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Engaging with the Global: Prospects for the 1997 UN Watercourse Convention being adopted in the Ganga region

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Abstract

Tanzi and Milano (2013) in their illustrious paper on Dispute Settlement mechanism under the 1997 UN Watercourse Convention (UNWC) have concluded that "with China, Turkey and India involved in a number of major water disputes, there is little chance that any of these countries will join the UNWC in the near future."[2] While evaluating the prospects of UNWC in China and Turkey is beyond the scope of this paper, this paper argues that there is a recognition by the Ganga riparian countries in the bilateral treaties concluded between them in 1996 that water scarcity and conflicts over it are a serious threat to the regional stability and peace and there is thus a need to enhance regional cooperation on trans-boundary water resource management. The Ganga countries are also adopting effective strategies for river basin management at the sub-national level within the domestic country context. These developments if complemented with effective persuasion of government and non government actors, may pave the way for the Ganga countries to consider adopting a more uniform and facilitative framework on trans-boundary water resource management - the 1997, United Nations Water Course Convention.

Introduction

In an era when water resources were plenty, the jurisprudential principles of 'discovery' and servitude defined the ownership claims over the resource. The principle of discovery said that whoever discovers the resource has the *dominium* over it. If the dominant owner allowed the use of resource at his will, because it was like slave to his property, the *principle of servitude* could apply. When the dominant owner allowed the use of his resource like a common property resource, the principle of *"profit a pendere"* would apply. Alternatively speaking, he could ease out his claims over the resources, allowing for easement to

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share the resources.[3] This was the state of affairs in the ancient Common Law System that still dominates the Ganges riparian countries and is vicariously reflected in their domestic legislation at the federal, state and local level.

However, in the modern era, that continues to be dominated by economy of growing scarcity–when the resources had started depleting, such principles of discovery or servitude could not be applied *simpliciter*. Therefore these were replaced with more equitable principles such as the principle of *"equitable apportionment"* that prevailed in the domestic legal system of many countries evolved as the primary rule that defined and balanced the competing claims of not only individual and entities but of sub-national actors with respect to the management and sharing of water of rivers and streams.

With the advancements in the international environmental law and the increasing global consensus to protect environment (that subsumed water since Stockholm, 1972) at the international level, the international law *principles of 'common heritage of mankind',* the principle of *intergenerational equity* and other similar principles came to be understood as part of customary international law or to say were increasingly accepted as general principles of international law. International water law (as a result of treaty developments on environment) has evolved and crystallised through State practice and the codification and progressive development efforts undertaken by the UN and private institutions. The treaty practice in this area encompasses a broad range of instruments, from general agreements, which provide basic principles for water resource development to specific contractual agreements. These principles together gave rise to the notion or doctrine of limited territorial sovereignty (over resources).[4] This important doctrine further gave rise to other important principles of water resource management that are recognized by international conventions, judicial decisions and international treaties. These are: the principle of *equitable and reasonable utilization;* an *obligation not to cause significant harm; the principles of cooperation, information exchange, notification and consultation; and the peaceful settlement of disputes.* These principles form the basis of the 1966 Helsinki Rules on the Uses of the Waters of International Rivers and the 1997 UN Convention on Non- Navigational Uses of International Watercourses (hereinafter UN Watercourses Convention).[5]

Principles of Trans-boundary Water Governance

There are different principles of trans-boundary water resources management. These principles form the basis of the 1966 Helsinki Rules on the Uses of the Waters of International Rivers (hereinafter Helsinki Rules) and the 1997 UN Convention on Non-Navigational Uses of International Watercourses (hereinafter UN Watercourses Convention).[6] These Principles are being briefly explained.

The Theory of Limited Territorial Sovereignty

As stated, this theory is based on the assertion that every state is free to use shared rivers flowing through its territory as long as such utilization does not prejudice the rights and interests of the co-riparians. The co-riparians have reciprocal rights and duties in the utilization of the waters of their

international watercourse and each is entitled to an equitable share of its benefits. This theory is also known as the 'theory of sovereign equality and territorial integrity'. The advantage of this theory is that it simultaneously recognizes the rights of both upstream and downstream countries because its guarantees the right of reasonable use by the upstream country in the framework of equitable use by all interested parties. Principles of equitable and reasonable utilization and an obligation not to cause significant harm are part of the theory of limited territorial sovereignty.[7] This theory has been adopted in the majority of the treaties in recent years, e.g. the 1995 Agreement on the cooperation for the sustainable development of the Mekong River basin[8] the 1995 SADC protocol on shared watercourse systems and the 2002 framework agreement on the Sava River basin.[10]

Principle of Equitable and Reasonable Utilization

This principle is a sub-set of the theory of limited territorial sovereignty. It entitles each basin state to a reasonable and equitable share of water resources for beneficial uses within its own territory. Equitable and reasonable utilization rests on a foundation of shared sovereignty and equality of rights, but it does not necessarily mean an equal share of waters. In determining an equitable and reasonable share, relevant factors such as the geography of the basin, the hydrology of the basin, the population dependent on the waters, economic and social needs, the existing utilization of waters, potential needs in the future, climatic and ecological factors of a natural character and availability of other resources, etc. should all be taken into account.[11] It entails a balance of interests that accommodates the needs and uses of each riparian state. This is an established principle of international water law and has substantial support in state practice, judicial decisions and international codifications.[12]

An Obligation Not to Cause Significant Harm

This principle is also a part of the theory of limited territorial sovereignty. According to this principle, no states in an international drainage basin are allowed to use the watercourses in their territory in such away thatwould cause significant harm to other basin states or to their environment, including harm to human health or safety, to the use of the waters for beneficial purposes or to the living organisms of the watercourse systems. This principle is widely recognized by international water and environmental law, often expressed as *sic utere tuo ut alienum non laedas*. However, the question remains about the definition or extent of the word 'significant' and how to define 'harm' as a 'significant harm'. This principle is incorporated in all modern international environmental and water treaties, conventions, agreements and declarations. It is now considered as part of the customary international law.[13]

Principles of Notification, Consultation and Negotiation

Every riparian state in an international watercourse is entitled to prior notice, consultation and negotiation in cases where the proposed use by another riparian of a shared watercourse may

cause serious harm to its rights or interest. These principles are generally accepted by international legal documents. However, naturally, most upstream countries often oppose this principle. It is interesting to note that during the negotiation process of the 1997 UN Watercourses Convention these principles, which are included in Articles 11 to 18, were opposed by only three upstream riparian countries: Ethiopia (Nile Basin), Rwanda (Nile Basin) and Turkey (Tigris-Euphrates Basin).[14]

Principles of Cooperation and Information Exchange

It is the responsibility of each riparian state of an international watercourse to cooperate and exchange data and information regarding the state of the watercourse as well as current and future planned uses along the watercourse.[15] These principles are recommended by the 1966 Helsinki Rules,[16] while Articles 8 and 9 of the UN Watercourses Convention make it an obligation. The 1944 USA-Mexico Water Treaty, the 1964 Columbia Treaty between USA and Canada, the 1960 Indus Waters Treaty,[17] the ILA's 1982 Montreal rules on water pollution in an international drainage basin[18] the 1995 SADC protocol on shared watercourse systems[19] the 1995 Mekong River basin agreement[20] as well as the 2002 framework agreement of the Sava River basin[21] all incorporate these principles.

Peaceful Settlement of Disputes

This principle advocates that all states in an international watercourse should seek a settlement of the disputes by peaceful means in case states concerned cannot reach agreement by negotiation. This principle has been endorsed by most modern international conventions, agreements and treaties, e.g. the 1966 Helsinki Rules[22] and 1997 UN Watercourses Convention.[23] It has also been incorporated in major treaties in recent years, e.g. the 1960 Indus Waters Treaty,[24] the 1995 SADC protocol on shared watercourse systems[25] the 1995 Mekong River basin agreement[26] and the 2002 framework agreement of the Sava River basin.[27]

Trans-Boundary Water Governance in the Ganga Region

An overview of the features of the Basin:

The Ganges or Ganges–Brahmaputra–Meghna/Barak (GBM) Basin comprises a river system that originates in the eastern Himalayas and spans over 1.758 million km2, of which 8% lies in Bangladesh, 8% in Nepal, 4% in Bhutan, 62% in India, and 18% in the Tibetan region of China (the literature gives different estimates of the basin's the regional distribution). The three rivers making up the basin meet in Bangladesh and flow to the Bay of Bengal as the Meghna River.[28] The tributaries flowing into the GBM are international in nature. In addition to the three main rivers of the GBM, there are more than 50 smaller rivers and tributaries that enter Bangladesh from India.

Because the system is so interconnected, it is very difficult to distinguish how much water contributes to the entire system.[29] The geographical complexity has given rise to number of disputes in the river basin that have to be understood in the light of political developments that happened in the subcontinent in the last 60 years.

Independence and partition driven Hydro-politics in the region

Ganga basin known for its complex trans-boundary river systems that cut across three sovereign nations as is also known for its rich history of disputes. Conflicts and negotiations related to the Ganges have been ongoing for more than 60 years. What was once a domestic issue, transformed into trans-boundary water conflicts over sharing of river waters as the number of riparian's grew from one to three, after the partition of India in 1947, the conflict hitherto became international. With the independence of Bangladesh (former Eastern Pakistan) in 1971, the main parties to the conflict were Bangladesh and India and have remained so until now. However, the scenario is not much different between India and Nepal. For all practical purposes, the Himalayan mountains separate Tibet from the rest of the Ganges riparians. In reality, Tibet was never part of the negotiations that took place. Tibet's geographical isolation, combined with the fact that Bhutan, and Nepal, are land locked, and Bangladesh is surrounded by Indian territory have major implications on the positions and dynamics of the basin's hydro-politics.[30]

Bilateral Treaties between the Ganga Riparians:

Ganga riparians have a long history of water disputes beginning since 1875.[31] However, post independence six bilateral agreements/treaties and three Memoranda of Understandings (MoU) have been signed between the riparian countries. The agreements/ treaties are as follows:

(1) 1920 Agreement between His Majesty's Government of Nepal and India (the then British Empire) for constructing the Sarada Barrage on the Mahakali River.

(2) Agreement between His Majesty's Government of Nepal and the Government of India concerning the Kosi Project, 25 April 1954. The treaty was subsequently amended on 19 December 1966.

(3) Agreement between His Majesty's Government of Nepal and the Government of India on the Gandak Irrigation and Power Project, signed at Kathmandu, 4 December 1959. The treaty was subsequently amended on 30 April 1964.

(4) Agreement between the Government of the People's Republic of Bangladesh and the Government of the Republic of India on sharing of the Ganges waters at Farakka and on augmenting its flows, signed on 5 November 1977 at Dhaka.

(5) Treaty between Nepal and India concerning the integrated development of the Mahakali River including Sarada Barrage, Tanakpur Barrage and Pancheshwar Project, 12 February 1996, signed at New Delhi.

(6) Treaty between the Government of the People's Republic of Bangladesh and the Government of the Republic of India on sharing of the Ganga/Ganges waters at Farakka, signed on 12 December 1996 at New Delhi.

Each of these bilateral treaties and agreements has a complex history behind them. Addressing the issues that emerged and drivers of conflicts between the Ganga countries is again beyond the scope of this paper. However, in order to understand the prospects of UNWC in the Ganga region it would be important to analyse the key treaties i.e. the 1996 Mahakali Treaty between Nepal and India and the 1996 Ganges Treaty between India and Bangladesh so as to find out to what extent the mechanisms provided under these treaties are effective and if they address the key principles of trans-boundary water resource management. These two latest treaties of the Ganges basin were selected for the study as both were signed during the negotiation process of the UN Watercourses Convention (1997) and are valid for a significantly longer period, 75 years and 30 years respectively. These are being analyzed so as to understand their efficiency in dealing with trans-boundary water disputes, and reasonable and equitable utilization of trans-boundary water courses.

Mahakali Treaty (1996)

Mahakali is a principal tributary of the Ganges and border river between Nepal and India. This river is also known as Sarada in India. The Mahakali Treaty was signed on 12 February 1996 (it came into force on 5 June 1997) between Nepal and India concerning the integrated development of the Mahakali River, including Sarada Barrage, Tanakpur Barrage and the Pancheshwar multipurpose Project. Of these, Sarada Barrage and Tanakpur Barrage were completed in 1920 and 1992 respectively. This Treaty absorbed the regime established by the 1920 Sarada agreement[32] and 1991 MoU and 1992 Joint communique' for Tanakpur Barrage.[33] The Treaty endorsed the idea of constructing Pancheshwar Multipurpose Project (PMP).[34] Hence, from a structural viewpoint, the Mahakali Treaty combines three distinct treaties related to the water sharing of the Mahakali River, the Sarada agreement, the Tanakpur agreement and the PMP.[35] The Treaty is valid for 75 years from the date it came into force.[36] The Mahakali Treaty endorsed the principles of information exchange and cooperation.[37] The Treaty provides for the formation of the Mahakali River Commission for information exchange, cooperation and implementation of the Treaty.[38] The Treaty sets out clear guidelines for the formation of the Mahakali River Commission, as well as jurisdiction of the Commission.[39] The Commission shall be composed of equal number of the representatives from both Parties and its expenses shall be borne equally by both the Parties.[40] The functions of the Commission include information exchange and inspection of all structures included in the Treaty, make recommendations for the implementation of the Treaty provisions, expert evaluation of projects, monitor and coordinate plan of actions, examine any differences arising between the Parties concerning the interpretation and application of the Treaty.[41] The Treaty approves the principles of equitable and reasonable utilization, the equitable distribution of benefits, and an obligation not to cause significant harm. In defining the jurisdiction of the Mahakali River Commission, it states: "the Commission shall be guided by the principles of equality, mutual benefit and no harm to either Party".[42] The Treaty also acknowledges an obligation not to cause harm.[43]

> Article 7 reads: In order to maintain the flow and level of the waters of the Mahakali River, each Party undertakes not to use or obstruct or divert the waters of the Mahakali River adversely affecting its natural flow and level except by an agreement between the parties.

This means each Party has an obligation to maintain the natural flow of the river. However, this obligation does not preclude the use of the waters by the local communities living on both sides of the Mahakali River, not exceeding 5% of the average annual flow at Pancheshwar[44] Article 8 acknowledges the right of both Parties to independently plan, survey, develop and operate any work on the tributaries of the Mahakali River as long as such use does not affect the rights of both Parties stipulated in Article 7. Thus, together Articles 7 and 8, and 9(1) accept the theory of limited territorial sovereignty, where each Party has the right to use the water as long as it does not preclude the rights and interests of the co-riparian.

However, the terms 'no harm' and 'adverse effect' are not defined in the Treaty and thus leaves room for controversy.[45] The Treaty indirectly restricts unilateral projects along the Mahakali River.[46] It states:

> Any project, other than those mentioned herein, to be developed in the Mahakali River, where it is a boundary river, should be designed and implemented by an agreement between the Parties on the principles established by this Treaty.

Hence, it is an obligation for either Party to reach an agreement before commencing any project on the Mahakali River. It makes it binding to both Parties to obey the principles of the Mahakali Treaty, inter alia principles of equality, benefit sharing and no harm.[47] Ultimately, it discourages the unilateral development of the river and approves the principles of cooperation, consultation and notification.

Dispute Resolution Mechanism under the Mahakali Treaty

The Treaty provides a detailed dispute resolution and arbitration mechanism[48] if the disputes are not resolved by the Mahakali Commission established under Article 9 of the Treaty. The Treaty provides for the establishment of an arbitration tribunal composed of three arbitrators conducts all arbitration.[49] One arbitrator must to be nominated by Nepal, one by India, with neither country able to nominate its own national, and the third arbitrator is to be appointed jointly, who, as a member of the tribunal, shall preside over such tribunal. In the event that the Parties are unable to agree upon the third arbitrator within 90 days after receipt of a proposal, either Party may request that the Secretary-General of the Permanent Court of Arbitration at The Hague appoint an arbitrator who shall not be a national of either country. The inclusion of the Permanent Court of Arbitration in this Article strengthens the dispute resolution mechanism of this Treaty. The decision of the arbitration tribunal is final, definitive and binding to both Parties.[50] The venue of arbitration, the administrative support of the arbitration tribunal, and the remuneration and expenses of its arbitrators shall be agreed upon by an exchange of notes between the Parties.[51] Moreover, the Parties may agree on alternative procedures of settling differences arising under the Treaty through an exchange of notes.[52] Thus Mahakali Treaty offers a good

example for dispute settlement in international rivers. It provides a relatively elaborate and advanced dispute resolution mechanisms that are in conformity with the UNWC mechanism of dispute settlement provided under Article 33.

Ganges Treaty (1996)

After the commissioning of the Farakka Barrage along the mainstream of the Ganges in 1975 and subsequent conflict regarding the water shortage in downstream Bangladesh, Bangladesh and India signed two treaties (1977 and 1996) and two MoU (1983 and 1985) for sharing the Ganges waters at Farakka. On 12 December 1996, the two governments signed the most recent Treaty for sharing the Ganges waters at Farakka during the dry season (1 January to 31 May). This Treaty is valid for 30 years. The Treaty establishes the Joint Committee and its jurisdiction for monitoring the Treaty and exchanging data and information.[53] The Joint Committee, consisting of an equal number of representatives nominated by the Parties, is entrusted to observe and record at Farakka the daily flows below Farakka Barrage as well as at Hardinge Bridge.[54] The Treaty requires the Joint Committee to submit all data collected by it and an annual report to both governments.[55]

The Joint Committee is responsible for implementing the arrangement of the Treaty and examining any difficulty arising out of the implementation of the arrangements and of the operation of the Farakka Barrage.[56] The Treaty as per it Preamble as well as other provisions[57] recognizes the need to cooperate to find a solution to the long-term problem of augmenting the flow of Ganges during the dry season. These Articles approve the principle of cooperation and information exchange. The Preamble of the Treaty notes that both countries wish to share the waters of international rivers and optimally utilize the water resources of the region in the field of flood management, irrigation, river basin development and hydropower generation for the mutual benefit of the people of the two countries. Although oblique, the inclusion of these issues could result in the cooperation of other water related issues and hence promote overall Ganges basin development.[58] Articles IX and X of the Treaty adopted the principles of equitable utilization and an obligation not to cause harm. Article IX states that:

> Guided by the principles of equity, fairness and no harm to either Party, both the Governments agree to conclude water sharing, Treaties/Agreements with regard to other common rivers.

On the other hand, Article X mentions:

> The sharing arrangements under this Treaty shall be reviewed by the two Governments at five years interval or earlier, as required by either Party and needed adjustments, based on principles of equity, fairness and no harm to either Party made thereto, if necessary.

Thus, both the Articles under the Ganga Treaty endorsed the principles of equitable and reasonable utilization and no harm or theory of limited territorial sovereignty. Article IX is one of the strongest legal instruments included in the 1996 Ganges Treaty. The provision of this Article ensures the

commitment of future cooperation for the other 53 common rivers between Bangladesh and India. It ultimately discourages unilateral development on the other common river and agreed to conclude water sharing Treaties/Agreements on the basis of the principles of equity, fairness and no harm to either Party. Thus in turn, Article IX acknowledges the necessity of coordinated management of the watercourses and the theory of limited territorial sovereignty. Unlike the 1996 Mahakali Treaty, the 1996 Ganges Treaty does not include clear dispute resolution and arbitration mechanisms.[59]

The preamble of the Treaty mentions that both Parties wish to find a fair and just solution without affecting the rights and entitlements of either country. It states that if the Joint Committee fails to resolve conflicts arising out of the implementation of the Treaty, it should be referred to the Indo-Bangladesh Joint River Commission.[60] If the difference or dispute still remains unresolved, it should be referred to the two governments, which would meet urgently at the appropriate level to resolve it by mutual discussion. What level of government it refers to and what the timeframe is for the settlement of disputes are not specified in the Treaty. In addition, the Treaty does not bind any Party to resolve the dispute if a disagreements persist.[61] Hence, the Treaty establishes political means, not arbitration, to resolve any dispute arising from the implementation of the Treaty. Undoubtedly, the absence of arbitration mechanisms makes it a less effective legal instrument than the Mahakali Treaty.[62]

UN Watercourses Convention and its prospects in the Ganga Region

On 21 May 1997, the UN General Assembly adopted the UN Watercourses Convention.[63] This Convention incorporated the principles of transboundary water resources management, building on the 1966 Helsinki Rules. So far 34 sovereign nations, placed in different trans-boundary water contexts, have ratified the UNWC,[64] Vietnam being the latest addition in the league. However, none of the Ganga riparians have become parties to the Convention. It is noteworthy that among the Ganges riparian countries, Bangladesh and Nepal both voted in favor of adopting the Convention, but none of the countries ratified or acceded to the Convention. China voted against the Convention and in the case of India it was clear from the beginning that the country was highly unlikely to ratify the Convention because it abstained during the vote adopting the Convention. India officially noted four objections regarding the Convention. These are as follows[65]-

(1) Article 3 of the Convention "failed to adequately reflect the principle of freedom, autonomy, and the rights of States to conclude international agreements on the international courses without being fettered by the present Convention".

(2) Article 5, dealing with equitable and reasonable utilization and participation, "has not been drafted in a clear and unambiguous terms stating the right of State to utilize an international watercourse in an equitable and reasonable manner and Article 5 in the present form is vague and difficult to implement".

(3) Article 32, dealing with non-discrimination, "presupposes political and economic integration among States of the region. As all watercourse regions are not so integrated,

this provision will be difficult to implement in certain regions. Hence, it did not merit . . . inclusion in the Convention".

(4) Regarding Article 33, dealing with peaceful settlement of disputes, India asserted "any procedures for peaceful settlement of disputes should leave the procedure to the parties to the dispute to choose freely and by mutual consent a procedure acceptable to them".

The valid and immediate question that arises is: why have Bangladesh and Nepal not ratified or acceded to the Convention, even though both voted for the adoption of the Convention? It is difficult to answer this question in the absence of any official clarifications, statements and, unlike India, objections against a particular Article or Articles of the Convention by the governments of Bangladesh and Nepal.[66]

Conclusion

From the analysis of the two key bilateral treaties concluded in 1996 between the Ganga riparian's in the light of the doctrine of limited territorial sovereignty which is widely accepted as Jus Cogens, and which further encapsulates principle of reasonable and equitable utilization and principle of no harm as sub-sets, it can be derived that the existing treaties are cognizant of the well established principles of Trans-boundary water resource management. However, they certainly lack in many areas including the lack of uniformity in approach as far as effective and holistic management of the basin as a single unit is concerned. As the mechanisms provided under these treaties will continue to address issues arising from the quantum and flow of shared waters, there is a need for a more effective and uniform approach which is provided under the 1997 UNWC. The other option being a tri-party agreement between Nepal, India and Bangladesh on river water sharing which again appears to be a remote possibility given that the hydro-politics in the Ganga basin is also a factor of geo-politics in the region.

Another significant point is that that UNWC is a framework Convention that provides a larger framework leaving much for the Parties to decide and agree upon and with a flexibility to adopt bilateral arrangements. There is a growing trend in adopting framework water laws in the domestic country context[67] which could be possible after a significant convincing and mobilizing at the sub-national level (that had almost a similar water disputes). A similar approach is to be adopted for the UNWC given that there is already a realization that addressing water disputes is important for ensuring regional security and peace as well as ensure water security for the growing population in the region.

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Endnotes:

1. Advocate Supreme Court of India' Managing Partner, Indian Environment Law Offices, New Delhi
2. Attila Tanzi & Enrico Milano Article 33 of the UN Watercourses Convention: a step forward for dispute settlement?, Water International, (2013), 38:2, 166-179, DOI: 10.1080/02508060.2013.782262
3. Chattrapati Singh, International Water Law Series, 1995

4. The doctrine of limited territorial sovereignty is based on the assertion that every state is free to use shared rivers flowing through its territory as long as such utilization does not prejudice the rights and interests of the co-riparians. In this case, sovereignty over shared water is relative and qualified. The co-riparians have reciprocal rights and duties in the utilization of the waters of their international watercourse and each is entitled to an equitable share of its benefits. This theory is also known as the 'theory of sovereign equality and territorial integrity'
5. Giordano & Wolf, 2003, 167; Rahaman, 2009
6. ibid
7. Schroeder-Wildberg, 2002,. 14
8. Articles 4–7
9. Article 2
10. Articles 7–9
11. Article V of the Helsinki Rules, 1966 and Article 6 of the UN Watercourses Convention, 1997
12. Birnie & Boyle, 2002, 302
13. (Eckstein, 2002, 82–83,; as quoted in Water Resources Development, Principles of Trans-boundary Water Resources Management and Ganges Treaties: An Analysis, Vol. 25, No. 1, March 2009, 159–173
14. ibid
15. Birnie & Boyle, 2002, 322
16. Articles XXIX, XXXI
17. Articles VI–VIII
18. Article 5
19. paragraphs 4 and 5 of Article 2, Article 5
20. Articles 24 and 30
21. Articles 3 and 4
22. Article XXVII
23. Paragraph 1, Article 33
24. Article IX, Annexure F and Annexure G
25. Article 7
26. (Articles 34 and 35),
27. (Articles 22–24).
28. Bridges Over Water, July 10, 2007, The Ganges Basin with focus on India and Bangladesh.
29. Opportunities for Trans-boundary Water Sharing in The Ganges, The Brahmaputra, and The Meghna Basins Mashfiqus Salehin, M. Shah Alam Khan, Anjal Prakash, and Chanda Gurung Goodrich.
30. ibid.
31. (IWLP, 2008; Beach et al., 2000, 168); The history of water cooperation (or conflicts) along the Ganges basin dates back to 29 April 1875 after the signing of the Agreement between the British Government and the State of Jind, for regulating the supply of water for irrigation from the western Jumna canal (amended on 24 July 1892). On 29 August 1893, the Agreement Between the British Government and the Patiala State Regarding the Sirsa Branch of the Western Jumna Canal was signed.
32. (Article 1).
33. (Article 2).
34. Article 3
35. (Uprety & Salman, 1999, 313) as quoted in Principles of Transboundary Water Resources Management and Ganges Treaties: An Analysis Water Resources Development, Vol. 25, No. 1, 159–173, March 2009
36. (Article 12, paragraph 2).
37. Article 9
38. Article 9(1)

39. Paragraphs 2 to 6 of the Article 9
40. Articles 9(2) and 9(4),
41. According to Article 9(3),
42. Article 9(1)
43. Articles 7 and 8
44. (Article 7).
45. Salman & Uprety in. Rahman MM, 2002, 108
46. Article 6
47. adopted in Articles 9(1), 8 and 7
48. Article 11
49. Article 11(2),
50. Article 11(3)
51. Article 11(4)
52. Giordano & Wolf (2003, 170) point out that incorporating clear mechanisms for dispute resolution is a precondition for effective long-term basin management. In many river basins, a lack of detailed conflict resolution mechanisms makes the treaty ineffective.
53. Articles IV to VII
54. (Article IV)
55. Article VI
56. Article VII
57. Article VIII
58. Uprety & Salman, as quoted in Rahman M.M, 1999, p. 342
59. ibid
60. Article VII
61. McGregor as quoted in Rahman MM, 2000
62. Uprety & Salman, 1999,. 336–338
63. In 1970, the United Nations (UN) General Assembly commissioned the International Law Commission (ILC) to draft a set of Articles to govern non-navigational uses of trans-boundary waters. After 21 years of extensive work, in 1991 the ILC prepared the draft text of the UN Watercourses Convention (Biswas, 1999, p. 438). After considerable discussions during 1991 to 1997 on the draft prepared by the ILC.
64. According to Article 36(1) of the Convention, 35 instruments of ratification, approval, acceptance or accession are required to bring the Convention into force.
65. (Chimni, 2005, pp. 99–101); as quoted in Principles of Transboundary Water Resources Management and Ganges Treaties: An Analysis Water Resources Development, Vol. 25, No. 1, 159–173, March 2009
66. Rahman MM Water Resources Development, Vol. 25, No. 1, 159–173, March 2009
67. See Water Framework Law of the Planning Commission of India, 2012 and Ministry of Water Resources Government of India, 2013

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