers and disregard the international laws of reasonable and equitable sharing of waters. India has constructed Farakka barrage, Kishanganga dam etc. despite the strong protest from other sides. M. N. Khan (2016), also found similar results while analysing geopolitics of water issues in South Asia. he deduced

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that India is using unilateralism as an instrument to violate the bilateral agreements with its co-riparians. India is violating the Indus water treaty of 1960 by constructing massive hydropower projects and storage dams on western rivers of Indus Basins such as Jhelum, Chenab and Indus. Moreover, the construction of Tipaimukh dam on international river Barak by India was also indicated as a violation of international water laws.

Similarly, India imposed Gandak and Koshi agreement on Nepal without detailed discourse. India exploited the landlocked nature of Nepal and implemented such agreements without involvement of democratic parties of Nepal. India not only want the free flow of water from Nepalese territory but also tried to snatch the territory of Nepal. An evident example of such unilateral and assertive behaviour can be found in the case of Tanakpur Barrage. This barrage was constructed after a hasty MoU of 1991 in which Nepal agreed to donate 2.9 hectares of land to India for construction of Tanakpur Barrage. Such kind of hasty moves by Nepalian Monarch and unilateral behaviour of India was challenged by Nepalian parliament and supreme court.

India unilateral behaviour towards Bhutan is quite similar to Nepal. Unlike Nepal where democratic institutions are emerging, Bhutan is still an autocratic state. Therefore, India took benefit of autocracy in Bhutan and persuade the monarchy to sign agreements according to Indian privileges. Bhutan is capable enough to produce hydroelectricity with a potential of 30,000 megawatts. However, India has obliged Bhutan by a 35 years Power Purchase Agreement to import 10,000 megawatts of hydropower to India.

In the case of Bangladesh, India shares the Ganges river with Bangladesh. India's unilateral behaviour towards Bangladesh can be seen through the fact that India does not accept the international status of Ganges river due to the religious affiliations of its Hindu majority to this river. The second reason for such stubbornness is that 80% of total Ganges river drainage basin lies in the Indian Territory. Therefore, India built Farakka Barrage on Ganges river without consulting Bangladesh and denied the controversial nature of Farakka Barrage. Later, the Ganges river water sharing treaty was signed between India and Bangladesh which is questionable due to abrupt seasonal changes.

The second result is the asymmetric distribution of power among the South Asian States. India is a hegemon in South Asia due to its geography, economy, population and military power. The asymmetry in power among South Asian states is the legacy of 1947 unreasonable and unequal partition which has disrupted the already established canal system of united India. Kashmir became the bone of contention among two arch-rivals. India took control of the Kashmir which is the hub of the Indus basin. India also took the unitary canal system of British India and disrupted the natural flow of rivers towards Pakistan.

Moreover, the hegemonic nature of India resulted in unequal water-sharing treaties which mostly benefited India. These treaties are vicious and lack the element of reasonable and equitable sharing of water which is the part of customary international water law. India imposes the principles of territorial sovereignty towards lower riparians and territorial integrity towards upper riparian. India succeeds in these impositions due to asymmetry in powers and hegemony. India

unilateral behaviour due to asymmetric power distribution vis-à-vis Nepal, Bhutan and Bangladesh has been discussed in the above paragraphs. However, in the case of Pakistan, such unilateral behaviour of India cannot be seen due to geopolitical strength of Pakistan. Although, India has tried its unilateral behaviour vis-à-vis Pakistan but cannot be succeeded. India has signed the Indus Water Treaty with Pakistan which divided the Indus basin between India and Pakistan.

Hanasz, (2014) also studies the power asymmetries in South Asia and their ultimate effect on water disputes in South Asia. The findings of his work are similar to our findings. He denies the water war rationale. According to Hanasz, (2014), India is a hydro-hegemon in South Asia which act as a stabilising factor in South Asian regional water dynamics which leads to stability rather than conflict. Moreover, it is the India hegemony which persuades the other states its bid of bilateral approach in water dispute.

The third result was the absence of the third party in the mediation process regarding the sharing of international waters. The only example of third-party involvement is the decisive and crucial role of the World Bank in the Indus Water Treaty between India and Pakistan. The treaty has lasted 2 major wars and many small border skirmishes. However, such mediation and involvement of the third party were absent in the case of India and Nepal and India and Bangladesh. Therefore, it has resulted that the involvement of third-party is necessary for solving the water disputes in South Asia. The bid of small nations to involve the third party in solving water disputes is rejected by India which depicts the unilateralism and frivolous attitude of India in solving the regional conflicts. India is the geographic entity of South Asia and is suffering from "Big Brother Syndrome". India does not bear the involvement of any institution or country in its sphere of influence. It the dire need of the time to forcibly involve the third party in the water dispute mediation process.

The fourth result is the use of militaristic tactics while managing water disputes. The approach made by South Asian nations about transboundary water management is extremely chauvinistic and technocratic. The waters in South Asia are overwhelmingly became the issue of national security. The securitisation of natural resources has been discussed by Buzan et al. (1998) in their work entitled "Security: A New Framework for Analysis". According to this work, an issue becomes a security issue when it poses some existential threat to a referent object i.e., state or people. In this sense, transboundary river waters in South Asia has become a security issue and can instigate water war among South Asians States. Though our results do not support the water war rationale due to the hydro-hegemony of India, water is indeed a security issue in South Asia. It has become the issue of national security in South Asia. Such strict securitisation of water in South Asia has become the recipe of natural disasters because no side is willing to share the so-called secure water data to other countries. Moreover, the data is not collected thoroughly at the basin level. This has resulted in a security dilemma in which securitisation of water has resulted in insecurity. If South Asia nations keep following such monocentric patterns than no state can never assure the water security to its populace.

The fifth result is the lack of mutual trust among South Asian Countries. This lack of trust increases particularly in the case of India. The factors which contribute to such a lack of mutual trust are the turbulent history of South Asia and the absolute

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geographical dominance of India. Almost all rivers in South Asia are transboundary and flows through two or more states. Due to geographical dominance, India holds more drainage area of these rivers and denies the international status of such rivers as in case of Ganges, Ravi, Sutlej and Beas. Moreover, India always stresses on bilateral way to solve regional water disputes and opposes the trilateral, multilateral or even regional based approach to solve the water disputes. Such kind of behaviour incites mistrust among states, and they hesitate to collaborate in managing water resources.

The sixth result is problematic water sharing treaties. South Asia can't enjoy regional integration and bloomed economy unless it resolves its water disputes. There is a lack of multilateral and regional framework on transboundary rivers while the bilateral treaties are unable to effectively address water issues due to vague clauses. The treaties made by South Asian states to resolve water disputes are fraudulent and oversight the core issues of water managements. The first problem in South Asian treaties is that these treaties are bilateral and ignore the collective basin approach. For example, the Indus water treaty is a bilateral treaty between India and Pakistan and ignore Afghanistan whose Kabul river is a significant western tributary of the Indus river. Moreover, agreements between Nepal and India ignore Bangladesh and China which are the parts of Ganges-Brahmaputra-Meghna basins. The second problem with these treaties is that the civilians residing in basin areas are not confided in or concerned while their fate is being sealed by these hasty treaties. They became the direct victim of such treaties that instigate either droughts or floods. The third problem is ambiguity in the clauses of bilateral treaties and the Mahakali treaty is the worst example of this problem. South Asian water treaties need revision and interpretation of certain clauses. These treaties do not handle the emerging challenges of climate change, fluctuated pattern of rainfall, falling level of ground water and construction of hydropower projects to compensate water scarcity and energy deficit.

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