

Hydro-politics in South Asia: A Conflict in the Making

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Abstract

The importance of Indus System of Rivers for Pakistan and India and impact of the Partition on irrigation system existing on these Rivers before 1947 has to be kept in view, in order to appreciate the looming specter of water war in South Asia. Though Bangladesh also shares international rivers with India but there appears to be no conflict in the making between the two countries at the present, in this context. Discontinuing of supply of water in the canals flowing from India to Pakistan on 1st April 1948, in fact, precipitated one of the gravest international water disputes in the world. David E. Lilienthal suggested that the World Bank might use its good offices to bring the Parties to an agreement and help in arranging finances for an Indus Development Programme. Nearly a decade of negotiations resulted in the Indus Waters Treaty. For the first three years or so efforts were focused on finding a solution for joint development of the system of rivers for mutual benefit. Ultimately the Bank realized that in view of relations between the two countries that was not possible. The Bank, therefore, proposed allocation of three Eastern Rivers to India and the three Western Rivers to Pakistan, except for very limited rights of the other party on the Rivers thus allocated. The Treaty concluded in 1960 has been very successful and has averted three wars between the Parties. Growth of population and resulting scarcity of water, deterioration of relations between the two countries and geopolitical developments in the region have brought the Treaty under stress. India's policy of nibbling away the rights of Pakistan and obligations of India under the Treaty is, therefore, pushing things towards a conflict.

Keywords: Indus System of Rivers, World Bank, Indus Waters Treaty 1960, regional peace, International Law, International Environmental Law

Introduction

One has to keep in view the importance of Indus System of Rivers for Pakistan and India and impact of the Partition on irrigation system existing on these Rivers before 1947, in order to appreciate the looming specter of water war in South Asia – although Bangladesh also shares international rivers with India but there appears to be no conflict in the making between the two countries at the present, in this context.

2. Indus System of Rivers, shared by North-West of India and Pakistan, is amongst the most important river systems throughout the world. Before 1947, a vast irrigation system had been developed on this system of rivers - more so in the areas that were subsequently included in Pakistan than in the areas now forming a part of India. It is estimated that, from this irrigation system, only 8.3 MAF canal water was used in

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territory that formed a part of India, while 64.4 MAF was used in territory that was included in Pakistan.¹

3. A few months after partition, on 1st April 1948, Government of Indian Punjab stopped supply of water in the canals flowing to Pakistan, precipitating one of the gravest international water disputes in the world. Pakistan's Premier requested his Indian counterpart to take action to restore water supply in the canals immediately - he added in his telegram of 15th April 1948 "I regret that before we have had time enough to settle our existing problems, the Government of East Punjab has thought it fit to create new ones..."²

4. In fact, the Indian Prime Minister himself criticized East Punjab Government for having violated international law. He sent an interim reply to the Premier of Pakistan intimating that a conference was being held in Simla and a satisfactory solution to the problem would be reached soon. The Prime Minister of Pakistan suggested an Inter-Dominion conference and asked for an early suitable date and venue. An Inter-Dominion conference was accordingly fixed for 3rd May 1948. In the meantime, Indian Punjab authorities resumed supply of water to the canals on 30th April 1948, on the instructions of the Indian Prime Minister.

5. The Inter-Dominion conference resulted in the Agreement of 4th May 1948. The Agreement referred to the exclusive proprietary claim of Indian Punjab over water in the Central Bari Doab Canal (C.B.D.C.) and Dipalpur Canals, which flowed to Pakistani Punjab, as well as the contention of West Punjab Government that in accordance with customary international law, equity and fairness, Pakistan, as lower riparian, had a right to the waters of the East Punjab Rivers. The two Governments, however, expressed their keenness to settle the question in a spirit of goodwill and friendship, without going into the legality of the two stands. The Government of Indian Punjab assured the Pakistani Punjab Government that it would not suddenly withhold water from Pakistani Punjab, without giving it time to develop alternative sources. The anxiety of Indian Punjab Government to develop its areas where water was scarce and that were underdeveloped in comparison with parts of Pakistani Punjab.³

6. Under the agreement, the Pakistan agreed to deposit such ad hoc sums, as may be specified by the Prime Minister of India, in the Reserve Bank of India. Out of these sums, undisputed claims of the Indian Punjab Government were to be released, as seigniorage charges for water; and the disputed amounts relating to capital cost of Madhavpur Head Works etc. were not to be released till the Parties reached an agreement in this respect.

7. This did not provide a lasting solution to the problem and the Parties were still struggling to reach a satisfactory solution in October 1948. Next year, the Governments of India and Pakistan agreed to continue the supply of water to Pakistan for the Kharif crop of 1949 on the same terms as agreed in 1948 agreement but the

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Parties did not agree on some details of the payments to be made to Indian Punjab by Pakistan. On 13th June 1949 the scope of the issue between the two Parties was broadened and a claim to equitable sharing of all waters common to India and Pakistan was raised. This, however, could not lead to an agreement for two years, despite correspondence between Prime Ministers of the two countries. Pakistan had proposed to take the dispute before the International Court of Justice (ICJ), if it could not be resolved through agreement, but India did not agree.

Indus Waters Treaty 1960

8. It was in this background, wherein the regional peace was threatened, that David E. Lilienthal, from the U.S.A., came to find a solution to the problem. It was this initiative that led to a way forward and broke the impasse in the bilateral negotiations. Lilienthal met Premiers of Pakistan, as well as that of India and other authorities and visited works in the two countries. On his return, he proposed to make a formal issue of water before the U.N. Security Council. He also proposed the World Bank to use its good offices to bring the countries to an agreement and help in arranging finances for an Indus Development Programme.

9. Accordingly, Mr. Eugene R. Black, the Bank's President, wrote to the Premiers of the two countries offering good offices of the Bank for developing a programme for an effective use of water resources of the Indus System of Rivers. As both the countries were interested in development of the water resources, they showed their eagerness to enter into such negotiations, despite their mistrust of each other.

10. Negotiations thus started under the auspices of the Bank, initially focused on joint development of waters of the system of rivers for benefit of both countries but, after two or three years, the Bank realized that it was not feasible due to the tense relationship between the two countries. In 1954, the Bank, therefore, presented a proposal to the two Governments, on the recommendation of General Wheeler of the Bank, own its own, with the following main features:

a. Allocation of three "Eastern Rivers" to India, and the three "Western Rivers" to Pakistan, with some exceptions.

b. Construction of "replacement" canals to convey water from the Western Rivers into areas in Pakistan which had hitherto depended for their irrigation supplies on water from the Eastern Rivers. India would make a contribution to the cost of this system of link canals (no storage was envisaged).

c. There would be a Transition Period, while the necessary link canals in Pakistan were being constructed, and during which India's increased withdrawals of Eastern River waters for her own use would be geared to Pakistan's ability to "replace".

11. This proposal was the basis of negotiations that led to the conclusion of Indus Waters Treaty 1960(the Treaty). The major deviation in the Treaty from the World Bank's proposal during the negotiations was in respect of storage works in Pakistan at

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Mangla and Tarbela. To this India persistently objected for a long time before finally conceding, as no storage works in Pakistan were envisaged in the Bank's original proposal, which only provided for replacement canals to convey waters from Western Rivers into those areas in Pakistan that had earlier depended for irrigation on water from the Eastern Rivers.

12. Some limited uses, by India from the Rivers allocated to Pakistan and by Pakistan from the Rivers allocated to India, are provided. Second and third Articles lay down in detail rights and obligations of the two states in this context and are the most important provisions of the Treaty.⁴ Since all the differences and disputes between India and Pakistan so far had largely been about conformity or otherwise of the designs of India's new Run-of-River Hydroelectric Plants, on the Western Rivers, with the criteria in Annexure D to the Treaty, we may briefly deal with these design constraints.

13. Out of the seven design criteria prescribed, the most important ones relate to capability of artificially raising water level above Full Pondage Level, Pondage beyond permissible limit, level of gates in the cases where gated spillways, outlets below Dead Storage Level and location of the intake of the turbine. Excessive Freeboard provided by India in the designs is objected to by Pakistan, as the literature on Freeboard restricts the use of the fastest mile wind speed due to the fact that the fastest mile wind speed values are obtained from a short time period generally less than 2 minutes in duration and that the literature, therefore, recommends that fastest mile measurement should not be used alone to determine the wind speed for wave generation. It is further asserted that the measurement can be modified to a time dependent average wind speed for wave generation. India, however, argues otherwise. In the case of Baglihar, the Neutral Expert decided the height of Freeboard justified being less than that provided by India but more than considered justified by Pakistan. In respect of Pondage, Pakistan is not satisfied with the working out of the permissible Pondage by India or the Neutral Expert – since the clear formula for working it out on the basis of Firm Power, as defined in the Treaty, is ignored by both. Similarly, there are disputes about the bottom level of gates in the cases where gated spillways is necessary; level of outlets for sediment control or other technical reasons; and intake of the Turbines.

14. The Treaty is considered the world's most successful water treaty⁶ and has survived three wars - some observers say four - between the two states. There has, however, been criticism of the Treaty also like Ramaswamy R. Iyer thinks that the Treaty's partition logic makes it difficult to build on in future.⁷ Similarly, Douglas Hill thinks that the relatively smooth implementation of the Treaty came under strain when India started building hydropower projects on the Western Rivers and recommends a new regime based on multilateral regional cooperation that would include China and Afghanistan, besides India and Pakistan.⁸

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15. In any case, during the last 58 years there were only two occasions when the differences/disputes between the Parties had to be taken to a third party settlement procedure under the Treaty. The first case pertained to the design features of Baglihar Hydroelectric Plant, which was submitted for resolution to a Neutral Expert, appointed by the World Bank, and the second related to the design features of Kishenganga Hydroelectric Plant that was submitted to a Court of Arbitration. Currently, Pakistan has initiated arbitration proceeding and initiated empanelment of a Court of Arbitration in respect of disputes on some design features of Kishenganga (not settled in the first arbitration relating to the Hydroelectric Plant) and Ratle Hydroelectric Plants but India has subsequently requested the World Bank to appoint a Neutral Expert to deal with the matter.

16. All these Hydroelectric Plants of India are Run-of-River Plants as described under the Treaty. While permitting such plants to India, the Treaty has laid down design criteria, as mentioned above, to which the hydroelectric power plants of India on the Western Rivers must conform. There are also operational restrictions in respect of these Hydroelectric Plants. These design features and operational restrictions were finalized after lengthy negotiations to ensure that the waters of these Rivers flow to Pakistan for unrestricted use, without undue control and interference of India.

17. These design criteria prohibit artificially raising water level above Full Pondage Level, limit the permissible Pondage, bar lowering of Spillway Gates and outlets as well as intake of turbines beyond, which is necessary. An operational restriction in the Treaty does not permit depletion of Dead Storage otherwise than in the case of unforeseen emergencies. The basic Idea is to minimize India's control over the waters of these Rivers and curtail her capability to interfere in their flows.

18. A review of the designs of India reveals that they normally have higher freeboard than permitted, with the potential of achieving capability of artificially raising water level in the Operating Pool above Full Pondage Level (FPL); much larger than permissible Pondage, which provides a bigger operating pool implying more than envisaged control over waters; lower intake, which makes it possible to use excessive Pondage that is provided by India in these designs; and much lower gates of spillway that means India can carry out drawdown flushing, which requires lowering of water level below Dead Storage Level that is barred under the Treaty. The emptying and refilling associated with such operations has the potential of harming Pakistan's agricultural and other uses. Modifications like the ones suggested by Pakistan, can preclude undue control over the waters of these Rivers and interference with their flow by India. These modifications would limit the possibility of carrying out drawdown flushing, while providing capability of sluicing and protecting the Intake from getting clogged by the sediment deposits and entry of coarse sediment particles/sand that would cause turbine abrasion, a requirement of sound designs.

19. It may be interesting to compare the approaches adopted by the Neutral Expert and Court of Arbitration in deciding the two cases of differences/disputes in the

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Baglihar and Kishenganga Hydroelectric Plants. As against the individual opinion of the Neutral Expert, the Court of Arbitration's decision, reached by 7-members, some of whom were well known international law experts, is more likely to have correctly interpreted the Treaty provisions and the constraints enshrined therein. In the case of Baglihar, the Neutral Expert seemed to be oriented towards a successful design and ignored the express regulatory provisions of the Treaty. The Court of Arbitration in Kishenganga Hydroelectric Plant case, however, held that the constraints provided in the Treaty in respect of the designs of these hydroelectric plants are:

*“part of the Treaty’s essential bargain, as is evident from the Court’s analysis in Partial Award of the text and context of the Treaty”.*⁹

20. To further illustrate the difference of approaches adopted by the Neutral Expert in the case of Baglihar Hydroelectric Plant and the Court of Arbitration in the case of Kishenganga Hydroelectric Plant, the conclusions of the two may be compared on the question of drawdown below Dead Storage Level (DSL). The Treaty prohibits such drawdown below DSL, except for unforeseen emergencies. The Neutral Expert initially admitted that it was so in Baglihar case in the Final Draft Determination dated 30th October 2006 but in his Final Determination of 12th February 2007 he held that such drawdown below the DSL was commonly considered necessary for long term maintainability of the scheme and that the prohibition was only for operational purposes. The Court of Arbitration in the Kishenganga Hydroelectric Plant case, on the other hand, decided that the Treaty does not permit reduction below DSL of waters level in the reservoirs of Run-of-River plants on the Western Rivers but for unforeseen emergencies – that does not include sediment control.

21. The Court of Arbitration also clarified that the decision of the Neutral Expert was binding in respect of the particular case of Baglihar only and held that it did not form a precedent for future Run-of-River Hydroelectric Plants of India on the three Western Rivers. In fact, the Court held that Neutral Expert's determination in Baglihar case had no general precedential value and that it was only binding in the specific case before him but not in respect of future Indian hydroelectric plants, while the decision of the Court of Arbitration, by contrast, would be binding generally for all such plants.

22. The Court elaborated its decision and observed that accumulation of sediment in the reservoir of Run-of-River plants on the Western Rivers does not constitute an unforeseen emergency that would permit the depletion of the reservoir below Dead Storage Level for drawdown flushing purposes.¹⁰

23. India, in fact, specially filed an application before the Court to seek clarification whether the prohibition was categorical or it was permissible to deplete or reduce water level below Dead Storage Level in reservoirs of future Indian Run-of-River plants on the Western Rivers depending on site specific conditions. The Court, however, reiterated that there was a decisive prohibition on the depletion of reservoirs below DSL under the Treaty, except for unforeseen emergencies.

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24. The Court further observed that the Treaty's restriction on low level outlets from Dead Storage: "make sense only against the background assumption that the uses to which Dead Storage could be put are also somehow constrained. If the depletion of Dead Storage was intended, whether for flushing or otherwise, the Court can see no obvious purpose that would be served by limiting the size and placement of outlets from the Dead Storage."¹¹ The Court also held:

*"It follows that the prohibition in question is not dependent on particulars of a given site or project; that is, to use India's term, the prohibition is not 'site-specific' but general."*¹²

25. Moreover, the Neutral Expert also disregarded the clear definition of the term "Firm Power" given in the Treaty, for the purposes of calculating the maximum permissible Pondage for a hydropower plant of India on the Western Rivers, and instead used the definition of the term "Firm Power" given by American Society of Civil Engineers (Determination of Neutral Expert in Baglihar case of 12th February 2007). The legality of his action was questionable as under Annexure F to the Treaty clearly provides:

*"in making his decision, he shall be governed by the provisions of this Treaty and by the Compromise, if any, presented to him by the Commission"*¹³

26. Coming to the outstanding differences/disputes relating to the Kishenganga and Ratle HEPs, they are proposed by Pakistan to be submitted to a Court of Arbitration, while India belatedly requested the World Bank to appoint a NE to resolve the differences/disputes. The World Bank has taken the stance that it has a Ministerial role only in the appointment of a NE and empanelment of a Court of Arbitration under the Treaty. It is, therefore, arranging meetings between the Parties at Government Level and trying to find a way forward with the help of its representatives, who participate in the meetings regularly, so that the differences/disputes can be resolved. A more logical interpretation, keeping in view Award of the Court of Arbitration in earlier arbitration, would have led the Bank to opt for the mechanism for the settlement of differences / disputes that was set in motion earlier. The stance of the Bank has imperiled the Treaty.

A Conflict in the Making

27. With increase of populations of the two countries and expansion of irrigated land in India and Pakistan, the demand for water has grown rapidly and the Treaty is increasingly coming under stress. It is reported that Pakistan is at risk of water scarcity and is among the three dozen most water-stressed countries in the world. Per capita water availability in the country has declined from 5,260 cubic meters in 1951 to below 1,100 cubic meters in 2010.¹⁴ IMF had reported the situation in Pakistan in 2015 as follows:

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*“Per capita annual water availability has dropped, fundamentally due to population growth, from 5,600 cubic meters at independence to the current level of 1,017 cubic meters, and is projected to decline further under the current infrastructure and institutional conditions (Figure 7). Demand for water is on the rise, projected to reach 274 million acre-feet (MAF) by 2025, while supply is expected to remain stagnant at 191 MAF, resulting in a demand-supply gap of approximately 83 MAF”.*¹⁵

28. India is in a much better position in this context and is not included in the list of most water stressed countries of the world. Pakistan, therefore, considers any action of India that interferes with the flows of the three Western Rivers that is not permitted by the Treaty as an existential threat. The heightened hostility between the two countries, especially under the Modi regime in India, has made the smooth implementation of the Treaty somewhat difficult. In fact, Modi considered unilateral termination of the Treaty in a meeting of the government officials in 2016. He soon realized the illegality of such an action and its threat to the regional peace and back tracked.

29. In the context of International legal obligations of India in this regard, it may be pointed out that Article 54 of Vienna Convention on the Law of Treaties 1969 provides that the termination of a Treaty may take place in conformity with the provisions of the Treaty. Now, Article XII of Indus Waters Treaty 1960 provides that the Treaty may be modified or terminated by a duly ratified treaty concluded between the two Governments i.e. the Government of India and the Government of Pakistan. Hence, India is not legally competent to terminate the treaty unilaterally. In fact, Pacta Sunt Servanda is a jus cogen. Under Articles 48, 49, 50 and 51, of the Vienna Convention, a state may invoke an error in the treaty, fraud and corruption or coercion in procuring her consent to the treaty, to question its validity but these grounds are not available to India in this case.

30. Supposing India still gets power drunk or something in future and purports to terminate the Treaty, the response options available to Pakistan can be within the ambit of Indus Waters Treaty 1960 as well as at the political level. Under the Treaty, the existence of any fact which, if established, might constitute a breach of the Treaty, has to be examined by the Permanent Indus Commission, in the first instance. Obviously the Commission cannot possibly resolve such a question relating to unilateral termination of the Treaty. The matter would thus have to be dealt with as a difference or dispute under Article IX of the Treaty. Since the matter would relate to material breach of the Treaty, it could be taken up by Pakistan before a Court of Arbitration established in terms of Annexure G of the Treaty, rather than a Neutral Expert, to whom technical differences can be submitted. There would hardly be any chance of India being able to convince a Court of Arbitration, consisting of prominent international law and technical expert, that it has the competence to unilaterally terminate the Treaty.

31. Outside the framework of the Treaty, Pakistan could consider unilateral termination of the Treaty by India and her undertaking a project to divert the waters of

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Chenab or something to be an act of war and would have the right to resort to use of force in self-defense. Pakistan could also raise the issue with the International community and the United Nations as a threat to international peace and security. As a matter of fact, India acting so blatantly in violation of its International obligations would cease to be eligible to be a member of the United Nations because it would not be considered a peaceful state able and willing to fulfill its International obligations, as required by the Charter of the United Nations – though in practice it is difficult to imagine such a course being taken by the U.N. The Treaty having survived three wars/armed conflicts between the two countries, there is very little chance of India taking such a risk during peace time, in any case.

32. Things have fortunately not come to such a pass and the Permanent Indus Commission was able to hold a meeting at Islamabad in March 2017 and the challenge to the Treaty abated. India is, however, trying to wriggle out of the Treaty obligations whenever possible and is placing every hurdle in the smooth resolution of differences and disputes that have emerged between the two Parties in respect of Kishenganga and Ratle Hydroelectric Plants. She has rejected all the four options suggested by the World Bank in September 2017 to come out of the impasse resulting from India's request for appointment of a Neutral Expert to deal with the differences/disputes, after Pakistan had fulfilled all requirements of the Treaty and made a Request for Arbitration containing the names of two Arbitrators appointed by Pakistan and thus instituted arbitration proceeding and started empanelment of a Court of Arbitration to deal with the disputes, on 19th August 2016.

Environmental Flows in the Eastern Rivers

33. Another important development affecting the prospects of the Treaty is the development of International Environmental Law and the demand of environmental flows in the Eastern Rivers. In areas of Pakistan that are adversely affected by drastic reduction of flows in certain reaches of the Eastern Rivers, especially South Punjab, the habitat of Flora, Fauna and human beings has markedly deteriorated. The people of the area are thus forced to demand environmental flows in the Rivers and this demand is gaining strength rapidly.

34. A number of Judgments of International Court of Justice and Award of the CoA in earlier Kishenganga Hydroelectric Plant case are relevant in this context. The CoA observed that before Indus Waters Treaty 1960 was negotiated the following fundamental principle of International Environmental Law was enunciated in the Trail Smelter case in 1938:

“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.”¹⁶

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35. The Court of Arbitration further cited the Advisory Opinion of ICJ in the case of Legality of the Threat or Use of Nuclear Weapons.¹⁷ Reference was also made to a series of international conventions, declarations as well as arbitral and judicial decisions that had addressed the need to manage natural resources in a sustainable manner since the time of Trail Smelter case. The case of Pulp Mills on the River Uruguay decided by the International Court of Justice¹⁸ and other cases were also cited by the CoA.

36. The CoA went on to observe that it is established that principles of International environmental law must be taken into account even when interpreting treaties concluded before the development of that body of law. The International Court of Justice had also taken the same view in Gabcikovo-Nagymaros case.¹⁹

37. It may be mentioned here that, in the context of environmental flows claimed by Pakistan, the CoA held that Pakistan had “undertaken a far more extensive analysis, attempting to capture complex interactions within the river eco-system. The Court notes that assessments of this nature are increasingly used by scientists and policy makers to bring a deeper understanding of ecology to bear on the management and development of river systems. In contrast, India has carried out a simpler assessment, drawing its conclusions essentially from a single indicator – the habitat available for selected fish species.”²⁰

Conclusion

38. These developments and radical geopolitical changes like dissolution of CENTO and SEATO, of which Pakistan was an important member state, alignment of the U.S.A. with India rather than Pakistan and influence of the U.S.A. on the World Bank, may encourage India to take her international obligations under the Treaty less seriously and ignore the internal pressures building up in Pakistan. A policy of faithful implementation of the Treaty by India can help the Government of Pakistan to successfully face the internal pressures resulting from the country becoming water scarce from being a water stressed state and environmental degradation in South of Punjab but a policy of undermining the Treaty by India would be a sure way to making of a conflict threatening peace of the region.

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References

- Gulhati, Niranjan D. 1973, Indus Waters Treaty - An Exercise in International Mediation, P.59).
- (Gulhati, Niranjan D. 1973, Indus Waters Treaty - An Exercise in International Mediation, p.64).
- (Gulhati, Niranjan D. 1973, Indus Waters Treaty - An Exercise in International Mediation, P.69).
- Indus Waters Treaty 1960, U.N.T.S. No. 6032, 1962, pp. 130-136.
- Indus Waters Treaty 1960, Annexure D, U.N.T.S. No. 6032, 1962, pp. 174-176
- A Majority Staff Report of the Committee on Foreign Relations of United States Senate, 2011, Avoiding Water Wars, p.7
- Iyer, R. Ramaswamy, 2005, "Indus Treaty: A Different View", Economic and Political Weekly, Vol. 40, Issue No. 29.
- Douglas P. Hill, 2013, "Trans-Boundary Water Resources and Uneven Development: Crisis Within and Beyond Contemporary India", South Asia 36, No. 2.
- Award of the Court of Arbitration, 2014, the Indus Waters Kishenganga Arbitration, Para.34 of the Award, Permanent Court of Arbitration Award Series, p.394
- Award of the Court of Arbitration, 2014, the Indus Waters Kishenganga Arbitration, Permanent Court of Arbitration Award Series, p.326
- Award of the Court of Arbitration, 2014, the Indus Waters Kishenganga Arbitration, Permanent Court of Arbitration Award Series, p.392
- Award of the Court of Arbitration, 2014, the Indus Waters Kishenganga Arbitration, Permanent Court of Arbitration Award Series, p. 393-4)
- Indus Waters Treaty 1960, U.N.T.S. No. 6032,1962, Annexure F Paragraph 6(b), p. 206
- Shaikh, Irfan, *September 18th, 2017, The Express Tribune.*
- IMF, 2015, ISSUES IN MANAGING WATER CHALLENGES AND POLICY INSTRUMENTS:
- REGIONAL PERSPECTIVES AND CASE STUDIES, June 2015, p.12

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Award in Trail Smelter Case (the USA Vs. Canada), 18 April 1938 and 11 March 1941, UNRAA, p. 1905.

ICJ Reports, 1996, P.226, P.242

ICJ Reports, 2010, P.14, P.83

ICJ Reports 1997, Case concerning the Gabčíkovo-Nagymaros Project (Hungary v Slovakia), Judgment, p.7 & p.78].

Award of the Court of Arbitration, 2014, Indus Waters Kishenganga Arbitration, Permanent Court of Arbitration Award Series, p. 452.