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THE GUIDING LEGAL REGIME AND INSTITUTIONAL ARRANGEMENT OF TRANSBOUNDARY WATERCOURSE: A REVIEW

Yusuf Ali MOAHMMED

Public Law, Social Science Institute, Anadolu University, Ankara, Turkey

Corresponding author *Email: yusufkud@gmail.com*

Abstract

Among contentious international law issues, the transboundary watercourse management, which is exhibited with a conflicting states interest, is at the center of international law discussion. In order to vividly grasp the very essence behind such conflicting states interest, it is quite important to understand how – the international water law works, and – its institutional platform arrangements are established. Hence, a comprehensive review concerning the guiding legal regime and institutional arrangement of transboundary watercourse is very crucial.

In the above vein, at the backdrop of the major theoretical doctrine of transboundary watercourse, this paper reviewed and addressed, customary international watercourse laws and the 1997 UN transboundary watercourses convention coupled with its incorporated principles. Alongside the aforementioned analysis, the paper reviewed major contentious issues relating to the aforesaid customary laws and principles. Moreover, the paper also reviewed and addressed the modelled categorization of institutional arrangement of transboundary watercourse.

Keywords: customary law; institution; legal theory; principle; transboundary watercourse; watercourses convention

1. INTRODUCTION

A world is endowed with so many resources both under and outer surfaces of the earth. Let alone a complicated and sophisticated matter of under surfaced natural resources, the now alarming which need utmost critical attention is the outer surface natural resource in general and cross-boundary watercourse resources in particular. These transboundary watercourse resources are – "the aquifers and lake and river basin shared by two or more countries" (UN Water, n.d.) – which "...cover 45.3 % of the earth's land surface, affect about 40% of the world's population, and account for approximately 80% of global river flows." (UN FAO, n.d.)

Though varies studies and publication addressed how to manage these transboundary watercourses, a comprehensive scrutiny of its guiding legal regime coupled with institutional arrangement have not been reviewed and addressed in an organised and easily referable manner. Hence, this paper critically and thoroughly reviewed the guiding legal regime and institutional arrangement of transboundary watercourse in a well organised collocation.

Within the above vein, the paper is divided into six sections. Assuming this introductory part as the first section, the second section deals with the major theoretical doctrine of transboundary watercourse, while the third section gives not only a clear view of the two Customary International Law of Transboundary watercourse, but also expose the most controversial issues of the latter. The fourth section discusses the 1997 UN Transboundary watercourses conventions in general, and the latter's adopted Principles and contentious issues in particular. The fifth section gives a short brief of Institutional arrangement for transboundary watercourse, followed by the last concluding section of the paper.

2. MAJOR THEORETICAL DOCTRINES OF TRANSBOUNDARY WATERCOURSE

Though the nature and scope differs, the evolution of international transboundary watercourse is at the centre of human evolution as water is one among the very basic human needs that is crucial for survival. Moreover, the creation of States increases the utmost importance of water for various domestic usages. On the one hand, the increasing demand of water due to the widening demographic nature, agricultural development, industrial revolution, energy production, and on the other hand, the deterioration of quality and quantity of transboundary water resource, created a conflicting interest among basin States, as States follow different approaches to retain & attain their respective vital resource interests. These complications lead to the emergence of various theoretical doctrines of transboundary watercourses.

Accordingly, three major theoretical doctrinal principles have developed so far. And these theories are 'absolute territorial sovereignty', 'absolute territorial integrity', and 'limited territorial sovereignty'. Though two additional legal doctrines, i.e., 'prior appropriation' and the 'community interest', would alternatively be considered, however, for the purpose of this review, the former three major legal theories are to be discussed in detail in the following sections.

2.1. Absolute territorial sovereignty

The 'absolute territorial sovereignty' theory is one of the extreme picks of transboundary watercourse, which mainly gives an exclusive right for a particular upstream basin State. In this theory, a particular "co-basin state may freely utilize waters within its territory without having any regard to the rights of downstream or contiguous states… [in a sense that] a state may extract or alter the quality of these waters to an unlimited extent but has no right to demand continued flow from an upper co-basin state or to assert its rights against a contiguous state." (McIntyre, 2010, 61) This theoretical thought is also known as 'Harmon Doctrine' as the theory emanates from the then US Attorney General, named 'Harmon', for the first time in 1895 in which the latter argued for absolute right of USA over Rio Grande irrigation usage. (McIntyre, 2010, 61)

However, though the 'Harmon doctrine' contribution is undeniable, this theory doesn't last long. The United State itself doesn't show its conformity toward the former. This was clearly reflected in the 1906 US-Mexico Rio Grande river treaty and 1909 US-Canada boundary water treaty. The very reason for this fact is that, having this doctrine at hand, though the US might have won the 'Rio Grande river' case as the basin's upper riparian States, but the US might lose the boundary waters case against Canada as the latter is geographically located on the lower riparian State.

The effort of other states to adopt this theory fell shortly as the theory didn't go along with their respective practical basin scenarios. This can be inferred from the case of the Indus River as India claimed for 'full freedom' over the resource but later on accepted the right of Pakistan. Similar cases have been observed in the 'Mauri River' 'Lauca River' as well.

One thing interesting is "…those authors who might be argued to have endorsed the principle mostly voiced their respective positions before non-navigational uses of international watercourses had taken on much significance, which 'may have led them not to appreciate fully the serious ecological, economic and other harm … that could result from large-scale diversions or pollution'." (McIntyre, 2010, 62) What makes it more interesting is again, "… [almost] all the commentators referred to came from only four countries, Austria, Germany, Canada and the United States, each of which are upstream states, at least in relation to some of their watercourses." (McIntyre, 2010, 61) Despite these facts, however, "…it is possible to conclude that no recent authoritative work supports this approach while very many, including even relatively early ones, completely eschew it." (McIntyre, 2010, 61)

Therefore, scholars concluded the Attorney Generals driven Harmon doctrinal thought as an, *inter alia*, "unfortunate anomaly, intolerable, radically unsound." (McIntyre, 2010, 61-62) As a result, "[I]t is at best an anachronism that has no place in today's interdependent, water-scarce world." (McCaffrey, 2001, 114)

2.2. Absolute territorial integrity

The other theory that is characterized as the other pick is 'absolute territorial integrity', which predominantly favours the respective downstream basin States. This theory confers the latter basin states not only – a privilege to use the total flow of the river without any interruption and due consideration to upstream riparians interest, but also – accord veto power to rule out any potential activity that undermine the actualization of the aforesaid scenarios. (McIntyre, 2010)

Though some downstream States like Argentina, Spain, Bangladesh, and a number of Middle East countries have invoked the principle of absolute territorial integrity ...its [practical] application was unequivocally rejected in the *Lac Lanoux case*. (McIntyre, 2010; Lake Lanoux Arbitration, 1957) Moreover, scholars like McCaffrey argue that "reliance on these contrasting extreme positions demonstrates above all else that they were invoked as 'tools of advocacy' rather than as legal principles." (McCaffrey, 2001, 129-130; McIntyre, 2010, 62)

It is also clearly perceived that, like absolute territorial sovereignty, "most of the authors cited in support of absolute territorial integrity wrote before non-navigational uses had assumed much significance and thus before state practice concerning non-navigational uses had substantially developed," so that has got little support in the contemporary world. (McIntyre, 2010, 62)

Therefore, now a day, most scholars "has so far rejected [this Absolute Territorial Integrity theory] ...like the Harmon doctrine, it has limited support in states practice, jurisprudence or the writings of commentators." (Parhi & Sankhua, 2014, 258; Rahaman, 2009, 210)

2.3. Limited Territorial Sovereignty

The 'limited territorial sovereignty' is a middle striking theory that lies in the mid somewhere between absolute – 'territorial sovereignty' and 'territorial integrity', – with its compromising approach by entitling all basin riparians to use their co-shared water resources in an equitable and reasonable manner within their defined sovereign territory. (McIntyre, 2010, 64) This theory is alternatively named as 'equitable apportionment theory' and/or 'sovereign equality and territorial integrity.' (Parhi & Sankhua, 2014, 258; Rahaman, 2009, 201)

The guiding principle of this theory is from the very thought of transboundary watercourses in which the co-shared water resources remain in "...a community of interest among all co-basin states [in a sense that]… a community of interest requires a 'reasonable and equitable' balancing of state interests which accommodates the needs and uses of each state." (McIntyre, 2010, 64) Moreover, the theory has its theoretical genesis "...in the sovereign equality of states, whereby all states sharing an international watercourse have equivalent rights to the use of its waters." (McIntyre, 2010, 64)

From its application point of view, this theory "appears to have its origins in widespread state practice, [bilateral and multilateral] treaty law, in judicial decisions" and major international scholars commentators. (McIntyre, 2010, 65)

In relation to States practice, though the theory considered to have "received some limited support among the state practice of the several Middle Eastern States," the vast majority of states' practices seem to be in line with this theory. (McIntyre, 2010, 64; McCaffrey, 2001, 142) To mention some prominent cases, *inter alia*, the 1856 agreement between Dutch-Belgian over River Meuse in which the aforenamed state parties are accredited "...to make the natural use of the stream;" the 1971 Act of Asunción between Argentina and Brazil over Paraná River in which all parties to the aforesaid act "...may use the waters in accordance with its needs provided;" the 1909 Boundary Water treaty between US-Canada in which they had agreed "...to an 'equitable' share of water for irrigation;" and in the US-Mexico case over the Rio Grande river as well, the US made concession and agreed to share the latter river "...on a just and reasonable basis." (McIntyre, 2010, 64; McCaffrey, 2001, 139-144; Declaration of Asunción, 1971)

Unlike those previous theories, this Limited Territorial Sovereignty theory "has received consistent support in the case law of international tribunals, with…'no known international decision supports a contrary rule." (McIntyre, 2010, 65; McCaffrey, 2001, 145) For instances, the

'*Lac Lanoux'* Arbitration and '*Gabcíkovo-Nagymaros'* case "...left little doubt that equitable utilization comprises the governing principle in the field of international watercourses." (McIntyre, 2010, 66)

This theory is considered a guiding principle for a number of international legislation like, *inter alia*, Salzburg Resolution adopted by Institute of International Law in 1961 (hereinafter the 'Salzburg Resolution'); Helsinki Rules on the Uses of Waters of International Rivers adopted by the International Law Association in 1966 (hereinafter the 'Helsinki Rules'); Environment Programme's Principles on Shared Natural Resources adopted by the UN in 1978 (hereinafter the 'Environment Principles'); Convention on the Law of the Non-navigational Uses of International Watercourse adopted by the UN in 1997 (hereinafter the '1997 Convention'); Berlin Rules on Water Resources Law adopted by the International Law Association in 2004 (hereinafter the 'Berlin Rules'). (McIntyre, 2010)

For the above very reason, now days, the limited territorial sovereignty thought is "...supported by the overwhelming majority of commentators [and]… widely [considered] …as the primary rule of 'customary international law' governing the use and allocation of the waters of international watercourses." (Kaya, 2005, 69-71; Birnie & Redgwell, 2009, 202)

3. CUSTOMARY INTERNATIONAL LAW OF TRANSBOUNDARY WATERCOURSE

A quick skim of international law development basically related with States conformity through its domestic law assimilation and international relation, in a sense of abiding by a particular way of order. Such an attitude creates a strong foundation between/among States to be guided by a particular Principle, up on reciprocal practice.

The degree of acceptability depends on how many States, and sometimes which potential States, adhere to that particular Principles and/or vice versa. As more States act in accordance with a provided Principle with the intention of abiding by it, *opinion juris*, its acceptability and application under international law gets higher and wider under lots of circumstances. In such a way, as more international and non-international actors, like States, international courts, international organization, authoritative scholars *et al*, adhere to a particular Principle, the latter be lifted up to 'Customary International Law'. Once a particular Principle has got a status of Customary International Law, all States, except persistent objector/s, have to be abided by it. Accepting such customary international law in general, States or international organizations entered into bilateral or multilateral treaties to formalize, detail, and/or fill its possible lacunas.

Coming to International transboundary watercourse, the 'limited territorial sovereignty' theory gave birth to two basic principles that have got status of Customary International Law, i.e. 'Equitable & Reasonable' use and 'No-Harm rule' Principle.

3.1. Equitable and Reasonable Utilization Principle

It is clear that the 'equitable and reasonable' use principle is a very crucial principle originating from 'limited territorial sovereignty' theory, which empowers both upstream and downstream riparian states to utilize their shared transboundary water resources in an equitable and reasonable manner within their respective sovereign territory.

This principle follows a very standardized tolerable approach by conferring a "...balance of interests that accommodates the needs and uses of each riparian state." (Rahaman, 2009, 210) Moreover, though this principle "rests on a foundation of shared sovereignty, equality of rights," however, it shall not be equated with equal shares, as the respective basin States water share be determined by taking lots of relevant factors like, *inter alia*, "the geography of the basin, hydrology of the basin, population dependent on the waters, economic and social needs, existing utilisation of waters, potential needs in future, climatic and ecological factors to a natural character and availability of other resources should be taken into account." (Rahaman, 2009, 210-211; Helsinki Rules, 1966, Article V; UN Watercourses convention, 1997, Article 6; Berlin Rules, 2004, Article 13)

The 'equitable and reasonable utilization' principle has got tremendous "...support in state practice, judicial decisions and international..." legislations. (Rahaman, 2009, 211) Among the international court's decision which have endorsed 'equitable & reasonable use' principle, the case of 'River Oder' and *'Gabcikovo-Nagymaros'* are the most common ones. In the former case, the PCIJ affirmed that *"an important basis of the entitlement to an equitable share is the notion of equality of right."* (River Oder Case, 1929) The ICJ also firmly confirmed this latter fact in the *'Gabcikovo-Nagymaros'* case by indicating in its decision that *"International Rivers are shared resources and all riparian states have equal rights to enjoy both the commodity and non-commodity ecological benefits of the river."* (Gabcikovo-Nagymaros Case, 1997)

Most bilateral and multilateral watercourse treaties and conventions incorporate the 'equitable and reasonable use' principle as a base scenario for their respective water share. Let alone regional basin watercourse treaties, all of those United Nation (hereinafter the 'UN'), International Law Association (hereinafter the 'ILA') and International Law Commission (hereinafter the 'ILC') lead legal regimes dealing with international transboundary watercourses have included this principle in the first row. This can be clearly inferred from the Helsinki Rules, the 1997 Convention, the Berlin Rules *et al*. (Helsinki Rules**,** 1996; UN Watercourses convention**,** 1997; Berlin Rules, 2004) On the base of these facts, the ILC commentary underlines the irrefutable fact of considering 'equitable and reasonable' use principle as a guiding legal regime of international transboundary watercourse law. (Stebek, 2007) Similarly, the ILA commentary on the 'Berlin Rule' confirms the universality and principality of the aforesaid principle in managing transboundary watercourse. (McIntyre, 2010; ILA, 2004) Moreover, scholars like Joseph W. Dellapenna dare to conclude the unanimity among international water law experts over the primacy of 'equitable and reasonable' use principle in transboundary watercourse. (Dellapenna, 2001, 279)

Having the above concrete facts and basing on the broad acceptance, therefore, the 'equitable and reasonable utilization' Principle is considered "as the primary rule of customary international law governing the use and allocation of the waters of international watercourses." (McIntyre, 2010, 66)

3.2. Principle of No-Harm rule

Like the 'equitable and reasonable use' principle, the 'no-harm rule' principle also originates in the parcel of 'limited territorial sovereignty', in a sense that, though the former principle dictates the right of particular state to use the shared watercourse resource in ones defined sovereign territory, the latter principle underscore the need to be precautious in respecting the equal right of other riparians states interest. (UN Fact Sheet Series, Number 5)

According to the 'no-harm rule' principle, riparian states shall refrain from using transboundary watercourse in their sovereign land in a way that could possibly cause significant harm against a shared watercourse's ecosystem and/or other riparians states equal right. (Rahaman, 2009) Hence, as this principle has a double edge responsibility in protecting environment and guarantees equal right of other riparian states, it is endorsed both in international environmental law and transboundary watercourse legal regime. (UN Fact Sheet Series, Number 5)

Though this principle is mistakenly often associated with downstream States' right for obvious facts, upstream States could possibly be benefited from the principle against downstream States harmful handling of their shared river resource, so that both upper–lower and lower-upper riparian discourses can be entertained.

Looking at different international instruments, the language terminology employed to refer to 'no-harm' rule differs from one to the other. While 'significant harm' terminology is predominantly used in the 1997 Convention, Convention on the Protection and Use of Transboundary Watercourses and International Lakes (hereinafter the '1992 Convention') uses 'transboundary impact' and the World Bank Project Policy refers it as 'appreciable harm'. (UN Watercourses convention, 1997; UNECE Watercourses convention, 1992; Tignino & Brethaut, 2020)

For this review, the 1997 Convention's 'significant harm' terminology is considered. Accordingly, under the 'no significant harm rule,' States are obliged to take all precautionary risk minimizing measures not to cause significant harm to a down neighbouring basin States. A very crucial parameter in this case is 'significant' harm, which refers to "...the real impairment of a use, established by objective evidence, [and in this parameter] …[f]or harm to be qualified as significant, it must not be trivial in nature but it need not rise to the level of being substantial [which ultimately] …be determined on a case by case basis." (UN Fact Sheet Series, Number 5, 1; Tignino & Brethaut, 2020, 635) It is, however, quite important to bear in mind that this 'significant' parameter standard rules-out a "...mere inconveniences or minor disturbances that [riparian] states are expected to tolerate, in conformity with the legal rule of 'good neighbourliness'". (UN Fact Sheet Series, Number 5, 1) Hence, 'significant harm' doesn't mean

an absolute prohibition of harms, as appreciable harm is tolerable under a scheme of 'equitable and reasonable' use principle.

A number of International Tribunals and ICJ endorsed the 'No-significant-harm' rule principle, namely the '*Trail Smelter case*', *'Lake Lanoux case' et al.* In the '*Trail Smelter case*' of, the tribunal underlined the significance of the aforenamed principle by stating "*...no State has the right to use or permit the use of its territory in such a manner as to cause injury...*" (Tignino & Brethaut, 2020, 635) Moreover, in the famous *'Lake Lanoux case'*, the tribunal underscore the existence of *"...a rule prohibiting the upper riparian State from altering the waters of a river in circumstances to do serious injury to the lower riparian State."* (Tignino & Brethaut, 2020, 637)

The 'no-harm rule' is widely incorporated in as number of bilateral and multilateral treaties. Letting alone bilateral and regional treaties, the latter principle is dictated in the Helsinki Rules, the 1997 Convention, the Berlin Rules and the 1992 Convention. (Helsinki Rules, 1966; UN Watercourses convention, 1997; Berlin Rules, 2004; UNECE Watercourses convention, 1992) Moreover, the Principle is also incorporated in a number of international environmental declarations and conventions like, *inter alia*, Declaration on the Human Environment adopted by UN in 1972 (hereinafter the '1972 Stockholm Declaration'), Declaration on Environment and Development adopted by UN in 1992 (hereinafter the '1992 Rio Declaration') and Convention on Biological Diversity adopted by UN in 1992 (hereinafter the '1992 Biological Diversity').

Taking into account the above concrete facts, now days, the 'no-harm rule' principle is deemed to be considered as – part and parcel of customary international watercourse law, and – a guiding legal regime of transboundary watercourse management. (Rahaman, 2009)

3.3. Equitable & Reasonable Utilization Principle vis-à-vis Principle of No-Harm rule

As a clear set up, it has to be vivid that the 'no-harm rule' has economic as well as environmental aspects. Though most scholars endorsed and supported the strong alliance of the aforenamed principle with that of environmental protection, they "...underline the precaution that is needed in the interpretation of the rule with regard to the economic aspect, i.e. utilization of watercourses." (Mohammed, 2014, 34; Stebek, 2007, 49)

The 'equitable and reasonable' use and 'no-harm' rule are the two guiding principles of transboundary watercourses. While the former gives a right for basin states to use their shared water resources in their respective sovereign land, on the other hand, the latter principle burdens the basin States with a responsibility to use their shared water resource in a way that shall not cause significant harm to a neighbouring basin riparian state.

However, as there is no way of upholding absolute prohibition of harms, the extent tolerable harm is usually at dispute. In the vein of this disputed issue, the much higher contesting issue is 'whether Equitable & Reasonable Utilization or No-Harm rule shall take priority'. Even during the 1997 Convention development, long debate and discussion was uncovered on this particular issue. While the upper riparians are so reluctant to support the supremacy of 'no-harm' rule

fearing "...it might potentially lead to a curtailment of future upstream developments," down riparians strongly abstain from supporting the prioritisation of 'equitable and reasonable' use principle it would probably "...allow scope for harm to occur from such developments with impacts downstream." (UN Fact Sheet Series, Number 5, 1) Despite such unsettled contentious issues, the UN General Assembly adopted related provisional text dealing with the aforementioned ones of the 1997 convention "...by 38 votes in favour, 4 (China, France, Tanzania and Turkey) against and 22 abstaining." (Rieu-Clarke & Loures, 2009, 14)

Although the final text was assumed to follow a mid balancing approach, arguably, the 1997 convention still seems to be prioritising 'equitable and reasonable' use principle, as a governing principal of transboundary watercourses. The phrasing of Article 7 (2) – "where significant harm nevertheless is caused to another watercourse State ...due regard for the [equitable & reasonable utilization] provisions of articles 5 and 6", and Article 10 (2) – "in the event of a conflict between uses of an international watercourse, it shall be resolved with reference to [the equitable & reasonable utilization provision of] articles 5 to 7" exemplify this fact, as the harm is to be evaluated within the scope of 'equitable and reasonable' use principle.

Moreover, a convincing logic stretched from this fact is that a riparian state must always confer with 'equitable and reasonable' use principle if 'significant harm' happens to be materialized in any case, but not vice versa of the latter in determining the former; consequently, many scholars in the field concluded "...the duty not to cause significant harm is ...a secondary obligation to the primary principle of equitable and reasonable utilisation." (UN Fact Sheet Series, Number 5, 2) Among the Authoritative scholar, a well respected scholar named McCaffrey described the aforementioned scenarios and facts as follow:

> "*If equitable utilization is the controlling legal principle, upstream State A may develop its water resources in an equitable and reasonable manner vis-à-vis downstream States B and C, even though that development would cause significant harm to their established uses. If, on the other hand, the obligation not to cause significant harm is dominant, State A could engage in no development, no matter how equitable and reasonable, that could cause States B and C significant harm.*" (Stebek, 2007, 49-50)

McCaffrey further indicates the non-absoluteness of the 'no-harm' rule as it can be alleviated by taking necessary precaution measures (Stebek, 2007; McCaffrey, 2001) It is not only believed such a method would balance with least harm among basin States, but also creates a mechanism of compensation for greater materialized damage. In order to determine the extent of damage, while differentiating '*factual harm*' and '*legal injury*', it has to be born in mind "it is only injury to '*a legally protected interest*' that is prohibited." (Stebek, 2007, 53; McCaffrey, 2001, 329)

Caflisch, another prominent scholar, underscore the less importance of 'no-harm' rule in transboundary water resource apportionment, believing the latter is already fully or overexploited, so that to actualise equitable and reasonable allocation of the former resource among the rightful riparian states, "...the negative no-harm rule had to be superseded by a positive rule which would make it possible to effect such an apportionment." (Stebek, 2007, 49)

4. THE GENESIS OF TRANSBOUNDARY WATERCOURSE CODIFICATION

With the aim of developing a codified International Non-navigational Transboundary watercourses legal regime, a number of studies and codification attempts have been made by Prof. H. A. Smith of London as well as the ILA and ILC since the 1900's. The prominent revolutionary codification was the work of ILA and ILC, in which the former developed a draft text on the 'Dubrovnik Rules', Helsinki Rules and Berlin Rules, while the latter is responsible for a draft of the 1997 famous Convention *et al*.

Prof. H. A. Smith was assumed to be the first scholar who had undertaken massive studies on the legal courses of transboundary watercourses by "...review[ing] more than 100 treaties and studied several conflicts on the use of transboundary rivers," in the early period of 20th century (Biswas, 2008, 13) In his study, he "...noted that some of the treaties considered the concept of equitable utilization," which let him to reiterate the basin states rights for a fair share of the aforesaid river. (Biswas, 2008, 13)

ILA had introduced the Helsinki Rules for transboundary watercourses, which was an updated version of Dubrovnik Rules, through Finland's proposed resolution to the UN General Assembly in 1970. However, member states pulled back from endorsing these rules on three grounds, claiming: a pure professional work which lack states say; its non-consideration of practical nexus issues; and its incorporation of troubling drainage concept, which was unwelcomed and fiercely disputed by states. (Biswas, 2008, 13) Despite the aforementioned facts, the ILA continued updating the Helsinki Rules, and as a result, came up with the Berlin Rules. Although the works of ILA have not been endorsed by international organizations like the UN, all three works of the forgoing association, undeniably, show a huge transformation of transboundary watercourse codification, thus "...can probably be best regarded as guidelines for a legal regime for managing transboundary waters." (Biswas, 2008, 13)

Up on the failure of the Helsinki Rules, the UN passed a major shifting resolution 2669 (XXV) in December 1970 and directed the ILC to commence its work in codifying the legal regime of international transboundary watercourse law. (Biswas, 2008) After two decades of study, the Commission came up with a draft text in early 1990's and conducted a number of consultations with various concerned stakeholders. Despite a major difference among basin States, the UN General Assembly approved with more than 100 States vote in favour of the ILC's Draft on the 1997 Convention in July 1997. In accordance with Article 36 (1) of the latter, the 1997 Convention came into force on the 17th of August, 2014.

4.1. The Principles adopted in the 1997 Convention

The 1997 Convention has incorporated a number of major principles for transboundary waters. Letting alone the two major principles, named 'equitable and reasonable' use principle and 'no-significant-harm' rule principle, which have been dealt with under the previous section, in this section it is worth noting those left over principles of the 1997 Convention.

Among those Principles that deserve to be discussed here are: Principles Cooperation, Regular exchange of Data and Information, Notification of Planned Measure and Peaceful Settlement of Dispute.

With respect to a shared transboundary watercourse, the very baseline of riparian States is that water shall not be a source of Conflict, but Cooperation. With this understanding, the 'Principle of Cooperation' dictates riparians have to come together and negotiate over their shared water, with the ultimate aim of – attaining "...optimal utilization and adequate protection of an international watercourse" and – managing the aforesaid one via joint institutional arrangement mechanisms. (UN Watercourses convention, 1997, Article 8)

Through basin-wide cooperation scheme, riparians shall regularly exchange all obtainable, *inter alia*, hydrological, meteorological, hydro-geological and ecological information and/or data of the international river course. (UN Watercourses convention, 1997, Article 9 (1))

Within the scope of 'regular exchange of data and information', riparian state shall timely notify each other of their respective planned measures, and if such planned measures can possibly cause significant harm on the other riparian, immediate notification alongside all disposable technical date and information shall be provided. (UN Watercourses convention, 1997, Article 12)

Despite the above scenarios, for any case of possible dispute over the shared watercourse, the 1997 convention incorporates a 'peaceful dispute settlement' mechanism in which riparian states shall settle their differences in a mutually amicable manner. (UN Watercourses convention, 1997, Article 33)

4.2. Contentious issues of the 1997 Convention

It is not only the drafting and consultation of the 1997 Convention which takes a very long time, so does the phase of entering the latter into force through States ratification. This was due to the contentious issues revolving around the aforesaid Convention and States hesitation to endorse this controversial Convention, as it was adopted without narrowing their differences. Let alone the very contentious issues of 'equitable and reasonable' use vs. 'no-harm' rule for obvious reasons, the other two major contentious issues, namely the 'existing and future agreement' and 'compulsory dispute settlement', are worthy to be discussed under this section.

Starting with the 'existing and future agreement' issue, the two diverse for-against views rotate around Article 3 of the 1997 Convention. Up on ratification, the latter Article dictates the unnecessity of harmonizing rights and/or duties arising from pre existing transboundary water treaties with that of the present Convention, unless the riparian parties intend to do so. (UN Watercourses convention, 1997, Article 3) The very purpose of this particular provision is to provide flexibility and to avoid the unduly burdensome of reviewing more than 3,600 of existing transboundary watercolours treaties. (Rieu-Clarke & Loures, 2009) However, there were states that have rejected this approach and argued for the inclusion of a clear provision of text stating otherwise. Rieu-Clarke & Loures, 2009) With these heated diverse opinions, "35

countries voted in favour [to Article 3] of the text, while 3 countries voted against (Ethiopia, France and Turkey), and 22 abstained." (Rieu-Clarke & Loures, 2009, 14)

Coming to the 'compulsory dispute settlement' issue, Article 33 of the 1997 Convention, though provides for amicable or mutual adjudication dispute settlement mechanism, however, provides if no agreement is reached within six months, with the fear of turning a dispute in to a real conflict, the convention follows a compulsory approach and dictates that "the dispute shall be submitted [even unilaterally], at the request of any of the parties to the dispute, to impartial fact-finding [Commission]." (UN Watercourses convention, 1997, Article 33 (3)) Such approach of period fixation and Compulsory fact-finding Commission arrangement, with unilateral initiation, was a source of contentious issues. Accordingly, the provision of "Article 33 was adopted by 33 votes to 5 (China, Colombia, France, India and Turkey), with 25 abstentions." (Biswas, 2008, 15).

5. INSTITUTIONAL ARRANGEMENT OF TRANSBOUNDARY WATERCOURSE

One among a very crucial step for the basin-wide watercourse cooperation is the establishment of institutional arrangement, as it is vitally so viable and monumentally "...resilient over time, even between otherwise hostile riparian nations, and even when conflict is waged over other issues'." (Vollmer, Ardakanian, Hare *et al*, 2009, 11)

The significance of such Institutional arrangement is underlined in most of the major legal regime of international watercourses like, *inter alia*, the 1997 Convention, and the Berlin Rules. (UN Watercourses convention, 1997, Article 33 (2); Berlin Rules, 2004, Article 31 (e), 34 (f), 35 (d))

Basin States follow different approaches of institutional set-up, which can be categorised into three basic groups: a River Basin Commission, a River Basin Authority, and a River Basin Coordinating Committee or Council.

5.1. River Basin Commission

A River Basin Commission arrangement is a much formal structural set-up and considered when comprehensive developmental alternates with conflicting users and uses are experienced on the watercourse. Moreover, this structural model is considered up on the need of information exchange, policy formulation, and detail management plan in order to achieve the ultimate goal of equitable and reasonable share of the transboundary water, without, of course, exposing significant harm on the latter resource. (Millington, Olson & McMillan, 2006)

Aside from the above, the commission is in need in order to "...set the bulk water shares that each state/province is entitled to divert and would monitor water use at the higher state/provincial level." (Millington, Olson & McMillan, 2006, 8) Moreover, the commission is set "...to arbitrate trans-jurisdictional or transboundary disputes [and to ensure] equal partnership

among all stakeholders, and involvement of the basin community as and when relevant in planning and decision making." (Millington, Olson & McMillan, 2006, 9)

The major possible structural design of a particular basin commission would be composed of 'Ministerial Council', 'Board of Management', and 'technical officers and experts'. The 'Ministerial Council' is a body which empowered with the overall ultimate authority of the commission, while the 'Board of Management' is a structural layer which is responsible to set policies, strategies *et al*. Besides, the 'technical officers and experts' gives technical supports to the aforementioned ones. (Millington, Olson & McMillan, 2006)

5.2. River Basin Authority

A River Basin Authority is the other category of institutional arrangement for transboundary watercourses. This institutional model either takes in a form of organization – "...with specific development tasks to undertake, such as hydropower development or navigation, [or] – ... that absorbs virtually all the water resources functions of other agencies in the basin, rendering it very large and powerful." (Millington, Olson & McMillan, 2006, 8)

This River Basin Authority structure is "...adequate, for example, in some African basins because of their relatively low degree of water resources development, such as the Niger." (Vollmer, Ardakanian, Hare *et al*, 2009, 9) Despite the aforementioned facts, this model "...is not suitable for 'historically, geographically, and politically very complex' basins" like Nile River Basin." (Vollmer, Ardakanian, Hare *et al*, 2009, 9). Thus, some basin states authority like 'Tennessee' Valley Authority (TVA) of the U.S, 'Mahaweli' (River Basin) Authority of the Sri Lank, the 'Snowy Mountains Authority' of the Australia *et al* are being transitioned to 'commissions' or 'coordinating committees/councils. (Vollmer, Ardakanian, Hare *et al*, 2009)

5.3. River Basin Coordinating Committee or Council

A River Basin Coordinating Committee or Council structure is formed assuming the existence of favourable conditions in a particular transboundary river basin with the spirit of high cooperation and less competition and/or confrontation among riparians. (Millington, Olson & McMillan, 2006)

Under this so called committee or council structural arrangement, though it might encompass senior public officials of a particular basin states, however, the latter is with no actual executive power, so that its strength and/or weakness depend on its riparian states commitment and chairperson leadership capability to do so. (Millington, Olson & McMillan, 2006) Thus, this institutional set-up can be used at the initial stage of basin-wide cooperation, and once a better institutional platform is in place, its existence would come to an end. (Millington, Olson & McMillan, 2006)

All in all, in order to establish such Joint Institutional set-up of transboundary watercourses, basin States need to agree in a form of bilateral or multilateral treaties to do so. In this vein,

basin States need to not only determine the appropriate type of Institutional model, but also set measurable clear tasks and responsibilities. Moreover, "the [institutional mandate] does not only have to be clear-cut and coherent, [but] also need to be enforceable." (Vollmer, Ardakanian, Hare *et al*, 2009, 12) For the effective realization of the latter, it is crucial to align basin States national legislation in general and the legal provisions dealing with River Basin Organization in particular.

6. CONCLUSION

The evolution of international transboundary watercourse is at the center of human evolution as water is one among the very basic human needs that is crucial for survival. Throughout this revolution, among the three major theoretical doctrinal principles, the two opposing extreme theories, i.e., *'absolute territorial sovereignty'*, *'absolute territorial integrity'*, "are, in essence, factually myopic and legally 'anarchic': [as] they ignore other states' need for and reliance on the waters of an international watercourse, and they deny that sovereignty entails duties as well as rights." (McCaffrey, 2001, 135) These lead to the emergency of a middle ground, which is more universal and tolerable theoretical thought, called *'limited territorial sovereignty'*. The overwhelming support of different international legal instruments, authoritative scholars, judiciaries lifts the latter doctrine up to the Customary International Law. The aforementioned facts gave birth to a very crucial Principles of Customary International Law, i.e., 'Equitable & Reasonable Utilization' and 'No-Harm rule' Principle. Arguably, not only the latter is a primary governing principle of transboundary watercourse, but the latter is also qualified within a scope of the former.

Since 1900's a number of studies and codification attempts have been made by Prof. H. A. Smith of London, ILA and ILC. In this vein, a number of international transboundary watercourse legal instruments have developed, *inter alia*, the Dubrovnik Rules, Helsinki Rules, Berlin Rules, and the 1997 Convention. Except the latter one, the remaining aforenamed legal texts can be considered as a guideline for transboundary watercourse, as they show the evolution of the latter codification. Though States opposing diverse standing was yet to be compromised, the 1997 Convention came into force on 17 August 2014 and it is now the only universal guiding legal regime of transboundary watercourse. The latter Convention incorporates, on the one hand, the six major principles, namely 'Equitable and Reasonable' use, 'No-Significant-harm' rule, 'Cooperation', 'Regular exchange of Data and Information', 'Notification of Planned Measure' and 'Peaceful Settlement of Dispute'; while, on the other hand, the Convention contain unresolved contentious issues like 'Equitable and Reasonable Utilization' vs. 'No-Harm Rule', 'Existing vs. Future Agreement', and 'Compulsory Dispute Settlement'.

Bearing in mind the very significance of Institutional arrangement of International Transboundary watercourse through bilateral or multilateral treaties, there are three joint structural set-ups known as 'River Basin Commission', 'River Basin Authority', and 'River Basin Coordinating Committee or Council'. Though these joint institutional arrangement applications vary depending on the nature of watercourse basins, the most common and preferable one is

'River Basin Commission'. To manage transboundary watercourses through such Joint Institutional arrangement mechanisms, basin States have to, *inter alia*, – agree on a basin wide 'Legal Framework', determine appropriate 'Institutional model', set its clear tasks and responsibilities, align it with its domestic legislation, and take necessary steps to enforce it.

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