THE UNITED NATIONS CONVENTION ON THE LAW OF THE NON-NAVIGATIONAL USES OF INTERNATIONAL WATERCOURSES, 1997: A CRITICAL OVERVIEW

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CERTIFICATE

This is to certify that the dissertation entitled **THE UNITED NATIONS CONVENTION ON THE LAW OF THE NON-NAVIGATIONAL USES OF INTERNATIONAL WATERCOURSES, 1997: A CRITICAL OVERVIEW** submitted by MUHAMMED SIYAD A.C. is in partial fulfillment of the requirement for the degree of ***Master of Philosophy*** (M. Phil) of this University. It is his original work and may be placed before the examiners for evaluation. This dissertation has not been submitted for the award of any other degree of this University or of any other University.

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These days international law are codified, modified and expanded to include new areas and cover new vistas. The law governing the non- navigational uses of international watercourses is one among them. The prediction of experts that the next world war will only be fought for water coupled with grim statistics about an ongoing water crisis is pregnant with caution to humanity to avert a future water war. This underscores the problem of sharing the precious transboundary water resources, which is a burning issue and source of conflict and controversies. Problem arises from the fact that water resources are quantitatively and qualitatively limited. Thus, this work basically examines the legal regime for the allocation of fresh water resources shared by two or more countries as mainly codified in the 1997 UN Convention.

It has been an arduous and wonderful task to produce this work. But the timely advice and helpful hints of my supervisor have benefited me a lot in its easy completion. I feel it is my duty to express my deep indebtedness to Prof. B. S. Chimni, who in spite of his hectic academic and official pre-occupations has always extended his methodological eye and ungrudging helping hand. His invaluable guidance, inspiring encouragement and numerous insightful comments added a new fillip to my efforts.

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DEDICATED TO

MY PARENTS

Abbreviations

AJIL	American Journal of International Law
ICJ	International Court of justice
ILA	International Law Association
ILC	International Law Commission
ILI	Institute of International Law
ILM	International Legal Materials
LNTS	League of Nations Treaty Series
PCIJ	Permanent Court of International Justice
UN	United Nations
UNCLNUIW	United Nations Convention on the Law of the Non-navigational Uses of International Watercourses
UNGA	United Nations General Assembly
UNRIAA	United Nations, Report of International Arbitral Awards
UNTS	United Nations Treaty Series

CHAPTER-1

INTRODUCTION

I.1. Introduction

Rivers and lake basins share nearly 47 percent of the land area in the world, which includes more than 60 percent of the area on the continent of Africa, Asia and South America. There are more than 260 international river basins and an indeterminate number of aquifers whose waters are shared by two or more sovereign states. These international river basins affect about 40 percent of the world's population, and account for approximately 60 percent of the global river flow. A total of 145 nations include territory with international basins. Twenty one-nations lie in their entirety within international basins. Five or more countries share nineteen river basins. Moreover, freshwater resources are unevenly distributed. Out of all nations in the world, 10 nations share 65 percent of the world's annual water resources[1]. It is precisely for this reason that the legal studies of international border shared by fresh water resources assume relevance. The law of the international rivers were not explicitly defined or codified in any single location before the emergence of Helsinki Rules; it is a bundle of rules subject to frequent disputes, reinterpretation, revision and expansion.

Though the total volume of fresh water in our planet is not increasing, global water use trebled just between 1950 and 1990. In the African continent nearly 400 million people do not have access to fresh water, while nearly 3 million die each year from water-borne and sanitation related diseases. In other words only 60% of them have access to safe drinking water.

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[1] To understand the magnitude and seriousness of the problem, which international law and principles face with transboundary water resources, Wolf (1998) can be referred: The 263 international watersheds cover more than one half of the land surface of the globe, and affect 40 percent of its population. As a consequence, recent articles in the academic literature, see Cooley 1984; Starr 1991; Gleick 1993; and others; and popular press, see Bullock and Darwish 1993; World *Press Review*, 1995, point to water not only as a cause of historic armed conflict, but as the resource which will bring combatants to the battlefield during the 21st century.

Although the surface of the 'blue planet' is two-third water, 97 percent of it is seawater, while an additional 2.3 percent is locked up in the polar ice caps, and less than 1 percent (0.69%) water is accessible for human use. Even that volume is quite unevenly distributed in 263 international rivers, lakes and indeterminate number of aquifers at various depths of land surfaces[2].

Thus, the quantity of water available to us on Earth is finite and has not changed over millennia. This fact has to be juxtaposed against increasing demands from a growing population. The major factor influencing the demand for freshwater is the world's changing patterns of demographic structure, irrigation, distribution of wealth. The world's population is expected to increase from 5.3 billion in 1990 to somewhere between 8 and 10 billion people in 2050. Out of this future population growth, 90 percent will be in developing countries. The population of the world, currently around 6.2 billion is expected to reach around 10 billion by 2050. Apart from sheer numbers, the process of urbanisation and development are also expected to vastly increase the demand for fresh water.

It is estimated that around 67 percent of freshwater is used by the agricultural sector for irrigation. The United Nations projects a 50-100 percent increase in irrigation water by 2025 as a result of growth in world food demand[3].

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[2] According to WMO/UNESCO estimates 97.5 percent of water resources are salt water found in oceans, 0.26 percent are accessible fresh water found in lakes, aquifers, rivers etc. and 2.24% are inaccessible fresh water locked up in polar ice caps, glaciers and deep ground water etc. This is why the UN Commission for Sustainable Development, Second Session, New York, 1994 noted as follows: "As the crisis approaches and as water become scarcer, the risk of conflict over them will become greater... Urgent and decisive action must begin now if an impending water crisis of a national proportion in the 21st century are to be avoided during the next 30 years". In 1998, 31 countries faced chronic freshwater shortages. By the year 2025, however, 48 countries are expected to face shortages, affecting nearly 3 billion people – 35 percent of the world's population. Countries in danger of running short of water in the next 25 years include, Ethiopia, India, Kenya, Nigeria and Peru. The Global Environment Outlook (GEO, 2000) substantiates this, projecting that over the next 25 years, the world would begin to run out of fresh water and 'water wars' could spread across a wide belt of North Africa, West Asia and East Asia. Water is a resource, which ignores political boundaries, fluctuates in both space and time, has multiple and conflicting demands on its use, and whose international law is still evolving.

[3] The population of India is estimated to reach between 1.5 and 1.8 billion by the year 2050. UN agencies have put the figure at 1.64 billion. It is generally believed that countries with annual percapita water availability of less than 1,7000 cubic metre (m3) are water stresses and less than 1000 cubic metre as water scarce. India needs 650-bcm water to avoid being a scarce country. By 2025 nearly 450 million tones of food grains would be required for feeding the

Industry currently accounts for approximately 19 percent of the total freshwater usage. For instance, industrial water use is predicted to double by 2025 if current growth trends persist. Only around 9 percent of the freshwater is being used for household consumption.

The agricultural sector is also the largest polluter of freshwater in most developed and developing countries. Water pollution takes place due to improper management practices including unwise use of pesticides and inorganic fertilizers, inefficiencies in irrigation, and unrealistically low subsidised water costs. Inorganic fertilisers have been found to consume more water than organic fertilisers.

The continued growth of world population and the uneven distribution of international water resources create problems for the riparian states. Most of these river basins are areas of potential conflict, especially large river basins shared by several countries. Examples of conflicts on a regional scale of varied intensity can easily be found among these international river basins.

In a report on the implementation of the Agenda 21's recommendation on fresh water, the United Nations General Assembly (UNGA) has noted that by the year 2025 a full 35 percent of the world population would be living under conditions of water scarcity or stress compared with about 6 percent in 1990.

Water scarcity is a situation where water demand exceeds available supplies. The scarcity situation looms large over many parts of the world increasing the likelihood of both conflict and poverty. Indeed, the World Bank tells us: "The wars of the next century will be fought over water."[4]

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population, production of which is a gigantic task while considering the constraints being faced in the irrigation sector.

[4] This statement, by Ismail Serageldin, the World Bank's Vice-President for Environmentally Sustainable Development was widely quoted in the media in the summer of 1995. According to Ismail Serageldin of the World Bank, "issues of scarcity have put water at the top of the international political agenda". He observes that international water problems "are not confined to historically conflicted or dry areas. As populations and demand for limited supplies of water increase, intra-national and international frictions over water can be expected to intensify". Scarcity of water may again worsen the critical food scarcity situation. See, for example, John Vidal. "Ready to Fight the Last Drop," *Guardian Weekly* (20 Aug 1995 p.13) reproduced in *the World Press Review* (Nov.1995, p.9). See also, Prof. Qureshi, "Linking Our Rivers",

The United Nations estimates that a billion people still lack access to fresh water. In other words, almost one out of five people in the world is without access to safe drinking water and half of the world population lacks adequate water purification system.

If the current trend continues, by 2025 the demand for fresh water is expected to rise by 56 percent more than what is currently available. The UN estimates that if the present water consumption is maintained, 5 billion people will be living in areas where it will be difficult to meet the basic water needs for sanitation, cooking and drinking. In the coming decades humanity would face an eco-catastrophe with fast depletion of the earth's fresh water resources. Rivers, lakes and aquifers of the world are literally drying up. Global demand for fresh water has increased more than six-fold in the past century. Global consumption of water doubles every two years.

It is, therefore, fitting that the World Summit on Sustainable Development (WSSD, 2002) has identified water and sanitation, as a key issue to be addressed for water resources management issue, as a major concern of states, civil societies and donor communities. It is also timely that the WSSD, 2002, has agreed to halve the portion of the people unable to reach or afford safe drinking water by 2025[5].

Geography and You, vol.2. 2002-2003, p.4, where, he opines that if the Second World War was fought for petroleum, the third one will definitely be fought for water. In an interview with the author, Prof. B.S.Chimni also holds the same view. Today, whole series of institutions and networks have sprung up to deal with this issue of water scarcity such as the World Water Commission, World Water Partnership, and so on. Today, efforts to address water problems are underway in a bewildering array of agencies with in the United Nations family. These organisations include FAO, UNDP, UNESCO, UNEP, UNIDO, WHO, WMO and the various regional economic commissions. UN agencies are increasingly co-operating on water related projects and programs, such as the UNDP / World Bank Water and Sanitation Programme, and the WHO/UNICEF Joint Monitoring Programme .In this connection, there is also an Inter - Agency Steering Committee. UN-based efforts to address fresh water problems can be found in Chapter 18 of Agenda 21,the programme of action in the field of environment and development adopted at the UNCED in June 1992. The goal for freshwater in the UN Millennium Declaration, is to halve by the year 2015 the proportion of people who do not have access to safe drinking water and to stop the unsustainable exploitation of water resources. Till date the focus of our water management strategy has been only on the increase in supply of water, not paying much attention to demand management.

[5] United Nations Millennium Declaration, Millennium Summit, New York, 6-8 Sept. 2002. It is notable that at the Stockholm Conference on the environment in 1972, much attention was given to water pollution in industrialised nations. Five years later, in 1977, the first United

These conditions can constitute a recipe for conflict and an incentive to co-operate. Thus, the use of fresh water resources shared by two or more states and disputes concerning shared water, are governed by international law and specifically by the rules concerning the non- navigational uses of international watercourses. In the nineteenth century, the dominant problems concerning rivers were navigation and the delineation of the boundary between the two countries. In the twentieth century, these matters have been settled by treaties. Subsequently, significance of non-navigational uses such as hydroelectric power, industrial uses, irrigational purposes to increase food production, maintenance of basic health and sanitation, diversion of water out of and into the basin, came to the fore.

As uses of water change as the years pass and the quality and quantity vary each year. Thus, adjustments have to be made undoubtedly to cope up with multiple and conflicting uses. For this purpose the guidance of general principles of international law is necessary. Indeed cooperation and equitable utilisation all are the logical outgrowth of rules of international law applicable in this field.

International watercourses have played a critical role in the economic development of States. For instance, the building of dikes, dams and locks on the river Rhine and the extraction of its waters have paved the way for the booming

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Nations Conference on Water in Mardel Plata, Argentina marked a specific concern for water issues with particular attention on drinking water and sanitation services. In the Brundtland Commission Report from 1987, the role of fresh water was largely being ignored. The initial agenda for the United Nations Conference on Environment and Development in 1992 also excluded water as a specific item. A series of guiding principles, however, were described, in a preparatory meeting leading up to Rio, in particular, at the Dublin Conference in 1992, following the United Nations Conference on Environment and Development. Thus, concern for water has thus begun to grow rapidly. Further, quality of fresh water resources has been identified as one of the main actions for the sustainable development in the Rio Conference, 1992. Realising this the Ministerial Declaration at the Second World Water Forum in the Hague in March 2000 called up on the nations to work towards water security in the 21st century and make water every body's business. Again the 2001 Ministerial Declaration placed greater commitments on the agreed principles of water resource management and called up on new partnership to create water wisdom. The core of watercourse management problem is water's uneven geographical distribution. Watercourse management is essential for the development of irrigation, flood control and provision of water to all sections of population. At the national level water management is concerned with the utilisation of national water resources as a whole and its relationship with other management systems. It is in this context the UN has taken into account the problems affecting many international watercourses resulting from, among other things, increasing demands and pollution by expressing the conviction that a framework convention will ensure the utilisation, development, conservation,

industrial cities along the Rhine and have made it one of the corner-stones of the economy of Western Europe. What the Rhine is for Western Europe, the Nile is for Egypt, the Colorado River for the United States, the Ganges for India, and the Jordan for Israel.

Thus, the result is that uses of international watercourses are a pervasive cause of international conflicts. Examples of rivers, which are the subject of conflicts, include the Rhine,[6] the Nile,[7] the Euphrates,[8] the Ganges,[9] and the Colorado.[10] .

Politicians and scholars have alluded to the possibility that conflicts of uses may become causes of war.[11] Even if that prospect does not materialise, conflicts of uses will increasingly threaten human population[12] and ecosystems[13] dependent on freshwater resources.

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management and protection of international watercourses and the promotion of the optimal and sustainable utilisation thereof for present and future generations.

6 In the river Rhine, discharges of pollutants in France and Germany have endangered the use of the river for drinking water and agriculture in the Netherlands.

7 The future claims of Ethiopia to the waters of the Blue Nile are bound to reduce supplies in Egypt and Sudan. See the observations by J. Dellapenna, 'The Nile as a Political and Legal Structure', in E. Brans and others, eds., *Water Scarcity: Emerging Legal and Policy Responses*, (Kluwer Law International, 1997), pp.121-33.

8 The planned 22 dams and 19 power stations are part of the Eastern Anatolian Project on the Euphrates in Turkey threaten supplies in Syria and Iraq. See 'Special Report on Power and Water – A New Source of Conflict for the Region', *Reuter Textile, Middles East Economic Digest* (25 January, 1991) (describing the attenuated problems of Turkey, Syria and Iraq in reaching agreement over the water flow to be released by Turkey). Reportedly, recent dam projects in Turkey have been initiated without consultations with Syria and Iraq; see 'Turkey Urges Syria, Iraq to Negotiate Water Dispute', *Reuters World Service*, 7 February 1996.

9 India's diversion of water from the Ganges through the Farakka barrage has caused severe water shortages in Bangladesh during the dry session and massive floods during the monsoon. See M. Asafuddowlah, 'Sharing of Transboundary Waters: The Ganges Tragedy', in n.5, p. 209; 'Arid Bangladesh Accuses India of Choking Ganges', *The Times* (15 July 1994) (describing how the withdrawal of water from the Ganges in India has caused salinity because the enfeebled Ganges cannot hold back seawater rushing upstream from the Bay of Bengal, causing what has been called 'one of Asia's greatest man-made disasters'.

10 Irrigation in the Western United States by extracting water from the Colorado River has caused salinisation that has adversely affected crop yield in Mexico.

11 See S. McCaffrey, "Water Scarcity: Institutional and Legal Responses', in Brans, n.5. pp.43-56.

12 Some 40 percent of the world population lives in the 250 river basins whose water is competed for by more than one State; see 'The Water Bomb', The *Guardian,* 8 August 1995.

13 Agenda 21, *Report of the United Nations Conference on Environment and Development,* UN Doc. A/CONF.151/26, Annex II (1992), para. 18.

States have, therefore, negotiated hundreds of river-basin treaties to prevent and resolve conflicts of uses.[14] Recent treaties apply to the Meuse,[15] the Scheldt,[16] the Danube,[17] the Jordon and Yarmouk,[18] the Nile,[19]the Mekong,[20] and the Orange River between South Africa and Namibia.[21]

Given the importance of water to life and economic development, it would be surprising if there were not conflicts and controversies within and between states over the precious water resources. India has faced problems with Pakistan over the sharing of Indus River system, but it was resolved through the Indus Treaty, 1960. The problems with Bangladesh and Nepal over sharing of water resources led to the signing of the Ganges Treaty, 1996 and the Mahakali Treaty, 1996 respectively[22].

Despite the potential for conflict, the last 50 years have seen only 37 disputes involving violence. In the same period, 157 treaties were negotiated and signed. Nations value these agreements because they make international relations more stable and predictable. In modern times there has been no war fought over water resources. In fact one has to go back, 4500 years to find the single historical example of true "water-war"- a dispute between the city-states of Lagash and

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[14] See the older overviews in *Legal Problems Relating to the Utilization and Use of International Rivers,* Report of the Secretary-General of UN, Part III, UN Doc. A/5409 (1963); FAO, *Legislative Study No.15* (1978).

[15] Agreement on the Protection of the River Meuse, Charlesville Mezieres, 26 April 1994, 34 *ILM* (1995), p. 854.

[16] Ibid., p.859.

[17] Convention on Cooperation for the Protection and Sustainable Use of the Danube River, Sofia, 29 October 1994, 5 Year Book of International Environmental Law (1994).

[18] Art. 6 and Annex II of the Treaty of Peace Between Isreal and Jordan, Arava/Arada Crossing Point, 26 October 1994, 34 *ILM* (1995) p. 43.

[19] In February 1995, eight Nile States agreed on the Nile River Basin Action Plan. See 'Development Plan Approved for Nile Basin States', *Xinhua News Agency* (13 February 1995).

[20] Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, 5 April 1995, 34 *ILM* (1995), p. 864.

[21] *Year Book of International Environmental Law* (1993), p. 240.

[22] For an analysis of these treaties see Salman, M A and Uprety Kishore, "Hydro Politics in South Asia: A Comparative Analysis of the Mahakali and the Ganges Treaties", *Natural Resources Journal*, vol.33, 1998, pp.257-63; Ramaswamy Iyer "Delhi Must Bridge Divide on Ganga", *The Times of India,* December 10, 1996.

Umma on the river Tigris-Euphrates[23]. Since then a large number of water treaties have emerged[24]

In the domestic realm, various states are having their own problems for sharing different river waters. These conditions bring countries more closely to consult and co-operate, both between and within states. However, history has shown that without a sufficiently detailed legal structure adopted by riparian states, the resolution of conflict is often prone to failure. Despite the complexity of the problems, records show that water disputes can be handled diplomatically.

At the international level, in the absence of an applicable treaty between the states concerned, the situations is governed by the rules of customary international law and are already being cited and relied upon by the government in disputes over international watercourses and in drafting new treaties.

I. 2. Concept of Interstate Conflict and International Watercourses

The term "interstate conflicts" can be interpreted in different ways. In traditional international law, it means disputes between two or more states concerning the determination of facts and the applicability of international legal rules to such facts, which in some cases, are themselves controversial. The classical case is the conflicting use of water resources which are shared by two sovereign states, both of them having exclusive jurisdiction over a part of the resource. The nature of international water disputes fall into two major categories. First, the use and apportionment of waters and the second on the question of payment of compensation

In the course at the Hague Academy of International Law in 1989, Lucius Caflisch has listed four possible foundations for the rights of states on international watercourses:

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[23] United Nations Department of Public Information, DPI/2293C-December2002, p.5.

[24] According to the FAO, more than 3,600 treaties related to international water resources have been drawn up since 805 AD, United Nations Department of Public Informations, DPI/2293G-February 2003, p.1. The United Nations Conventions on the Law of the Non-Navigational Uses of International Watercourses, 1997 (hereafter referred to as the UNCLNUIW) is one of the international agreements, which specifically focuses on shared water resources.

a) The absolute territorial jurisdiction expressed by the "Harmon Doctrine;"
b) Riparian rights allocating to all the riparian states the quantity and quality of water which natural conditions would ensure to them;
c) Unlimited freedom of navigation; and
d) Limited territorial integrity based on the common interests of the concerned states[25].

Here the third principle is irrelevant for the present considerations. Today, the last approach is widely followed and accepted. This limited territorial integrity doctrine is supported by state practice[26] and also by the federal courts in Switzerland[27], United States[28] and Germany[29]. In the International Commission of *the River Oder Case*[30], the PCIJ, in the course of determining the applicability of Treaty of Versailles to certain navigable tributaries of river Oder, referred to what is termed as "international fluvial law in general." Applying this law to the case in hand, the court stated:

> When consideration is given to the manner in which states have regarded the concrete situation arising out of the fact that a single waterway traverses or separates the territory of more than one state, and the possibility of fulfilling the requirement of justice and the consideration of utility which this fact places in relief, it is at once seen that a solution of the problem had been sought not in the idea of a right of passage in the favour of upstream states, but in that of a community of interest of riparian states. This community of interest in navigable river becomes the basis of a common legal right, the essential features of which are perfect equality of all riparian states in the use of the whole of the course of the river and the exclusion of any preferential privilege of any one riparian state in relation to others[31].

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[25] See Ralph Zacklin and Lucius Caflisch, eds., *The Legal Regime of the International Rivers and Lakes* (The Hague: Martinus Nijhoff Publishers, 1981).

[26] The case of Rio Lauca between Chile and Bolivia; the Jordan dispute and the *Lake Lanoux* Case.

[27] *Canton Zurich V. Aargan*, 1978 ATF, pp. 4,34,46,56.

[28] Wyoming V. Colorado, 259 US, pp.419, 466 (1922); New Jersey V. New York, 283 US, pp.336, 342- 343 (1931).

[29] *Donaversinkung Case; Wuir Hemberg and Prussia V. Baden* 1927, Fontes Juris Gentium, series A, S.2, pp. 173-179.

[30] *Territorial Jurisdiction of the International Commission of the River Oder*, PCIJ (ser.A), No.23.

[31] Ibid.

The principles of community of interests can thus be considered as the general foundation of the "international fluvial law".

Berber notes that the boundary between the two nations is fluid,[32] and that the determination between these jurisdictions could be inexact. Curiously enough the fluidity of the boundary between international and national began to emerge in relation to boundary waters. Boundary waters refer to waters as rivers, lakes, reservoirs and canals part of which are situated in different states.[33] They are boundary waters because they either form a boundary between states or they run through one[34]. In sum boundary waters are also called international watercourses because they are already by definition international. From this reason regulation of the use of these "shared natural resources" have to be established bilaterally and multilaterally. The general purpose of the boundary waters treaties was to prevent disputes by reconciling the various interests of riparian states.

In many cases, a river system can present complex questions because the use of its waters is demanded simultaneously for navigation, irrigation, hydroelectric power etc. Hence the function of international law is to provide rules for setting possible conflict of interests by trying to strike an equitable balance between them.

As far as non-navigational uses are concerned, states concluded already prior to World War II a number of bilateral and multilateral treaties. While some treaties related to traditional uses such as irrigation, domestic uses, fishing and floating of timber. After the industrial revolution treaties were concluded regarding the use of hydro-electric power, the size of a dam to be constructed in a boundary water, or a volume of water to be diverted for mining or industrial purposes. Moreover, in 1923, a multilateral treaty called the Convention Related

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[32] See, Berber, *Rivers in International Law* (London: Stevens and Sons, 1959), p.3.

[33] See the UNCLNUIW, New York, 21 May 1997, 36 *ILM* (1997), p.700, Art. 2 (b).

[34] Preliminary Article of the 1909 Boundary Waters Treaty between the US and Canada defines boundary waters as follows: "the waters from the main shore of lakes and rivers and connecting waterways, or the portion thereof, along which the international boundary between the US and the dominion of Canada passes, including tributary waters which in their natural channels would flow into such lakes, rivers and waterways or waters flowing from such lakes, rivers and waters, or waters of rivers flowing across the boundary."

to the Development of Hydraulic Power Affecting More than One State was concluded.[35] Further, it is to be mentioned that international community has a responsibility to ensure that riparian states enter in to bilateral and multilateral arrangement to prevent adverse transboundary impact, and for this purpose it was necessary to establish a multilateral regulatory framework. To this effect the first regional convention was adopted in 1992 under the auspices of the United Nations Economic Commission for Europe[36].

The law of the non-navigational uses of international watercourse has been one of the subjects under study or consideration by the International Law Commission (ILC). The use of the expression 'international watercourses' represents a shift of emphasis from concentration on only rivers to the wider subject of all trans-national waterways, whether these be rivers, on the one hand, or, on the other hand, lakes, canals, dams, reservoirs, and other surface waters, and as well underground waters. The ILC gave consideration to waters flowing into mainstream rivers, and recognised that rules for the regulation of river systems could not serve, to iron out inequalities in distribution of resources between states or to contribute to the solution of questions of the sovereign state over their natural territorial resources.

An international drainage basin is embraced in the expression 'international watercourses.' It involves the concept of an integrated area drained by a single river system passing through two or more states, and has been defined as "a geographical area extending to or over the territory of two or more States...

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[35] 9 December 1923, 36 *LNTS*, p. 76. The original draft of this Convention provided for a conclusion of a prior agreement between all riparians where hydraulic power works are likely to change the natural regime of the waters. In view of the strong opposition, this provision was amended during the negotiation so that the obligation was not to conclude an agreement but only to enter into negotiation as in customary international law. For example, Belgium noted that the proposal collided with state responsibility. According to Belgium, the state which possesses natural resources could under no circumstances be obliged to give them or a part of them up in favour of a neighbouring state which did not possess them; if a state which for example, possessed electric power should be compelled to share a certain quantity of power with another state, why should not the same principle be applied to states which possessed coal mines, diamond mines or any kind of natural resources, as quoted in Berber (1959), p. 124.

[36] Convention on the Protection and Use of Tranboundary Watercourses and International Lakes, adopted at Helsinki, Finland on March 17, 1992; reprinted 31 *International Legal Materials* 1312 (1993).

bounded by the watershed externalities of the system of waters, including surface and underground waters, all of which flow into a common terminus". Each international drainage basin would in principle seem to require its own, peculiar, workable set of rules for co-basin states, rather than the application of global rules formulated in the abstract, or in an absolute manner for all international watercourses. Semble, there is at least a duty on a riparian state to consider the effect of its activities on co-riparian or co-basin states. Finally, there is the problem of trans-border pollution of rivers and lakes, adding to the complexity of the whole subject.[37]

The term 'international' with reference to rivers is merely a general indication of rivers, which geographically and economically covers the territory, and interests of two or more states. Associated with rivers will be lakes and canals and other artificial works forming part of the same drainage system. Conceivably a river could be 'internationalised', i.e. given a status entirely distinct from the territorial sovereignty and jurisdiction of any state, on the basis of treaty or custom, either general or regional.

However, in practice rivers separating or traversing the territories of two or more states is subject to the territorial jurisdiction of riparian states up to the *medium film aquae*, usually taken to be the deepest channel of navigable waters. For the most part the legal regime of rivers, creating rights for other riparian and non-riparian states and limiting the exercise of territorial jurisdiction for individual riparian, depends on treaty. Particularisation of the regimes for various river systems would seem to be inevitable, since each system has its own character and technical problems. Moreover, no longer may general principles be found on the assumption that the primary use will be navigation. Irrigation, hydro-electricity generation, and industrial uses are more prominent in many regions than navigation, fishing, and floating of timber.

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[37] J.G. Starke, *Introduction to International Law* (New Delhi: Aditya Books Private Ltd., 1994), pp. 195-96.

In this field, the lawyer has to avoid the temptation to choose rough principles of equity governing relations between riparian, reflected in some treaty provisions and the work of jurists and learned bodies, as rules of customary law. On some sets of facts, however, unilateral action, creating conditions, which may cause specific harm to other riparian states, may create international responsibility on the principles laid down in the *Trial Smelter* arbitration and the decision in the *Corfu Channel* cases (merits).

The arbitral award concerning the waters of *Lake Lanoux* in 1957 was concerned with the interpretation of a treaty between France and Spain. However, the tribunal made observations on certain Spanish arguments based on customary law. On the one hand, the tribunal seemed to accept the principle that an upstream state is acting unlawfully if it changes the waters of a river in the natural condition to the serious injury of a downstream state. On the other, the tribunal stated that 'the rule according to which states may utilise the hydraulic force of international watercourses only on condition of a prior agreement between the interested States cannot be established as a custom or even less as a general principle of law.[38] All in all, the law on this subject was wage and indeterminate.

Thus, in 1970, the UNGA entrusted the ILC to codify and develop the law on the non-navigational uses of international watercourses. The ILC took 24 years to submit its Draft Articles on the subject. Later, with some modifications, those Draft Articles emerged as the United Nations Conventions on the Law of the Non-Navigational Uses of International Watercourses, 1997 (hereafter referred to as the UNCLNUIW) containing both substantive and procedural provisions. Schematically speaking, the study of the UNCLNUIW is significant because:

i) It is prepared by the ILC, a UN body that is responsible for the progressive development and codification of international law;

ii) It is the first convention on the non-navigational uses of international watercourses. It was adopted by a weighty majority of hundred and three

[38] Ian Brownlie, *Principles of Public International Law* (Oxford: Oxford University Press, 1990), pp. 271-76.

countries with only three negative votes, indicating the broad agreement of the international community on the general principles governing the non-navigational uses of international watercourses;

iii) The convention is helpful in interpreting other general or specific watercourse agreements that are binding on the parties to a controversy, whether or not the convention itself is binding on those parties; and

iv) Even before the convention's adoption, the ILC Draft Articles on which it is based had influenced the drafting of many specific agreements. (Example, the 1995 Protocol on Shared Watercourse Systems in the South African Development Community Region, and the 1995 Agreement on the Co-operation for the Sustainable Development of the Mekong River Basin). Hence, it is likely that with the adoption of the convention, States framing future agreements will resort to its provision as a starting point.

I.3. Precursors and their Contributions to International Watercourse Law

The evolution of law to govern the uses of international watercourses for purposes other than navigation has been a slow process. International organisations, both governmental and non-governmental, have made valuable contributions to the codification and progressive development of international water law. The upcoming chapters explore these contributions in an attempt to develop key principles in international water law.

The measures adopted by inter-governmental organisations include the following: Montevideo Convention on the Rights and Duties of States of 24 December 1933 adopted by the 7th International Conference of American States (League of Nations); the Principles of Law Governing Use of International Rivers adoted by the Inter-American Bar Association in 1957; Propositions adopted by the Asian-African Legal Consultative Committee in 1973; and Draft Principles of Conduct released on 7 February 1978 in Nairobi by the Inter-Governmental Group of Experts on Natural Resources Shared by More than One State.

Arts. 9 and 10 of the Montevideo Convention provides that parties should settle water disputes through "diplomatic channels", "conciliation" or "any other procedure contained in any of the multilateral conventions in effect in America."

The rules on international drainage basins adopted by the Asian-African Legal Consultative Committee are set out in Proposition X: "A state which proposes a change of the prevailing existing uses of the waters of an international drainage basin that might seriously affect utilisation of the waters by any other co-basin state, must first consult with the other interested co-basin states. In case an agreement is not reached through such consultation, the states concerned should seek the advice of the technical expert or commission. If this does not lead to agreement, resort should be had to the other peaceful methods provided for in Article 33 of the United Nations Charter and, to international arbitration and adjudication"[39].

Contributions by international NGOs include: resolutions of the Institute of International Law; resolutions of the Inter-American Bar Association; and rules adopted by the International Law Association (ILA) at the Helsinki conference. Thus, it is important to examine the extent to which these international organisations have addressed the challenge of overcoming the problems of non-navigational uses of international watercourses. A brief survey of the works of two international non-governmental organisations has been attempted as an introduction to the I.L.C. Draft Articles on the Law of the Non- Navigational Uses of International Watercourses, 1994 and subsequently the UNCLNUIW.

I.3.1.The Institute of International Law (IIL)

The I.I.L. (The Institute de Droit International) is a non- official body that was established in 1873 and is composed of around130 elected members. The IIL has played a vital role in emboldening the existing rules of international law and sometimes even formulated new rules[40].

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[39] See Asian- African Legal Consultative Committee Report 1973, pp. 91-107.

[40] See I.I.L. Madrid Resolution (1911); I.I.L. Salzburg Resolution (1961); and I.I.L. Athens Resolution (1979).

Its works relating to the use of international watercourses have been duly considered and relied upon by the international tribunals and by states in diplomatic exchanges. In 1911, the I.I.L., in its seminal Madrid Resolution stated that riparian states with a common stream are in a position of permanent physical dependence on each other[41].

The Institute drew up two essential rules resulting from that interdependence which states should observe[42]. The first one concerned the contiguous watercourses and boundary lakes, and the second one relating to the successive watercourses. The first rule was that: "When a stream forms the frontier of two states... neither state may, on its own territory, utilise or allow the utilisation of the water in such a way as to seriously interfere with its utilisation by the other states or by individuals, corporations etc. thereof".[43] The second rule was that: "When a stream traverses successively the territory of two or more states... no establishment ...may take so much water that the constitution, otherwise called the utilisable or essential character of the stream shall, when it reaches the territory down stream, be seriously modified".[44]

For instance, the Council of the Institute of International Law decided as far back as 1911 (Madrid) that:

> A State is forbidden to stop or divert the flow of a river which runs from its own to a neighbouring state but likewise to make such use of the water of the river as either causes danger to the neighbouring state or prevent it from making proper use of the flow of the river on its part[45].

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41 Institute of International Law, Declaration of Madrid, April 20,1911,24. See Year Book of International Law Commission, vol. 2, part 2, 1976, p. 200.

42 For a compilation of the report of the Institute (1979 to 1987); see FAO Legislative Study, No.23, Rome: FAO, 1980

43 Ibid., para 1.

44 Ibid Para II, Kaufman writing in the 1930's, similarly deduced rights and duties of states from the physical interdependence of stream waters. Kaufman. Regales generates du Droit de la Paix, 54 *Hague Academia de Droit International. Recueil des Cours* 390 (1935). So did Andrassy two decades later. For Andrassy, a territorial unity of a neighbouring state of which the reverse linking them are an instance and example, gave rise to a unity of cause and effect and in consequence, to the law of voisinage .Andrassy, "Les Relations Internationals de voisinage" 79 *Hague Academie-de Droit international,Recueildes Cours* 108 (1951).

45 See I.I.L. Madrid Resolution (1911).

The Barcelona Convention (1921) to which India was a signatory expressed the following view:

> No State is allowed to alter the natural conditions of its own territory to the disadvantage of the natural conditions of the territory of a neighbouring State.

The 1961 Resolution on the Use of International Non Maritime Waters states that a state's right to make use of shared waters is limited by the right of use by the other states concerned with the same river or watershed,[46] and any dispute as to the extent of the respective states rights shall be settled on the basis of equity, taking into account the respective needs of the states as well as any other circumstances relevant to any particular case.[47] This provision almost resembles the principles of equitable utilisation, though the latter applies precisely to the manner in which states use shared waters.

The 1979 Athens Resolution on the Pollution of Rivers and Lakes and International Law recognises the community of interest of states sharing international rivers and lakes in a rational and equitable utilisation of such resources through the achievement of a reasonable balance between the various interests[48]. The resolution declares that states must ensure that activities within their borders cause no pollution in the water of international rivers and lakes beyond their boundaries.

Further, the resolution contains provisions on co-operation between states. This resolution takes a "basin approach". The I.I.L. thus made a new beginning towards applying legal rules to the entire hydrographic basin rather than merely to the surface water channel: One in favour of increased use of procedural rules, possibly culminating in the establishment of joint management mechanisms, and a trend towards the idea that it is in the interest of all riparians that shared water resources is utilised in an equitable and reasonable manner.

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[46] Salzburg Resolution, (1961), Art. 2.
[47] Ibid., Art. 3.
[48] I.I.L Athens Resolution, Preamble.

According to Stephen C. McCaffrey, the resolution of IIL was a half-century ahead of its time. It blazed a trail that the Institute as well as other organisations followed, but only in the latter half of the 20th century.[49]

I.3.2. The International Law Association (ILA): The Helsinki Rules, 1966

The I.L.A. was founded in the same year as the I.I.L. The I.L.A. has a membership around 4,000[50]. In the early 1950s, there were several international river disputes, in particular those over the Indus, the Jordan, the Nile, and the Columbia rivers. At that time, however, there was no accepted rule of international law applicable to these disputes. This state of affairs led the ILA to embark in 1954 on a study of the legal aspects of the uses of waters of international drainage basins. The three Committees of ILA have been engaged in this work. The 1958 Conference held in New York adopted a resolution on the Uses of Waters of International Rivers and the Hamburg Conference of 1960 devoted to the procedures for the peaceful settlement of differences between co-riparian states regarding their rights in the waters of international drainage basins. By 1966 the ILA produced the monumental Helsinki Rules identifying the fundamental principles of international water law called equitable and reasonable utilisation.

It has been playing a pioneering role at comprehensive codification of law of international watercourses. However, the crowning achievement of the I.L.A. was the Helsinki Rules on the Uses of Waters of International Rivers[51]. The cornerstone of the Helsinki Rules is the concept of the "international drainage basin". It is defined as a geographical area extending over two or more states determined by the watershed limits of the system of waters, including surface and underground waters, flowing into a common terminus[52]. This definition is highly

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[49] Stephen C McCaffrey, *The Law of International Watercourses: Non-navigational Uses* (New York: Oxford University Press, 2001), p.319.

[50] The International Law Association, or the Association for the Reform and Codification of the Law of Nations as it was originally known, was founded in Brussels at a conference held on 10, 11 and 13 October 1873. The main objectives of the association, as its original name indicates, are the reform and codification of international law. The ILA can be seen as a collection of highly qualified publicists for the different nations represented among its ranks.

[51] The ILA Report of the fifty-second conference, 1967.

[52] Helsinki Rules, 1966, Art.II.

remarkable not only for its broad approach, which is consistent with the hydrological reality, but also for its specific mention of underground waters.

Along with the international drainage basin approach, the Helsinki rules are known for having championed equitable utilisation as the dominant principle of international watercourse law[53]. The Helsinki Rules spell out the factors, which define what is equitable[54], and as in the American riparian right doctrine, the allocation of use is not frozen, there is room for new uses, even in compatible ones.[55]

The Helsinki Rules further stipulates that as per the existing principles, a basin state might not be denied the present reasonable use of waters of an international drainage basin to reserve for a co-basin state the future use of such waters,[56] and that a use or a category of uses was not entitled to any inherent preference over any other use or category of uses. The Helsinki Rules also implied that the ground water and estuarine water as well as surface waters, were interconnected through cause and effect and this formed the basis for a holistic approach in legal aspects and prudent management of aquatic environment.

The Helsinki Rules obviously constitute a monumental work. They have had a major impact upon the development of the law of international watercourses. Further, these rules were later found expression in the framing of the UNCLNUIW. Yet, at the Seoul Conference in 1986, the ILA adopted Articles entitled 'Complementary Rules Applicable to International Water Resources[57] These Articles were mainly as guidelines for the application of the 1966 Helsinki Rules. In short, these are complementary and an attempt to give more precision to the imprecise principle of equitable utilisation and thus to make it easier to apply

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[53] The commentary to the ILA's Montreal Rules on Water Pollution in International Drainage Basins adopted in 1982, states "the principle of equitable utilisation is the foundation on which the Helsinki Rules are built", ILA Montreal Report, pp. 535-46.

[54] Helsinki Rules, Art. 5.

[55] Ibid., Art. 8 (1).

[56] Ibid., Art. 7.

[57] International Law Association, Reports of the Sixty- Second Conference, Seoul, 1986, pp.21, 275-94 and 298-303.

this principle in practice. The next chapter will explore, in some detail, the theoretical bases of the modern international watercourse laws.

I.3.3. International Law Commission (ILC)

The UNGA established the ILC in 1947 to promote the progressive development of international law and its codification. The Commission, which meets annually, is composed of 34 members who are elected by the UNGA for five-year terms and who serve in their individual capacity, not as representatives of their Governments. [58]

Most of the ILC 's work involves the preparation of drafts on topics of international law. Some topics are chosen by the ILC and others referred to it by the UNGA or the Economic and Social Council. When the Commission completes draft articles on a particular topic, the UNGA usually convenes an international conference to incorporate the draft articles into a convention, which is then open to states to become parties.

In the absence of binding legal authority for the rules relating to international rivers, the United Nations began the international effort to create a legal framework to address this growing problem. The efforts to codify the law of international watercourses were undertaken by the ILC in its Draft Articles on the Law of the Non-Navigational Uses of International Watercourses. In 1970, the UNGA noted that:

> Despite the great number of bilateral treaties and other regional regulations ... the use of international rivers and lakes is still based in part on general principles and rules of customary law.[59]

Therefore, the ILC should:

> Take up the study of the law of non-navigational uses of international watercourses with a view toward its progressive development and codification.[60]

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[58] For more general information about the ILC, see http://www.un.org/law/ilc/index.htm. See also, Jhon Dugard, " How Effective is the International Law Commission in the Development of International Law? : A Critique of the International Law Commission on the Occasion of its Fiftieth Anniversary," South African Year Book of International Law, vol.23, 1998, pp. 34-44.

[59] G.A. Res. 2669, 1970.

[60] Ibid.

In formulating rules on this subject, the ILC was not travelling in a totally unexplored terrain but benefited a lot from the pioneering work and experience of IIL and ILA. From 1970 until the submission of its provisional Draft Articles in 1991, the ILC experts worked with thirty-two governments through questionnaires and correspondence in drafting the articles. The ILC then transmitted the thirty-two articles that comprise the draft to the governments of member states with the request that their comments and observations should be submitted back to the ILC by January 1993.

In short, considering the highly technical and political character of the issue, the ILC had to find its own approach to the mitigation of the normative ambiguity. The Commission was well aware of the need to draft a provision that could be broadly acceptable throughout the world. The next chapter begins with a short problem, which inspires to explore what kind of possibilities international legal regime really have in managing and developing transboundary water resources and how such a legal framework can facilitate the process of bringing all the parties concerned on common ground to address this crucial problem.

I.4. Objective of the Study

The present study is intended to:

i) Analyse the evolution of modern transboundary watercourse law including the history of the drafting of the UNCLNUIW;

ii) Assess the extent to which a riparian state has in international law to give consideration to the rights and interests of other riparian states in using the waters of an international watercourse found within its territory;

iii) Examine how effectively balance is struck in the UNCLNUIW between the two core principles of equitable utilisation and no- harm; and

(iv) Explore the customary international law principles embodied in the UNCLNUIW by looking at state practice.

I.5. Scope of the Study

The present study explores, in some detail, the theoretical bases of the modern international watercourse law as mainly codified in the UNCLNUIW. It analyses the various general and customary principles of the modern watercourse law as embodied in the UNCLNUIW. The study will not, therefore, cover the rules governing the navigational uses of international watercourses. Further, the study will not examine national water laws and policies. Nor will it examine the bilateral or regional watercourse regimes as such.

The study is divided into three further chapters.

The second chapter deals with the doctrinal basis of international watercourse law. It describes the jurisprudence and evolving legal norms relating to the non- navigational uses of the international watercourses in terms of sources identified in Article 38 (1) of the Statute of International Court of Justice. It also surveys some of the relevant parts of the decisions of domestic courts, international tribunals, the Permanent Court of International Justice and the International Court of Justice on the subject.

The third chapter critically analyses the UNCLNUIW, in particular the principles of equitable utilisation and no-harm and the principle of co-operation. It also enquires how far they have acquired the character of customary international law from the broader perspective of establishing a legal regime for international watercourses.

The fourth chapter consists of final reflections.

CHAPTER II

LEGAL REGIME OF INTERNATIONAL WATERCOURSES BEFORE THE UNCLNUIW

II.1. Introduction

International rivers pose a particular problem in the context of international law. Occurrences, both natural and man-made, affecting the water resources in one part of the watershed have the potential to change the quantity, quality, or use of the water in another part of the watershed. Extensive development of water resources in an upstream area will reduce the flow to the lower riparian and may deprive them of adequate water supplies. Similarly, a downstream riparian's construction will impact the rate of flow in the entire river system, both upstream and downstream. Unrestricted pumping of ground water in state A can result in the drying up of springs or wells in state B. Pollution of surface water in state B can contaminate ground water in state A. Toxic substances disposed of on land in state A can find their way into an aquifer that is shared with state B, contaminating B's well and even surface water. These examples could be multiplied many times; shows, why modern international watercourse law must assume significance.

The enquiry in this chapter seeks to analyse the development of rules relating to non-navigational uses of international watercourses as mainly crystallised in the process of codification of the Helsinki rules, 1966 and critically evaluate the doctrinal bases of international watercourse laws. The chapter illustrates how legal norms and evolving legal regimes can in fact foster greater cooperation for the management of international watercourses.

II.2. Case for the Development of Substantive Water Law

Watercourses are vitally important sub-systems of the hydrologic cycle. Their significance for transportation and agriculture was recognised far back in human history and led to the assertion of authority by the riparian states over the stretches of

international watercourses that flowed through their territories[1]. This, in turn, led to conflicts and delayed the emergence of a customary law of co-operation, including the principle that the river basin should be treated as a unity in law. If accepted, this principle would reflect the physical unity of the basin, linking its waters with other components of the hydrologic cycle. The international law of watercourses, as a part of international law, regulates state relationships with respect to the utilisation of shared or common or transboundary watercourses.

II.2.1.Early Models of Fresh Water Regimes

When we are discussing a legal regime for international watercourses, it would be worthy to have an understanding of regime. According to Krasner, *regimes* are implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations. *Principles* are beliefs of fact, causation and rectitude. *Norms* are standards of behaviour defined in terms of rights and obligations. *Rules* are specific prescriptions or proscriptions for action. Decision-making procedures are prevailing practices for making and implementing collective choice[2]. Regime has to create guidelines for those actors for the establishment of negotiating framework, which is the crux of international water law too. It can be said that international water law is a sort of co-ordination game in which actor expectations are assessed. Such game seems to have focussed on description and not prescription. Regime is the result of convergence of interests and values of riparian states.

Regimes are at the outset social institutions or recognised pattern of behaviour or practice around which expectations converge. Regimes can arise spontaneously through a process of negotiation, rooted in practices. These practices are later crystallised and solidify into *opinio juris*[3] All in all, regime is a pattern of confidence

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1 A watercourse system is formed of hydrographic components such as rivers, lakes, canals, glaciers and ground water constituting by virtue of their physical relationship a unitary whole; thus, any use affecting waters in one part of the system may affect waters in another part. An "international watercourse system" is a watercourse system, components of which are situated in two or more States. International watercourse law focuses solely on freshwater law and does not apply to coastal, ocean or seawaters. Modern international watercourse law is the result of an evolutionary process in legal doctrine related to the agricultural and navigational uses of transboundary freshwater.

2 Stephen D. Krasner, "Structural Causes and Regime Consequences: Regimes as Intervening Variables", in Stephen D. Krasner, ed., *International Regimes* (1983).

3 Sharing of information, prior notification,equtable utilisation and no-harm rule.

building measures. Another meaning of the term regime is more precise; the set of commitments that emerge from negotiations and often result in frame work agreement.

II.2.1.1. Sectoral Approaches

The majority of early fresh water regimes were sectoral in one or more aspects[4]. For example, the earliest agreement sought to govern activities such as navigation, fishing. Progressively matters such as apportionment of waters, flood control, irrigation and energy generation took over primary concern in treaty making.

II.2.1.2.Competitive and Use Oriented Approaches

Under this approach, a rigid formula for the allocation of waters was devised in tune with the principle of equitable utilisation and no harm rule and also by keeping in mind the competing sovereign issues. This approach also takes into account the areas of procedural obligation. Hence, it can be said that the regime should be rooted in the co-operative paradigm for promoting rules concerning ecologically sound conduct such as the principle of sustainable development, intergenerational equity and the precautionary principle.

Further, the regime should consider the future and provide sufficient flexibility to accommodate new concerns and interests as they may emerge. Hence what is clear is that procedural framework is a pre-condition to the realisation of substantive eco-system orientation and the continuing evolution of substantive norms.

The legal regime for international watercourse is largely based on European and North American state practices. These practices are based on a use-centric individualistic development model. International law in its present stage of development does not consider water in its totality, (surface, atmospheric and underground water); the legal regime is related mainly to its various uses. Mostly, surface waters have been the objects of some detailed regulations[5]. However, over the last few decades the use of international fluvial or lake waters has begun to be regulated by considering the basin as a unit.

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[4] On navigation, see for instance, Congress of Vienna, Final Act, June 9, 1815, Convention on the navigation of Rhine.

[5] For general discussion, see Ralph Zacklin and Lucius Caflisch, eds., *The Legal Regime of the International Rivers and Lakes* (The Hague: Martinus Nijhoff Publishers, 1981) and Chauhan, *Settlement of International Water Law Disputes in International Drainage Basins.* (Berlin: Schmidt, 1981). The concept expressed hereafter by the word 'international', 'shared' or 'transboundary' water resources is synonymous.

Historically, countries have exercised absolute sovereignty over the use of rivers and other natural resources located within the states' territory, no matter what the effects of the resource use on neighbouring countries. This principle of absolute territorial sovereignty is often referred to as the Harmon Doctrine. Under the Harmon Doctrine, an upstream state can freely deplete or utilise a river's flow within its boundaries without considering the effect of its actions on a downstream state. This legal doctrine, however, has since become disfavoured as an anachronistic and narrow view for reconciling differences among opposing states where a shared natural resource is at issue.

Before the emergence of United Nations Convention on the Law of the Non-navigational Uses of International Watercourses, 1997 (the UNCLNUIW), international law allowed for the construction of legal arguments that undermined the legitimacy of its rules. International water law seeks to reconcile the sovereign rights of states sharing freshwater resources so as to optimise benefits for all, while ensuring adequate protection of the watercourse. States planning projects on international watercourses, including tributary streams and groundwater, must account for international law rules requiring prior notification, equitable utilisation and prevention of significant harm. These rules greatly restrict the scope for purely unilateral action.

Before explaining the recent shift in the framework of international water law, it would be appropriate to describe and analyse the legal regime before the UNCLNUIW. In the early years of industrial development, international water law was manifested primarily in the form of bilateral treaties. Typically, bordering countries would enter into agreements for the sharing of a river or lake in the context of defining political borders, flood management, reallocating waters for growing populations, diverting river flow for agriculture, and developing new industries.

The development of the law, however, also resulted from various international and the US decisions concerning the same issues, including, for example, *Jurisdiction over the River Oder; the development of the River Meuse, the utilisation of the waters of Lake Lanoux.* In an effort to bring uniformity to international water law, the ILA developed the Helsinki Rules in 1966, a comprehensive code for the use of transboundary drainage basins. The rules included provisions for both the navigational and non-navigational uses of transboundary waters. The Helsinki Rules, however, have

become best known for their non-navigational guidelines and are often regarded as the predecessor to the UNCLNUIW.

Where a treaty or treaties, whether multilateral or bilateral are in existence the provision related to water constitute the law applicable among the signatories. In earlier times, rivers were considered 'international' when navigable. These rivers would be either successive or contiguous depending on whether they would cross or separate two or more states. During the last sixty years, the development of international watercourses for purposes other than navigation and hydropower generation and, in particular, for consumptive uses such as irrigation and water supply has caused a number of other water treaties to be signed on several shared international water resources[6]. These treaties are still limited in numbers, scope and regard, for instance, the Nile, Senegal, Gambia and Kagera rivers, as well as, the Lake Chad in Africa, the Mekong, Indus, Kosi and Ganges basins in Asia; the Rio Grande/Colorado, the boundary rivers between Canada and United States, and the Rio de la Plato in the Americas. A number of treaties have been entered into in Europe also. Among these we may quote treaties concerning the Rhine and the Danube rivers[7].

Thus, extensive international practice in the use of treaties to resolve transboundary water conflict has evolved since then.[8] This practice is marked by the evolution of the doctrine of equitable utilisation for resolving transboundary water conflicts. Treaty practice has also led to the development of another idea, the equitable participation that goes a step beyond equitable utilisation.

The development of theoretical and customary law principles for international water resource allocation has led to several significant attempts to codify these principles. Since the beginning of this century, legal scholars and diplomats have attempted to develop a mechanism for regulating international watercourses.

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6 Treaties related to waters are numerous. They include regulation of the world's ocean through the 1982 United Nation Convention on the Law of Sea and 17 Regional Seas Programme as well as regulation of fresh water through two framework conventions and 2000 bilateral and multilateral treaties regulating at least 242 transboundary watercourses.

7 Jutta Brunnnee and J.Stephen Toope, "The Changing Nile Basin Regime: Does Law Matter?" *Harvard International Law Journal,* vol. 43, 2002, pp.105-59.

8 At least ninety-one treaties governing international rivers have been documented. See H. Smith, *The Economic Uses of the International Rivers* (London: King and Sons Ltd., 1931); UN Economic Commission for Europe, Committee on Electric Power, Legal Aspects of Hydro Electric Development of Rivers and Lakes of Common Interest, UN Doc.E/ECE/13(1952) (40 treaties original UN Doc. E/ECE/EP/98/Rev.1). See also W. Griffin, "The Use of Waters of International Drainage Basins under Customary International Law", *American Journal of International Law*, vol. 53, no.1, 1959, p.50.

Customary watercourses law has been stemming from variety agreements between the states regarding the use of international watercourses. Such fundamental norms are: the principle of equitable utilisation, principle of no-harm and the principle of co-operation. The principle of co-operation includes sharing of information and data, negotiation and consultation. More often, the principle of equitable utilisation will be the guiding principle governing the non-navigational uses of international watercourses.

In 1910, the Institute of International Law proposed a framework for regulating international waterways. In the following year, the Institute passed the Madrid Resolution on the uses of international rivers. In the 1920s, the League of Nations adopted the only two existing multilateral treaties on the use of international waterways, which are the freedom of navigation and agricultural uses of international rivers. In 1966, the most significant codification of the principles of international law regarding transboundary water resources was completed through the International Law Association's (ILA) Helsinki Rules on the Uses of the Waters of International Rivers.

The foundation of the Helsinki Rules is that each state within an international drainage basin has the right to a reasonable and equitable part of the beneficial use of the basin waters. According to the ILA, this idea is "a development of the rule of international customary law which forbids states to cause any substantial damage to another state or to areas located outside the limits of national jurisdiction"[9]. The Helsinki Rules, for the first time, incorporated the equitable use idea in stating that "each basin state is entitled, within its territory, to a reasonable and equitable share in the beneficial uses" of a drainage basin's waters[10]. Unfortunately, during that time the enforceability of the Helsinki Rules has been undermined by the ILA's status as an unofficial organisation. As a result, the ILA's resolutions was not considered to be legally binding in international law unless they are adopted in the form of a multilateral convention or followed by state as state practice.

II.3. General principles of the Law of International Waters

There are two basic types of international law: (i) treaty law; and (ii) customary law. In the absence of an applicable treaty on shared waters, countries' rights and

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[9] See the Commentary to Helsinki Rules, 1966.

[10] Helsinki Rules, ILA Report (1966), p. 477-532, see also ILA, Report of the Forty- Eight Conference held at New York, September 1-7, 1958, p.89.

obligations are governed by customary international law. *Opinio juris necessitates* refers to an obligation felt by the state when certain practice is required by international law[11] In the *North Sea Continental Shelf Cases*[12], it was clarified that the conditions leading to the creation of the customary law based on treaty provision include the following:

1) Provision must be a norm- creating nature;
2) There must be a wide spread participation in the treaty regime, including those states that are especially affected;
3) State practice must be consistent with the existence of obligation.

Many of the rules of customary international law concerning shared freshwater have been "codified" in the UNCLNUIW. Though not in force, the Convention has been cited as evidence of custom by the International Court of Justice.[13]

II.3.1.Three Main Principles of *Customary International Law on Watercourses* are:

1. Equitable and reasonable utilisation: Shared water must be used in a manner that is equitable and reasonable vis-à-vis co-riparian states. What is "equitable and reasonable utilisation" is determined case-by-case, taking into consideration all relevant factors based upon both natural and human-related phenomena.

2. Prevention of significant harm: Countries must do their best to prevent uses within their territories from causing significant harm to other states. Probably, the most controversial issue in international water law is the relationship between the equitable utilisation and prevention of significant harm principles. The UNCLNUIW seems to suggest that one state's use can cause some harm to another state and still be justified as equitable.

3. Prior notification: A state must notify other states of planned activities that may adversely affect those watercourse states. Potentially affected states must be permitted to comment on and consult with the notifying state concerning the plans. An emerging

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[11] Sometimes seen as behavioural element in the formation of customary international law.
[12] FRG v. Netherlands, ICJ p.3, paras. 42-44, Feb. 20, 1969.
[13] The significant ruling was a 1997 case on the Gabcikovo-Dam on the Danube, between Hungary and Slovakia, 1997 ICJ p.7. The ICJ came into being in 1946, with the dissolution of its predecessor, the Permanent Court of International Justice. That earlier body, PCIJ, did rule on four international water disputes during its existence from 1922-1946.

principle is to protect and preserve the ecosystems of international watercourses from being harmed through pollution and other human activities. The ICJ has strongly endorsed the obligation not to harm the environment of other states or areas beyond the limits of national jurisdiction.[14]

The foregoing principles are said to be customary international law because it was followed generally in the long duration, frequency and uniformity and was regularised as a set of behavioural dispositions inherited from the past. All in all, it establishes expectations regarding the management of international watercourses among the riparian states.

The principle of customary law is nonetheless abstract; for customary law to be substantive at an operational level, there must also be rules. At the present stage of the evolution of transboundary watercourse law, in addition to the principle of equitable utilisation and no-harm, five principles appear solidly established. These include a requirement of notice prior to dry diversion, or requirement of consultation prior to diversion that will result in a substantive (i.e., material) decrease in the quality and quantity of water flow to a lower riparian, a presumption of illegally for any diversion that will results in an environmental (i.e., a species extinction) of human (i.e., a loss of subsistence water supply) tragedy.

II.4. Doctrinal Bases of International Watercourse Law: A Critical Analysis

The writings of publicists in clarifying and identifying the governing principles of water law are not only a few but also divided. Broadly speaking, theories enunciated by scholarly commentators may be classified into six categories:

1) Absolute Territorial Sovereignty (Harmon Doctrine);
2) Theory of Prior Appropriation (Theory of Established Rights);
3) Doctrine of Absolute Territorial Integrity (Natural Water Flow Theory);
4) Limited Territorial Sovereignty Doctrine;
5) Community of Interests Doctrine (Doctrine of Common Management);

[14] *Gabcikovo Nagymaros Case*, 1997 ICJ p.7 and *Nuclear Weapons cases*, 1974 ICJ p. 372.

6) Principle of *Sic Utere Tuo Ut Alienum Non Laedas* (Principle of Good Neighbourliness).

II.4.1. Absolute Territorial Sovereignty (The Harmon Doctrine)

The theory of absolute territorial sovereignty is associated with the Harmon Doctrine. This doctrine draws its name from an opinion delivered in the late nineteenth century by an American Attorney General during the time of dispute between the US and Mexico over the use of Rio Grande Water.[15] Specifically, Harmon stated: "The fundamental principle of international law is the absolute sovereignty of every nation, as against all others, within its own territory. All exception.... to the full and complete power of a nation within its own territories must be traced up to the consent of the nation itself."[16] In support of his argument, Harmon cited the judgement of the then Chief Justice Marshall in the case of the *Schooner Exchange v. Mc Fuddon.*[17]

Thus, according to this theory, each state is the master of the own territory and may adopt in regard to watercourse, all measures deemed suitable to the national interest, irrespective of their effects beyond its borders.[18]

The Harmon Doctrine, as noted above, was developed out of a dispute between Mexico and the United States that arose in 1894. Mexico protested against the diversion of the Rio Grande in the US to the detriment of existing Mexican users. Mexico contended that the principles of international law would form a sufficient basis for the rights of the Mexican inhabitants on the bank of the Rio Grande. Their claim over the use of the water of that river is incontestable, being prior to that of the inhabitants of Colorado by hundreds of years, and, according to the principles of civil law, a prior claim takes precedence in case of dispute. Then the US Secretary of State

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[15] McCaffery, *The Law of International Watercourses Non-navigational Use* (New York: Oxford University Press, 2001), pp.584-85. See Harmon Opinion (opinion of the US Attorney General, Harmon to the US Secretary of State), 13 December 1895 and is reproduced in Cairo A. Robb and others, eds., *International Environmental Law Reports* (UK: Cambridge University Press, 1999), pp. 543-49.

[16] Ibid.

[17] See, William Cranch, *Reports of Cases Argued and Adjudjed in the Supreme Court of the US, in February Term 1812 and Term 1813*, vol.VII, third edition (1911), pp.116-46.

[18] The principle of absolute territorial sovereignty posits that states have the right to unrestrained use of resources within their territories. The principle is also known as the Harmon Doctrine, after US Attorney-General Judson Harmon, who declared in 1895 that, in the absence of established law to the contrary, states are free to exploit resources within their jurisdiction without regard to the extraterritorial effects of such action. In direct contrast to absolute territorial sovereignty, absolute territorial integrity provides that lower riparian states have the right to the continuous or natural flow of a river.

requested Attorney-General Harmon to prepare an opinion on the Mexican contentions. Harmon declared in 1895 that, since the US had sovereignty over the Rio Grade in its territory, international law imposes no obligation upon the US to share the water with Mexico, or to pay damages for injury to Mexico caused by water diversion in the US. Significantly, the US government did not comply with the opinion given by Harmon. Instead of implementing the opinion, Mexico and the US jointly established a boundary commission to investigate and report on the Rio Grande dispute. On 25 November 1896, the commission issued a report stating that the only feasible way to regulate the use of the water in order to secure the legal and equitable rights of each state was to build a dam at El Paso. The commission further reported that Mexico had been wrongly deprived of its equitable rights for many years. It recommended that the dispute should be settled by a treaty that divided the use of water equally. Mexico waived all claims for past damages. The treaty was accordingly concluded on 21 May 1906.

A historical survey of the views of commentators shows that while there was some support for the theory of absolute territorial sovereignty in the nineteenth century and even in the earlier decades of the twentieth century, it declined sharply as the significance of non-navigational uses increased. Berber refers to ten authors as supporting this doctrine. These include, Kluber, Heffter, Bousek, Mackay, Schade, Simsarian, Hyde, Fenvick, Bourne and Briggs.[19] It is striking that this list contains commentators from only four countries. Austria, Germany, Canada and the United States. And only two of these countries are in Europe, where the experience with international watercourse problem is the richest. It may not be coincidental that all four states represented are upstream countries. It helps explain their positions understandable since, to paraphrase Holmes, the law reflects experience more than logic.[20]

No contemporary works support this doctrine. It will suffice for present purposes to refer to one highly regarded work. The first edition of Oppenheim's classic treatise on International Law was published in 1905, only a decade after Harmon advanced his doctrine. In a section on 'independence and territorial and personal supremacy', Oppenheim states as follows:

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[19] F.J. Berber, *Rivers in International Law* (London: Stevens and Sons, 1959), pp. 15-19.
[20] McCaffery, n. 15, p. 126.

> Just like independence, territorial supremacy doesn't give boundless liberty of action. Thus by customary international law... a states is, in spite of its territorial supremacy, not allowed to alter the natural conditions of its own territory to the disadvantage of the natural conditions of a territory of a neighbouring state - for instance to stop or divert the flow of a river which runs from its own into a neighbouring territory.[21]

However, some states like Ethiopia still stand by the Harmon Doctrine, as shown by a series of terse statements issued by her Ministry of Foreign Affairs in 1998, in which, Ethiopia asserted and reserved for herself "all the rights to exploit her natural resources". However these statements must be evaluated with caution. They were made in the heat of exchanges between the government of Egypt and Ethiopia. Egypt and Sudan purported to allocate all the Nile waters between them without the participation of any of the other eight basin states, including Ethiopia, which contributes some five-seventh of Nile waters reaching Egypt. Egypt has also shown hostility to independent Ethiopia in the very aspect of its international existence. In other words, Ethiopia's reliance on the Harmon Doctrine is perhaps understandable in the larger context of the relations between the states.[22] They may have been in part designed to elicit Egyptian cooperation on fluvial and other matters.

While the Harmon Doctrine has undoubtedly been advanced by a few states in diplomatic exchanges concerning co-riparian states, it has seldom, if ever been reflected in the resolution of actual controversies. The reason being, Smith in his highly respected 1931 work noted, Harmon's attitude seems to have been merely the caution of the ordinary lawyer who is determined not to concede unnecessarily a single point to the other side.[23] The very state that articulated this doctrine later repudiated it since this was not figured in the solution of actual disputes. According to Berber, a solution based on this doctrine, would be 'grounded in an individualistic and anarchical conception of international law in which personal and egoistical interests are raised to the level of guiding principles and no solution is offered for the conflicting interests of the upper and lower riparian.[24]

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[21] Hersch Lauterpacht, *Oppenheim's International Law* (London: Longmans, Green Co.,1955), p. 475.
[22] It can be recalled that Egypt had itself constructed the Aswin Dam, which was heavily dependent upon Blue Nile Waters, without even consulting Ethiopia.
[23] Smith, n. 8, p. 145.
[24] Beber, *Rivers in International Law* (London: Stevens and Sons, 1959), pp. 15-19.

The North Atlantic Coast Fisheries case,[25] the tribunal effectively abandoned the doctrine of absolute sovereignty. The tribunal noted that sovereignty was subject to limitations based on international law or limitations agreed to in a treaty. All in all, Oppenheim, Brierly, Arechaga and Austin do not support the Harmon Doctrine[26]. Further, the developments of Helsinki Rules have already weakened this doctrine.

II.4.2 Theory of Prior Appropriation

A distinct but similarly restrictive theory of water allocation is the principle of prior appropriation. It favours neither the upstream nor the downstream state, but rather the state that puts the water to use first, thereby protecting those uses, which existed prior in time. Each state along a watercourse may thus be able to establish prior rights to use a certain amount of water depending on the date upon which that water use began. The law of prior appropriation will increasingly evolve into a shadow or framework allocation rule.

In doing so, however, the principle may be inequitable where one state lags behind another in the economic or technical ability to develop its river use. Further, in rewarding those who first put water to use, the doctrine does not take into account either thorough planning or environmental uses of the river. Consequently, it has received little support from the international community.

The law of prior appropriation was evolved as an anti-thesis to the common law of riparian rights. Prior appropriation is an exclusive property rights model regime, which assumes that all available resources should be used to the point of exhaustion but that each user shows in advance the extent of their rights so that the risk of interference with other use will be minimised. The function of the law is, therefore, to establish the ground rules for the acquisition of a relatively exclusive right and to police the exercise of the right to protect the interests of other users.[27]Hence the focus should be more on protecting actual expectations of water users; rather than on formal entitlement.

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[25] The Hague, 7 September 1910, UNRIAA, pp. 172-226.

[26] Indian Law Institute, *Interstate Water Disputes in India*(Bombay: Triupathi Private Ltd,1971),p.94.

[27] A. Dan Turlock, "Current Trends in United States Water Law and Policy: Private Property Rights, Public Interest Limitations and the Creation of Markets" in Edward H. P. Barns and others, eds., *The Scarcity of Water: Emerging Legal and Policy Responses* (The Hague: Kluwer Law International, 1997), p.187.

The doctrine of prior appropriation creates relatively firm consumptive rights allowing the use of the last drop of water in a stream if necessary. It is a use based rather than land based system of property rights. Prior appropriation is difficult to apply to ground water. For example, most states have rejected a senior "right to lift" because it would freeze pressure levels and discourage subsequent use[28]. They don't recognise the junior right to lower pressure to a reasonable level. In times of water shortage, junior rights must cut back so that senior right holders will obtain the full amount of their right. Anyhow, to promote the maximum use by the maximum number of users, courts imposed three historic limitations on the enjoyment of appropriative rights. They are:

a) A right must be used to be held; unused rights are subject to abandonment or statutory forfeiture;
b) The use must not be wasteful. Waste was originally defined by community custom but more recent decisions and administrative practice impose a higher standard, although it falls short of technological or economic efficiency;
c) The use must be for a beneficial purpose. This is a flexible standard as it encompasses new uses such as in stream flows so it has, in effect, become a restatement of the anti waste prohibition and can be used to avoid water rights being held for a speculative purpose.[29]

In order to acquire the appropriate rights, the appropriator must show that:

1. Unappropriated water is available;
2. The proposed appropriation will not interfere with prior rights; and
3. The appropriation is in the public interest.

II.4.3 Doctrine of Absolute Territorial Integrity:

The theory is closely related to the old common law doctrine of private water rights whereby a lower riparian has the right to demand the continuation of the natural flow of waters coming from upstream. In other words, no state is permitted to modify the natural conditions of its own territory to the disadvantage of the natural conditions of the territory of a neighbouring state. A state should not divert, interrupt, artificially

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[28] E.g. *Wayman V. Muarry City Cor.*, 23 Utah 2d 97, 458, p. 2d, 861c (1969).
[29] For an interesting example of the principle, see the dissenting judgment in *Home Builders Asociation V. City of Scottdale*, 902, p. 2d, 1347, 1995.

increase or diminish the flow. In direct contrast to the Harmon Doctrine and prior appropriation is this principle that the lower riparian states have an absolute right to have an uninterrupted flow of the river from the territory of the upper riparian, no matter what the priority. This theory, known as absolute territorial integrity, posits that a riparian state may not develop a portion of a shared river course if it causes harm to another riparian. Like the Harmon Doctrine and prior appropriation, this theory has received little support among the international legal community. It is viewed as placing an inequitable burden on the upper riparian without exacting similar duties on lower riparian. Therefore, the theory has only been invoked where the continued flow of water is critical to the lower riparian's survival.

Bolivia, a downstream state in relation to Chile, has relied on the doctrine of absolute territorial integrity in disputes concerning in Rio Maure and Rio Lauca.[30] In the Rio Mauri Case, Bolivia relied upon civil law, in particular the law of riparian rights. While this doctrine of private law has some features in common with the theory of absolute territorial integrity, its invocation is hardly a sound basis for concluding that a country believes the latter theory to be a part of general international law.[31]

The doctrine of absolute territorial integrity is said to be supported by certain commentators including Schenkel, Max Huber, Fleischmann, Reid and Oppenheim.[32]

Oppenheim's eighth edition may be read as supporting the theory under discussion, but it is submitted that more reasonable interpretation would attribute to it only the more obvious view that an upstream-state may not entirely 'stop or divert' a successive watercourse of the river as either causes danger to neighbouring state or prevents it from making proper use of the flow of the river on its part.[33] That the latter interpretation is more likely. The correct one is suggested by the latest edition of the work, which retains the languages in question but adds such object to works carried out by another riparian, unless its own interests in the river waters are affected substantially.[34]

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30 Lucius Caflisch, *The Law of International Waterways and its Sources* (The Hague: Martinus Nijhoff, 1993), p. 115.
31 Mc Caffery, n. 15, p.133.
32 Ibid.
33 Lauterpacht, n. 21, p. 475.
34 Ibid., pp. 584 -85.

A close scrutiny reveals that the purported doctrinal support for the absolute territorial integrity appears less strong and unequivocal than it might appear at the first blush. History has been no kinder to this doctrine than to it's theoretical opposite, that of absolute territorial sovereignty.[35] Both doctrines are in essence, factually myopic and legally anarchic,[36] as they deny that sovereignty entails duties as well as rights. To conclude that the two doctrines were identical, therefore, one would have to interpret the *sic utere* maxim to mean:

a) That it applied to upstream, but not down stream states; and

b) That any change whatsoever in the natural flow of an international watercourse constitutes 'harm' to a down stream state.

II.4.4. The Limited Territorial Sovereignty Doctrine

Despite the unfortunate Soviet-era connotations of its name,[37] the doctrine of limited territorial integrity is probably the prevailing theory of international watercourse rights and obligation today.[38] According to this theory sovereignty of a state over its territory is limited by the obligation not to use it in such a way as to cause significant harm to other states[39]. Metaphorically, It may be expressed in national legal system as follows: The freedom to swing one's fist ends where the other person's nose begins.

Clarifications of transboudnary watercourse law depend in large part on state agreement about what fundamental policy should inform this law. There exist four general candidates: absolute territorial sovereignty, absolute territorial integrity, limited territorial sovereignty and community of interests.[40]

Scholars generally agree that the first two approaches (which, in the first case, burden upstream states with no duties to downstream states and, in the second case, give downstream states an effective veto over proposed upstream uses) do not embody

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35 McCaffey, n. 15, p.135.

36 Smith, n . 8, p. 144.

37 This doctrine also known as 'the Brezhnev Doctrine was proclaimed in Statement justifying the Soviet invasion of Czechoslovakia. See New York Times, 27 September 1963, and also 7 *ILM* 1323 (1968).

38 McCaffery, n. 15, p. 137.

39 Akin to the principle of *sic utere tuo ut alienum non laedas*, this doctrine holds that a state may use the waters flowing through its territory only to the extent that this does not interfere with the reasonable utilisation of downstream states.

40 See Gabriel Eckstein, Application of International Water Law to Transboundary Ground Water Resources and the Slovak-Hungarian Dispute over Gabcuikvo Nagymaros, *Sufflok Transational Law Review*, vol. 19, 1995, pp. 67 and 72.

customary law and do not have place in emerging treaties.[41]. In contrast, limited territorial sovereignty and community of interests enjoy support from scholarly circles and in practice, with the more conservative limited territorial sovereignty informing the greater mass of current customs[42], but with the community of interest quickly gaining ground. Indeed, for navigation uses, discussed below, community of interest long ago displaced limited territorial sovereignty.

Limited territorial sovereignty, broadly understood, places some restrictions on state discretion, primarily based on the principle of *sic utere tuo ut alienum non laeads*. In turn, community of interests requires that decision-making be undertaken collectively and in consideration of the best use of the entire basins. To distinguish between these two approaches, while limited territorial sovereignty doesn't burden states with any substantive obligation to maximise the efficiency of the allocation of watercourse resources, community of interests takes efficiency as a starting point.

The limited territorial sovereignty doctrine curtails absolute territorial sovereignty and integrity but at the same time does not go to the extent of the community of interest theory.[43] It envisages a less advanced level of international integration. Hence each state has a right to have a river system considered as a whole, and to have its own interests taken into account and weighted in the balance against those of others. And each state is precluded from making any alteration in the river system, which would be of enjoyment without that of other state's consent.[44]

As Sauser-Hall has observed, law is an art as well as a science. It is only by an objective appreciation of facts that it will be possible to discover the fair extent to which the various riparian states must take their reciprocal interests into consideration. Limited territorial sovereignty places some restrictions on state discretion, primarily based on the principle of *sic utere tuo alienum non laedas.* Commentators

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41 Absolute territorial sovereignty thesis is often called Harmon Doctrine. This doctrine has been almost universally rejected. The UNCLNUIW established Chinas as something of a rouge state regarding watercourse laws, because during negotiations it advocated the absolute territorial sovereignty rhetoric of the Harmon Doctrine. Schewabach posits that only Rwanda and China adhere to this doctrine, see, Schwabach, "The United Nations Convention on the Law of Non-navigational Uses of International Watercourse, Customary International Law, and the Interest of Developing Upper Riparians", *Texas International Law Journal,* vol. 33, 1998, p. 257.

42 The approach generally taken to balance the right of lower and upper riparian owners is one of limited territorial sovereignty, see, Schwabach, Ibid., p. 449.

43 See Ignaz Seidl- Hoheveldern, *International Economic Law* (The Hague: Kluwer Law International, 1990).

44 P.K. Menon, "Water Resources Development of International Rivers with Special Reference to the Developing World," *International Lawyer,* vol. 9, 1975, pp. 441-64.

overwhelmingly endorse the view that, international law imposes limitations on state's freedom with regard to the portion of an international watercourse system within its territory and they explained the theory in terms of 'neighbourship law'. In *Trail smelter case* the arbitral tribunal concluded that:

> Under principles of international law... 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 properties or person therein when the case is of serious consequences and the injury is established by clear and convincing evidence.[45]

Decisions of national courts also support the doctrine of limited territorial sovereignty. Most often cited in these connections are the equitable apportionment decisions of the US Supreme Court in cases between American States.[46]

II.4.5. Community of Interest Doctrine

This doctrine envisages a collective right of action by all riparian states in such a manner that none of them can dispose of the waters without consultation and cooperation of others[47]. According to its chief exponent, Henry Farnhan, a river, which flows through the territory of several states, is their common property and neither state can do any act, which will deprive the other of the benefits of those rights and advantages[48].

This theory may sound like a modern innovation but in fact has antecedents in Roman law. The more fundamental notion that all freshwater is something that should be shared by the community is a powerful one that has been embraced by philosophers and poets since ancient times including Plato, Ovid and Virgil. This view of water was endorsed by no less a figure than Grotius. In a chapter of *De Jure Belli ac Pacis* entitled, 'Of Things which belong to Men in Common', Grotius wrote:

> Thus a river, viewed as a stream, is the property of the people through whose sway the people is... The same river, viewed as running water, has remained common property, so that any one may drink or draw water from it.[49]

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[45] 2 UNRIAA, p. 1965.

[46] *Kansas V. Colorado*, 206,US 46(1907).

[47] The theory of community of interests advances the goal of optimal use and development of a transboundary water resource. It seeks to achieve economic efficiency and the greatest beneficial use possible, though often at the cost of equitable distribution and benefit among the states sharing the resource. The principle of prior appropriation posits that current uses of water have precedence over future or planned uses.

[48] Mc Caffery, n. 15, p.161.

[49] Grotius (1583-1645), whose systematic treaties De Jure Belli ac Pacis (The Law of War amd Peace) first appeared in 1625, gives an account of numerous topics of legal science and touched on the problems of

Speaking of freedom of passage on the Sea, Grotius quotes Liberians as follows; "God didn't bestow all products upon all parts of the earth, but distributed its gifts over different regions, to end that men might cultivate a social relationship because one would have need of the help of another. And so He called commerce into being, that all men might be able to have common enjoyment of the fruits of earth, no matter where produced." Whether by the design of providence or otherwise, the uneven distribution of fresh water on Earth has brought neighbouring nations together in the past; it appears almost inevitable that it will bring more disparate members of the international community together in the future,[50] shows the significance of the community of interest theory in the field.[51]

The ICJ has observed that modern development of international law has strengthened this principle for non-navigational uses of international watercourses as well, as evidenced by the adoption of the convention of 21 May 1997 on the Law of the Non-navigational uses of International Watercourses by the United Nations General Assembly.[52] On the basis of the community of interest principle, the court concluded that Czechoslovakia, by unilaterally assuming control of a shared resource, and thereby depriving Hungary of its right to an equitable and reasonable share of the natural resources of the Danube failed to respect the proportionality which is required by international law.[53] Thus, the concept of community of interest can function not only as a theoretical basis of the law of international watercourses but also as a principle that informs concrete obligation of riparian states, such as that of equitable utilisation.

The notion that there is a community of interest of riparian states in the waters of an international watercourse is a venerable one. Just as the PCIJ found in its 1929 *River Oder decision* that the community of interest of riparian states formed the basis of a common legal right in the whole course of the river including its tributaries, so it must be concluded today, with the ICJ in its 1997 judgement in the *Gabcikovo-Nagymaros* case, that this community of interest applies to non-navigational uses as

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theological and philosophic interests and is considered the first framework of the modern science of international law.

50 Mc Caffery, n.15, p. 174.

51 Grotius writing in the 1620s adhered to the view that a river is a common property.

52 1997, ICJ, para 85.

53 Ibid.

well as to navigational ones. The community of interest extends to all terrestrial elements of the hydrologic cycle, that is, including not only tributaries but also ground water that feeds or is fed by surface streams or lakes.

It can be said that the notion of community interest in an international watercourse reinforces the doctrine of limited territorial integrity rather than in any way contradicting that doctrine. It belies the notion that a state sovereignty over the water in its territory allows to do whatever it wishes with that water in addition to its reinforcing function .The community of interests theory may be seen as having several advantages over that of limited territorial sovereignty.

Firstly, the expression conveys a more accurate conception of the relationships of states, sharing the watercourse, in which even non-riparian states and the international community have interests in the international watercourses because of the potential harm that pollution from land-based sources may cause to the marine environment. Secondly, this theory expresses more accurately the normative consequences of the physical fact that a watercourse system is, after all, a unity. It is one thing that is shared by more than one state. A third advantage of the notion of a community of interests is that it implies collective, or joint action. Whereas the doctrine of limited territorial sovereignty merely connotes unilateral restraint, the concept of community of interests evokes shared governance, joint action. It seems only logical that such a community would be best expressed in the form of a regime of joint institutional management of the watercourse.

Publicists have drawn analogies to different private law theories that have features in common with the community of interest doctrine. These theories include joint, or co-ownership (common property), condominium, consortium and neighbourship rights. In this category, neighbourhsip law does offer useful analogies. A common law doctrine that has much in common with neighbourship law is the law of nuisance. Here a community is to be understood in the sense that all riparian states share something in common, the watercourse. All have interests in it, and usually have the capacity to affect the others in some way and hence all riparian states should work together to advance those interests in ways that are mutually acceptable, rather than requiring them to cooperate in this way.

The legal term of equitable apportionment was deemed insufficiently precise for international usage. Equitable apportionment suggests allocating a quantity of water. A more precise prescription of actual practice is allocating a right to use a quantity of water. In particular, when one considers the physical reality of the hydrologic cycle, it is indeed, difficult to actually own specific molecules of water within the cycle. Thus international legal thought has, over a period of time, rephrased equitable apportionment as equitable utilisation.

To underscore the meaning of equitable utilisation, it is helpful to consider two references. The United States Supreme Court stated that the equitable apportionment calls for allocating water based on balancing a number of factors such as physical and climatic conditions, nature of existing water uses, the benefits and damages that would likely come from the proposed allocation of water etc.[54] International law commentators call for equitable utilisation to be defined as a similar balancing of factors[55] Equitable utilisation, in contrast, provides that states respect each other in their individual pursuits of developing transboundary waters. But optimum use of transboundary waters might not be accomplished through a set of separate development efforts among states; instead, co-operative, integrated efforts among states may be necessary.[56] Beyond equitable utilisation, another concept has apparently emerged within international treaty practice is equitable participation which means engaging in co-operative, integrated efforts to make optimum use of transboundary waters in the light of increasing competition for such waters.

International bodies have noted the need for states to adopt equitable participation to attain optimum use of transboundary waters[57]. In particular, in 1988, experts and government officials in a UN meeting over river and lake basin

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[54] *Kansas V. Colorado*, 206 US 46, (1907).

[55] Factors do include each state's contribution of water to the common watercourse, past use of the waters, economic and social needs, population dependent on use of the water and comparative cost of alternatives to proposed use of the waters, see Report of the fifty second conference of the I.L.A., Art. V, (Helsinki 1966).

[56] S. Schwebel's Third Report on the Law of the Non-navigational Uses of International Watercourses, UN Doc A/CN.4/348(1982); reprinted in *Year Book of International Law Commission*, 1982 vol.65, UN DOC.A/CN.4/SER.A/1982/Add.1 (Part I).

[57] See Report of the UN Water Conference, Mardel Plate, 14-25 Mar. 1977, UN DOC. E/CONF. 70/29, U.N sales No. E77 A.12 (1977); Natural Resources Development and Policies, including Environment Considerations. Report of the Secretary General, Addendum, Issues of International, Water Resources Development, UN Economic and Social Council Committee on Natural Resources, 1st session; UN Doc.E/C.7/2Add. 5(1972). Fifth Biennial Report on Water Resources Development, UNESCOR 44th session, Supp. No.3, UN Doc. E/4447 (1968), UN ESCOR.

development expressly recommended that states affirmatively participate in cooperative efforts to develop and maintain transboundary waters[58].

In practice, equitable participation has not been mentioned as such in treaties but reflected by cooperative efforts of states, usually through creating a joint commission to coordinate and integrate development. A number of treaties display such practice. The range of this practice with commissions varies but ultimately, is oriented to develop co-co-ordinated, integrated, multilevel institutional contact between states[59].

Finally, one may ask why the treaties practice works, why do states accede to limited sovereignty, to equitable utilisation and equitable participation? After all, there is no "higher authority" that can enforce limited sovereignty among nations. The answer within the framework of international legal thoughts has been in the horizontal action - reciprocal sanctions by states.

To the extent that limited territorial sovereignty is gradually giving way to community of interests, the current name for the shifting middle ground between the two is equitable utilisation, also known as equitable and reasonable use.

This theory of community of interest is also known as optimum utilisation theory emphasises maximum utilisation and optimum economic development of an entire river basin. This principle better approximates to a strategy for common management of an entire river system. The principle is firmly established in international watercourse law.

II.4.6. Principle of *Sic Utere Tuo Ut Alienum Non Laedas*

In addition to legal theories which have been developed in direct response to international watercourse allocation, there is a traditional customary law principle known as *sic utere tuo ut alienum non laedas*. This refers that "one should use one's own property in such a manner as not to injure others", which limits a state's actions to

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[58] UN Department of Technical Cooperation for Development, River and Lake Basin Development, 36-38, UN DOC. ST TCD/13, UN sales No. E. 90. 11 A. 10 (1990) Proceeding of the UN International-regional meeting on River and Lake Basin Development with Emphasis on the African Region held at Addis Ababa, Ethiopia (10-15 Oct. 1988).

[59] See the UN Department of Economic & Social Affairs, Management of International Water Resources: Institutional and Legal Aspects, pp. 56-61, 176-81, UN DOC ST/ESA/5, UN sales NO. E. 75 11, A.2 (1975). There is also some thoughts; naturally, on what exact attribute of cooperation that commissions need to be successful. Some attributes noted in commentary are cooperation in research, data collection, impact assessment, development, management actions, providing forum for public participation, permanence in staffing and funding etc.

the extent that such actions injure another state. This plays a strong role in international water law. The *sic utere* doctrine is reflected in international water law theory through the principles of "restricted territorial sovereignty" and "restricted territorial integrity". These are hybrids of the principles of absolute territorial sovereignty (the Harmon Doctrine) and absolute territorial integrity and form the basis for a compromise between the two. This principle is rooted in the Roman Law maxim of *sic utere tuo alienum non leadas*, that is, use your own property - so as not injure your neighbour.[60] This principle mandates states to co-exist peacefully while using transboundary national resources within national boundaries. The principles imposes a duty to each state to tolerate to a reasonable extent, the harmful effects caused by lawful activities undertaken in neighbouring states.

According to the principles of absolute territorial sovereignty and integrity, every state is free to use its territorial water, provided that it in no way prejudices the rights and uses of other riparian states. The right to use water from a river basin is reflective of the needs of the riparian states that share the river. Because of its ability to balance interests among states, the *sic utere* doctrine has been widely favoured in the attempt to codify international water law, through both the Helsinki Rules and the ILC Draft Articles, which will discussed more detailed later. The doctrine has also been clearly established in the case law as evidenced by *Spain v. France,* 1957. There the tribunal upheld "the sovereignty in its own territory of a state desirous of carrying out hydroelectric developments" but acknowledged "the correlative duty not to injure the interests of a neighbouring state" [61]

The principles of *sic utere* – "restricted territorial sovereignty" and "restricted territorial integrity" - share the basic concept that a riparian may not use a river so that it substantially injure another riparian. Although the four principles (absolute territorial sovereignty, absolute territorial integrity, restricted territorial sovereignty and

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[60] The landmark case of *Ryland V. Fletcher* was divided on this principle (See *English Law Reports,* 1868: 330, 341). At the international level, the preamble of the UN Charter, the 1972 Geneva Convention regarding Development of Hydraulic Power Affecting More than One State; Principle 21 of Stockholm Conference, Art 196 of the UNCLOS, Principle 2 of the Rio Declaration etc., have all reiterated this principle. Cases such as the *Meuse Diversion* (PCIJ series A/B No. 70 (1937), *Corfu Channel case* (ICJ Report, 1949, p.22); *Lake Lanoux* (24 ILR, 1957) and *Trail Smelter*, (III UNRIAA, 1938), further affirm it. Various codification process such as the ILC Draft Articles on the Rights and Responsibilities of State (see Year Book of the ILC, 1992, 34; UN Doc A/47/10), the ILC Draft Articles on Liability for Injurious Consequences Arriving out of Act not Prohibited by International Law, and the ILC Draft Articles on the Non-navigational Uses of International Watercourse as adopted by its 1991 also reiterate this principle.

[61] *Trail Smelter*, (3 Report International Arbitral Tribunal, 1938).

restricted territorial integrity) have different rationales, the result of each is similar: river use that causes substantial harm to another riparian is unlawful where the harm outweighs equitable reasons in favour of that use. Whether a river use is lawful under these four principles is decided by determining the degree of harm caused to the riparian state.

Today, these customary law concepts are evolving as society recognises the transboundary issues surrounding natural resources. While the *sic utere* doctrine seems to embody the pragmatic views of policymakers and attorneys, a more progressive view of international natural resource issues supported by naturalists, engineers, and economists is "the community of interests" concept. The "community of interests" approach treats the entire river as one hydrological unit that should be managed as an integrated whole. Each state within the basin has a right of action against any other basin state, such that none of the basin states may affect the resource without the co-operation and permission of its neighbours. While this concept of managing a resource based upon its hydrological features as opposed to its political boundaries would be a positive step forward in protecting natural resources, relations among countries have not yet evolved to a similar level. However, the ILC Draft Articles on International Watercourses, 1994 are directed toward the attainment of this goal.

II.5. The Helsinki Rules on the Uses of Waters of International Rivers, 1966

The most significant codification of the principles of international law regarding transboundary water resources was completed through the International Law Association's (ILA) Helsinki Rules on the Uses of the Waters of International Rivers.[62] The foundation of the Helsinki Rules is that each state within an international drainage basin has the right to a reasonable and equitable part of the beneficial use of the basin waters. At its 52nd conference at Helsinki in 1966, the International Law Association approved a set of draft articles on the uses of waters of international rivers, and resolved that these should bear the title of the 'Helsinki Rules on the Uses of Waters of International Rivers'.

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[62] According to the ILA, this idea is "a development of the rule of international customary law which forbids states to cause any substantial damage to another state or to areas located outside the limits of national jurisdiction". The Helsinki Rules, for the first time, incorporated the equitable use idea in stating that "each basin state is entitled, within its territory, to a reasonable and equitable share in the beneficial uses" of a drainage basin's waters.

The Helsinki rule is the first and the most often cited text in the field. The Helsinki rule contains 6 chapters and 37 Articles, which include a chapter on Pollution (chapter 3), Navigation (chapter 4), Timber floating (Chapter 5), and procedures for the prevention and settlement of disputes (Chapter 6). Art. 1 provides that the general rule as set forth in these chapters are applicable to the use of the waters of an international drainage basin except as may be provided by the convention, agreement or binding custom among the basin states.

These Rules provide that no category of use enjoys any inherent preference over another (article VI), that no state may reserve future uses for itself (article VII), and that existing activities may be presumed equitable and reasonable unless established otherwise (article VII). The Helsinki Rules were later supplemented by the ILA with subsequent resolutions, including the Montreal Rules on Pollution[63]. Over the years, these principles have become accepted as bases for negotiations among riparian states over shared waters, and have played an important role in the development and codification of international water law. Nevertheless, despite their soundness, the Helsinki Rules and their supplementary declarations have received little recognition as official codifications of international water law.

The Helsinki Rules in its Art. 3 state that a basin state is a state the territory of which includes a portion of an international drainage basin. The cornerstone of the Helsinki Rule is the concept of the "international drainage basin".[64] This expression is defined in Art.2 of the rules as follows: "an international drainage basin is a geographical area extending over two or more states determined by the watershed limit of the system of waters, including surface and underground waters, flowing into a common terminus"[65] The definition is noteworthy not only for its broad approach, which is consistent with hydrological reality, but also for its specific mention of 'underground waters'. This increasingly important source of fresh water had largely escaped international legal regulation up to this point, probably in large part because

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[63] ILA Montreal Report, pp. 535-46.

[64] The principles formulated by the ILA are included in the Convention on the Use of Transboundary Watercourses signed in March 17, 1992. This Convention stresses the obligation of the upper riparian to use its waters in such a manner as not to cause adverse transboundary impact on the lower riparian states. This Convention was negotiated under the auspices of the Economic Commission for Europe. Unlike the ILC Draft, the Helsinki Convention regulates "the transboundary waters" which are defined "as any surface or ground water which mark or cross or are located on boundaries between two or more states."

[65] Helsinki Rules, Chapter 1, Art II.

the government didn't fully appreciate its characteristics including its relationship to surface water systems.[66]

The comments on this article further elaborate on the drainage basin concept: "The drainage basin is an indivisible hydrologic unit which requires comprehensive consideration in order to effect maximum utilisation and development of any portion of the waters". The emphasis on maximum "utilisation" and "development" as the principal objectives of states with regard to their watercourses are perhaps indicative of their chief concerns of states during the first half of this century. Later work of the ILA displays more sensitivity to environmental concerns. The "elements" of a drainage basin are defined in the comments in Art. II in the following way: Basin elements: an international drainage basin is the entire area, known as the watershed, which contributes water, both surface and underground, to the principal river, stream or lake or other common terminus.

Due to certain geological features, underground waters may occasionally flow in a direction different from, or have an outlet different from, that of the surface waters of the same area. Furthermore, in rare instances underground waters appear to form in distinct underground field without ascertainable limits. The underground waters constituting a part of drainage basin described in this article are those that contribute to its principal river, a stream or lake or other common terminus.[67]

Its basic principle, according to Art. 4, is that each state with in an international drainage basin has the right to a reasonable and equitable part of the beneficial use of the basin waters. According to article IV of the Helsinki Rules, "each State is entitled, within its territory, to a reasonable and equitable share in the beneficial uses of the waters of an international drainage basin." This principle recognised that each basin state has rights equal in kind and correlative with those of other co-basin state. Equal and correlative rights do not mean that each state will receive an identical share of water, as this will depend on those factors listed in article V of the Helsinki Rules. The ILA noted that, to be worthy of protection, the use of water must be "beneficial," or "economically or socially valuable."

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[66] McCaffrey, n. 15, p. 321.
[67] Comments on the Helsinki Rules, ILA Report of the 52nd Conference Comment (b), p. 8.

The nature and extent of a 'reasonable and equitable share' are to be determined by all relevant factors in each particular case. The relevant factors to be considered are listed in article V (2) of the Helsinki Rules, and include:

- the geography of the basin, including the extent of the drainage area in the territory of each basin state in particular;
- the hydrology of the basin, including the contribution of water by each basin state in particular;
- the climate affecting the basin;
- the past utilisation of the water of the basin, as well as current utilisation in particular;
- the economic and social needs of each basin state;
- the population that depends on the water of the basin in each basin state;
- the comparative costs of alternative means of satisfying the economic and social needs of each basin state;
- the availability of other resources;
- the avoidance of unnecessary waste in the utilisation of the water of the basin;
- the practicality of compensation to one or more of the co-basin states as a means to adjust conflicts among users; and,
- the degree to which the needs of a basin state may be satisfied without causing substantial injury to a co-basin state.

The list given above is not exhaustive, since each case must be examined according to its own merits. The weighing of these factors may result in one co-basin state receiving the right to use water in quantitatively greater volumes than its neighbours. The notion of equitable sharing provides the maximum benefit from the use of the water to each state, while ensuring the minimum detriment to each state. It is worth commenting on preferential and future uses at this juncture. Art 5 catalogues a non-exhaustive list of factors to be taken into account in determining what amounts to a reasonable and equitable share in a specific case? Art 5 (K) states that there shouldn't be any substantial injury to a co-basin state. Therefore, Art 5 (J) provides for compensation as means of adjusting conflicts among uses. Further, Art 6 makes crystal

clear that no use is entitled to have any inherent preference and denies the priority to navigation.

Article VI of the Helsinki Rules provides that "a use or category of uses is not entitled to any inherent priority." Art. 7 makes it clear that a basin state may not be denied the present reasonable use of the waters of an international drainage basin to reserve for a co basin state a future use of such waters. Art. 8 recognises the doctrine of prior use and states that an existing reasonable use may continue in operation unless the factors justifying its continuance are outweighed by other factors leading to the conclusion that it be modified or terminated so as to accommodate a competing incompatible use. Further, Art. 8 states that a use will not be deemed an existing use if at the time of becoming operational it is incompatible with an already existing reasonable use.

Chapter 3 altogether doesn't prohibit pollution. Art. 9 refers to water pollution as any detrimental change resulting from human conduct in the natural composition, content, or quality of the waters of an international drainage basin. If pollution is caused consistent with the principle of equitable utilisation, it is not being banned. Here too, it is concerned with the substantial injury and not insignificant harm and the state is required to take reasonable measures to abate pollution[68]. Art 10 (2) obliges the failing states to enter into negotiations with the injured state for reaching settlement equitable under the circumstances. Art 11(1) mandates the states to cease the wrongful conduct and compensate the injured state for the injury. Art.10 adds that conforming to the principle of equitable utilisation each state should refrain from any new form of pollution of the waters or any increase in the level of actual pollution of waters in an international drainage basin, likely to cause serious damage on the territory of another state in the basin.

While not mentioning certain components such as tributaries and glaciers, this explanation evidences an appreciation of the unity of a hydrographic system. This understanding is especially evident in the emphasis on ground water although the requirement that ground water contributes to the principal river or "other common terminus" could be interpreted in an unduly limited manner. Since water may move from the surface into the ground, as well as vice versa. It would perhaps, have been

[68] See Lipper, n. 85, p. 16; Lammers, n. 86, p. 17.

sufficient to require that the ground water related to the surface water, and forms part of the drainage basin.

Chapter 6 deals with the procedures for the prevention and settlement of disputes which includes the procedures for prior notification of proposed projects and affords to the recipient a reasonable period of time to make an assessment of the probable effect of the proposed project. Art 31 provides that if a question or dispute arises relating to the present or future utilisation of international drainage basin, it is to be referred to a joint agency, that exists or may be established, who may survey the international drainage basins and formulate plans and recommendations for the fullest and most efficient use thereof in the interest of all such basin states. Art. 31 also states that the joint agency may in appropriate cases invite non basin states to associate themselves with the work of the joint agency and may be permitted to appear before the joint agency too. Art. 32 provide that if a dispute is incapable of being resolved in the manner set forth in Art. 31, then the states are recommended to seek good offices, or jointly request the mediation of a third state, of a qualified international organisation or of a qualified person.

Art. 33 states that if states could not resolve the dispute through negotiation or on the measures described in Art.31& 32 then, they have to form a commission of inquiry or an ad hoc conciliation commission, which shall endeavour to find a solution, likely to be accepted by the states concerned or of any disputes as to their legal rights. Art. 34 provides for the states concerned to submit their legal disputes to an ad hoc arbitral tribunal, to a permanent arbitral tribunal or to the International Court of Justice, if a commission has not been formed as provided in Art.33, or the commission has not been able to find a solution to be recommended, or a solution recommended has not been accepted by the states concerned.

All these principles demonstrate that the ILA, has made an appreciable contribution towards the emergence and evolution of the theory of equitable utilisation through the medium of Helsinki Rules.

II.5.1. The History of ILA Process

There have been several efforts to distil the state practice into a 'code of rules governing the uses of the water of the international rivers' both by IIL and ILA**69**. The ILA began studying the law on international watercourses in 1954 and with the exception of years 1986-1990, this study had gone continuously. This prolonged attention to international water law is a testimony not only to the complexity of the problems and undeveloped state of the branch of the law but in particular to the perceived urgent need of the legal rules in a world, where water is becoming increasingly scarce as population increases rapidly. By 1966, the ILA had identified the basic rule on the subject- the principle of equitable utilisation. In the process, the ILA codified and formulated the Helsinki Rules. These Rules were drafted by the ILA's Committee on the Uses of Waters of International Rivers[70], whose objective was to "clarify and re-state existing international law as it applies to the rights of states to utilise the water of an international drainage basin". Indeed, the committee recommended that the I.L.A. might adopt the completed draft as "statement of existing rules of international law. The ILA stressed that a drainage basin is an "indivisible hydrologic unit."

According to the above definition, an international drainage basin is the entire area known as the 'watershed' that contributes water, both surface and underground, to the principal river, stream, lake or other common terminus. With regard to underground waters, the ILA conceded that, due to certain geographic features, such water might occasionally flow in a direction or have an outlet different from that of the surface waters of the same area. Furthermore, in rare instances, underground waters appear to form in distinct underground fields without ascertainable limits. For these reasons, the ILA maintained that underground waters constituted a part of the drainage basin, as described in Art. II, are those that contribute to its principal river, stream,

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[69] See also, Progressive Development and Codification of the Rules of International Law relating to International Watercourses UN GAOR, 6th Committee 25th Sess.1225th meeting, p. 267, UN DOC. A/7991, A/C. 6/SR.1225 (1979).

[70] There were three Committees engaged in the codification work of the ILA. The first Committee (1954 - 1966) was established at the initiative of Prof. Clyde Eagleton at Edinburgh Conference of the ILA in 1954. The Helsinki Rules were contained in its Final report; But the ILA's Executive Council established the second Committee on International Water Resources Law (1966-1986), Finnish Branch of the ILA. It was in fact Judge E.J. Manner, the Finnish Chair of the ILA Committee that prepared the Rules, who in his capacity as a government delegate proposed the UNGA that the ILC take up the study in this field using the Helsinki Rules as a model for its work. A third Committee was established in 1990 to amplify the principles of international water resources law.

lake or other common terminus. The ILA further commented that a state, although not a riparian to the principal stream of the basin, might nevertheless supply a substantial quantity of water to the basin. Thus, such a state is in a position to interfere with the supply of water through action that involves the water flowing within its own territory. The ILA therefore concluded that, in order to accommodate potential or existing conflicts in instances of the multi-use development of a common resource for the benefit of each state where a portion of the system lies in its territory, the drainage approach has become a necessity.

The adoption of the drainage basin approach to the codification of the law of International watercourses represented a significant step forward. There is a substantial support for the use of the international "drainage basin" as the physical unit to which legal rules are applied. Since the drainage basin is a natural functional unit, it is also an appropriate factual basis for rules concerning environmental protection. On the other hand, use of the expression "geographical area" in defining "drainage basin" has been unfortunate since, while technically accurate, it implies not only water but also land areas that might fall within the scope of the Rules. This has caused some states to reject the entire concept of drainage basin as the proper basis for a set of rules on international watercourses.

The term "international watercourse" is used here primarily on a convenient designation for rivers, lakes, or ground water sources shared by two or more states. Such watercourse will normally either form or straddle an international boundary, or in the case of rivers, they may flow through a succession of states.[71]

In dealing with shared or transboundary watercourses, problems of geographical definition arise. The possibilities range from simply that portion which crosses or defines a boundary, to the entire watershed or river basin, with its associated lakes, tributaries, ground water, and connecting waterways, wherever they are located. Anyhow, the broadest possible geographical scope of international watercourse is preferred.

As the ILA's commentary notes: "The drainage basin" is an individual hydrologic unit which requires a comprehensive consideration in order to effect

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[71] ILA, Helsinki Rules, Report of the 52nd Conference (1966), p.485; Teclaff, *The River Basin in History and Law* (The Hague, Martinus Nijhoff, 1967).

maximum utilisation and development of any portion of its waters".[72] International codification and state practice reflect differing views on this question, however. Modern bilateral and regional treaties have tended to adopt the basin approach, because it is the most efficient manner of achieving control of pollution and water utilisation.[73] Examples of such arrangements are widespread in Africa, and the basin concept is also used in controlling toxic pollution of the Rhine and the Great Lakes.

It has been favoured by declarations of international conferences, notably the Stockholm Conference on the Human Environment[74] and the UN Water Conference held at Mar del Plata in 1977,[75] and it forms the basis of codification undertaken by the Institut de Droit International[76] and of the International Law Association's Helsinki and Montreal Rules.[77] The ILA's definition of an international drainage basin is the most extensive 'covering of a geographical area extending over two or more states determined by the watershed limits of the system of waters, including surface and underground waters, flowing into a common terminus.'[78] Despite the obvious utility of a broadly comprehensive definition of a watercourse, and its clear endorsement in international policy, this remains a relatively recent approach only partially reflected in state practice.

Older treaties are more likely to follow the narrower definition found in the Final Act of the Congress of Vienna, which focused on international rivers separating or traversing the territory of two or more states and declared them open for navigation by all riparians.[79] Although inappropriately narrow for environmental purposes, this definition has remained influential.[80] Moreover, some treaties apply only to boundary waters. The 1909 Boundary Waters Treaty,[81] which still governs watercourse relations

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72 Kearney, 11 *Year Book ILC* (1976), p.1.
73 UNCHE, *Action Plan for the Human Environment*, UN Doc. A/Confc.48/14/Rev.1, Rec. 51.
74 Report of the UN Water Conference; Mar Del Plata, 14-25 Mar. 1977. See generally II Year Book ILC (1986).
75 Ibid.
76 Helsinki Rules, n.10, and Montreal Rules, ILA Report of the 60th Conference (1982), p.535.
77 Helsinki Rules, Article II.
78 See Report of the ILC, *II Yearbook ILC* (1979), p. I.
79 See Territorial Jurisdiction of the International Commission of the River Oder Case, PCIJ, Ser. A, No.23, (1929), 27-9; Lammers, Pollution, 110-13.
80 UN, Legislative Texts and Treaty Provisions, ST/LEG/Ser B/12, 260; repr. 146. Recueil des cours (1975).p. 307.
81 Preliminary Article, and Article IV.

over a large part of the US-Canadian border, excludes tributary waters and rivers flowing across the boundary, although it does apply to transboundary pollution.[82]

Among some states, usually those enjoying an upstream position, there is resistance to the more extensive basin concept as a basis for environmental control.[83] For this reason, the International Law Commission, in its work on the non-navigational uses of international watercourses, has had to avoid reference to drainage basins. As special Rapporteur Evensen reported in 1983:

> For several reasons, international drainage basin' met with opposition in the discussions both of the Commission and of the Sixth Committee of the General Assembly. Concern was expressed that 'international drainage basin' might imply a certain doctrinal approach to all watercourses regardless of their special characteristics and regardless of the wide variety of issues of special circumstances in each case. It was likewise feared that the 'basin' concept put too much emphasis on the land areas within the watershed, indicating that the physical land area of a basin might be governed by the rules of international water resources law.[84]

Subsequent draft and articles have therefore referred only to 'international watercourses',[85] but defined in term watercourse broadly, to mean 'a system of surface and underground waters constituting by virtue of their physical relationship a unitary whole and flowing into a common terminus'.[86]

Despite support for the drainage basin concept of modern treaty practice and the work of international codification bodies, the evidence of disagreement in the ILC suggests that it is premature to attribute customary status to this concept as a definition of the geographical scope of international watercourses law.[87] With respect to pollution control, however, this conclusion may not matter greatly. As Lammers argues,[88] even where pollution obligations are placed only on a particular portion of an international watercourse, such as the boundary waters, it will still be necessary for states to control pollution of the wider drainage basin to the extent necessary to produce the desired result in boundary areas.

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82 Schwebel, *II Yearbook ILC*, part 1 (1979).

83 Ibid. (1983), part. 1, p. 167, para. 71.

84 See the Report of Rapporteur Evensen, 1983.

85 1991 Draft Articles, Report of the ILC to the Gen. Assembly, UN Doc. A/46/10 (1991), p.161.

86 *1991 Draft Article 2.* See also II Yearbook ILC (1986), p. 2, 62, para, 236, and Report of the ILC, 154-60 where objections to the term 'watercourse system' are noted. Under the 1991 draft, a watercourse is 'international' if parts are situated in different states .See also, Kamil Idris, and Mpazi Sinjela, "The Law of the Non-navigational Uses of International Watercourses: The I.L.C Draft Articles, an Overview", *African Year Book of International law*, vol. 3, 1995, pp. 183-203.

87 Sette-Camara, 186 *Recueil des cours* (1984), 128. Some writers disagree, however. See Lipper, in Garretsonand and others, *The Law of International Drainage Basins* (New York: 1967), p.15.

88 Lammers, *Pollution of International Watercourses* (the Hague:1984), pp. 110-13

In consequence, 'this means that for the question of the legal (in) admissibility of trans-frontier water pollution, it makes little sense to distinguish between such concepts as 'international watercourse' or 'waters of an international drainage basin'.[89] Experience with the pollution of US-Canadian boundary waters,[90] suggests that this conclusion may be optimistic, however, the concept expressed by the word 'international', 'shared ' or 'transboundary' water resources is synonymous The expression may refer indifferently to atmospheric, surface or underground water shared between two or more states.

II.5.2. Legal Significance of the Helsinki Rules

The ILA's Helsinki Rules undoubtedly contributed to the development of international water law. Some of the Helsinki Rules are merely declarations of the principles of international law. The doctrine of 'reasonable and equitable share', for instance, might have become a principle of international law by virtue of state practice before the rules were approved in 1966. The ILA, for example, cited the dispute between Bolivia and Chile over the Lauca River, where Chile, the upper riparian, did not utilise the Harmon Doctrine to justify its conduct, but instead recognised that Bolivia had certain rights in the water. The association also referred to the dispute between Israel and certain Arab states where both sides adhered to the position that each is entitled to a share of the relevant basin waters. The Helsinki Rules "broke new ground in certain respects" and could well "serve as a basic draft for a proposed general convention".

Though the ILA rules were adopted by consensus by its Committee and its Conferences, the Helsinki Rules did not have the support of all members of the Rivers Committee. Further, the Austrian delegate[91]and the Indian delegate[92] had submitted a lengthy paper rejecting the notion of equitable utilisation on the ground that "the idea regarding the concept of equitable sharing are not clear," and that "state must be free to develop their issues in accordance with their needs".

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[89] Ibid., p. 343.

[90] 1909 US-Canada Boundary Waters Treaty, Art. IV, see Zacklin, n. 5.

[91] See the Report of Dr.A. Weiss- Tessbach of Austria.

[92] See the Report from Dr. Nagendra Singh, member of the ILA Rivers Committee, to the Chair of the Committee. Interestingly Berber supported the Helsinki Rules but he was lukewarm about it. He qualified his support by saying that he did not regard the rules "as regulation meant to bind a judge."

These denials and equivocations did not dampen the general enthusiasm for the Helsinki Rules. There is evidence that Helsinki Rules were soon be accepted by international community as customary international law. For example Dr. Manner reported to the 1970 Hague Conference in referring to the acceptance of the Helsinki Rules that the Argentinean government had approved it. In 1975, the government of four states comprising the Mekong Committee adopted a Joint Declaration of Principles for the Utilisation of the Waters of the Lower Mekong Basin; the principles were fashioned on the Helsinki Rules, Art. V of the Rules were reproduced in the Declaration word for word. Another example is the adoption by the AALCO in 1973,[93] of Art. IV and V of the Helsinki Rules in its proposition III paragraph (a) and (b) respectively, on the Law of the International Rivers. The Helsinki Rules were also applied by tribunals in India in adjudicating interstate water disputes.[94] Again, Special Rapporteur to the ILC , Schwebel, Evensen and McCaffrey concluded after intensive studies that the principle of equitable utilisation was a rule of customary international law.

These Rules, which have commanded a large degree of approval, adopted the basic principle of the equitable utilisation of the waters of an international drainage basin, and broke new ground in certain respects, for example, in the proposed rules to deal with water pollution and floating timber. At least, the draft articles reflect an enlightened appreciation of the new problems connected with regulations for the waters of international rivers and drainage basin, and could well serve as a basic draft for a proposed general convention. Generally speaking, there is a movement to lay more stress on matters such as irrigation, hydroelectric power, flood control and pollution rather than on navigation simpliciter.

II.6. Towards a New Legal Regime of International Watercourses

Perception of the interdependence and interrelationship of the water resources within a river basin is considered by a number of international organizations as fundamental to proper water management regimes. The underlying concept of the unity of a river was taken up in the closing decades of the nineteenth century by

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[93] See Dante A. Caponera, *The Law of International Water Resources*, Background Paper No. 1/Rev. 1 1978), pp.45-46. The propositions are also reproduced in the Year Book of ILC, 1974, pp. 339-40, UN. Doc. A/CN.4/ 274.

[94] B R. Chauhan, *Settlement of International and Interstate Water Disputes in India* (Bombay: N.M.Tripathi Private Ltd., 1992).

planners of multi-purpose water developments, and was later extended to embrace entire river basins. In less than half a century jurists were able to arrive at a body of rules for the community of interests of states in a river basin.

Some forty years later, the ILA put its stamp of approval on the notion of the integrated river basin as the proper unit for the co-operation of states in developing water resources. The Salzburg Declaration of 1961 then found that the rights of states to use waters flowing across their borders were defined by the principles of equity. However such principles were not specified, so doubts persisted as to whether there were any specific legal rules applicable to the waters of international river basins. However, there was no room for doubt in the ILA's Helsinki Rules, a crowning achievement of the ILA after many years of labour. Indeed, the Helsinki Rules of 1966 may be said to have been the first attempt by an international organisation to prepare a complete and all-embracing international watercourses.

The keystone of the Helsinki Rules was the concept of the international drainage basin, which represented a significant step forward. For the first time it confirmed, in terms of judicial area, what naturalists, engineers and economists had previously accepted that the basin as a physical whole and not only the river of the waters must be the object of legal regulation.

It is concluded here that although the ILI, and ILA did appear to move one step further towards some legal agreement, it was not enough and unless the states concerned begin to co-operate, and unless these organisations stop bowing to the governments of the politically stronger riparian, it was unlikely that any precise rules of law was ever going to be generally accepted. The likelihood of co-operation between states that have an historical animosity towards each other is very unlikely. Perhaps the creation of general rules is not the best way forward in the settlement of such disputes. It seems that the UNCLNUIW could be "the international law" which then would be the only one in its "class". It also must be commented that the UNCLNUIW is considered as unique. For example, the UN Convention on the Protection and Use of Transboundary Watercourses and International Lakes, which was concluded at Helsinki on 17 March 1992 and entered into force 6 October 1996, is only concerned about the member countries of the Economic Commission for Europe (ECE).

II.7. ILA: Latest Developments

One of the areas for which the ILA is best known is the articulation of cogent and compelling statement of customary international law relating to fresh water resources. Working over a span of nearly 50 years, the Association produced a series of rules addressing the various topics relating to the overall field of international water law[95]. In its second report prepared by the London Conference in 2000, the Water resources Committee of ILA presented the *Compione Consolidated Rules* and an Article on Adequate Stream flows, and a project report to revise and update the Helsinki Rules. The *Compione Consolidated Rules* did not represent a new work but rather a compilation and consolidation of the prior work of the Water Resources Committee as approved by the Association over a period of 35 years. The basic question in the ILA' *Compione Consolidated Rules* was how to proceed with the possible revision of the work regarding the waters of international drainage basins as discussed extensively in meetings of the Committee at the Rome, Italy (June 1997), Rotterdam, the Netherlands (March 1998), Compione d'Italia (June 1999) and Dundee, Scotland (February 2000). The ILA met in Washington DC, in 2001 and in London in 2002 before the New Delhi Conference. The main object of all these meetings was to review comprehensively and revise to the extent needed the Association's work to assure that it correctly states the current law and to indicate the emerging development. The goal of ILA is to complete the project by 2004.

II.8. Conclusion

The overall conclusions that may be drawn from the discussion of the conventional fluvial-lacustrine legal regime are the following:

The development and codification of the fluvial-lacustrine law in the area has been greatly influenced by the general political conditions, which exist in that part of the world. Some relatively discernible improvement was a trend towards cooperation. The persistence of the notion of 'limited sovereignty' is evident in some of the bilateral agreements. But in some of them, there are even traces of absolute sovereignty approach, taking benefits from its indeterminacy. It appears that in the first case, there is a rapid development towards a basin approach. It is an established fact that the basin

[95] ILA, 2002 Report (Regional Branch, India), p.125.(See also www.Ila.hq.org; www.ila2002.org).

approach is closely related to the notion of equitable utilisation. The abandonment of the doctrine of absolute sovereignty marked the end of the traditional period.

The most widely accepted theories in international legal circles for resolving trans boundary water conflict are limited territorial sovereignty and community of Interests[96]. Limited territorial sovereignty provides that each riparian state may make use of waters but not to interfere with the reasonable use of each other. It was evolved through the doctrine of equitable apportionment and equitable utilisation. Limited territorial sovereignty, broadly understood, places some restrictions on state discretion. primarily based on the principle of *sic utere tuo ut alienum non laedas.* This maxim introduced the prohibition that the state is not allowed to exceed its sovereign rights.

In turn, community of interests requires that decision-making be undertaken collectively and in consideration of the best use of the entire basins. To distinguish between these two approaches, while limited territorial sovereignty doesn't burden states with any substantive obligation to maximise the efficiency of the allocation of watercourse resources, community of interests takes efficiency as a starting point. The "community of interests" approach treats the entire river as one hydrological unit that should be managed as an integrated whole. Each state within the basin has a right of action against any other basin state, such that none of the basin states may affect the resource without the co-operation and permission of its neighbours.

The main feature of the legal regime before the 1997 convention is the elementary characteristics of the substantive provisions, which cover only general direction of legal conduct and, as such, are unquestionably ineffective in dealing with concrete questions. In actual terms, therefore, on the one hand, every thing is in the hand of the commission, which have undertaken the tasks of developing practice and rules of conduct and, on the other hand, to the machinery of settlement of disputes which on the basis of the body of legal rules that has been created in addition to the general rules of law applying in the matter, is called on to contribute to the eventual clarification of the applicable rules and their crystallisation. As last word on the matter: it seems that in practical and real terms strong machinery for the application of weak agreements is an element tending further to weaken national persistence on

[96] There are four theories regarding the use of international watercourses. They are: absolute territorial sovereignty, absolute territorial integrity, limited territorial sovereignty and community of interest.

sovereignty to give substance, together with other contributing factors, to the basin approach in the area.

Apart from the discussion on the topic by the 1815 Vienna Congress and the ILI, it was only in 1966 the most significant codification of the principles of international law regarding transboundary water resources was completed through the ILA's Helsinki Rules on the Uses of the Waters of International Rivers.[97] The foundation of the Helsinki Rules is that each state within an international drainage basin has the right to a reasonable and equitable part of the beneficial use of the basin waters. Although it might have been possible to reconcile the rules of 'no significant harm' and 'equitable utilisation', the normative framework contained no principles to guide states towards reconciling these two-core principles.[98] Yet, the unresolved relationship between two-core principle of international water law, 'no significant harm' and 'equitable utilisation' has allowed the state to maintain irreconcilable positions. This is the peculiar feature of the regime before the UNCLNUIW. It is mainly meant to resolve this problem. The Helsinki Rules, however, have become best known for their non-navigational guidelines and are often regarded as the predecessor to the UNCLNUIW.

It was the ILC that discovered that the use of the term 'drainage basin' was, not surprisingly, unpopular with upstream riparian. Such states generally favoured the use of the term 'international river'; a definition which excludes not only tributaries but also groundwater.

International water law was manifest primarily in the form of bilateral treaties. The development of the law, however, also resulted from various international and federal cases concerning these same issues, including, for example, *jurisdiction over the River Oder*, the development of the *River Meuse,* the utilisation of the waters of *Lake Lanoux*. In an effort to bring uniformity to international water law, the efforts taken by ILC will be interesting to know. There are two basic forms of international law: (i) Treaty law; and (ii) Customary international law. In the absence of an

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[97] According to the ILA, this idea is "a development of the rule of international customary law which forbids states to cause any substantial damage to another state or to areas located outside the limits of national jurisdiction". The Helsinki Rules, for the first time, incorporated the equitable use idea in stating that "each basin state is entitled, within its territory, to a reasonable and equitable share in the beneficial uses" of a drainage basin's waters.

[98] Ludwik A. Teclaff, "Fiat or Custom: The Chequered Development of International Water Law", *Natural Resources Journal*, vol. 31, 1991, pp. 45-73.

applicable treaty on shared waters, countries' rights and obligations are governed by customary international law. The rules of customary international law concerning shared freshwater have been "codified" in the 1997 United Nations Convention on the Law of the non-Navigational Uses of International Watercourses, negotiated and adopted by the General Assembly. Though not in force, the Convention has been cited as evidence of custom by the International Court of Justice. Anyhow, a legal survey of the Convention is attempted in the chapter III

Member states have undertaken to use the resources of shared watercourses in an equitable and reasonable manner. This principle is in line with the principles of international water law such as the Helsinki Rules and the UN Watercourse Convention. Several aspects must be taken into consideration in order to achieve equity and reasonable sharing. These include the natural physical characteristics of the watercourse, social and economic needs, as well as potential impacts and effects of the intended use on the watercourse. The principle also promotes the development of guidelines and agreed standards of use. The doctrine of 'reasonable and equitable share', for instance, might have become a principle of international law by virtue of state practice before the rules were approved in 1966.

States have thus concluded agreements that contain specific provisions on their rights and obligations. Reference may be made at this juncture to some provisions of the UNCLNUIW adopted by the UNGA and opened to signature on 21 May 1997. In the preamble, parties to the convention expressed the Conviction that a framework convention will ensure the utilisation, development, conservation, management and protection of international watercourses and the promotion of the optimal and sustainable utilisation thereof for present and future generations.

In an endeavour to overcome this problem the ILC introduced the phrase 'international watercourse system', which constitutes a 'shared natural resource'. Reservations were again expressed concerning the terms 'system' and 'shared' because they were seen as similar to the drainage basin concept, and instead an article was proposed providing that a state is 'entitled to a reasonable and equitable share of the uses of the waters. The UNCLNUIW, which is the subject of next chapter, is a novel attempt to resolve the complex issues and controversies of the watercourse states along with articulating the shift in the previously entrenched positions of states.

CHAPTER III
THE UCLNUIW:
CORE PRINCIPLES AND ITS IMPLICATIONS

III.1.Introduction

The failure of the Helsinki Rules to lay down a normative framework to effectively balance the irreconcilable positions of two core substantive principles of international watercourse law, culminated in the emergence of the United Nations Convention on the Law of the Non-navigational Uses of International Watercourses[1], 1997 (the UNCLNUIW). Before explaining the different functions that these principle of equitable utilisation and the obligation not to cause injury to other States, perform in the system of international watercourse law, and examining the practice of States, it is now significant to examine the brief history of the process of codification of the UNCLNUIW with a view to reconcile the positions which appear in conflict with each other. The UNCLNUIW deprives each side of convincing legal arguments for the priority of their claims. The upper and lower riparian States are forced to re-examine their entrenched positions and to engage with one another to find fair solutions to their disagreements.

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[1] The International Law Commission (ILC) started working on the Draft Convention at its 23rd session in 1971, following the adoption by the General Assembly of Resolution 2669 (xxv) of 8 Dec. 1970, asking the ILC to study the topic of "international watercourses." The ILC adopted a provisional text of the draft treaty in 1991 and the final text took almost 25 years and was submitted on June 24, 1994 to the UNGA. Especially telling is the fact that it took more than 25 years of continuous work. 13 reports and five special Rapporteurs to finalise the text. See generally Report of the Commission to the General Assembly on the work of its 46th session, UN.Doc.A/CN.4/1994/Add.1. The UNCLNUIW was adopted by the General Assembly on May 21, 1997, by a vote of 103 for and 3 against (Burundi, China and Turkey) with 27 abstentions. It is notable that India and Pakistan abstained while Nepal, Bhutan and Bangladesh voted in favour. For a full text of the UNCLNUIW, see, May 21, 1997, 36 International Legal Materials (ILM) 700 (1997). See General Assembly Plenary 10, Press Release GA/9248 99th Meeting (AM) 21 May 1997; Pakistan and Rwanda cited the inclusion of ground water in the UNCLNUIW, as a reason for abstaining from the vote on it. The count, however, might have been 106 in favour with 26 abstentions. Belgium, which was recorded as abstaining, and Fiji and Nigeria, which were recorded as absent, subsequently announced that they had intended to vote in favour of the UNCLNUIW. The 21 signatories to the UNCLNUIW are Finland, Jordan, Lebanon, Luxembourg, Syrian, Portugal, Venezuela, South Africa, Germany, Hungary, Iraq, Namibia, Netherlands, Norway, Paraguay, Qatar, Sweden, Arab Republic, Tunisia, Yemen and Cote d'Ivoire and the first 8 countries have ratified it as on 22 March 2003. The UNCLNUIW will enter into force 90 days after it has been ratified or accepted by thirty-five signatories. The UNCLNUIW asserts in Art. 1(2) that the use of International watercourse for navigation is not within the scope except in so far as other uses affect navigation or are affected by navigation.

The chapter seeks to articulate the re-oriented normative discourse for establishing a legal regime for international watercourses and discusses to what extent this alters the legal protection of certain interests.

On May 21, 1997 the United Nations General Assembly (UNGA) finally adopted the UNCLNUIW by a vote of 103 countries in favour, to 3 votes against[2] and with 27 abstentions[3]. At this juncture, it is worthy to recollect the decision of the ICJ in the North Sea Continental Shelf Cases,[4] where it was observed that: "Even without the passage of any considerable period of time, a very widespread and representative participation in the Convention might suffice as a proof of *opinio juris*, provided it included that of the State whose interests were specially affected."

Thus, the 27 abstentions and three negative votes do not bode particularly well. The acceptance of the rules embodied in the UNCLNUIW by an overwhelming majority of the delegation indicates the broad agreement of the international community on the general principles governing the non-navigational uses of international watercourses and reflects a reasonable balance between the interests of upstream and downstream States. Despite divergent views, the UNCLNUIW building on the work of the IIL, ILA and ILC has brought international water law a long way.

The UNCLNUIW was designed to serve as a framework for more specific bilateral and regional agreements relating to the use, management and preservation of transboundary water resources. It was also drafted to help prevent and resolve conflicts over international water resources, and to promote sustainable development and the protection of global water supplies. The UNCLNUIW shall enter into force on the ninetieth day following the deposit of the 35th instrument of ratification[5].

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2 Burundi, China and Turkey.

3 These countries include Egypt, Ethiopia, Ghana, India, Mali, Pakistan and Rwanda.

4 *FRG v. Denmark; FRG v. Netherlands*, 193 ICJ, Feb. 20)

5 It is noteworthy that the UNCLNUIW envisages only thirty-five ratifications. Why the working group didn't decide on a considerably higher number, is because some of the substantive and procedural provisions have already become part of customary international law and underlying factors have been identified by many international tribunals and international courts. Even those states with no international watercourse might still have an interest in becoming a party, for example, on the ground that the UNCLNUIW promotes the side of law that will help avoid disputes in this increasingly important field, or because states with which they are allied would stand to benefit from the UNCLNUIW.

acceptance, approval or accession, with the Secretary General of the United Nations.[6]

III.2. History of the Work of the ILC and the UNCLNUIW

The UNCLNUIW was negotiated in the Sixth (Legal) Committee of UNGA, convening for this purpose a 'Working Group of the Whole'[7], on the basis of the Draft Articles adopted by the ILC. The negotiations in the working group were open for participation by all UN members States as well as States that are members of the specialised agencies of the United Nations.[8]

In 1970, the UNGA recommended the ILC to take up the study of the law of the non-navigational uses of international watercourses with a view to its progressive development and codification. The task of ILC was colossal considering the highly technical and political dimension of the issue.

The critical issue that ILC had to deal with was, how to reconcile the independent riparian sovereignty over territorial waters and a duty on every State not to interfere with or cause harm to the rights of other riparian States. The work of ILC has not been simple or easy due to the normative indeterminacy of the principle. The process of formatting international law has been time taking and painstaking effort. Even though the ILC included this subject in its programme of work in 1971, it was in 1974 that a Sub-Committee was established. In the same year the sub-committee submitted a report, which suggested that a questionnaire be circulated to the member governments on some key questions. The Commission accepted this proposal. According to the usual practice, the Commission began work on this subject by preparing a questionnaire, which was submitted to Member States.

Is the geographical concept of an international drainage basin the appropriate basis for a study of the aspects of the pollution of international watercourses?[9] sent out a questionnaire in 1974 to all members of UNGA. The questionnaire had nine questions. One was on the definition of the term 'international watercourse', two on appropriateness of the drainage basin concept, five on what water uses and problems

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[6] See Art. 36 of the UNCLNUIW, it has not yet entered into force.

[7] See the Report of the Sixth Committee convening as the Working Group of the Whole, A/51/869 (11 April 1997).

[8] Switzerland could participate by virtue of this entitlement without being a member of the UN.

[9] *Year Book of International Law Commission*, vol.2, part 1, 1974, p. 302, para 17; UN DOC A/C N. 1/5ERA/1974.

should be considered and the last on the potential role of technical, scientific and economic experts. Three types of questions put to Member States are especially pertinent to our discussion. They are:

a) What would be the appropriate scope of the definition of an international watercourse, in the study of the legal aspects of fresh water uses on the one hand and of fresh water pollution on the other hand?

Is the geographical concept of an international drainage basin the appropriate basis for a study of the legal aspects of non-navigational uses of international watercourses?

The response to the questionnaire was not encouraging. By 1976, only 21 of the 147 UN members had bothered to reply. Four additional countries replied by 1978. one by 1979, four by 1980 and two by 1982. This meant that only about one-fifth of the member countries responded to a simple questionnaire in some eight years. In sum. UNGA decided to convene a Working Group in 1996 to elaborate a convention on the law of the non-navigational uses of international watercourses.

It is no coincidence that both the Helsinki Rules and the ILC questionnaire employ the "international drainage basin" concept. After all, the Helsinki Rules obviously facilitated the whole process. Unfortunately, the replies of States revealed sharp differences of views concerning the proper basis for the ILC work.[10] As noted by the Special Rapporteur in 1979, "the question that gave rise to substantial even striking-differences was the first three, which concerned the meaning and scope of the term 'international watercourse'[11].

The debate in the Sixth (Legal) Committee of the UNGA was largely concerned with whether it should contain a reference to the Helsinki Rules. Such a reference was ultimately rejected by a vote of 41 to 25, with 32 abstentions[12]. The Chairman of the Working Group had decided to reduce the time for negotiations in order to have a text ready in a few days. Only 42 countries in the Working Group had

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[10] Kamil Idris and Mpazi Sinjela,"The Law of the Non-navigational Uses of International Watercourses: The ILC Draft Articles: An Overview", *African Year Book of International law*. vol.3, 1995, pp. 183-203.

[11] See the Report of Stephen M. Schwebel, 1979.

[12] 25 U.N. GAR C. 6 (1236th meeting) para.32, U.N. Doc. A/C. 9. SR. 1236 (1970).

voted in favour of the text, while a third of the Member States who had participated in the negotiations voted against it. France had tried to promote serious negotiations with a view to reaching consensus on a balanced text, but its offer of compromise had not been heeded. The haste in negotiations had created serious procedural discrepancies, which affected the credibility of text, he said. The Chairman of the Working Group had denied delegates the right to explain their vote before the text was approved. That practice represented a serious hindrance to the codification of international law and could not be justified. The Convention was clearly imbalanced with respect to the upstream and downstream States. It also had legal ambiguities. France considered the result of the negotiations to have been a relative failure. Neither the report of the Sub Committee nor the questionnaire itself indicated the consequence of selecting the drainage basin concept over some other approach.[13]

The consequences of choosing a term such as "drainage basin" emphasises a unitary nature of an international watercourses as a shared common resources, while use of the term such as "boundary rivers" or "successive rivers" emphasises the fragmentation of the natural unity of a fresh water system as a consequence of the existence of political boundaries. The Special Rapporteur, Schwebel, favoured the "drainage basin" approach.

The replies of governments revealed that those opposing the drainage basin concept were, for most part, predominantly upstream States[14]. These States generally favoured use of the definition of the expression "international river" found in the Final Act of the Congress of Vienna (1815), which defines it as "the river that separates or traverses the territory of two or more States." Most of the States supporting the

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[13] Five Rapporteurs worked on the issue: Richard D. Kearney (1974); Stephen M. Schwebel (1977); Jens Evenson (1982); Stephen C McCaffrey (1985) and Robert Rosenstock (1992). The progress achieved by some report was often undone after the appointment of new Rapporteurs, each of whom had their own ideas as to which should be followed. The third report of Special Rapporteur Schwebel (ILC Year Book, 1992, vol. II, part 7, p. 65) had a decisive influence on the essential content and shape of the Articles, but the momentum caused by that report was lost after successive changes of Special Rapporteurs, who revisited many of the issues in that report while often arriving at the same conclusion. In sum, ILC singled out the following for special protection: protection of vital human needs, protection of ecosystems, and sustainability of water utilisation.

[14] Those countries included Australia, Brazil, Canada, Colombia, Ecuador, the Federal Republic of Germany, Nicaragua, Poland, Spain and the Sudan.

drainage basin concept were, needless to add, predominantly down stream States.[15] This sharp divergence of view resulted in postponing the debate for defining "international watercourse," till 1979. A breakthrough was achieved in 1980, when the concept of "international watercourse system" was employed by the ILC.

III.2.1. ILC Draft Articles: An Overview

In 1994, the ILC concluded twenty-four years of work by adopting Draft Articles on the Law of the Non-navigational Uses of International Watercourses. together with a resolution on transboundary confined ground water, and recommended that a Convention be prepared on the basis of its Draft Articles.[16] The ILC Draft Articles undoubtedly have made an important contribution to the strengthening of the rule of law for international watercourses.

The Draft Articles comprise of an introductory section, and five operational parts. Part II puts forth general principles, which include equitable utilisation and no harm rule. Part III proposes planned measures that may have an effect on international watercourses, establishing a phased procedure comprising of information exchange and notification and a waiting for period of six months to allow for a reply for the notification, during which time the notifying State shall not implement or permit the implementation of planned measures without the consent of the notified State. The Draft Articles envisage a reply to notification, consultations and negotiations and procedures to be followed in the absence of notification and reply, or where the urgent implementation of a particular measure is required. Part IV deals with protection and preservation of ecosystem. Part V deals with harmful conditions and emergency situations, and part VI establishes miscellaneous provisions, *inter alia,* on management, regulation of flows, installations and armed conflict, indirect contact between watercourse States, confidentiality of certain data and non-discrimination.

The ILC commentaries regarding the expression "international watercourse system" shows that the Commission selected this term because it gave the appropriate sense of dimension, which characterised an international watercourse. An international

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[15] These states included Argentina, Barbados, Finland, Hungary, Pakistan, Sweden, and the United States, the Venezuela.

[16] Report of the International Law Commission to the UNGA on the Work of its Forty-Sixth Session, in UN GAOR 49th Session, Supp. (No. 10) UN Doc. A/49/10 (1994), p. 196.

watercourse was not after all a pipe carrying water through the territory of two or more States. While its core is generally and rightly seen as the main system of river traversing or forming an international boundary, the international watercourse is something more, for it forms part of what may be best described as a system. It comprises components that embrace or may embrace, not only rivers but also other units such as tributaries, lakes, canals, glaciers and ground waters constituting by virtue of their physical relationship a unitary whole.[17]

The ILC commentaries to Art. 5 observed that the concept of shared natural resources is a novel one, it has not been accepted as a principle of international law.[18] With regard to the argument that the notion of water as a shared natural resources entails an encroachment upon state sovereignty, the ILC observed that "by its very nature, water flowing from the territory of one State to that of another is not in the sense of being within the exclusive jurisdiction and domain of just one State, at any rate until it is apportioned between States, it is shared between States."[19]

In any event, the argument herein was nothing more than the Harmon doctrine in new clothes. That doctrine, long since had repudiated by the country that articulated it,[20] can't be said to be supported in the practice of States. These considerations suggest that the concept of an international watercourse as a "shared natural resource" should pose no greater threat to state sovereignty than the principle of *pacta sunt servanda.*[21] The challenge ahead for us is to transcend the self-interest of our respective nation

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17 The ILC Commentary, pp. 110-111.

18 The Commission's commentary deals at length with the history of the General Assembly action on the Drafts Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilisation of Natural Recourses Shared by Two or More States, U.N. SALES no. B. 75. (Z). Prepared by an Inter- Governmental Working Group of Experts on Natural Resources Shared by Two or More States, which had been established by the United Nations Environmental Programme (UNEP) in 1975. One of the objections to the adoption of the principle by the General Assembly was that some of them 'constituted an encroachment on sovereignty', p. 125.

19 Ibid., p. 126.

20 See E.g. S. Mc Caffrey, Second Report on the Law of the Non-navigational Uses of International Watercourses, *Year Book of International Law Commission*, vol.2, part I, 1986, pp. 87 and 105-110.

21 "The court declines to see in the conclusion of any treaty by which a state undertakes to perform or refrain from performing a particular act an abandonment of its sovereignty." *The S.S. Wimbledon*, 1923 PCIJ, Reports (Ser. A) No. 1, p. 25.

states so as to embrace a broader interest of the survival of human species in a threatened world.[22]

The ILC Draft Articles have already significantly influenced the drafting of other international agreements, including the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes, the South African Development Community (SADC) Protocol on Shared Watercourse Systems, the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, and the 1991 Protocol on Common Water Resources concluded between Argentina and Chile. This trend has continued after the UNCLNUIW's adoption as is evident in the 1999 Draft Protocol to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes. The Convention was recently referred to by the ICJ in *the Gabcíkovo-Nagymaros* case. In this case, the Court affirmed the centrality of the principle of equitable and reasonable utilisation.

Before dealing with the UNCLNUIW, it is educative to take a 'helicopter tour' of the gone years to examine the highlights of the accomplishment in the co-operative use of transboundary water resources. Key phrases in the helicopter flight are: The Harmon Doctrine, Doctrine of Limited Territorial Sovereignty, Helsinki Rules, 1966, ILC Draft Articles, 1994, Community of Interest Theory and UNCLNUIW. The tour began exactly a century ago in 1885 at a time when there is controversy over the Rio Grande between Mexico and the USA. Subsequently out of the legal opinion of Harmon, the then Attorney General of the US, a famous Harmon Doctrine was born. Later the treaty practice rejected this doctrine and States came closer to limited territorial sovereignty theory. The next landmark was the Helsinki Rules, 1966. The ILA took on the task and established its Water Resources Committee in 1954 and after 12 years the Helsinki Rules were born. The next landmark was the promulgation in 1994, by the ILC of its Draft Articles on the Law of the Non-navigational Uses of International Watercourses. The ILC Draft largely follows the Helsinki Rules and reinforces them and the doctrine of equitable utilisation. These are the legal benchmark of international watercourses law before the UNCLNUIW.

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[22] Statement of T. Mc Millan, Minister of Environment, Govt. of Canada, World Commission on Environment and Development (WCED), public hearing, Ottawa, Canada (May 26-27,1986), reprinted in WCED, *Our Common Future* (Delhi: Oxford University Press, 1987) 1987,p. 263.

III.3. Overview of the UNCLNUIW

The UNCLNUIW is an elaboration of rights and obligation attached to watercourse States. However, the negative votes of China and Turkey are probably attributable to their positions as upstream States in the ongoing controversies rather than a dispassionate assessment of the law.[23] Burundi's negative vote is somewhat puzzling since it didn't dissent in the vote taken in the working group.[24] Further, the hydrogeography of the State and their activities in the upper White Nile basin[25] will not affect Egypt or Sudan. Its position may have more to do with Egypt's historical concern with activities in the upper basin than with hydro geographic reality. The UNCLNUIW was open for signature from May 21,1997 until May 20, 2000.

III.4. Basic Principles of the UNCLNUIW

The UNCLNUIW contains seven parts and consists of 37 Articles: part I, Introduction (Arts. 1-4); part II, General Principles (Arts. 5-10); part III, Planned Measures (Arts. 11-19); part IV, Protection, Preservation and Management (Arts. 27-28); part VI, Miscellaneous Provisions (Arts. 29-33); and part VII, Final Clauses (Arts. 34-37).

The preamble of the UNCLNUIW, *inter alia*, refers to:

> Affirming the importance of international co-operation and good-neighbourliness in this field,
>
> Aware of the special situation and needs of developing countries,
>
> Recalling the principles and recommendations adopted by the United Nations Conference on Environment and Development of 1992 in the Rio Declaration and Agenda 21,
>
> Recalling also the existing bilateral and multilateral agreements regarding the non-navigational uses of international watercourses,
>
> And agree to comply with the UNCLNUIW including seven parts and altogether 37 Articles.

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[23] For instance, China's plan to construct additional dams on the upper Mekong and Turkey's GAP project on Euphrates. States with both lower and upper riparian interests are categorised together with those that are predominantly lower riparian states; since the vote suggests that their interests correspond more closely with those of lower rather than of upper riparian states. Of the 43 states with both lower and upper riparian interests, 29 favoured the UNCLNUIW, seven abstained, and seven were absent. Of the upper riparian states, three voted against the UNCLNUIW, seven voted in favour, 10 abstained, and 8 did not participate in the vote.

[24] In fact, it appears that Burundi did not participate in the meetings of the working group. Lebanon and Sweden officially acceded to the UNCLNUIW without having signed it.

[25] The other states are Kenya, Rwanda, Tanzania, Uganda and the Democratic Republic of Congo.

An annex to the UNCLNUIW containing 14 Articles sets forth the procedures to be used in the event of parties to a dispute have agreed to submit it to arbitration. An analysis of the UNCLNUIW shows that, while many if not most of its provisions find support in State practice, theses are distilled to their essence and thereby four fundamental obligations emerge: The obligation to utilise the international watercourse in an equitable and reasonable manner (Arts. 5, 6), the duty to prevent significant harm to other to other riparian States (Art. 7), the obligation to provide prior notification of planned measures that might affect the other States sharing a watercourse (Arts.8,9) and the obligation to protect and preserve the ecosystem (Arts.20-23).

The first two of these obligations are substantive as well as procedural. The first set of obligations is intended to protect international watercourse and their ecosystem against unreasonable degradation. The second set of obligations is the procedural obligation to cooperate with each other. The UNCLNUIW governs the non-navigational uses of international watercourses, as well as measures to protect, preserve and manage them. It addresses such issues as flood control, water quality, erosion, sedimentation, saltwater intrusion and living resources. It does not cover navigational uses, except in so far as other uses affect navigation.

According to Art. 2 of the UNCLNUIW, "Watercourse" means a system of surface waters and groundwater constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus; "International Watercourse" means a watercourse, parts of which are situated in different States; "Watercourse State" means a State Party to the present Convention in whose territory part of an international watercourse is situated, or a Party that is a regional economic integration organisation, in the territory of one or more of whose Member States part of an international watercourse is situated. "Regional Economic Integration Organisation" means an organisation constituted by sovereign States of a given region, to which its Member States have transferred competence in respect of matters governed by this Convention and which has been duly authorised in accordance with its internal procedures, to sign, ratify, accept, approve or accede to it. Art. 3 para 2 states that watercourse States may enter into one or more agreements, hereinafter

referred to as "watercourse agreements", which apply and adjust the provisions of the present Convention to the characteristics and uses of a particular international watercourse or part thereof.

III.5. Substantive Provisions

The most fundamental attempt to improve up on the law of watercourses regarding equitable and reasonable use was to develop an obligation to prevent 'serious harm' to other watercourse States. Earlier, the ILC introduced the concept of 'due diligence' to prevent uses involving significant harm from being exclusively covered by the doctrine of equitable use. In the same line, the UNCLNUIW did not prohibit harm but wanted to prevent 'significant harm', while implementing the principle of equitable utilisation.

III. 5.1. The Doctrine of Equitable and Reasonable Utilisation

The two principles of equitable and reasonable use in Art. 5 and the obligation not to cause appreciable harm in Art. 7 result in what was termed the "twin cornerstones" of the law of the non-navigational uses of international watercourses. The doctrine of equitable utilisation is the backbone of the law of non-navigational uses of international watercourses and it was also designated by the ILA's Helsinki Rules as the basic and governing principle on the subject.[26] Both the concept of equitable utilisation and sustainable development resemble each other in so far as both revolve around balancing of interests.[27] The principle of equitable utilisation has often been said to share a common legal nature with other principles of international law such as good neighbourliness, the principle of good faith or the prohibition of abuse of rights. While the latter principles are interpretative in nature, the principle of equitable utilisation is constitutive of the right to use an international watercourse[28].

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[26] The principle of equitable utilisation has been elevated to the status of customary principle by the International Court of Justice in the case concerning *the Gabcikovo-Nagymaros Project, n. 67,* p. 7, judgment of 25 Sept. 1997, e.g. paras., 78, 85,147,150. In his dissenting opinion Judge Adhoc Skubiszewski referred to it as the 'canon of an equitable and reasonable utilisation.'

[27] This articulation is in line with the recent decision of ICJ in the *Gabcikovo-Nagymaros* case between Hungary and Slovakia. The ICJ confirmed the centrality of the principle when it emphasised the importance of operating the project involved in the case "in an equitable and reasonable manner."

[28] Ximena Fuentes, "Sustainable Development and the Equitable utilisation of International Watercourses", *British Year Book of International Law*, 1998, p.129. This article states that prior to

Equitable utilisation rests on a foundation of equality of rights, or shared sovereignty, and is not to be confused with equal division. The strongest view is that this equitable approach takes precedence over the other principles, notably the obligation to prevent serious harm to other States. Used in this sense, the threshold of wrongful injury will turn not on the seriousness of the injury alone but on its reasonableness judged against other equitable factors.

Art. 5 sets out these principles as twofold: First, international watercourses shall be used and developed to attain optimal utilisation consistent with adequate protection of the particular watercourse. Second, that watercourse States shall participate in the use, development, and protection of international watercourses in an equitable and reasonable manner, including the duty to co-operate in the protection and development of it. By providing that watercourse States "shall participate" in the use and protection of an international watercourse in Art. 5, the UNCLNUIW expanded upon the Helsinki Rules, which provides for equitable use as a right to use a watercourse reasonably by creating a positive duty to protect that watercourse. India says that Art. 5 had not been drafted clearly and would be difficult to implement it. The UNCLNUIW had superimposed the principle of "sustainable utilisation" over the principle of equitable utilisation without appropriately defining the term "sustainable". India had abstained in the voting on draft Arts. 5, 6 and 7 in the Working Group.

Indeed, it generally entails a balance of interests that accommodates the needs and use of each State. This principle enjoys substantial support in judicial decisions, State practice and international codifications. In the *River Oder* Case the PCIJ had to consider the rights of lower riparian States to freedom of navigation in Polish waters upstream. Its main finding favoured a community of interests in navigation among all riparian States based on equality of rights over the whole navigation course of the river[29]. Although confined to navigation, the principle on which it is based supports a comparable community of interest in the uses of watercourse.

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the establishment of an equitable regime for utilisation of international watercourses, there is only a generic right to participate in the sharing of watercourses, but it is equitable utilisation, which constitutes the basis of the certain right of volumes of water or right to undertake certain activities in the watercourses. See also Ximena Fuentes, "The Criteria for the Equitable Utilisation of International Rivers," *British Year Book of International Law,* 1996, pp. 337-412.

[29] *The River Oder Case*, PCIJ, Ser. A, No23 (1929). See also the *Diversion of Water from the Meuse Case,* PCIJ, Ser. A/B, No.70 (1937).

The doctrine of equitable utilisation was born out of the US Supreme Court decision in inter-state apportionment cases beginning in the early 20th century,[30] and is supported by decisions in other federal States.[31] This doctrine is chiefly a principle governing apportionment or quantitative allocation of water sharing between two or more States.

In most basic terms the task of arriving at an equitable allocation involves striking a balance between the needs of the States concerned in such a way as to maximise the benefit and minimise the detriment to each. This conclusion is based on ample evidence of State practice, judicial decisions and legal authorities[32] and is also in line with the law of federal States[33]. In fact, there exists no evidence to support the contrary position, namely, the waters should be allocated, for example, according to the contribution of each State to the basin's water or the length of the river in each States territory.

Art. 5 provides that states "shall in their respective territories utilise an international watercourse in an equitable and reasonable manner." Art. 6 provides for a non-comprehensive list of factors, relevant to the assessment of water use, which watercourse States must consider when assessing what uses meet the criteria of equitable and reasonable utilisation. In the same line, Art. V of the Helsinki Rules

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30 *Kansas V. Colorado*, 206 US 46 (1907); *Wyoming V. Colorado*, 259 US 419, modified, 206 US (1922), amended, 353 US 953 (1957); *Connecticut V. Massachusetts*, 282 US 660 (1931); *New Jersey V. New York*, 283 US 336 (1931); *Washington V. Oregon*, 297 US 517 (1936); *Colorado V. Kansas*, 320 US 383 (1943); *Nebraska V. Wyoming*, 325 US 589 (1945), modified 345 US 981 (1953); *Colorado V. New Mexico*, 459 US 176 (1982); *Texas V. New Mexico*, 462 US 554 (1983); Colorado *V. New Mexico*, 467 US 310 (1984); and *Kansas V. Colorado*, 475 US 1079 (1986).

31 *Donauversinkung Case,* translated in American Digest of Public International Law Cases, vol.4 1927-1928 p.128 and *Province of La Pampa V. Province of Mendoza*, Supreme Court of Justice of Argentina, Dec. 1987, summarised in the UN International Rivers and Lakes News Letter, No. 10 May 1988, pp.2-5 and *Aargau V. Zurich* as discussed in Smith's work: *The Economic Uses of International Rivers* (London: King and Son Ltd, 1931), pp. 39-40.

32 This conclusion has never been contested. See J. Lipper, "Equitable utilisation", in A. Garretson and others, eds., *The Law of International Drainage Basins* (New York: Oceana Publications, 1967), pp. 41-45; W. Griffin, "The Use of Waters of International Law", *AJIL*, 1959, pp. 78-79; C. Bourne, "The Right to Utilise the Waters of International Rivers", 3 *Canadian Year Book of International Law*, 1965, p.187.

33 In the case of *Arizona V. California*, 373 US 546 (1963), Justice Douglas mentioned in his dissent that under the principle of equitable apportionment, the size of the basin with each of two states is a relevant factor. A majority of US Supreme Court did not adopt this factor. On this point see, G. Sherk, "Equitable Apportionment after Vermejo: The Demise of a Doctrine", *Natural Resources Journal,* vol.29, 1989, pp. 565-77.

provides for a list of factors[34], these include, among others, geographic, hydrological, climatic, historical, social, economic and technical elements, as well as existing and possible uses, costs and the availability of alternatives[35].

Art. 6 speaks of factors relevant to equitable and reasonable utilisation. Para I of Art. 6 states that utilisation of an international watercourse in an equitable and reasonable manner within the meaning of Art. 5. It requires to take into account all relevant factors and circumstances, including: geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character; the social and economic needs of the watercourse States concerned; the population dependent on the watercourse in each watercourse State; the effects of the use or uses of the watercourses in one watercourse State on other watercourse States; existing and potential uses of the watercourse; conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect; the availability of alternatives, of comparable value, to a particular planned or existing use. Art.6, para 2 states that in the application of Art. 5 or paragraph 1 of this Article, watercourse States concerned shall, when the need arises, enter into consultations in a spirit of cooperation. Para III provides that the weight to be given to each factor is to be determined by its importance in comparison with that of other

[34] The relevant factors to be considered are listed in article V (2) of the Helsinki Rules, and include:

- the geography of the basin, including the extent of the drainage area in the territory of each basin state in particular;
- the hydrology of the basin, including the contribution of water by each basin state in particular;
- the climate affecting the basin;
- the past utilisation of the water of the basin, as well as current utilisation in particular;
- the economic and social needs of each basin state;
- the population that depends on the water of the basin in each basin state;
- the comparative costs of alternative means of satisfying the economic and social needs of each basin state;
- the availability of other resources;
- the avoidance of unnecessary waste in the utilisation of the water of the basin;
- the practicality of compensation to one or more of the co-basin states as a means to adjust conflicts among users; and,
- the degree to which the needs of a basin state may be satisfied without causing substantial injury to a co-basin state.

[35] Hydroelectric potential of an international watercourse is excluded as a relevant factor under Art. 6 of the UNCLNUIW. As regards, inland fisheries, states are not willing to apply the principle of equitable apportionment. Further, application of equitable apportionment to ground water is still a controversial point.

relevant factors. In determining what is a reasonable and equitable use, all relevant factors are to be considered together and a conclusion reached on the basis of the whole.

Art. 7 provides that watercourse States "shall ... take all appropriate measures to prevent the causing of significant harm to other watercourse States." Before the UNCLNUIW, among international codifications, only the International Law Association's Helsinki Rules explicitly require States to prevent pollution injury 'consistent with the principle of equitable utilisation'. This provision purports to rely mainly on *Trail Smelter* and other authorities considered here. In contrast, the ILC has moved away from a similar position initially adopted by Rapporteurs, Schwebel and McCaffrey. Instead, it has chosen not to make the obligation to prevent serious harm or pollution injury to other States conditional on equitable balancing. Indeed, it has now favoured the opposite view, that a watercourse State's right to utilise an international watercourse in an equitable and reasonable manner finds its limit in the duty of that State not to cause appreciable harm to other watercourse States.

Equitable utilisation is useful as a means of introducing environmental factors into the allocation of shared watercourse resources, but as a basis for comprehensive environmental protection of those watercourses, it is a principle of only modest utility. Not only is it unpredictable in application, through its stress on the individuality of each river and the multiplicity of relevant factors, but also it tends to neglect the broader environmental context of rivers as part of hydrologic cycle affecting the health and quality of the oceans. Moreover, the common regional standards of water quality necessary in that context are less likely to find place in equitable arrangements balancing only the needs of riparian States.

Justice Holmes had emboldened the philosophical and policy underpinnings of the principle of equitable utilisation in the case of *New Jersey v. New York.* He effectively rejected both the Harmon Doctrine and absolute territorial integrity doctrine by stating that both States have real and substantial interests and these interests must be reconciled as best they may rather than simply declaring one the absolute winner and the other the absolute loser. He ruled that the object is to secure an equitable apportionment without quibbling over formulas. The novelty is that equitable

utilisation purports to become the principal basis of entitlement to the use of international watercourses. Therefore, claims to a portion of the waters of an international watercourse or to undertake a particular activity cannot be separated from the question of equitable utilisation. This fact has been recognised in India by the special tribunals that have resolved inter-state water disputes.

The practice of these municipal courts is relevant for this study because they have had recourse to the principle of equitable utilisation as a principle of international law applicable to the resolution of inter-state or provincial water disputes. The Krishna Tribunal, which was appointed for the resolution of disputes between the States of Karnataka, Maharashtra and Andhra Pradesh, states that the application of the principle of equitable apportionment, the decision of courts and tribunal and opinion of jurists on international law may be consulted.[36] Having said this the Krishna Tribunal invoked the Helsinki Rule, 1966. Further, the Narmada Tribunal, which was appointed for the resolution of disputes between the States of Madhya Pradesh, Gujarat, Rajasthan and Maharashtra, invoked the principle of equitable utilisation and observed that: "the doctrine of equitable apportionment is derived from the basic concept of international law."[37]

In relation to the question of property rights over interstate waters, the Krishna Tribunal stated that: No State has a proprietary interest in a particular volume of water of an interstate river on the basis of its contribution or irrigable area. Rules of law based on the analogy of private proprietary interests in water do not afford a satisfactory basis for settling interstate water disputes[38]. In the same way the Narmada Tribunal maintained that: as a matter of fact, no State has a proprietary right on a particular volume of water of an interstate river on the basis of its contribution to the available flow or drainage area. It is well established that the waters of a natural stream or other natural body of water are not susceptible of absolute ownership as specific intangible property[39].

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[36] Government of India, Report of the Krishna Water Dispute Tribunal, (New Delhi, 1973), vol. 1, p. 95.

[37] Government of India, Report of the Narmada Water Disputes Tribunal, (New Delhi, 1978), vol. 1, p. 115.

[38] See n.36, p.94.

[39] See n. 37, p.114.

In the same vein, another Indian special tribunal, the Ravi -Beas Water Tribunal in examining the claim of the State of Punjab observed that the waters of the Ravi and Beas belonged entirely to it to the exclusion of Haryana and Rajasthan, and held that there is nothing in the law for anyone including the State to claim absolute proprietary rights in river waters. Running water has therefore rightly been called 'a negative community' as it belongs to no one and is not susceptible to absolute ownership rights. The only right, which a State can legitimately claim in river water flowing within its territory, is the right to make use thereof provided that such use doesn't affect adversely the right of another State to make use of the said waters[40].

Seen in this light, as a principle, which solves the question of entitlement to the utilisation of the waters of international watercourses, the principle of equitable utilisation can be separated from other principles of entitlement such as territorial sovereignty or the principle of acquired rights[41].

In the *North Platte River Case*, the US Supreme Court explained the relevance of the priority of use and its relation to other factors in arriving at an equitable allocation.[42] It is important to note that priority of use alone is not decisive. The loadstar is not simply who got to the river first or who is upstream or downstream, but what is equitable and reasonable in circumstances. Hence the doctrine of equitable utilisation is flexible and it may change over time.[43] Again, the temporal flexibility was illustrated in *Kansas V. Colorado,*[44] where Kansas relied on non-harm rule or *sic utere tuo* principle as Colorado caused factual harm.

Here the distinction between factual harm and legal injury is crucial to an understanding of the principle of equitable utilisation. It is only injury to a legally protected interest that is prohibited. Deprivation of a State's equitable share is not the notion of equality of right.[45] It is enshrined in Art 2(1) of the UN Charter. In

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[40] Government of India, Report of the Ravi-Beas Waters Tribunal (New Delhi, 1987), p. 94.
[41] Fuentes, n.28, p.129.
[42] *Nebraska V. Wyoming*, 325 US (1945), modified 345 US 981 (1953).
[43] *Colorado V. New Mexico*, 45A US p.184.
[44] 206 US 46 (1907), where the court observed that Kansas had a legal right to an equitable apportionment of the river's benefits.
[45] *River Oder Case*, PCIJ Ser.A, no.26 p.27; *Gabcikovo- Nagymaros Case (Hungary v. Slovakia)* 37 *ILM* 1998.

Connecticut V. Massachusetts[46], the US Supreme Court ruled that equality of right doesn't mean: "That there must be an equal division of the waters...It means that the principles of right and equity shall be applied..."

In *Aargau V. Zurich*[47], the Swiss Federal Court did not accept the Harmon Doctrine but recognised the equal sovereignties of the other jurisdictions corresponding to the needs. Oppenheim expressed the same idea in his classic work published in 1905:

> Territorial supremacy does not give a boundless liberty of action. Thus, by customary international law ... a state is, in spite of its territorial supremacy, not allowed to alter the natural conditions of its own territory to the disadvantage of the natural conditions of a territory of a neighbouring state, for instance to stop or divert the flow of a river which runs from its own into a territory.[48]

What is important is that each State has an equal right to an equitable share of the uses and the benefits of the stream. While discussing the principle of equitable apportionment, the US Supreme Court observed:

> Especially...where water is scarce, there must be no waste of the 'treasure' of a river...only diligence and good faith will keep the privilege alive... Thus wasteful or inefficient uses will not be protected...Similarly, concededly senior water right will be deemed forfeited or substantially diminished where the rights have not been exercised or asserted with reasonable diligence[49]

Colorado V. New Mexico represents the classic case of an upstream State wishing to make use for the first time of a watercourse that had been fully utilised by a downstream State. This case teaches that every State has an equal right to an equitable portion of the uses and benefits of a shared watercourse, irrespective of where the watercourse rises or which State's use was prior in time. It can be said that the principle of equitable utilisation presents an amalgamation of method and aim[50].

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[46] 282 US 660, pp.670-71 (1931).

[47] *Aargau V. Zurich* Case is also known as the *Zwillikom Dam Case*, Entsch.des Schweizerischen Bundesgerichts (1878), vol. 4, p. 34. Smith characterises this case as the earliest case in which judicial tribunal has approached the problem from the standpoint of the international law.

[48] Oppenheim, *International Law* (London: Longmont, Green, 1905), p.175.

[49] *Colorado V. New Mexico*, 459 US, p. 184.

[50] The combination of method and aim in relation to the application of the concept of equity can also be found in some of the judgments of the I.C.J Concerning maritime delimitation: The result of the application of equitable principle must be equitable. This terminology, which is generally used, is not entirely satisfactory because it employs the term equitable to characterise both the result to be

The application of equity can be distinguished in *equity contra legem*[51], *equity infra legem*[52], and *equity praetor legem.*[53] For international watercourse *equity infra legem* is applied. Equity was first conceptualised as a general principle of international law within the meaning of Art. 38 (1)(c) of the ICJ Statute by Judge Hudson in his individual opinion to the *Diversion of Water from the Meuse*[54]

The application of equity is taken to constitute a method of interpretation and application of the rule of law in force of which it forms an attribute[55], thus "fulfilling the law and if necessary supplementing it".[56] Ultimately equitable and reasonable utilisation is a means to an end. Equitable utilisation insists even optimal utilisation and benefits therefrom consistent with adequate protection of watercourses. As Hey observes, optimal utilisation is a goal, which, States should attempt to achieve, it is not a result which States are legally obliged to achieve.[57] A different opinion is held by Gerhard Hafner, who states optimal utilisation is to be perceived as "an obligatory

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achieved and the means to be applied to reach this result. It is however the result which is predominant; the principles are subordinate to the goal. The equitableness of the principle must be assessed in the light of its usefulness for the purpose of arriving at an equitable result. It is not every such principle, which is in itself equitable; it may acquire this quality by reference to the equitableness of the solutions. See *Continental Shelf Case (Tunisia/Libya Arab Jama Hiriya)* 1982 ICJ 59 and Delimitation *of the Maritime Boundary in the Gulf of Marine Area*, 1984 ICJ, 294.

51 Equity *contra legem* specifies that solutions are found which are 'opposed' to the law- 'in this sense equity is the application to particular circumstances of the standard of what seems naturally just and right, as contrasted with the application of those circumstances of a rule of law, which may not provide for such circumstances or provide with what seems unreasonable or unfair'. (D.M.Walker, T*he Oxford Companion to Law*, (1980), p. 424). "Equity may contradict the Law," see M. W. Janis, "Equity in International Law" in R. Bernhardt, ed., *Encyclopaedia of Public International Law* 7 (1984) p.75; and L.F.E. Goldie, "Equity and International Management of Transboundary Resources," *Natural Resources Journal*, vol. 25, 1985, pp. 672-74. It is worthy to note that under Art.38 (2) of the I.C.J. statute, the I.C.J. can decide a case *ex aequo et bono* when parties to a dispute have requested the court to do so.

52 The weight to be given to each factor is to be determined by its importance in comparison with that of other relevant factors. In determining what is reasonable and equitable share, all relevant factors are to be considered together and a conclusion reached on the basis of the whole.

53 *Equity praeter legem* means "equity is seen as a gap filler when the law is 'silent'... " , see Janis, n. 51, p. 75 and Goldie, n. 51, pp. 672-74.

54 *Netherlands V. Belgium* 1937 P.C.I.J (ser. A/B) no. 70, p. 7 (28 June 1937) (judgment).

55 See *North Sea Continental Shelf Case*, 1969, I.C.J.47: "It is not a question of applying equity simply as a matter of abstract justice, but of applying a rule of law which itself requires the application of equitable principles..." *Frontier Disputes*, ICJ 1986,pp. 567-68. The court will have regard to equity infra legem, that is, the form of equity, which constitutes a method of interpretation of the law in force, and is one of its attributes.

56 Shabtai Rosenne, "Equity", in A. Bloed, P. Van Dijk, eds., *Forty Years of International Court of Justice: Jurisdiction, Equity and Equality* (1988), p. 89.

57 Ellen Hey, "Sustainable Use of Shared Water Resources: the Need for a Pragmatic Shift in International Water Resource Law" in Gerhard. H. Blake and others, eds., *The Peaceful Management of Transboundary Resources* (London: Martinus Nijhoff, 1995), p.144.

objective underlying any reconciliation of conflicting uses, thus, as a legally binding restriction on the discretion concerning utilisation in the interests of the community.[58]

Maximising benefits for States and avoidance of harm to States, not minimising harm to watercourse themselves is what optimal utilisation is about. Harm-benefit balancing test is an integral part of equitable utilisation analysis. If harm is caused, it is to be remedied with appropriate compensation[59].

There is no evidence of State practice for the principle that prior or existing uses are not entitled to absolute protection. As we have seen States have invoked their right to established,[60] or historic,[61] uses of watercourses or have complained of pollution damage from uses of upstream[62]. A claim for established or historic use would tantamount to an assertion that first in time is first in right, but this idea is philosophically and legally unsound.

It is worthy to note the suggestion by Hayton that the doctrine of equality of rights to the beneficial uses of international watercourses enjoys the status of a peremptory norm.[63] If the idea is that the sovereign equality of states constitutes a peremptory norm, the Permanent Court of International Justice as early as 1923,[64] affirmed that the incurring treaty obligations was an expression rather than an abandonment of sovereignty,[65] and thereby, McCaffrey expresses his doubt about the status of peremptory norms to the principle of equality of right. Since the Harmon Doctrine is repudiated and outdated, the prior or established use claim also doesn't hold any water.

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[58] Gerhard Hafner, "The Optimum Utilisation Principle and the Non-navigational Uses of Drainage Basins", *Austria Journal of Public International Law,* 1993, p. 132.

[59] See Art.7 (2) of the UNCLNUIW and the Art. V (2) j of the Helsinki Rules.

[60] Egypt has taken this position with respect to the Nile.

[61] México took the position over the Rio Grande leading to the articulation of the Harmon Doctrine by the US. Egypt has also taken this position vis-a-viz Sudan. Karnataka has made this historic use claim over Cauvery water against Tamil Nadu in 2002.

[62] This is the case with France and Netherlands over the Rhine, which was affected by chlorine pollution.

[63] Robert. D. Hayton, "The Formation of the Customary Rules of International Drainage Basin Law, in A. Garreston and others, eds., *The Law of International Drainage Basins* (New York: Oceana, 1967), pp. 835-36.

[64] *The Wimbledon,* PCIJ, Series A, No.1, p.25.

[65] S.C.McCaffrey, *The Law of International Watercourse: Non-Navigational Uses* (New York: Oxford University Press, 2001), p. 338.

Still we hear occasional references to 'sovereignty' by upstream States in relation to the law of international watercourses[66]. But there is no inconsistency between the notion of sovereignty and the idea of respecting the co-basin's right. It is to be borne in mind that the rights of the other States that are affected are no less sovereigns than those of the States asserting their sovereign freedom.

III.5.2. Operation of the Principle of Equitable Utilisation:

Each State must initially determine for itself whether its use of an international watercourse is equitable and reasonable vis-à-vis its co-riparian States. If one State has exceeded its share, then the other State has to notify to that effect and differences, if any, are to be resolved through negotiation. It is pertinent to note here a relevant part from the *Lake Lanoux* Case:

> The Tribunal considers that the upper riparian state, under the rules of good faith, has an obligation to take into consideration the various satisfactions compatible with the pursuit of its own matter, or real desire to reconcile the interests of the other riparian with its own[67].

If differences can't be resolved through negotiation, then the matter is taken to the Tribunal[68] or Courts[69] as far as the federal State is concerned or if it is between two countries, then to the international tribunals[70] or the ICJ[71]. Most of such disputes are resolved through negotiations and some result in the conclusion of a treaty.

It must be recognised that determination of a State's equitable share is not in many cases, a simple and easy matter. Most of the cases present so much of legal and factual details[72].

Suppose, down-stream Bangladesh is the only one making use of the Ganges, the upstream State, India has no immediate cause for complaint. At this point the use

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[66] This was the attitude of China with regard to the UNCLNUIW, see the statement of the Chinese Delegate, Gao Fend, reported by Xinhua News Agency on 21 May 1997.

[67] 12 *UNRIAA*, p. 28, English translation in 1974 *ILC Year Book*. vol. 2, p. 198.

[68] Cauvery Water Dispute Tribunal, Krishna Tribunal etc. were set up.

[69] Cauvery Water Dispute went up to the Supreme Court of India; various other cases too reached the apex court.

[70] Lake Lanoux case, 12 UNRIAA. English translation in 1974 ILC Year Book, vol. 2, p. 198.

[71] The *Gabcikovo- Nagymaros case* 1997 ICJ 7, (judgement of 25 September 1997), reprinted in 37 *ILM* (1998)

[72] Equitable utilisation is not an abstract or static state of affairs, but one that must be arrived at through an ongoing comparison of the situation, data and uses of states concerned. More often, there

of water by Bangladesh could be equitable and reasonable, although equity may require that Bangladesh should alter its earlier use if and when India begins to make use of the waters of the Ganges. On the other hand, if we suppose, when India has been using and relying upon the Mahakali waters and then Nepal begins diverting large quantities of water, leaving virtually none for India as a practical matter, then the use of waters by Nepal would appear *per se* inequitable and unreasonable. Hence, some adjustments by both States are required to balance their interests. In a problem of this sort, all relevant factors must be taken into account before pronouncing *a priori* upon the equity and reasonableness of a State's use[73].

What is equitable may change with changing circumstances. It is not to be forgotten that equitable utilisation is a two-way communication and exchange of regular information as contemplated by Art. 9 of the UNCLNUIW. As any new use would throw a regime of equitable utilisation out of balance, it should be subject to prior notification and consultation.[74] If need be, negotiation and even third party dispute settlement may be resorted to.

Co-operation and good faith fulfilment are the cornerstones for establishing an equitable regime for international watercourse and such thing is effective when it is institutionalised[75]. The equitable utilisation is a principle of law and not simply a matter of apportioning water *ex aequo et bono,* as Berber once thought. This rule enjoys wide acceptance today and is part of customary international law. Reasonable use of natural resources implies securing the maximum possible yield, which is referred to as 'optimisation'. The concept of equitable or reasonable use for international watercourse can be considered from two standpoints: From the use itself and from the way in which the derived benefits are to be apportioned between States.

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is unilateral determination owing to secrecy in sharing the data and information and irregular updating of information.

[73] Indicative lists of such factors have been developed by national courts and are given in both the Helsinki Rules, 1966 and the UNCLNUIW but it is a non-exhaustive list. Finally, everything depends upon the unique characteristics of the case at hand.

[74] Sometimes, conducting the transboundary environmental impact assessment could be necessary.

[75] A survey of multipartite and bipartite commissions concerned with non-navigational uses of international watercourses compiled by the UN Secretariat lists ninety such bodies. In fact, the doyen of all international organisations was the Central Commission of the Navigation of the Rhine.

The equitable utilisation may be relied on to determine the permissibility of pollution injury falling below the threshold of serious or significant harm, but not to excuse injury above that threshold. Such injury will itself be inequitable.

What constitutes reasonable and equitable utilisation is not capable of precise determination. It is implicitly understood in *Lake Lanoux* arbitration, where the tribunal recognised that, in carrying out diversion works entirely with in its own territory, France nevertheless had an obligation to consult Spain, the other riparian and to safeguard her rights in the watercourse.[76] This does not mean that any use of an international watercourse affecting other States requires their consent, but does indicate that the sovereignty of a State over rivers within its borders is qualified by recognition of the equal and co-relative rights of other States. Settlement of river disputes in North America and the Indian sub-continent by States, which had previously asserted a different position, tend to confirm this conclusion.

These and other examples of State practice had persuaded successive Rapporteurs to endorse that it be affected by the proposed use of watercourses.[77] However, a listing of factors says nothing about the priority or weight to be given to each one, or how conflicts are to be reconciled. These remain matters for judgment in individual cases, and for this reason uncertainty in application is the main difficulty affecting the principle of equitable and reasonable use. The better solution given the greater complexity of the balancing process involved and the likelihood that needs of State may change, is probably some form of common management that is designed to achieve equitable and optimum use of the watercourse system.

Thus, the principle of equitable utilisation leads naturally to the theory on which the allocation of water resources has been based, that of common management. In the *River Oder* Case, the PCIJ had to consider the rights of lower riparian to freedom of navigation in Polish waters upstream. Its main finding favoured a

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[76] *ILR*, vol. 24 1957, p.101; *AJIL*, vol. 57, 1963, pp. 234-41.

[77] *Lake Lanoux Arbitration*, n. 67, p.138: 'account must be taken of all interests, of what so ever nature, which are liable to be affected by the works undertaken, even if they do not correspond to a right'; see also *ILA* Commentary to the 1966 Helsinki Rules, p. 488.

community of interests in navigation among all riparian States based on equality of rights over the whole navigation course of the river.[78]

As we have seen, equitable utilisation is generally workable on a multilateral basis only if supported by appropriate institutions and co-ordinated policies. Thus, only as part of the trend to common management and international regulation of transboundary watercourses does it have a more convincing role in resolving environmental disputes too.

III.5.3. Prevention of Harm to Co-Basin States

The proposition that States is under a customary obligation to prevent serious harm to others through their use of an international watercourse is not itself controversial. Art. 7of the ILC states the general principle, which successive Rapporteurs and the Commission have regarded as a codification of established customary law for all forms of damage to other States. The general obligation of one State not to cause harm to another is one of the most basic in all of international law. Art. 7 provides for obligation not to cause significant harm[79].

This was the most controversial provision during the negotiation of the UNCLNUIW. Does the no-harm rule enjoy sufficient support to qualify as an independent, binding obligation under the law of international watercourses? Whether the equitable utilisation should prevail over the no-harm obligation? Are they incompatible with each other? These are questions that therefore deserve examination.

It is arguable that the no-harm rule is compatible with and supports that of equitable utilisation.[80] This law prohibits not actual harm *per se* but injury to legally protected interests. It neither embodies an absolute standard nor supercedes the

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[78] *The River Oder Case*, PCIJ, Ser. A, No 23(1929). See also *the Diversion of Water from the Meuse Case*,PCIJ, Ser. A/B, No. 70 (1937).

[79] Para I of Art.7 states that watercourse States shall, in utilising an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse States. Para II states that where significant harm nevertheless is caused to another watercourse State, the States whose use causes such harm shall, in the absence of agreement to such use, take all appropriate measures, having due regard for the provisions of Arts. 5 and 6, in consultation with the affected State, to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation.

[80] In certain circumstances equitable and reasonable utilisation of international watercourses may still involve significant harm to another watercourse State. Generally in such circumstances the principle of equitable and reasonable utilisation remains the guiding principle in balancing the interests of states. However, pre eminence is given to the principle of equitable and reasonable utilisation.

principle of equitable utilisation where the two appear to conflict with each other. Instead, it plays a complementary rule, triggering discussions-between the States concerned for proscribing certain forms of serious harm. Hence no-harm doctrine complements and supports rather than overrides, equitable utilisation.

The no-harm rule is identified with the maxim *sic utere tuo ut alienum non laedas* (so use your own as not to harm that of other). It has acquired the status of customary principle. *Sic utere* principle has been derived from Roman law. Some other maxims of the Roman law indicate that focus was not simply upon the causing harm, but upon whether one had the right to cause harm. This principle is aptly incorporated in the following maxims. *Neminem laedit qui jure suo uritur* (he who stands on his own rights injures no one); and *nemo damnum facit nisi qui id fecit quod facere jus non habet* (no one is considered as doing damage unless he is doing what he has no right to do). Caflisch considers the doctrine of *sic utere tuo* as originated from the general principle of law recognised by civilised nations within the meaning of Art. 38(c) of the Statute of the ICJ.[81] Judge Castro called it a feature of law both ancient and modern,[82] while Bruhacs refers to it as an Anglo American legal maxim par excellence.[83]

This *sic utere tuo* maxim is not being invoked strictly. The apt example is the 1908 case of *Leming v. Fockward.* The maxim *sic utere tuo* furnishes, in a general sense, the rule that every member of society possesses and enjoys his property, but it is not in an ironclad rule without limitations. If applied literally it would largely defeat the very purpose of its existence, for in many instances it would deprive individuals of the legitimate use of their property. This doctrine is not inconsistent with the rule of law that a man may use his property as he pleases without being answerable for the consequences, if he is not an active agent in causing injury, if he doesn't create nuisance, and if he exercises due care and caution to prevent injury to others[84].

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[81] Caflisch, "The Law of International Waterways and its Sources", in R St. J. Macdonald, ed., *Essays in Honour of Wang Tieya*, (The Hague: Martinus Nijhoff, 1993), p.123.

[82] Dissenting opinion of judge Castro in *Nuclear Tests Case (Australia.v.France),* 1974, ICJ 253 judgment of 20 December 1974), p. 372.

[83] J. Bruhacs, *The Law of Non-navigation Uses of International Watercourses* (Budapest: Akademiai Kiado, 1993), p. 122.

[84] It is the classic ruling of the Montana Supreme Court, 1908, p. 92 para, 962 (emphasis added).

Along with the exercise of due diligence, a certain degree of harm will be caused legitimately to one or more watercourses[85]. The notion of due care and reasonableness are flexible ones, which prescribe a degree of care that is appropriate in the circumstances. *Sic utere tuo* has obvious connection with the theories of abuse of rights and good neighbourliness (neighbourship law). What amounts to an abuse of right is difficult to state in general term. This abuse of right doctrine was applied by both the PCIJ in *Free Zone* case[86] and ICJ in the *Anglo Norwegian Fisheries* Case[87]. This doctrine mandates not only to refrain from causing significant physical harm but also to tolerate a certain degree of harm and the degree of harm will be assessed on the basis of the facts and circumstances of each case.

It is apt to quote the following statement of law by the *Trail Smelter* Tribunal.

> 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 consequences and the injury is established by clear and convincing evidence[88].

When there is significant harm, one of the means of balancing the equities is in payment of compensation.[89] Another notable decision in this regard is the *Corfu Channel* case, where the ICJ postulated the law that:

> Every state has obligation not to allow knowingly its territory to be used for acts contrary to the rights of other states[90].

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[85] As regards the degree of diligence required, the ILC relies on the classic description given in the *Alabama Arbitration.* A diligence proportional to the magnitude of the subject exercising it ---, see the Geneva Arbitrations in the Alabama case, J.B.Moore, *History and Digest of the International Arbitrations,* (1898), pp. 572-73, 612. Also see Riccardo Pisillo Mazzeschi, "The Due Diligence Rule and the Nature of the International Responsibility of States", *German Year Book of International Law, vol.* 35 (1992), p. 48.

[86] Series A, no. 24, p.12 and series A/B, no.46, p. 167, judgement of June 1932. The court there stated: 'a reservation must be made as regards the case of abuses of a right ---but an abuse can't be preserved by the court'.

[87] *Anglo Norwegian Fisheries Case,* 1951 ICJ p.142, in that case the court characterised the situation as involving a case of manifest abuse of the right to delimit the territorial sea. See also Art. 300 of the 1982 UNCLOS, UN Doc. AL CONF. 62 /122, 121 *ILM* 1261 (1982) entitled ' Good Faith and Abuse of Rights'.

[88] UN reprint's Arbitral Awards, pp. 1911, 1938. The 1941 award relevant here is reprinted in *AJIL,* vol.35, 1941, p.68.

[89] Art 7 of the UNCLNUIW, 1997 contemplates the question of compensation where the significant harm is caused.

[90] *Corfu Channel Case (U.K. v Albania)*, 1949 ICJ 4. The facts of this case are little in common with problems on the subject discussed here.

The above dictum and the ratio of the *Trail Smelter* can be supportive to the doctrine of equitable utilisation and that of 'no-harm'. It is pertinent to underscore the *Lake Lanoux* obiter dicta in this context:

> There is a rule prohibiting the upper riparian state from altering the waters of a river in circumstances calculated to do serious injury to the lower riparian state.[91]

In *Gabcikovo- Nagymaros* case, the ICJ didn't endorse Hungary's heavy reliance on the no-harm rule. The court gave pre-eminence to the doctrine of equitable utilisation as the guiding principle, which suggests that the former rule has little utility for resolving complex problems related to shared fresh water resources[92]. International law obligates each State not to cause harm to another.[93] This obligation includes direct state action within its own territory and each State's duty to ensure that its territory is not used in a manner injurious to other countries.[94] This rule is affirmed in Principle 21 of the Stockholm Declaration, which reads:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities with in their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.

The Principle 21 of the Stockholm Declaration stresses that States have the responsibility to ensure that the activities within their jurisdiction or control do not cause damage to the environment of other State. In other words, it embodies a due diligence obligation. This principle is the fountainhead in the development of the law

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[91] *Spain v. France* ,n. 67

[92] *Hungary v. Slovakia,* 1997 ICJ, n. 71, available on the court's website, www.icj-cij.org. On July 1993, in pursuance of a special Agreement of 7 April 1993, Hungary and Slovakia requested the ICJ to determine the rules and principles of general international law and other treaties applicable by the court arising out of 1977 Agreement on the construction and operation of the Gabcikovo-Nagymaros barrage system between Hungary and Czechoslovakia. In its judgement the court found both states to be in breach of their obligations and called on them to negotiate a settlement in good faith. On 3 September 1998 Slovakia filed a request for an additional judgement, arguing that Hungary was unwilling to implement its judgement and it was subsequently agreed that Hungary would file a written statements of its position regarding this request by 7 December 1998. In brief, in this case the court re-affirmed the status of customary international law of the principle of equitable utilisation of an international watercourse.

[93] *Island of Palmas Case* (*US.V. Netherlands*), 2 R. International Arbitral Awards, 1928, pp.829- 839; *Trail Smelter Case* (*US v. Canada*), 3 Reports of International Arbitral Tribunal, 1905, pp. 1931- 41.

[94] *Corfu Channel Case* (*UK v. Albania*) 1949, ICJ 2, 22.

in the field of the environment. It has not only been repeated in Principle 2 of the Rio Declaration and in similar terms by the ICJ, advisory opinion in *the Nuclear Weapons* Case[95] and its judgement in *Gabcikovo- Nagymaros* Case. It has also been reproduced in the preamble of the United Nations Framework Convention on Climate Change,[96] in Art. III of the Convention on Biological Diversity,[97] and in other major environmental agreement.

Recommendation 90 of the UN Water Conference stresses the need to apply this principle to shared water resources.[98] This rule has developed through general and constant practice and is accordingly recognised as customary rule. Coming to the decisions of national courts it is worth recalling what German court said in the *Donauversinkung* Case.[99]

> C. The Rule of International Law as to the Utilisation of the Flow of International Rivers. The Duty to Abstain from Injurious Interference--- the exercise of sovereign rights by every state in regard to international rivers traversing its territory is limited by the duty not to injure the interests of other members of the international community. No state may substantially impair the natural use of the flow of such a river by its neighbour. This principle has gained increased recognition in the international relations. The application of this principle is governed by the circumstances of each particular case. The interests of the states in question must be weighed in an equitable manner, against one another.[100]

Another notable provision emphasising the essential role of cooperation in dealing with shared natural resources is Art. III of the Charter of Economic Rights and Duties of States (CERDS).[101]

The 1991 I.L.C Draft appears on its face to opt for a strict standard as opposed to one of due diligence. This is true of both the general no-harm obligation of Art.7

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[95] UN Doc. A/CONF. 48/ 14, P.2 The I.C.J. restated the substance of the principle 21 in *Legality of the Threat or Use of Nuclear Weapons*, 1996 ICJ pp. 241-2. para. 29).

[96] *I.L.M.* 849 (1992).

[97] *I.L.M*.818 (1992).

[98] Report of the UN Water Conference, Mardel Plata, March 143-25, 1977, UN Doc.E/CONF.70/CBP/p. 10(1977); U N Doc.A\CONF.48\14\REV.1 (1972).

[99] *Wuttemberg and Prussia.V.Baden* (the *Donauversinkung Case*), the German decision of 18 June 1927, Entscheidungen des Reichsgericht in Zivilsachen, vol.116, pp.18-45. The report of the case is found in *Annual Digest*, Years 1927 and 1928.

[100] Ibid., p. 131.

[101] UNGA Res. 3281(xxix) of 12 Dec.1974.

and the obligation not to cause pollution harm contained in Art. 21(2).[102] Neither provision employs expression such as those maintained by the 1991 Draft e.g. "all appropriate measures."

Instead, the 1991 language is unqualified[103]; making them sound very much like obligations to guarantee a particular result, namely that other States will sustain no pollution or harm as a result of activities in the source State. States are indeed free to establish strict obligation by agreement, although they generally have not done so.[104]

In the ILC Draft Articles on State Responsibility, 1994, it shed light about the distinction between obligation of conduct (Art. 20) and obligation of result (Art. 21). It also recognises a further category of obligations to prevent a given event (Art. 23) which deal with the prevention by the State of an event caused by factors in which it plays no part and which are a species of obligation of result. It has sometimes been assumed that obligations of 'conduct' are less stringent than the other two categories and the latter impose what amounts to strict liability.

As we saw earlier, however, views differ on whether the obligation not to cause harm represents the limit of equitable utilisation of a watercourse, or is itself subject to equitable balancing involving other factors. Thus, despite its general acceptability, the status of this obligation as an independent principle remains unsettled. Moreover, it encounters in this context the same difficulties of interpretation as elsewhere, notably that it is uncertain whether the obligation is one of due diligence in preventing harm, or whether the State must meet a stricter standard. Nor is it certain what threshold of harm determines the wrongfulness of any injury to other States. International claims concerning watercourse damage, such as the *Gut Dam* arbitration, do not permit useful

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[102] *Year Book of International Law Commission*, vol.2, part 2, 1991, pp. 67 and 68.

[103] Art.7: Watercourse State shall utilise an international watercourse in such a way as not to cause appreciable harm to other watercourse State. Art. 21(2): Watercourse State shall individually or jointly, prevent, reduce and control pollution of an international watercourse that may cause appreciable to other watercourse or to their environment.

[104] The single exception in multilateral agreement is the strict liability provided in the Convention on International Liability for Damage Caused by Space Object, 29 March 1972, 961 UNTS 187, which provides in Art. II that the launching state is absolutely liable to pay compensation for damage caused by its space object.

inferences on these questions. The work of the ILC has provided some clarification however.[105]

In principle, causing significant harm is unlawful unless due diligence has been exercised. Non-harmful use such as non-wasteful use, contributes to the long-term availability and promotion of the quality of fresh water resources, which is in the interest of future generations. When significant transboundary harm is caused notwithstanding the exercise of due diligence, Art.7 para 2 is applicable.

Although the duty laid down in this provision is just one of holding consultation with a view to making adjustments, or even to come to some agreement on compensation, it should not be forgotten that the situation at hand is a lawful one under Art.7 para I. In this regard it is a step forward that a further obligation has been included.[106] Undoubtedly, an obligation as reflective of the *sic uerte tuo* maxim exists in general international law and, in particular, in the law of the environment.

In the case of significant harm the obligation is one of due diligence. If the harm is unreasonable, procedurally the source State is obliged to prove that it has fulfilled its due diligence obligation and in addition to it, it must establish that its conduct or use is equitable and reasonable. In the process, the gravity of harm and the harming State's conduct, including its efforts to avoid them will be taken into account among other factors in assessing whether the harming State's use is equitable and reasonable under the circumstances. It means the no-harm obligation works in tandem with the principle of equitable utilisation. In other words, the non-harm rule is a necessary and indispensable part of the principle of equitable utilisation.

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[105] However, the ILC commentary indicates otherwise and observed that the conduct adopted must be proportionate to the gravity of the potential harm. The ILC commentary to Art.7 adopted on second reading in 1994 states that: the obligation of due diligence contained in Art.7.... is an obligation of conduct, not an obligation of result. In any event, obligation of conduct is more stringent than obligation of result, because, as Paul Reuter pointed out they deprive the state of the choice of means. The notion of capability of state of preventing harm is measured by the standard of due diligence, which is what could reasonably be expected of the state in question in the circumstance as well as any applicable standards that have been generally accepted either globally or in the region where the watercourse in question is situated.

[106] Fitzmaurices, "The Law of the Non-navigational Uses of International Watercourses: The ILC Completes its Draft", *Leiden Journal of International Law,* vol. 8 1995, p. 368: The introduction of the obligation in the law on the non-navigational uses of international watercourses is however, quite innovative.

One ILC Rapporteur, McCaffrey, has dealt with the choice between a standard of due diligence and more stringent obligations of pollution prevention in international watercourses. Although the latter interpretation is implicit in the view of some members of the Commission who have continued to favour a regime of strict liability for watercourse pollution. However, the Rapporteur could find little or no evidence of State practice recognising strict liability for damage, which was non-accidental or did not result from a dangerous activity. In his view, this indicated that the standard required of the State was generally one of due diligence, implicit in the *Trail Smelter* arbitration and is supported by State practice. This standard afforded the appropriate flexibility and allowed for adaptation to different situations, including the level of development of the State concerned. Moreover, to minimise any problems of proof, the Rapporteur believed that due diligence should be treated as a defence to be established by the source State, which would presumptively be liable.

III.5.4. Striking a Balance between the Principles of Equitable Utilisation and No-harm

The vulnerability of the doctrine of equitable use mandates the necessity of substantive rules that would insulate certain interests from unfavourable balancing process. While the no appreciable harm principle is an integral component of international law, no appreciable harm standard appears to bring with it the doctrine of prior appropriation, protecting the rights of those who first put the watercourse to use regardless of the harm being caused. For example, it is the no appreciable harm standard, rather than the equitable use standard, which is applied in the case of pollution. This is a practical solution, given that pollution should be reduced on all levels, not just balanced in one State against the beneficial uses in another State.

Here remains the possibility that a polluting State not causing serious harm to other States may nevertheless be inequitable. This determination does involve a balance of interests among competing riparian States.

In expanding the substantive protection against the pollution of rivers, the UNCLNUIW embodies the *sic utere* principle of international law which requires States to prevent extraterritorial harm by not causing appreciable harm in other watercourse States. Article 7 specifies that States shall utilise an international

watercourse in a manner that does not cause appreciable harm to other watercourse States. To be an appreciable harm, there must be a "real impairment of use, i.e., a detrimental impact of some consequence" upon the public health, industry, property, agriculture, or the environment of another State. In developing this standard over the 'substantial harm' standard in the Helsinki Rules, the ILC wanted the standard to be more than "insignificant" but less than "serious".

The Helsinki Rules reflect this point by providing that no category of uses has inherent preferences over any others. Thus protection of the river environment and its living resources must compete with other claims. Secondly, there is no automatic preference for established uses. An inflexible rule protecting such uses would in effect allow the creation of servitudes. These have not generally found favour with States. Instead, commentators and the views of codification bodies suggest that an equitable balance of interests may in an appropriately strong case allow for the displacement or limitation of earlier established uses. At the most these earlier uses enjoy a weighty claim to qualified preference. European and North America practice referred to earlier seems consistent with this conclusion, which the *Lake Lanoux* case implicitly supports.

The available authorities indicate that no-harm principle does qualify as an independent norm, but it neither embodies an absolute standard nor supercedes the principle of equitable utilisation where the two appear to conflict with each other. Instead, it plays a complementary rule, triggering discussions between the States concerned for proscribing certain forms of serious harm. Hence no-harm doctrine complements and supports rather than overrides the principle of equitable utilisation. What is needed is the procedural mechanism like, procedure for cooperation, joint management, notification and consultation, in order to alleviate the normative ambiguity of international watercourses law.

The obligation of due diligence contained in Article 7 sets the threshold for lawful state activity[107]. It is not intended to guarantee that in utilising an international watercourse significant harm would not occur. Therefore, in order for a State to violate Article 7, this would require an element of negligence or an intentional act or omission

[107] The ILC has defined the due diligence obligation not to cause significant harm as " not strict liability," but "such care as governments ordinarily employ in their domestic concerns".

This does not mean that any use of an international watercourse affecting other States requires their consent, but does indicate that the sovereignty of a State over rivers within its borders is qualified by recognition of the equal and co-relative rights of other States. Settlement of river disputes in North America and the Indian sub-continent by States that had previously asserted a different position tend to confirm this conclusion.

This view has generally been supported by States. The same principles have also been adopted in other codifications, such as the ILA's Helsinki Rules, which gives States a reasonable and equitable share in the beneficial uses of waters.[108] What constitutes reasonable and equitable utilisation is not capable of precise determination. In its Draft Articles, the ILC has identified factors relevant to determining equitable and reasonable utilisation. But this list is not meant to be exhaustive; consideration must be given to the interest of all the riparian States likely to be affected by the proposed use of watercourses.[109]

This principle of common management is regarded as a general principle of public international law in view of its widespread acceptance in State practice[110] case laws,[111] commentaries[112] codification process,[113] etc. It does not advocate an integrated

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[108] 1966 Helsinki Rules, Article IV. The commentary describes equitable utilisation as 'the key principle of international law in this area'. See also Institute of International Law, Salzburg Session, 1961, Resolution on the Utilisation of Non-maritime International Waters, Article III: ' If states are in disagreement over the scope of their rights of utilisation settlement, will take place on the basis of equity, taking particular account of their respective needs as well as of other pertinent circumstances'.

[109] *Lake Lanoux Arbitration*, n. 67: 'account must be taken of all interests, of whatsoever nature, which are liable to be affected by the works undertaken, even if they do not correspond to a right'; see also ILA 1966 Helsinki Rules, Commentary, p. 488.

[110] See 1909 Canada - US Boundary Water Treaty, UN Legislative Texts and Treaty Provisions concerning the Utilisation of International Rivers for other Purposes than Navigation, UN Legislative Series, UN/ST/LEG/SER B/12: 269-276. See 1944 US- Mexico Treaty. 1960 India Water Treaty so on.

[111] See *Lake Lanoux* , n. 67, Zarumillah River Arbitration (Caponera, 1980: 245); Kansas V. Colrado (206 US, 1907:46).

[112] See Bourn, "The Primacy of the Principle of Equitable Utilisation in the 1997 Watercourse Convention," *Canadian Year Book of International Law*, 1997, p.215; Lipper, "Equitable Utilisation" in Garreston and others, ed., *The Law of International Drainage Basins* (New York: Oceana Publications, 1967) 1967:69; Albert Utton, "The Development of International Ground Water Laws," Natural Resources Journal, vol. 22, 1982,p. 95, and so on.

[113] See Art 5 of the 1991 ILC Draft Articles on the Law of the Non-navigational Uses of International Watercourses; 1966 Helsinki Rules, Report of the 32nd Conference and 1991 UNECE Draft Convention on the Protection and Use of Transboundary Watercourses.

approach to watercourse. But the consideration on which this principle rests includes reasonableness[114] and protection of use.[115]

III. 5.5. Obligation to Protect the Environment.

The foregoing discussion reflects the perspective of traditional customary law. It is seen that these obligations are of a very general character and their main concern is the protection of other States from significant harm. The ILC s work points, however, to the emergence of a more comprehensive approach to watercourse pollution which involves an obligation to protect and preserve 'the ecosystems of international watercourses' and a duty to take all measures necessary to protect and preserve the marine environment against inputs of pollution from rivers[116]. Arts. 20 to 23 of part IV of the UNCLNUIW are directed at the protection of the watercourse and at the control and improvement of water quality. Art. 20 provides for the protection and preservation of ecosystems[117]. Art. 21 speaks of prevention, reduction and control of pollution[118].

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[114] When disputes arise involving the use of international rivers, the question of reasonableness is raised so as to consider factors such as the extent of a state dependence on the water, comparative social and economic gains, pre existing understanding, pre existing apportionment, etc. See Resolution, Report of the 47the Conference, ILA, 1956. Art 10 of the Helsinki Rule also mentioned factors such as geography, climate, past utilisation, economic and social needs, availability of the resources etc, in judging reasonableness.

[115] Uses that are beneficial are generally protected. According to the commentary of Art. 4 of the Helsinki Rules, a beneficial use is defined as one that is economically and socially valuable. It further states that beneficial use need not be the most productive use to which the water may be put, nor need it utilise the most efficient method known in order to avoid waste and ensure maximum utilisation. See International Law Association Report of the 52nd Conference, Helsinki, 1966, pp. 488-91.

[116] The ILC Draft Articles define `pollution' in broad terms, meaning 'any detrimental alteration in the composition or quality of the waters' resulting from human conduct, and they require states to consult with a view to listing substances whose discharge into the watercourse is to be controlled or prohibited. What this suggests is an attempt to integrate the elements of modern practice in common management regimes for international watercourses with regional arrangements for controlling rivers as land-based sources of pollution.

[117] Para I of Art. 20 states that watercourse States shall, individually and, where appropriate, jointly protect and preserve the ecosystems of international watercourses.

[118] Para I of Art. 21 says that the purpose of this Article, "pollution of an international watercourse" means any detrimental alteration in the composition or quality of the waters of an international watercourse which results directly or indirectly from human conduct. Para II provides that watercourse States shall individually and, where appropriate, jointly prevent, reduce and control the pollution of an international watercourse that may cause significant harm to other watercourse States or to their environment, including harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse. Watercourse States shall take steps to harmonise their policies in this connection.

Art. 21 also mention that watercourse States shall, at the request of any of them, consult with a view to arriving at mutually agreeable measures and methods to prevent, reduce and control pollution of an international watercourse, such as:

a) Setting joint water quality objectives and criteria;
b) Establishing techniques and practices to address pollution from point and non-point sources;
c) Establishing lists of substances the introduction of which into the waters of an international watercourse is to be prohibited, limited, investigated or monitored.

The ILC's Articles recognise that the international nature of a watercourse is no longer solely defined by its transboundary character, but also by its environmental impact on shared resources or common spaces and that these impacts must be taken into account in preventing watercourse pollution. The beneficiaries of this obligation will not be other riparian States alone, but will include States whose maritime zones or interest in the high seas environment is affected. The elaboration of detailed standards of pollution control and prevention and their supervision by international commissions or other collective institutions are recognised as essential features of this approach to environmental protection.

Art. 22 requires States to take all measures necessary to prevent the introduction of species, alien or new, into an international watercourse which may have effects detrimental to the ecosystem of the watercourse resulting in significant harm to other watercourse States. Art. 23 speaks of protection and preservation of the marine environment[119]. Art. 24 analyses the issues regarding management. Para I states that watercourse States shall, at the request of any of them, enter into consultations concerning the management of an international watercourse, which may include the establishment of a joint management mechanism[120]. This is definitely in the interest

[119] Art. 23 states that watercourse States shall, individually and, where appropriate, in cooperation with other states take all measures with respect to an international watercourse that are necessary to protect and preserve the marine environment, including estuaries, taking into account generally accepted international rules and standards.

[120] Para II of Art. 24 illustrates for the purposes of this Article that management refers, in particular, to: (a) Planning the sustainable development of an international watercourse and providing for the implementation of any plans adopted; and (b) Otherwise promoting the rational and optimal utilisation, protection and control of the watercourse. The regional seas treaties do support the underlying implication of the ILC codification that the basis of pollution control in international

of the future generation. Agenda 21 of the Rio Declaration calls upon States to take a variety of actions directed towards water pollution, prevention and control[121]. It also urges the development of national and international legal instruments to protect the quality of fresh water resources. The provision of UNCLNUIW on pollution thus represents a recent effort by the international community to restate and progressively develop the law in this field[122].

It can be argued that the Art. 21 (2)'s rule of no-significant pollution harm should prevail over the general principle of equitable utilisation.[123] What is the nature of the no-pollution harm obligation: Is it strict or one of due diligence? A statement of understanding of the working group that drafted the UNCLNUIW states that Art 21, 22, and 23 impose a due diligence standard on watercourse States.[124]

The ILC commentary goes as to state that the principle of precautionary action is applicable,[125] especially in respect of dangerous substances such as those that are toxic, persistent or bio accumulative.[126]

Art. 21 para 3 encourages consultations. This Article encourages consultations with a view to establishing common emission standards. This does not alter the

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rivers is no longer to be found mainly in customary obligations concerning equitable utilisation or harm prevention, but in regional regimes employing common standards of environmental protection for river pollution, and in the requirements of international co-operation, but there remain problems of co-ordinating the operation of watercourse and regional seas commissions in a manner which achieves the Commission's objective.

[121] The formula "prevent, reduce and control" was modelled upon Art. 194 (1) of the 1982 United Nations Convention on the Law of the Sea (UNCLOS)[121]. The ILC commentary explains that: the obligation to 'prevent' relates to new pollution of international watercourses while the obligation to 'reduce' and 'control' relate to existing pollution. A similar approach is taken by the Helsinki Rules and by other modern instruments in the field.

[122] Art. 21 para II establishes basic and general obligations, but it is intended to be a specific obligation under Arts. 5 and 7 of the UNCLNUIW. It is not clear how the equitable and reasonable utilisation standard of Art. 5 comes into play in Art. 21 (2).

[123] The adjectives 'appreciable,' 'significant,' 'substantial,' or 'serious' are used to qualify the concept of harm. These terms seems to have its origin in different threshold of harm for repairing it. The term 'significant' harm constitutes a higher threshold of harm than 'appreciable' harm but less than 'substantial' or 'serious' harm.

[124] UN Doc.A/51/869, p. 5, para 8.

[125] The principle of precautionary action therefore appears to be intended to bring forward the moment at which preventive measures are taken and reflect an anticipatory approach to environmental protection.

[126] This means that in respect of substances that threaten serious or irreversible harm, states should take preventive action where they lack clear scientific evidence concerning the causal relationship between the substances and the harm. In spite of a lack of full scientific certainty with respect to the causal link, Arts. 20 to 30 nevertheless require the watercourse States to take measures so as to

applicability of the obligations incumbent upon each individual watercourse States. Thus, Art. 21 para 3 attempts to stimulate the harmonisation rules sand standards between watercourse States. Art. 23 formulates a collective interest in which watercourse States should work towards. In pursuing this aim, causing of low-level harm is not always unlawful and may be compatible with equitable and reasonable watercourse utilisation. As the ICJ recently observed in its judgment in the *Danube case*:

> Throughout the ages, mankind has for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon the environment. Owing to new scientific insights and growing awareness of the risks for mankind for present and future generations of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in great number of instruments during the last two decades. Such new norms have taken into consideration, and such new standards are given proper weight, not only when states contemplate new activities but also when continuing with activities begun in the past. This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development.[127]

The ICJ recalled that it had recently had occasions to stress the great significance that it attaches to respect the environment, not only for States but also for the whole mankind.

> The environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn. The existence of the general obligation of states to ensure that activities within their jurisdiction and control respect the environment of other states or areas beyond national control is now part of the corpus of international law relating to the environment. (*Legality of the Threat or Use of Nuclear Weapons, Advisory opinion*, ICJ Reports, 1996, PP 241-242 Para 29).[128]

The environmental security in the context of fresh water can only be achieved through a sophisticated understanding of regime formation and by a determined pursuit of eco-system orientation.

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prevent possible harm; ILC Report, 1994, p.122 para 4. See Kathaina Kummer, International Management of Hazardous Wastes (Oxford: Clarendon Press, 1995).

[127] *Gabcikovo-Nagyonaros Project Case*, n. 71, para.140.

[128] Ibid., p. 78, para 50.

III.5.5.1. Implications of an Obligation to Protect Watercourse Ecosystems:

The concept of 'the eco-system' should be understood broadly. Thus the concept of 'eco-system' of an international watercourse should include not only the flora and fauna in and immediately adjoining to watercourse, but also the natural features within the catchments that have an influence on, or whose degradation could influence, the watercourse. For example, it is clear that grazing and logging practices can have such influences. The formulation of the obligation in Art.20 of the UNCLNUIW makes no mention of transboundary impact.

The general principle clearly includes pollution or environmental damage, as Art. 21(2) goes on to provide:

> Watercourse States shall, individual or jointly, reduce and control pollution of an international watercourse that may cause appreciable harm to other watercourse States or to their environment, including harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse...

This provision is based on Art. 194 of the UNCLOS and other precedents and is supported by international codifications and by numerous writings, although the number of watercourse treaties which expressly or implicitly incorporate such an obligation is not large. But the *Trail Smelter* arbitration, the *Lake Lanoux* arbitration, decisions of some national courts, and a number of international declarations provide further confirmation of the Commission's view that Art. 21(2)'s antecedents are well grounded in the State practice.

McCaffrey's interpretation of the State's primary obligation is not explicit in draft Art. 21, but is apparent in Art. 23, which requires States to 'take all measures ...that are necessary' to protect and preserve the marine environment. Most of the more modern treaties support his interpretation, although others, which prohibit pollution, or specified forms of pollution may sustain a stricter interpretation. Thus although the context and formulation of individual treaties is important and may lead to a different conclusion, the evidence does tend to favour the Rapporteur's interpretation of a general obligation of due diligence in the regulation and control of pollution in international watercourses. Moreover, use of the formula 'prevent, reduce and control' in draft Art. 21 was intended to allow for differentiation in measures taken

with regard to new or existing sources of pollution, and to that extent also supports the Rapporteur's view that there is no absolute obligation of prevention.

In defining the threshold at which this obligation operates the ILC uses the term 'appreciable harm' throughout. This term was first adopted by Rapporteur Schwebel, who intended it to mean more than perceptible, but less than 'serious' or 'substantial', the two other qualifications often used in this context.[129] The Commission itself endorsed the view that there must be a harm of some consequence,[130] for example to health, industry, agriculture, or the environment, but that this need not be 'momentous or grave', and it has concluded that 'appreciable' is the preferable term.

Some members had argued that this is too vague a test to incorporate in national law; others believe it sets too low a threshold, which might inhibit industrial growth. The Rapporteur has defended his choice by pointing to the evidence of acceptance in State practice, and the need for consistency with other ILC topics, notably 'international liability' where the same issue crops up.

According to the ILC, the term is as objective as possible without specific agreement on scientifically determined thresholds of permissible emissions. The development of more exact international standards, such as those prohibiting toxic emissions, or limiting discharges, will thus tend to amplify the more general criteria. All in all States have an obligation to protect the eco-system of international watercourses. While this obligation may be described as 'new' and 'emerging', its basic principles are already parts of general international law. The obligation as stemming from Art. 20 of the UNCLNUIW reflects advances in scientific knowledge about the inter relationships of natural systems. Now acts affecting one part of eco-systems may have effects upon the other parts of eco-systems or upon the ecosystem as a whole.

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[129] The term 'significant' is used because an analysis of more than 60 international instruments, judicial decisions, arbitral awards, and other documents had shown that the term ' significant' or equivalent words was most often used, see ILC Year Book, 1998, p. 36, para 5, and also see ILC Draft Articles on the Law of the Non-navigational Uses of International Watercourses, Commentary to Art. 2, p. 339, para 15.

[130] There is subtle distinction in the use of the terms ' harm,' 'damage' and 'injury.' 'Harm' is a physical concept, 'damage' is a financial concept and 'injury' or 'loss' is legal concept and these terms are sometimes used as synonyms.

The protection of the watercourses systems is of great significance, in terms of geography, meeting basic human needs, and sustainable development. The goal of sustainable development was endorsed to reconciling economic development with protection of the environment. The environmental protection provisions of the draft encourage timely action. First the protection of the ecosystems of watercourses is declared to be a collective interest. Secondly the principle of precautionary action is declared applicable in the context of the obligation for the prevention of threats of harm within the meaning of Art. 20-23.

Lack of scientific evidence to establish the causal link is not an excuse. The basic principle of governing international watercourse always remains its equitable and reasonable utilisation, which requires taking into account all relevant factors and circumstances for determining the correlative rights of the riparian States involved. It should be stressed that the obligation contained in Art. 5 para.1, Art. 7 para 1, and Art. 20-23 are continuous obligation. They apply throughout the whole span of planning and implementing watercourse utilisation.

III.6. Procedural Obligations:

The fundamental obligations relating to international watercourses are 'substantive' and 'procedural'. But sometimes the substantive obligations itself appear to be a process. It shows that the procedural obligation is by no means less binding than a substantive obligation. Both are category obligations under international law whose violation gives rise to the secondary obligation to cease the breach and to make appropriate reparation. Schacter has aptly described the importance of procedural rules in the following way:

> It is reasonable... that procedural requirement should be regarded as essential as the equitable sharing of water resources. They have particular importance because of the breadth and flexibility of the formulae for equitable use and appropriation. In the absence of hard and precise rules for allocation, there is relatively greater need for specifying requirement for advance notice, consultation and decision procedures, such requirements are, in fact, commonly found in agreements by neighbouring states concerning common lakes and rivers.[131]

[131] Schacter, Sharing *the Worlds Resources* (New York: Columbia University Press, 1997).

III.6.1. General Obligation to Co-operate

The fundamental importance of cooperation by riparian States is the inevitable result of the fact that an international watercourse is a shared natural resource. Herbert Smith recognised this in his seminal work, published some 70 years ago[132]. The first principle is that the river system is naturally indivisible physical unit, and that as such it should be developed as to render greatest possible service to the whole human community which it serves, whether or not that community is divided into two or more political jurisdictions.

Art. 8 of the UNCLNUIW provides for the general obligation to cooperate which provides that watercourse States shall cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilisation and adequate protection of an international watercourse[133].

It is the positive duty of every government concerned to cooperate to the extent of its power in promoting the development. If Smith were formulating this principle at the turn of the 21st century, he might have spoken of the objectives of cooperation and of sustainable development.

The ICJ has recently emphasised the necessity of cooperation between States sharing a major European watercourse, the Danube:

> The Danube has always played a vital part in the commercial and economic development of its [nine] riparian states, and has underlined and reinforced their interdependence, making international cooperation essential. Only by international cooperation could action be taken to alleviate ...problems of navigation, flood control and environmental protection.[134]

III.6.1.1.Collective Action Problems: Prisoner's Dilemma.

The advantage of cooperation between States sharing fresh water resources are illustrated by the classic 'prisoners dilemma' problem.[135] Two prisoners are being

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[132] Smith, *The Economic Uses of International Rivers* (London: King and Son Ltd., 1931).

[133] Para II of Art. 8 states that in determining the manner of such cooperation, watercourse States may consider the establishment of joint mechanisms or commissions, as deemed necessary by them, to facilitate cooperation on relevant measures and procedures in the light of experience gained through cooperation in existing joint mechanisms and commissions in various regions.

[134] I.C.J Judgment of 25 Sept. 1997 (1997 ICJ, 7, para 17).

[135] See Frost and Lucianovic, *The Prisoner's Dilemma: Theory and Reality* (1977).

interrogated in separate cells concerning an armed robbery. Each prisoner can either 'cooperate' with the other, by not confessing, or 'defect' by confessing and testifying against the other. But each must decide without knowing the other's choice.

If the prisoners each decide to cooperate, they will receive a one-year sentence for possession of weapons. If one defects and the other co-operates (remains silent), the first will receive a pardon and the second a ten- year sentence. If both defect, they both will receive five-year sentences. Since the prisoners can't communicate with each other, the incentive is to defect clearly not the choice either prisoner would have made of he or she could have spoken with the other. It is all too often the case that the States too, fail to communicate with each other leading to analogous results.

Benvenisti has applied the prisoners dilemma to the case of two States sharing a common lake or aquifer. They can cooperate by keeping withdrawals lower than the replenishment rate and by preventing pollution of the resource; cooperation involves certain costs (lower rate of consumption, improvement of infrastructure) but ensures sustainable use of the resource. In fact, the sustainability of the resource depends on the riparian's cooperation. Without effective means of communication and enforcement of commitments, however, riparian A can not be sure whether riparian B has chosen to incur the costs and cooperate, or to defect and use the resource without limits[136].

Is Art. 8 of UNCLNUIW a codification of customary international law? It is of little use to speak of an obligation to cooperate in the abstract. The obligation takes on meaning in specific contexts, e.g., working together with co-riparian States to achieve an equitable allocation of uses and benefits of a watercourse; working together for altering the regime of an international watercourse; and working together with the other States to fight pollution and protect the ecosystem of international watercourses.

The logical implication of the concept of community of interest is cooperation. However, despite its importance, it seems cooperation as happening mainly at the state level without active public participation. The various elements, of which this principle is composed of, are the duty to notify, duties regarding data collection and

[136] Eyal Benvenisti, "Collective Action in the Utilisation of Shared Fresh Water: the Challenges of International Water Resources Law", *American Journal of International Law,* vol. 90, 1996, p. 384.

monitoring, the duty to exchange data and information, the duty to consult and negotiate, harmonisation of water quality standards, emergency cooperation etc. all focus on a state-based development approach to river water management.

In an attempt to avoid the corporate character of the regime of international watercourse law and management, several civil liability principles have also been adopted. These include the polluter pays principles and the principles of equal access and non-discriminations. The polluter pays principle says that whoever pollutes should pay[137].

While Art. 32 provides for equal access on a non-discriminatory basis to individuals affected by transboundary harm to obtain judicial relief within the country of harm[138]. However, what is evident is the state-centric responsibility regime. This, of course, is totally opposite to a community-based approach to integrated management of international watercourse. This regime of international watercourse is not only non complimentary but opposed to achieving sustainable development.

The very cursory treatment of transboundary watercourse management in chapter 18 of Agenda 21, the action programme of the 1992 UNCED, reiterates this observation. After emphasising the importance of transboundary water resources to the riparian, it is stated in the introduction to the chapter that cooperation may be desirable[139]. As regards the basis of such cooperation, it mentions only existing arrangement and other relevant arrangements. Similarly, under programme area A, Integrated Water Resources Development and Management, it calls for 'riparian States to formulate water resources strategies and action programmes, but then only invites them to 'consider, where appropriate the harmonisation' of these strategies and action programmes'.

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[137] 1969 International Convention on Civil Liability for Oil Pollution Damage as amended by protocol 1976 and 1984 and 1977 International Convention of Civil Liability for Oil Pollution Damage Resulting from Exploitation of Submarine Mineral Resources. The object of polluter pays principle is to channel the cost of prevention and reparation of environmental interference to the source of that interference. This principle has an economic origin and as such it was not intended to have normative implications for channelling the injurious consequences of harm to the source of the harm, such as abandonment of wrongfulness as a requirement for a right to redress. It can be said that polluter pays principle is the universal standard for the management of international watercourses. See in this connection, Principle 16 of the Rio Declaration.

[138] See Principle C (4) of the OECD Recommendation C (74) 224 of 14 Nov. 1974.

[139] UNDOC A/Conf. 151/126, vol. 2, p. 167.

Under programmes area B, Water Resources Assessment, it states under the heading "Activities" that 'all States could, *inter alia,* cooperate in the assessment of transboundary water resources, subject to the agreement of each riparian State concerned'. For people like Stephen McCaffrey, such languages is not only timid but potentially dangerous as it seems to be the reversal of the hard-won codified principles regarding the regular exchange of data and information relating to the condition of the watercourse. To him, Agenda 21's treatment of this important subject seems to represent a step backward into the fluvial dark ages of absolute sovereignty and the stillborn Harmon Doctrine.

III.6.2. Obligations of Prior Notification and Related Obligations

This notice rule, simply stated, holds that an upper riparian must provide formal notice to lower riparian prior to affecting any substantial project on a transboundary watercourse.[140]

Under community of interest, lower riparian would ostensibly incur a similar obligation. While a co riparian could react to such notice by claiming that a proposed project infringed on its interests, then nothing more than notice is required if the quantity and quality of water as well as freedom of navigation are not adversely affected in other riparian territories. The accepted authority on the notice rule is the 1957 *Lake Lanoux* Arbitration between France and Spain.[141] In the tribunal's influential holding, France was required to give notice and nothing more to Spain about French plans to divert, but then restitute in full a supply of water from the Carol River.

The application to international watercourses of the principle that States are entitled to prior notice, consultation, and negotiation in cases where the proposed use of a shared resource may cause serious injury to their rights or interests is amply supported by international codifications, declarations, case law, and commentaries. In this context procedural requirements are particularly important as a means of giving effect to the

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[140] *Lake Lanoux Arbitration*, n.67.

[141] This rule is also reflected in a UNGA Resolution endorsement of "a system of information and prior consultation," GARes.3129 UNGAOP, 28th Session, 2199th Plenary Meeting, 1973, p.48.

principle of equitable utilisation and for avoiding disputes among riparian States over the benefits and burdens of river development.

These procedural principles are generally regarded as applicable to cases of possible serious injury or appreciable adverse effects. Moreover, although many older treaties are concerned only with works, which affect navigation or the flow or course of a river, the same procedural norms have been applied to the adverse effects of river pollution or the risk of serious environmental harm. European treaties expressly requiring prior consultation in such cases include the Convention on the Protection of Lake Constance and the 1974 Nordic Convention on the Protection of the Environment. In other treaties, such as the 1973 Agreement between the US and Mexico, reference to consultation in case of possible 'adverse effects' will also cover pollution or environmental harm, unless as in the case of the 1960 Indus Waters Treaty, their terms are too specific to include consultation in such situations.

This conclusion is implicitly supported by the ILC's Draft Articles, which do not distinguish consultation in cases of environmental harm from other possible adverse effects. Furthermore, the growing practice of consultation, through international river commissions, on the establishment of pollution emission standards, toxic discharges, and measures threatening increased pollution points to an implied obligation covering these matters even where there is no treaty requirement to consult. Treaties relating to land-based sources of pollution provide further evidence of the importance of this form of institutional consultation machinery in relation to river pollution.

Failure to respond to notification, or to an offer of consultation, may indicate tacit consent to any proposed works. On the other hand, the ILC Draft provides that although the proposing State may then proceed with its plans, it remains subject to obligations of equitable utilisation and the prevention of serious injury. The implication here is that whatever tacit consent arises from a failure to reply or participate in negotiations does not extend to breach of the proposing State's obligations. The conclusion is more in keeping with the situation following an unsuccessful attempt to negotiate a settlement. But in cases where negotiations fail, the argument for tacit consent of any kind is clearly absent; where they never take place at all, this is less apparent, and the ILC leaves unresolved what role tacit consent does then play.

Art. 9 provides for regular exchange of data and information[142]. Para II of this Art. states that if a watercourse State is requested by another watercourse State to provide data or information that is not readily available, it shall employ its best efforts to comply with the request but may condition its compliance upon payment by the requesting State of the reasonable costs of collecting and, where appropriate, processing such data or information[143]. .

Art. 11 provides for information concerning planned measures. Watercourse States shall exchange information and consult each other and, if necessary, negotiate on the possible effects of planned measures on the condition of an international watercourse. Art. 12 says that before a watercourse State implements or permits the implementation of planned measures, which may have a significant adverse effect upon other watercourse States, it shall provide those States with timely notification thereof. Such notification shall be accompanied by available technical data and information, including the results of any environmental impact assessment, in order to enable the notified States to evaluate the possible effects of the planned measures.

Art. 13 speaks of period for reply to notification unless otherwise agreed. This Article specifies that a notifying State shall allow the notified State a period of six months to study and evaluate the possible effects of planned measures. This period of six months is extendable for another period of six months. Art. 14 provides for the obligation of notifying State. It states:

> During the period referred to in Art. 13, the notifying state:
>
> (a) Shall cooperate with the notified States by providing them, on request, with any additional data and information that is available and necessary for an accurate evaluation; and
>
> (b) Shall not implement or permit the implementation of the planned measures without the consent of the notified States.

[142] Para I of Art. 9 states that pursuant to Art. 8, watercourse States shall on a regular basis exchange readily available data and information on the condition of the watercourse, in particular that of a hydrological, meteorological, hydro-geological and ecological nature and related to the water quality as well as related forecasts.

[143] Para III of Art.9 states that watercourse States shall employ their best efforts to collect and, where appropriate, to process data and information in a manner, which facilitates its utilisation by the other watercourse States to which it is communicated

Art. 15 provides for reply to notification. The notified States shall communicate their findings to the notifying State as early as possible within the period applicable pursuant to Art. 13. If a notified State finds that implementation of the planned measures would be inconsistent with the provisions of Art. 5 or 7, it shall attach to its finding a documented explanation setting forth the reasons for the finding.

Art. 16 deals with the absence of reply to notification. If, within the period applicable pursuant to Art. 13, the notifying State receives no communication under Art. 15, it may, subject to its obligations under Art. 5 and 7, proceed with the implementation of the planned measures, in accordance with the notification and any other data and information provided to the notified States. Para II states that any claim to compensation by a notified State that has failed to reply within the period applicable pursuant to Art. 13 may be offset by the costs incurred by the notifying State for action undertaken after the expiration of the time for a reply, which would not have been undertaken if the notified State had objected within that period.

Art. 17 deals with consultations and negotiations concerning planned measures. If a communication is made under Art. 15 that implementation of the planned measures would be inconsistent with the provisions of Art. 5 or 7, the notifying State and the State making the communication shall enter into consultations and, if necessary, negotiations with a view to arriving at an equitable resolution of the situation. Para II states that the consultations and negotiations shall be conducted on the basis that each State must in good faith pay reasonable regard to the rights and legitimate interests of the other State. Para III states that during the course of the consultations and negotiations, the notifying State shall, if so requested by the notified State at the time it makes the communication, refrain from implementing or permitting the implementation of the planned measures for a period of six months unless otherwise agreed.

Where notification confirms the existence of a conflict of interests, or where affected States request it, consultation and negotiation are required. The *Lake Lanoux* arbitration shows how the process of prior consultation and negotiation has been interpreted by an international tribunal, not only as a treaty stipulation, specific to relations between France and Spain, but more generally as a principle of customary

law. The tribunal found that the conflicting interests aroused by the industrial use of international rivers must be reconciled by mutual concessions embodied in comprehensive agreements. Consultation and negotiation in good faith are required, not as a mere formality, but as a genuine attempt to conclude an agreement. Each State is obliged to give a reasonable place to the interests of others in the solution finally adopted, even if negotiations for this purpose are unsuccessful, though owing to the intransigence of its partner. But subject to compliance with these procedural obligations, other States have no veto over the development of a river.

The 1992 Rio Declaration on Environment and Development frame the principles of prior notification in the following terms: States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith.[144]

In most respects the ILC Draft Articles closely follow the principles laid down in the *Lake Lanoux* arbitration, *the Fisheries Jurisdiction* cases, and *the North Sea Continental Shelf* cases concerning the conduct of consultations and negotiations. Where the implementation of planned measures would be inconsistent with the equitable utilisation of a watercourse, or would cause appreciable harm to other States, and then also 'equitable resolution' is called for. Although reliance on equitable solutions in cases of transboundary harm has been criticised earlier, the Commission's conclusion that international law requires States to notify and negotiate as a means of reconciling conflicting rights and interests is clearly consistent with the recognition of equitable utilisation as the main basis for allocation of rights and interests in shared water resources.

Co-operation between States in the field of the environment will be effectively achieved if official and public knowledge is provided of the technical data relating to the work to be carried out by States within their national jurisdiction with a view to avoiding significant harm that may occur in the human environment of the adjacent area. Arts.11 and 12 of the 1997 Convention capture the core of cooperation.

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[144] Rio Declaration Environment and Development, Principle 19, UN Doc. CONF.151/5 REV.1, 13 June 1992, 31 *ILM* 874 (1992).

The duty to provide notification arises when the planned measures are likely to result in significant harm to other riparian States. During the time of the negotiation the UN provisions on prior notification were not controversial because the States were already accepted their duty to prior notification of planned projects[145].

Only a few States, such as Brazil, have persistently opposed explicit consultation obligations for successive watercourses, as the normative significance of such practice is questionable. But while the general principle is beyond serious argument, its application may pose difficulties in particular cases. One of the most difficult questions remains that of deciding who determines when the circumstances require prior notification and consultation. The principle of good faith imports some limit of reasonableness in unilateral assessments by the proposing State. In the *Lake Lanoux* arbitration, the tribunal observed:

> A state wishing to do that which will affect an international watercourse cannot decide whether another state's interests will be affected; the other state is sole judge of that and has the right to information on the proposals. Thus the decision is not one for the proposing state alone to take once the possibility of adverse affects is foreseen. The affected state is itself entitled to initiate the process of notification and consultation, if the proposing state does not act[146].

The ILC Articles also indicate some of the consequences of failure to notify or negotiate with affected States. This will first be a breach of obligation and may render the State responsible for harm caused by the omission. Another possible consequence is the loss of any claim to priority. As we have seen, the ILC's Articles also allow the potentially affected State to request information and negotiation, if it has serious reasons for the request. This approach is consistent with the view of the *Lake Lanoux* tribunal that if the neighbouring State has not taken the initiative, the other State cannot be denied the right to insist on notification of works or concessions which

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[145] Available evidence including claims by state, the manner in which disputes between state have been resolved, State treaty practice, instruments adopted in intergovernmental flora, the work of expert bodies and the writing of commentators suggest that prior notification is required by customary international law. Hence it can be said that even Environmental Impact Assessments (EIAs) are already a part of customary international law.

[146] *Lake Lanoux Case* n.67

are the object of a Scheme, and it accords with State practice in several disputed cases.[147]

Art. 3 of the Charter of Economic Rights and Duties provides that in the exploitation of natural resources shared by two or more countries, each State must cooperate on the basis of a system of information and prior consultation in order to achieve optimum use of such resources without causing damage to the legitimate interests of others. In the *Lake Lanoux* Case, the Arbitral Tribunal held the existence of customary rule establishing the obligation of the States to negotiate. The obligation to negotiate implies engaging in true negotiation and conducting it in good faith. The parties concerned should engage in real negotiation and not a mere exchange of written communication or talks designed to specifically comply with the requirement.

III.6.3. Obligation to Consult with Other Riparian States

Had France anticipated reducing the actual plan of water traversing into Spain, it would have been required to engage in prior consultation with Spain. The consultation rule holds that prior consultations must be held or at least offered prior to the initiation of any project that may have a substantive impact on the freedom of navigation and a co-riparian's ability to enjoy its current quality and quantity of water. Support for the long existence of this rule is founded in the *Lake Lanoux* Arbitration.

There is scope for abuse in this formulation, however, which has prompted the ILC to adopt a broader and additional, requirement of consultation wherever there are 'possible effects' of whatever kind, including beneficial ones. This is complemented by its more general provision for co-operation in the exchange of information relating to the state of the watercourse. Although the 1933 Montevideo Declaration is among a few instruments supporting consultation in situations unqualified by reference to possible adverse effects, it is doubtful whether such an extensive obligation represents an established law. The most that can be said is that a State must notify and consult wherever a possible conflict of interest exists.

The purpose of prior notification is of course to provide adequate information on which consultation can if necessary take place. An obligation to notify is widely

[147] Ibid.

accepted in watercourse treaties and international declarations. It has been treated as customary law by successive Rapporteurs of the ILC, whose Draft Articles provide that notification must be timely, allow a reasonable period for reply, and contain sufficient information for evaluation of the impact of the proposal. The Commission's reports provide substantial evidence of the adoption of these principles in agreements among riparian States, although in certain respects its proposed Articles go beyond international practice, for example in stipulating six months as a reasonable maximum period for reply.

In deciding a case concerning *unilateral diversion of water from the Meuse*, the Permanent Court of International Justice in 1937 held that as long as either party did not adversely affect the current flow or volumes of waters available to the other party, there was no breach of law. More recently, in the *Gabcikovo -Nagymaros* case, the ICJ suggested that for diversion project in which the affected State played no role in contributing to or developing the project, serious prospective threat of species extinction, ecological degradation and disruption of navigation may alone constitute violation, if there have been no meaningful consultations.[148]

As in other respects, regional patterns may be significant, and Europe and North America offer the most developed examples of co-operation in matters of notification and consultation. But although practice with regard to environmental risks for international watercourses elsewhere is less extensive, there is no evidence of any substantial departure from the general principles under discussion here. Nor has any distinction been drawn in an environmental context between contiguous and successive rivers or lakes.

The ILC has also adopted the view that during the period for reply, consultation, and negotiation, good faith require that implementation of any plans be postponed, but not indefinitely. Prolonging negotiations will itself be inconsistent with good faith, and to counter this possibility, the Commission adopts a six-month limit, or other 'agreed reasonable period' during which to resolve the dispute. State practice undoubtedly favours postponement, but the evidence suggests that this is often much more protracted than the Commission envisages.

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[148] *Hungary V. Slovak, n. 71,* pp. 182- 86.

Art.2 para 5 of the 1997 of the UNCLNUIW provides for consultation with a view to negotiating in good faith for the purpose of concluding watercourse agreements[149]. Further, Art. 5 para 2 asks the concerned States to enter into consultation in a spirit of cooperation. Art. 7 para 2 provides for a State whose uses cause significant harm to consult with the affected State concerning the elimination or mitigation of the harm.

The various provisions of the part III of the UNCLNUIW also requires the State to consult in respect of planned measures[150]. Regular consultations between States sharing fresh water resources are almost essential in order to ensure a fair balance between their respective uses[151]. This is why so many States have established joint bodies to assist them in the cooperative management and protection of their shared water resources. Now regular consultation is quintessential for maintaining an equitable and reasonable regime for shared water resources. In other words, regular communication is a key element of the process of equitable utilisation.

Under the UNCLNUIW, riparians, whose potential uses of a watercourse might affect the use of the watercourse by other riparians, are to be given timely notification. Both downstream and upstream riparians have the right to receive notification. In the case of upstream riparians, their potential use of the watercourse might affect the viability of a project located downstream. In accordance with this provision, Syria would have the right to enter into consultations and negotiations concerning plans for the Jordan River basin, on the basis that each State must in good faith pay reasonable regard to the rights.

III.6.4. Obligation to Exchange Data and Information on a Regular Basis

The regular exchange of data and information on the state of the watercourse, and on the impact of present and planned uses can also be regarded as part of a general obligation to co-operate. The ILA's Helsinki Rules recommend such an exchange, while the ILC's Draft Articles also require it. The ILC's Rapporteur has

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[149] Art. 3 para 5: Where a watercourse State considers... watercourses State shall consult with a view to negotiating in good faith for the purpose of concluding a watercourses agreement or agreements.

[150] Arts. 11, 17, 18(2) and 3, and 19(3) of the UNCLNUIW.

[151] Art 11(iii) of Farakka Treaty also mandates consultation in accordance with the principle of equity, fair play and no harm to either party.

pointed to the large number of agreements, declarations, and resolutions which provide for exchanges of information, such as the 1944 US-Mexico Agreement, the 1960 Indus Water Treaty, the 1961 Columbia River Treaty, and the 1964 Niger Treaty. Additionally, Article 5 of the ILA's 1982 Montreal Rules on Water Pollution in an International Drainage Basin requires States to exchange information on pollution of basin waters. The practice of river commissions dealing with pollution has facilitated and encouraged such exchanges.

This obligation to exchange data and information on a regular basis has been recognised in a variety of instruments including the UNCLNUIW,[152] the revised SADC Protocol,[153] the 1992 E.C.E. Helsinki Convention,[154] the 1995 Mekong Agreement,[155] the 1960 Indus Waters Treaty,[156] and the Helsinki Rules, 1966.[157] Some agreements such as the 1995 Mekong Agreement and the 1996 Ganges Treaty[158], establish joint bodies for the collection and exchange of data and information.

Bourne, reviewing the State practice, concludes that a general obligation to exchange information about watercourses has not yet crystallised in international law. But in view of the ILC's more recent evidence, this may be too cautious. Moreover, the importance of regular exchanges of information in fulfilling the obligations of equitable utilisation of a shared resource and preventing harm to other States or the environment can be emphasised in support of the ILC's Draft Articles.

III.6.5. Emergency Co-operation

The general principle that States must notify each other and co-operate in case of an emergency to avert harm to other States, applies also to international watercourses. Bourne views it as part of a State's duty of reasonable care in the supervision of its territory; McCaffrey treats it as part of the duty of equitable utilisation.

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[152] Annex, 1 Art. 9.
[153] Art. 3(6) of the Protocol on the Shared Watercourse System in the South African Community (SADC) Region, Johannesburg, 28 Aug. 1995.
[154] Art. 6 of the ECE Helsinki Convention, 17 March 1992, *ILM* 1312 (1992).
[155] Art 24 (c) (Joint Committee) of the Mekong Agreement.
[156] Indus Waters Treaty, 19 Sept 1960.
[157] Anexxe 11 Art. xxix (1).
[158] Art IV and VI (Joint Committee).

Most of the treaties are concerned more with natural disasters, such as floods, but a few such as the 1976 Rhine Chemicals Convention, require notification to other States and relevant international organisations in cases of accidental discharge of toxic or seriously polluting substances likely to affect other States[159]. The ILC's Draft Articles adopt this precedent and provide for notification of incidents resulting in 'pollution or environmental emergency'. Resolutions of the ILI and ILA also support notification to other States where there is the risk of sudden increase in transboundary pollution.

The ILC's Draft Articles now extend the obligations of a riparian beyond mere notification in cases of a pollution emergency, and require it to take action to prevent, mitigate, or neutralise the danger to other watercourse States. This is in keeping with precedents in other fields, such as the law of the sea, and with the obligation of due diligence on which the decision in the *Corfu Channel* case is based, but it is as yet reflected in only a few watercourse treaties such as the 1961 Columbia River Basin Treaty.

Other agreements permit technical experts from one country to have access to the territory of another country for the purpose of information gathering and observation[160], empower joint commission to perform these functions,[161] or provide for the establishment of observation stations by one country at the request of another, with data collected to be provided to the latter, upon its agreement to defray expenses.

The regular exchange of data and information between States sharing international watercourses is closely connected with obligations of equitable utilisation and prevention of significant harm. It is an advantage always to co-operate with the co-riparian States with regard to protection of their shared water resources. Notifications to management of international watercourses through joint mechanism, all are means to co-operation. Sharing of data and information are key to establishing an equitable regime for international watercourses and for avoiding disputes.

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[159] Switzerland was criticised by its neighbours in 1986 for its failure to offer timely warning under Art. 11 of this agreement, when fire at the Sandoz Chemical plant caused toxic pollution of the Rhine.

[160] Treaty concerning the Waters of the Tigris's Euphrates (Iraq and Turkey) 29 Mar 1946 protocol 1, Art 3 legislative texts, Treaty no. 104, p. 376.

[161] Treaty of 3rd Feb 1944 between Mexico and the United States, Art 2, para 4, Legislative Texts Treaty, no. 77, p. 236.

III.7. Dispute Avoidance and Settlement: Approach of the UNCLNUIW

Art.33 of the UNCLNUIW provides for the settlement of disputes. Para I states that in the event of a dispute between two or more parties concerning the interpretation or application of the present Convention, the Parties concerned shall, in the absence of an applicable agreement between them, seek a settlement of the dispute by peaceful means in accordance with its provisions. Para II provides that if the Parties concerned cannot reach agreement by negotiation requested by one of them, they may jointly seek the good offices of, or request mediation or conciliation by, a third party, or make use, as appropriate, of any joint watercourse institutions that may have been established by them or agree to submit the dispute to arbitration or to the International Court of Justice.

Para III says that subject to the operation of paragraph 10, if after six months from the time of the request for negotiations referred to in paragraph 2, the Parties concerned have not been able to settle their dispute through negotiation or any other means referred to in paragraph 2, the dispute shall be submitted, at the request of any of the parties to the dispute, to impartial fact-finding in accordance with paragraphs 4 to 9, unless the Parties otherwise agree. Para IV provides that a Fact-finding Commission shall be established, composed of one member nominated by each Party concerned and in addition a member not having the nationality of any of the Parties concerned chosen by the nominated members who shall serve as Chairman.

Para V makes it clear that if the members nominated by the Parties are unable to agree on a Chairman within three months of the request for the establishment of the Commission, any party concerned may request the Secretary-General of the United Nations to appoint the Chairman who shall not have the nationality of any of the parties to the dispute or of any riparian State of the watercourse concerned. If one of the parties fails to nominate a member within three months of the initial request pursuant to paragraph 3, any other Party concerned may request the Secretary-General of the United Nations to appoint a person who shall not have the nationality of any of the parties to the dispute or of any riparian State of the watercourse concerned. The person so appointed shall constitute a single-member Commission. Para VI provides that the Commission shall determine its own procedure. Para VII states that the Parties

concerned have the obligation to provide the Commission with such information as it may require and, on request, to permit the Commission to have access to their respective territory and to inspect any facilities, plant, equipment, construction or natural feature relevant for the purpose of its inquiry.

Para VIII states that the Commission shall adopt its report by a majority vote, unless it is a single-member Commission, and shall submit that report to the Parties concerned setting forth its findings and the reasons therefore and such recommendations as it deems appropriate for an equitable solution of the dispute, which the Parties concerned shall consider in good faith. Para IX states that the expenses of the Commission shall be borne equally by the Parties concerned. Para X states that when ratifying, accepting, approving or acceding to the present Convention, or at any time thereafter, a Party which is not a regional economic integration organisation may declare in a written instrument submitted to the Depositary that, in respect of any dispute not resolved in accordance with paragraph 2, it recognises as compulsory ipso facto and without special agreement in relation to any Party accepting the same obligation: (a) Submission of the dispute to the International Court of Justice; and/or (b) Arbitration by an arbitral tribunal established and operating, unless the parties to the dispute otherwise agreed, in accordance with the procedure laid down in the annex to the present Convention. A Party, which is a regional economic integration organisation, may make a declaration with like effect in relation to arbitration.

Art. 33 of the UNCLNUIW establishes a staged procedure for the avoidance and resolution of disputes, which is applicable, in the absence of a relevant agreement. It provides for private recourse and also provision is made in Art 33 on the inter-state level. Negotiation is the first stage set forth in Art. 33 para 2. For this purpose, *Lake Lanoux* rationale and *Gabcikovo Case* are replete with guidelines[162]. Art 33 para 2 provides that they may seek to settle them in a non-binding way through a third party, or through any applicable joint institution they may have set-up. Alternatively they may submit their dispute to binding arbitration or to the ICJ. Otherwise, they must submit the dispute to the fact-finding commission.

[162] The I.C.J stated: "the parties are under an obligation so to contact themselves that the negotiations are meaningful which will not be the case when either of them insists upon its own position without

III.8.Major Debates and Controversies on the UNCLNUIW

Undoubtedly, one of the most contentious issues before the Sixth Committee and the UNGA, concerned the scope and relationship of the substantive principles contained in Arts. 5, 6 and 7. A siseable number of States, including many who voted in favour of the text, objected that, in these Articles, the UNCLNUIW failed to establish a balance between the rights and obligations of upper and lower riparian States. While this shift suggests increased support for reconciling the various interests of watercourse States in the development of their transboundary waters, it overshadows a continued determination by the opposition to prevent the inclusion of more definite obligations in the UNCLNUIW. That the Draft Articles took nearly 25 years to prepare is just one indication of the complexity of the issues, and of the importance that States attributed to the subject matter. In October 1996, and again in March/April 1997, the Sixth Committee of the UNGA convened as a Working Group of the Whole to debate the draft text with a view to produce a framework Convention.

The UNGA adopted the draft resolution on a Convention on the Law on Non-Navigational Uses of International Watercourses by a recorded vote of 103, in favour[163] to 3 against,[164] with 27 abstentions.[165] The meetings of parties were quite contentious,

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contemplating any modification of it". See ICJ 1997, p. 78, para 141 quoting from the *North Sea Continental Shelf Case,* ICJ 1969, p. 47, para 85.

[163] Countries who voted in favour of the UNCLNUIW are: Albania, Algeria, Angola, Antigua and Barbuda, Arab Republic, Armenia, Australia, Austria, Bahrain, Bangladesh, Belarus, Botswana, Brazil, Brunei Darussalam, Burkina Faso, Cambodia, Cameroon, Canada, Chile, Costa Rica, Côte d'Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Djibouti, Estonia, Federal States of Micronesia, Finland, Gabon, Georgia, Germany, Greece, Guyana, Haiti, Honduras, Hungary, Iceland, Indonesia, Iran, Ireland, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Lao Peoples Democratic Republic, Latvia, Lesotho, Liberia, Libya, Liechtenstein, Lithuania, Luxembourg, Madagascar, Malawi, Malaysia, Maldives, Malta, Marshall Islands, Mauritius, Mexico, Morocco, Mozambique, Namibia, Nepal, Netherlands, New Zealand, Norway, Oman, Papua New Guinea, Philippines, Poland, Portugal, Qatar, Republic of Korea, Romania, Russian Federation, Samoa, San Marino, Saudi Arabia, Sierra Leone, Singapore, Slovakia, Slovenia, South Africa, Sudan, Suriname, Sweden, Syria, Thailand, Trinidad and Tobago, Tunisia, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, Venezuela, Viet Nam, Yemen and Zambia.

[164] See n.2.

[165] Abstaining and uninterested countries in the UNCLNUIW are: Andorra, Argentina, Azerbaijan, Belgium, Bolivia, Bulgaria, Colombia, Cuba, Ecuador, Egypt, Ethiopia, France, Ghana, Guatemala, *India*, Israel, Mali, Monaco, Mongolia, Pakistan, Panama, Paraguay, Peru, Rwanda, Spain, United Republic of Tanzania, Uzbekistan. Countries who are absent are: Afghanistan, Bahamas, Barbados, Belize, Benin, Bhutan, Cape Verde, Comoros, Democratic People's Republic of Korea, Dominican Republic, El Salvador, Eritrea, Fiji, Guinea, Mauritania, Myanmar, Niger, Nigeria, Palau, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Senegal, Solomon Islands, Sri

raising issues of rights and responsibility and of the scope and applicability of the UNCLNUIW. The central and recurring issues in the debate included:

- the framework nature of the UNCLNUIW;
- the implication of the UNCLNUIW for existing and future treaties; and
- the relationship between the substantive rules of no appreciable harm (Art. 7) and of equitable and reasonable use (Art. 5) .

Many upper riparian States, for example, voted against the passage of the UNCLNUIW or abstained from voting, while lower riparian States typically supported its adoption. Many States that abstained or voted against the text contended that the document was not ready for a vote, and noted the lack of consensus on several key provisions, including those governing dispute settlement.

In comments on the text of the UNCLNUIW, China, Rwanda and Turkey, among others, criticised the UNCLNUIW for failing to contain language referring to States' sovereignty over watercourses located within their territory[166].

Tanzania stated that a "the delicate balance" between Arts. 5, 6 and 7 "had been undone by the introduction, in Art. 5, of reference to a demand to take into account the interests of the watercourse States concerned."[167] Tanzania was concerned that the reference expanded the scope of the UNCLNUIW beyond its intended purpose, "thus introducing an element of uncertainty" and improperly allowing, "some States actions to remain subject to the consent of others". In contrast, Israel "supported the compromise reached on Arts. 5, 6 and 7," although it believed that neither principle should be subservient to the other.[168]

The UNCLNUIW will serve as a guideline for further watercourse agreements and, once such agreements are concluded, it will not alter the rights and obligations provided therein, unless such agreements provide otherwise.

Lanka, Swaziland, Tajikistan, The former Yugoslav Republic of Macedonia, Turkmenistan, Uganda, Zaire and Zimbabwe.

[166] GA., Verbatim Record, 99th Plenary Meeting, UN Doc. A/51/PV 99(1997).

[167] Ibid.

[168] Ibid.

III.8.1. Sustainable Development

The Brundtland Commission defined sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'[169]. Hence, our duty to protect the rivers and lakes emanates from the very concept that we are trustees of the natural resources. So it aims at minimising the detriment and maximising the benefits, keeping in view the need of the future generations. Sustainable development as such has not been included as a relevant criterion to be taken into account in the establishment of an equitable regime for the utilisation of international watercourses. The 1994 Draft Articles on the Law of the Non-Navigational Uses of International Watercourses adopted by the ILC did not contain any reference to the principle of sustainable development, apart from its inclusion in Article 24 regarding the management of international watercourse. The ILC text of Art. 24, which has been maintained in the UNCLNUIW, reads as follows:

> 1. Watercourse States shall, at the request of any of them, enter into consultation concerning the management of an international watercourse, which may include the establishment of a joint management mechanism.
>
> 2. For the purpose of this Article, 'management' refers, in particular, to:
>
> (a) Planning the sustainable development of an international watercourse and providing for the implementation of any plans adopted; and,
>
> (b) Otherwise promoting rational and optimal utilisation, protection and control of the watercourse.

The commentary that the ILC attached to this provision explained that watercourse States are not required to 'manage' the watercourse in question and that the use of the terms 'sustainable development' and 'rational and optimal utilisations' are to be understood as relevant to the process of management. The commentary emphasised that Article 24 in no way affects the application of Articles 5 and 7.

The omission of sustainable development was criticised by various States. In this connection, Finland observed that 'the principle of sustainable development, which has been widely quoted and accepted since the Rio Conference, has not been adequately reflected in the Draft Articles. Therefore, Finland proposed that the term sustainable development be introduced in Art. 5 (principle of equitable and reasonable utilisation) or in Art. 6 (equitable factors). In Finland's view, sustainable development

[169] WCED, *Our Common Future* (Delhi: Oxford University Press, 1987), p.43.

would in any case have to be taken into consideration in the search for balance between the factors relevant to equitable and reasonable utilisation.

During the debate in the United Nations, the inclusion of sustainable development was proposed by Finland and the Netherlands. Finland's proposal referred to the inclusion of sustainable development in the chapeau of Art. 6. For its part, the Netherlands proposed to include a reference to sustainable development in this Article.

Other countries proposed to include references to the term 'sustainable utilisation'. In this regard, Egypt proposed to include sustainable utilisation as one of the objectives of water utilisation. Canada, Germany, Italy, Romania and the United States proposed to include a reference to the notion of sustainable utilisation in Article 5 and to add 'the importance of managing the watercourse in a sustainable manner for present and future generations' to the text of Article 6. For its part Jordan proposed to include the concept of 'sustainability' in Article 7. The debates on the Drafting Committee and in the Working Group show that only two States[170] opposed the inclusion of 'sustainable utilisation.' The result of this discussion was that a reference to sustainable utilisation was incorporated into Article 5.1 and this notion was also included in the Preamble of the UNCLNUIW.

The pertinent paragraph of the Preamble states that the Parties express their conviction that a framework Convention will ensure the utilisation, development, conservation, management and protection of international watercourses and the promotion of the optimal and sustainable utilisation thereof for present and future generations. The ICJ has also understood sustainable development as a notion that reconciles the need for environmental protection with the developmental concerns of States.

It cannot be forgotten that the very attempt to codify this UNCLNUIW began with the Stockholm Conference, but the spirit of Rio in general and Agenda 21 in particular, has not been given the much-needed attention. It can be said that sustainable development is only mentioned in Article 24, while the Preamble of the UNCLNUIW and Art. 5 speak of sustainable utilisation. Nevertheless, and given the

[170] India and the Czech Republic.

fact that sustainable development is a concept which 'refers to processes, principles and objectives, as well as to a large body of international agreements on environment, and on economic and civil and political rights', the need to incorporate all or some of these elements into the process of the establishment of an equitable regime for international watercourses cannot be discarded. Apart from the question concerning the role of sustainable development in the application of the principle of equitable utilisation, it is also necessary to examine what would be the role of equitable utilisation in the process of the attainment of sustainable development.

III.8.1.1. Two Essential Elements Embodied in the Notion of Sustainable Development

The concept, therefore, involves the idea of a balance between socio-economic development and the protection of the environment, which can be traced back to the 1972 Stockholm Declaration on the Human Environment. The 1992 Rio Declaration on Environment and Development also underscores the inter-relationship between economic development and the duty to protect the environment. It speaks of right to development (Principle 3) and it asserts that environmental protection cannot be considered in isolation from the development process (Principles 4 and 25). Principles 3 of the Rio Declaration reads as follows:

> The right to development must be fulfilled as so to equitably meet developmental and environmental needs of present and future generations.

Further, Principle 4 of the Rio Declaration states that:

> In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Principle 8 of the Rio Declaration states that each Government has the primary role and ultimate responsibility of ensuring the social progress and well being of its people, of planning social development measures as part of comprehensive development plans, of encouraging and co-ordinating or integrating all changes in the social structure. While establishing an obligation to protect the environment, the Stockholm Declaration also recognised that a priority for developing countries was development. Principle 2 of the Stockholm Declaration states that:

> The natural resources of the earth including the air, water, land, flora and fauna and especially representative samples of natural ecosystems must be safeguarded for the benefit of present and future generation though careful planning or management, as appropriate.

However, Principle, 11of the Stockholm Declaration makes clear that the aim of protecting the environment should not affect the possibilities of economic development in developing countries. Principle 11of the Stockholm Declaration reads as follows:

> The environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all, and appropriate steps should be taken by States and international organisations with a view to reaching agreement on meeting the possible national and international economic consequences resulting from the application of environmental measures.

For its part, Principle 23 of the Stockholm Declaration states that:

> Without prejudice to such criteria as may be agreed upon by the international community, or to standards which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country and the extent of the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries.

In this context, it is also important to mention Charter of Economic Rights and Duties adopted by the UNGA on 12 December 1974, of which Article 7 provides that:

> Every State has the primary responsibility to promote the economic social and cultural development of its people. To this end, each State has the right and the responsibility to choose its means and goals of development, fully to mobilise and use its resources, to implement progressive economic and social reforms and to ensure the full participation of its people in the process and benefits of development. All States have the duty, individually or collectively, to co-operate in order to eliminate obstacle that hinder such mobilisation and use.

Finally, the Arbitral Tribunal in the Guinea–Guinea–Bissau arbitration concerning maritime delimitation, while stating that the economic inequalities between the parties could not justify a modification of the delimitation line, also held that it could not completely lose sight of the legitimate claims by virtue of which economic

circumstances are invoked, nor contest the right of the peoples concerned to a level of economic and social development, which fully preserves their dignity. All in all, it can be said that the very concept of sustainable development is built up on the well entrenched precautionary[171] and polluter pays principles. Hence, the responsibility ensuing from the principle of inter-generational and intra- generational equity can never be forgotten.

III.8.1.2. Human and Environmental Disaster Rules

The obligation to refrain from causing an imminent and substantial environmental or human disaster has been a part of environmental and human right law as developed in recent decades. To begin with, the environmental case, all environmental obligations stemming from international treaties can be expanded within the watercourse basin, even in the absence of any specific treaty or amendment to a treaty, regulating the transboundary watercourse.

Similarly, a riparian State cannot subject a neighbouring riparian State's population to substantial and imminent danger through unilateral use of a watercourse. Such danger could arise through denying a population its ability to meet its "vital human needs" (i.e. subsistence, irrigation or drinking water), which are accorded a paramount importance under Art 10 of the UNCLNUIW.[172]

III.8.1.3.Environmental Impact Assessment (EIA)

Environmental Impact Assessment is an exercise of evaluating and predicting future changes caused by the proposed project, plans or policies to the quality of the environment. EIA is a tool not only for identifying potential damage but also probing methods for preventing such damage[173]. EIA is a multidisciplinary process requiring

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[171] Precautionary principle is based on the idea that any uncertainty should be interpreted towards a measure of safeguard. It is a 'better safe than sorry' or a 'no regret' policy. See in this connection, n. 71, para., 31, where the ICJ invoked the precautionary principle.

[172] In stressing the paramount importance of "vital human needs", the UNCLNUIW may infact be restating customary law. It can be argued by pointing out that the 1977 Mar del Plata statement recognised the right of people to have access to drinking water quantities and of a quality equal to their basic needs, and that successive similar statements reinforce this right. It is correct to say that "vital human needs" reflect custom, but somewhat incorrect in implying that Art 10 of the UNCLNUIW codifies customary law. Precedent does not support the NCLNUIW's elevation of vital human needs to an importance above all other concerns. Articles 10 of the UNCLNUIW, being the only modern source in which human needs explicitly trump environmental needs, is really an innovation and not a reflection of a customary rule at all.

[173] See European Economic Community Directive, 85/337/EEC/40, 5.7. 1987.

application of variety of knowledge and expertise. Normally, an EIA is followed by two conclusions either Findings Of No Significant Impact (FONSI) or a decision to prepare an EIA.

Unlike the I.L.C Draft Article on Prevention of Transboundary Damage from Hazardous Activities adopted on first reading in 1998, neither the UNCLNUIW nor the ILC Draft Article on watercourses expressly requires an environmental impact assessment. However, the likelihood that one would be conducted is recognised in Art. 12 of the UNCLNUIW, which requires that prior notification of planned measures, are to be accompanied by available technical data and information, including the result of any environmental impact assessment.

Today, there exists a customary obligation to conduct an EIA. Especially in the transboundary context, the duty to conduct EIA is probably now a requirement of customary international law. This is to the extent that this is true the lower riparian must be accorded the opportunity to consult with project planners, comment on the assessment, and provide technical and other relevant information relevant to the assessment, and especially relating to consequences of planned project, that may not be in the possession of planning State. Relevant procedures emerging from international water law requires that a planned project on international waters may not deprive other countries of their right to an equitable and reasonable share of the uses and benefits of these waters.

Further, the country in which the project is to be situated should ensure that a Transboundary Environmental Impact Assessment (TEIA) is performed, in accordance with its applicable law, to determine whether the project adversely affects other countries sharing the watercourse and in case of an adverse effect – those countries must be notified of the proposed project and provided with technical data and information concerning it, and must be given an opportunity to comment upon the plans and be permitted to consult with the notifying country. If no adverse effect, it is nevertheless good policy to notify co-riparian of the plans since their assessments may differ.[174]

[174] See the separate opinion of Vice president, Weeramantry in the *Gabcikovo- Nagymaros* case, about the principle of continuing environmental impact assessment, see n.71, p., 166.

EIA is necessary to make environmentally sound decisions and to verify the genuineness of the decision making process.

III.8.2. Management

Art. 24 of the UNCLNUIW states that:

> Watercourse States shall, at the request of any of them, enter into consultations concerning the management of an international watercourse, which may include the establishment of a joint management mechanism.

The commentary, which the ILC attached to this provision, emphasised that Art. 24 has in no way affected the application of Arts. 5 and 7. The result of this discussion was that a reference to sustainable utilisation in the Preamble of the UNCLNUIW. Art. 5.1 reads:

> Watercourse States shall in their respective territories utilise international watercourses in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilisation thereof and benefits there from, taking into account the interests of the watercourse States concerned consistent with adequate protection of the watercourse.

Therefore, sustainable development is only mentioned in Art. 24, while the Preamble and Art. 5 of the UNCLNUIW speak only of sustainable utilisation. Apart from the question concerning the role of sustainable development in the application of the principle of equitable utilisation, it is also necessary to examine what would be the role of equitable utilisation in the process of the attainment of sustainable development.

Thus, in brief, Art. 3 suggests that watercourse States may enter into one or more agreements; alternatively they may not. Art. 24 uses the more definite word "shall" relating to consultation, but again only the permissive "may" when referring to the establishment of a joint management mechanism.

III.8.3. Indirect procedures

In cases where there are serious obstacles to direct contact between watercourse States, the States concerned shall fulfil their obligations of cooperation provided for in the present Convention, including exchange of data and information, notification,

communication, consultations and negotiations, through any indirect procedures accepted by them.[175]

III.8.4.Data and information vital to national defence and security

Article 31 provides that nothing in the present Convention obliges a watercourse State to provide data or information vital to its national defence or security,[176] but the latter part of the same Article incorporates the principle of good faith. Finally it can be said that Art. 31 provides the possibility for a legal loophole of momentous proportions whereby any non-compliance could be argued under the cachet as "vital to its national defence or security."

III.8.5. Non-discrimination

Article *32* states that unless the watercourse States concerned have agreed otherwise for the protection of the interests of persons, natural or juridical, who have suffered or are under a serious threat of suffering significant transboundary harm as a result of activities related to an international watercourse, a watercourse sate shall not discriminate on the basis of nationality or residence or place where the injury occurred, in granting to such persons, in accordance with its legal system, access to judicial or other procedures, or a right to claim compensation or other relief in respect of significant harm.[177] A watercourse State shall not discriminate on the basis of nationality or residence or place where the injury occurred, in granting to such persons, in accordance with its legal system, access to judicial or other procedures, or a right to claim compensation or other relief in respect of significant harm caused by such activities carried on in its territory. India argued that Art. 32 presupposed regional integration and hence did not merit inclusion. India is worried about the possibility of harassment of or obstruction by neighbouring States using the avenues of private challenges to proposed project.

III.8. 6. Settlement of Disputes

Article 33 requires that the dispute shall be submitted, at the request of any of the parties to the dispute, to impartial fact-finding. Para 10 of Art. 33 recognises such

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[175] The UNCLNUIW, Art. 30
[176] Ibid., Art.31.
[177] Ibid., Art. 32.

dispute resolution compulsory ipso facto and without special agreement in relation to any Party accepting the same obligation: (a) Submission of the dispute to the International Court of Justice; and/or (b) Arbitration by an arbitral tribunal established and operating, 'unless the parties to the dispute otherwise agreed, in accordance with the procedure laid down in the annex to the present Convention'[178]. Subject to the operation of paragraph 10 of Article 33[179], if after six months from the time of the request for negotiations referred to in paragraph 2, the parties concerned have not been able to settle their dispute through negotiations or any other means referred to in para 2, the dispute shall be submitted to impartial fact finding in accordance with para 4 to 9, unless the parties otherwise agree.[180]

Para 4-9 provide for the establishment of fact-finding commission, composed of three members, one of whom is to be from a third country and serve as chair. Facts and data are the essential predicate for the operation of the equitable utilisation principle. The report of the fact-finding commission is not binding on the States concerned, but may be of assistance in resolving their disputes[181].

Art. 33 provides for a sort of compulsory fact finding commission, which can be asked for by any country, which India has objected. India argued that free choice of means of dispute settlement could have been provided. For India, any mandatory third-party dispute settlement procedure would be inappropriate and should not be included in a framework Convention.

Art. 33, on dispute settlement contains an element of compulsion. Any procedure for peaceful settlement of disputes should leave the procedure to the parties. Any mandatory third-party dispute settlement procedure would be inappropriate and should not be included in a framework Convention. India had voted against the provision in the working group and would have voted against had the Article been put to a separate vote today. India had therefore abstained in the voting.

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[178] Ibid., Art. 33

[179] Para 10 of Art.33 allows the parties to declare that they accept the compulsory jurisdiction of the ICJ or of an arbitral tribunal in relation to any dispute not resolved in accordance with the para 2 of Art. 33 of the UNCLNUIW.

[180] The UNCLNUIW, Annex I, Art. 33 (3).

[181] Ibid. Art.33

Thus, in brief, Art. 3 suggests that watercourse States may enter into one or more agreements; alternatively they may not. Art. 24 uses the more definite word "shall" relating to consultation, but again only the permissive "may" when referring to the establishment of a joint management mechanism. Likewise, neither Art. 31, nor any of the other Articles, either singularly or collectively appear to refer to any set legal procedure for possible non-compliance with the aforementioned Articles. Finally, Art. 31 provides the possibility for a legal loophole of momentous proportions whereby any non-compliance could be argued under the cachet as "vital to its national defence or security".

While we have noted that "the international drainage basin" was a keystone concept of the Helsinki Rules of 1966. However, the recent UN pronouncement has failed to properly address the matters of entire river basin management. Such weak backsliding on this crucial matter is an indication of the problems that could lie ahead. Secondly, relating to the notion of a supra-state regional-level organisation, it can be concluded that under the rubric of the prisoner's dilemma, "unselfish behaviour" can only be guaranteed if it is enforced by an external authority, and that this serves to provide a convincing case for the existence of the state to promote both the collective and the individual good.

III.8.7. Summary of State Positions

In some cases, countries failed to participate in the voting, thus leaving the status of the UNCLNUIW unclear as it might apply to a specific watercourses. Examples are:

- *Tigris and Euphrates Rivers*: While Syria and Iran backed the UNCLNUIW, Turkey (upstream of both Syria and Iran), voted against the text. Iraq was not recorded as participating in the vote.
- *Nile River*: In a watercourse that traverses the Middle East and North Africa and the sub Saharan Africa geographic regions, only Kenya and the Sudan voted in favour of the UNCLNUIW. Seven other riparian States abstained, while Burundi opposed the text outright.

- *Niger and Volta Rivers*: Three States voted in favour of the UNCLNUIW, two abstained, and three were absent, including Niger and Nigeria. Chad and the Central African Republic did not participate in the vote.
- *Limpopo River*: Three of the four riparian States – Botswana, Mozambique and South Africa – voted for the UNCLNUIW, while the fourth, Zimbabwe, was absent from the vote.
- *Orange River*: All four riparian States – Botswana, Lesotho, Namibia and South Africa – voted for the UNCLNUIW.
- *Zambezi River*: Angola, Botswana, Malawi, Mozambique and Zambia backed the UNCLNUIW, while Tanzania abstained, and Zimbabwe was absent.
- *Indus, Ganges, Brahmaputra and Mahakali Rivers*: Nepal and Bangladesh voted in favour of the UNCLNUIW, while Pakistan and India both abstained. Bhutan was absent from the vote.
- *Mekong River*: Cambodia, Laos, Thailand and Vietnam voted in favour of the UNCLNUIW, while China submitted one of only three votes against it. Myanmar was absent from the vote.
- *Syr Darya, Amu Darya and Aral Sea*: Kazakstan voted for the UNCLNUIW and Uzbekistan abstained, while Afghanistan, Tajikistan and Turkmenistan were formal absentees. Kyrgyzstan was not recorded as participating.
- *Danube River*: Of ten riparian States, seven voted in favour of the UNCLNUIW. Bulgaria abstained, while Yugoslavia (Serbia-Montenegro) and Moldova did not participate in the vote.
- *Rhine River*: France abstained. Switzerland was not a member of the UN. The remaining six riparian States voted in favour of the UNCLNUIW.
- *Colorado River and Rio Grande*: Both Mexico and the US voted in favour of the UNCLNUIW.
- *Columbia River*: Both Canada and the US voted in favour of the UNCLNUIW.
- *Amazon River*: Brazil, Guyana, Surinam and Venezuela backed the UNCLNUIW, while Bolivia, Peru, Colombia and Ecuador abstained.

- *La Plata and Paraguay Rivers*: Brazil and Uruguay supported the UNCLNUIW while Argentina, Bolivia and Paraguay abstained.

Daudin. Mwakawago (United Republic of Tanzania) said that the the UNCLNUIW was, to some extent the product of a deadline. Art. 6, on factors relevant to utilisation, represented a suitable compromise in the face of diverse interests. However, the delicate balance in the ILC Draft Arts. 5, 6 and 7 had been undone by the introduction, in Art. 5 of the UNCLNUIW of reference to a demand to take into account the interests of the watercourse States concerned. His delegation opposed those changes. Basin-wide regulatory measures were a necessary step towards environmental protection, Mwakawago said. However, those measures did not address different capabilities of States for monitoring and compliance. Without addressing such realities, the UNCLNUIW's strict provisions might in some cases become a barrier for inter-state co-operation.

Addressing other elements of the UNCLNUIW, he said not just for a State to allow unhindered access to those claiming injury as a result of a right arising under the UNCLNUIW, while denying others to seek redress to its judicial organs on matters other than those prescribed by the UNCLNUIW. Such an obligation failed to address constraints facing States in whose jurisdiction a cause of action was considered strictly territorial. He said, the UNCLNUIW preserved and authenticated existing agreements on non-navigational uses of international watercourses. He noted that it was to enter into force, following the deposit of 35 instruments of ratification or accession

Concern was voiced by some States that the aim of the UNCLNUIW had deviated from being a framework agreement. Countries like China, India and Turkey asserted that the structure of the UNCLNUIW had surpassed its original intent, pointing, in part, to the compulsory provisions regarding the settlement of disputes. India, for example, which abstained from the vote, asserted, "any procedure for peaceful settlement of disputes should leave the procedure to the parties". Likewise, Israel, which also abstained, stated that as a matter of principle, States must settle their disputes peacefully. However, the means of settling a dispute must be left to their

agreement. Parties to a dispute must be allowed to choose the mechanism which was most appropriate to their specific needs.

Huseyin E. Celem of Turkey said that his delegation could not accept the draft Convention because of objections to its preamble, as well as Arts. 3, 5, 7, 10 and part III, with the exception of Arts. 11, 22, 23, 32 and 33. As a framework Convention, the UNCLNUIW should have set forth general principles. Instead, the UNCLNUIW went beyond the scope of a framework and established a mechanism for planned measures. Such a practice had no basis in international law. The mechanism created an obvious inequality between States. It was not appropriate for a framework Convention to foresee any compulsory rules regarding the settlement of disputes, a matter that should be left to the discretion of States concerned. Further, the UNCLNUIW did not refer to the sovereignty of the watercourse States over the parts of international watercourses located in their territory, he went on to say. His country did not sign the draft Convention, which would have no legal effect in Turkey.

Edgar Camacho Omiste (Bolivia) said that the ILC Draft had reflected States' interests in a balanced fashion. The UNCLNUIW lacked that balance. Bolivia had reservations regarding Arts. 5, 6 and 7, as well as about the text as a whole. He abstained in the voting.

Ahmad Kamal of Pakistan said that he had participated in the work on the draft Convention. However, despite the Working Group's efforts, not all concerns had been adequately addressed. Pakistan had reservations regarding Arts. 2, 7 and 23. In Article 2, there were difficulties in using the term "groundwater". While the flow of a river could be measured in precise terms at various gauging sites, it was not possible to do so with ground waters, which flowed slowly through porous soil. Different laws applied to the flow of rivers and ground waters. With respect to Article 7, he said its use of the term "significant" before "harm" was problematic in that "significant" could be subject to different definitions. He favoured obligatory and binding settlement procedures. Pakistan had reservations regarding Draft Article 33 on dispute settlements because the mechanism provided therein was not binding.

Martin Smejkal of Czech Republic said that he would vote in favour of the UNCLNUIW as a whole. That vote would reflect his Government's firm attachment to

the codification of international law rather than a strong conviction that the UNCLNUIW was fully balanced. His delegation's position regarding Articles 3, 5 and 7 was reflected in its concluding statement to the Working Group, where it had abstained during the vote owing to serious misgivings about the drafts' preamble.

Gao Feng of China said that there were obvious drawbacks in the UNCLNUIW. First, it failed to reflect general agreement among all countries, and a number of States had major reservations regarding its main provisions. Secondly, the UNCLNUIW did not reflect the principle of the territorial sovereignty of a watercourse State. Such a State had indisputable sovereignty over a watercourse, which flowed through its territory. There was also an imbalance between the rights and obligations of the upstream and downstream States. He said China could not support provisions on the mandatory settlement of disputes, which went against the principles set out in the United Nations Charter. His Government favoured the settlement of all disputes through peaceful negotiations. Accordingly, he voted against the UNCLNUIW.

Jan Varso of Slovakia said that during the Working Group's session, Slovakia has abstained in a vote on the UNCLNUIW because its Arts. 5, 6 and 7 should have better reflected the objective of ensuring the reasonable and equitable use of international watercourses by downstream and upstream States. Nevertheless, his country supported the UN's efforts to codify international law and to implement Charter principles. Since the current text contained a framework designed to promote equitable and reasonable cooperation among downstream and upstream States, and with the hope that its application would contribute to the progressive development of international law, Slovakia would vote in favour of it.[182]

Hubert Legal of France said that his delegation had abstained in the voting. A small group had insisted on its position. As such, the text did not meet the objectives it had set out to achieve. Berhanemeskel Nega of Ethiopia said that his delegation had abstained in the voting because the text of the UNCLNUIW was not balanced, particularly with respect to safeguarding the interests of upper riparian States. Art. 7 and Part III of the UNCLNUIW were of particular concern. Part III put an onerous burden on upper riparian States. Despite considerable opposition to that section in the

[182] GA., Verbatim Record, 99th Plenary Meeting, Doc.A/51/PV 99 (1997), p.12.

Working Group, there had been no serious effort to accommodate the interests of upper riparian States. He said the element in Art. 3 on adjusting application of the UNCLNUIW's provisions to the characteristics of a particular watercourse could undermine the UNCLNUIW. Specific watercourse arrangements should be adjusted to the UNCLNUIW, not the other way around. The Convention was tilted towards lower riparian States, he said. However, while reserving the right to use the water of its international watercourses, Ethiopia had not voted against the UNCLNUIW but had abstained. It had done so in the hopes that the UNCLNUIW might encourage negotiations to ensure equitable utilisation and promote co-operation[183].

Lamia A. Mekhemar of Egypt expressed the hope that its adoption of the UNCLNUIW would enhance the Assembly's role in codifying and developing international law, with the aim of promoting international peace and security and upholding the rule of law. While the UNCLNUIW contained some new regulations, they did not modify customary international law. The Convention did not prejudice the legal weight of international law; its framework should not affect bilateral or regional agreements or established laws. She said the framework nature of the UNCLNUIW had made it possible to provide a set of principles and Articles on the use of waters. Its application should be subject to the full agreement and consent of all parties sharing those watercourses[184]. The special nature of each application, as well as existing agreements and customary uses, should be taken into account. The Convention should provide a basis for improved cooperation, in the spirit of full and mutual respect.

Leeora Kidron of Israel said that her delegation had abstained in the voting. With respect to Art. 3, she did not believe the UNCLNUIW could affect existing agreements. States had full freedom in negotiating and entering into new agreements, provided those agreements did not adversely affect other States. Her Government supported the compromise reached on Arts. 5, 6 and 7. Nevertheless, it would have a more explicit balance between the principle of no harm and the principle of reasonable and equitable utilisation. Neither principle should be subservient to the other. The balance between them should be based on the specific case. With respect to Art. 10 referring to "vital human needs", she said the adequate supply of drinking water should

[183] GA., Verbatim Record, 99th Plenary Meeting, Doc.A/51/PV 99 (1997), p.6.
[184] Ibid., pp.11-12.

be of greater primacy. Her Government also had problems with Art. 33, on the settlement of disputes. As a matter of principle, States must settle their disputes peacefully. However, the means of settling a dispute must be left to their agreement. Parties to a dispute must be allowed to choose the mechanism, which was most appropriate to their specific needs and circumstances[185].

Jorge Sanchez of Spain said that his country had abstained in the voting. Art. 7, on the obligation not to cause harm, was one of the most important elements of the UNCLNUIW. However, that obligation could not be separated from principles of equitable and useful utilisation spelled out in Arts. 5 and 6[186]. Venuste Habiyaremye of Rwanda said that he had abstained in the voting as the UNCLNUIW lacked any reference to the sacrosanct principle of state sovereignty. His Government also had problems with Art. 33, on the settlement of disputes, as well as with provisions in Art. 2, on the management of underground waters.

The UNCLNUIW replaces the earlier terminology with regard to adverse impacts from "appreciable harm" to "significant harm". This moves the standard of analysis from subjective to objective criteria and renders it possible to settle issues through ameliorative action or payment of compensation.

The right to consultation in good faith is asserted. The provision on equitable utilisation (Arts. 5, 6) and no harm (Art. 7) rules, inevitably strike a delicate compromise. At first glance, the watercourse Convention would seem to perpetuate the competitive paradigm. Its substantive core rules bring in mutual limitation of the sovereign rights. The focus is not on identifying and promoting shared understandings of common interests but on decentralising a single state's separate entitlement. As a result, the UNCLNUIW's term may provide the maintenance or even the reinforcement of the separate identities of riparian States.

The assessment is true to the extent that the UNCLNUIW fails to offer a sufficiently developed alternative conceptual framework that would felicitate the formation of collective identities.[187] Nonetheless, rather than perpetuate the old

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[185] Ibid., p.6.

[186] Ibid.,p.11.

[187] When a State signs an international treaty, such as the UNCLNUIW, it does not necessarily bind such a State to the terms of the treaty. This merely obliges the State not to act in a manner that

paradigm, the UNCLNUIW may, in fact, accomplish the opposite. The UNCLNUIW effectively 'neutralises' the previously competing legal rules. Given the circular nature of the regime established by Arts.5 and 7, which ties the equitable utilisation and no harm rules together without resolving the priority issue, neither rules can any longer be argued as overriding.

It is true that, though deliberately, an open-ended equitable utilisation framework, the UNCLNUIW provides little in the way of substantive guidance for the necessary balancing process. Nonetheless, the UNCLNUIW makes an important contribution towards co-operation. This contribution underlines the very riparian right based approach to water law, intended to codify and progressively develop and this allows, though admittedly does not directly facilitate, process based approaches to find a common ground.

In Art. 8, the UNCLNUIW uses "Shall' regarding the general obligation to co operate. However, for the joint managent, it uses the term "may", making integrated management optional. Also, in defining the term "management' in Art. 24 of the UNCLNUIW, it mentions two contrary concepts, i.e., sustainable and optimal utilisation, which is self-defeating as each contradicts the other. The origin *of Sic utere tuo* maxim is uncertain, despite the use of Latin in its formulation.[188] Somewhat ironically, it is a feature primarily of the common law system of the United States and the U.K., where it has been involved in nuisance cases.

Even there, it has been called unhelpful and misleading, and utterly useless as a legal maxim.[189] On the other hand, no less an authority than Judge Lauterpacht has

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would defeat the object and purpose of agreement. A treaty becomes binding on a State only after the State has followed its own domestic procedure for approving and implementing an international agreement. The process of signing and ratifying treaty is summarised here. First, the State signs a treaty. However, it then has to confirm that signature by a process called "ratification" which is an internal procedure usually defined in the constitution of the State concerned. Hence some countries require that the treaty be "ratified" by their parliaments. Others have different procedures. The point being that ratification is an internal/domestic procedure that once completed (and the instrument of ratification is transmitted to the depositary of the treaty) then the treaty is binding on the State. This is subject to the treaty being in force. The UNCLNUIW, which is under discussion here, is not in force because it has not attracted the required number of ratifications. Once it does it will enter into force and will be binding for all those state that have ratified it (and not for those who have only signed it). The distinction between accession, approval or acceptance is a very narrow one and it is probably not of much significance in this context.

[188] Lammers, *Pollution of International Watercourse* (Boston: Martinus Nijhoff, 1984), p. 570 : It must be seriously doubted that the principle as formulated is of Raman origin at all.

[189] *The Auburn and Cato Plank Rd. Co. V. Douglass*, INY, 444 918540.

called it one of those general principles of law recognised by civilised States, which the Permanent Court of International Justice is bound to apply under Art. 38 of its Statute,

III.9. *Gabcikovo-Nagymaros Case*: A Critical Analysis[190]

This case is, recognised globally as the first landmark case on transboundary water resources decided by the ICJ. This decision set a new trend in the progressive evolution of jurisprudence of international watercourses law.

On 2 July 1993, in pursuance of a special Agreement of 7 April 1993, Hungary and Slovakia requested the ICJ to resolve the dispute arising out of 1977 Agreement on the construction and operation of the Gabcikovo-Nagymaros barrage system,[191]on the Danube River, the second largest river in Europe. This case was between Hungary and Czechoslovakia[192]. The Danube forms the border between the said two countries. The purposes of this treaty are mainly to improve navigation, provide flood protection, and produce electricity. The treaty provides for the construction of two series of locks, one at Gabcikovo in Slovak territory and the other at Nagymaros in Hungarian territory. Citing environmental concerns, Hungarian parliament suspended and later abandoned the work at Gabcikovo after re-evaluation of the project. Subsequently, as a counter-measure Slovakia decided to put into operation of Variant C, which includes unilateral diversion of the Danube to the Slovak territory. On 19 May 1992, Hungary unilaterally terminated the 1977 treaty. The two countries failed to resolve their differences via a mediation forum and thus the matter reached before the ICJ for adjudication.

The issues put before the ICJ were:

1) Whether the Republic of Hungary was lawfully entitled to suspend and subsequently abandon in 1989, the work on the Nagymaros Project and on part

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[190] *Hungary v. Slovakia,* n. 71.

[191] According to 1977 Agreement, Hungary and the Czech and Slovak Republic agreed to build the Dunakiliti dam and reservoir, a barrage system including two hydro-electric power stations (one at Gabcikovo in Czech and one at Nagymaros in Slovakia), and a twenty five- kilometre by-pass canal for diverting the Danube from its original course through a system of locks and then back to its original course, see 1977, 32 *ILM* (1993), 1247.

[192] On 1 January 1993, Slovakia became an independent State.

of the Gabcikovo Project for which, the treaty attributed the responsibility to the Republic of Hungary;

2) Whether the Czech and Slovak Republic were entitled to proceed in November 1992, to the "Provisional Solution"(Variant C) and to put into operation from October 1992 this system in an attempt to secure the objectives of the said agreement;

3) What were the legal effects of the notification, on 19 May 1992, of the termination of the 1977 Treaty by the Republic of Hungary;

4) What were the legal consequences, including the rights and obligations of the Parties, arising from the court's judgement on the questions above?

Before the court, Hungary asserted that by terminating the 1977 agreement it had relieved itself of the obligation to construct the Nagymaros works, and it had rescinded its consent for Slovakia to divert the Danube River from its natural course. Hungary based its arguments on the legal ground of (1) ecological necessity;[193] (2) impossibility of performance of the treaty; (3) the occurrences of fundamental change of circumstances; (4) material breach of the treaty; and (5) supervening custom.[194] Hungary also contented that the treaty was lapsed after the dissolution of the former Czechoslovakia, as there was no rule of automatic succession of bilateral treaties in the case of dissolution of States. It was argued that the failure of Hungary to implement the provisional solution was justified as it was unilaterally prepared by Slovakia and the request of Hungary for meaningful negotiation was not heeded by Slovakia.

The rules of customary international law upon which Hungary relied included obligation of States to maintain eco-system and related ecological process, to conserve flora and fauna, to participate in good faith negotiation, to prevent transnational environmental interference, not to cause significant harm to other watercourses, to make equitable and reasonable use of transboundary water resources, to give prior notification of activities which cause significant transboundary adverse effects, to

[193] See Arts. 60-62 of the Vienna Convention on the Law of Treaties.

[194] This is nothing but the development of new norms of international environmental law. They include sustainable development, treaty provisions permitting the parties to take into account those norms; repudiation of the treaty; reciprocal norm compliance; integrity of the rule of *pacta sunt servanda*; treaty remaining in force until terminated by mutual consent. See *ILM* 1998, p. 164.

engage in good faith consultations, and to take precautionary measures to anticipate, prevent and minimise damage to transboundary resources and mitigate adverse effects. Hungary also relied on several regional treaties.

Hungary stated in its arguments to the ICJ that "the previously existing obligation not to cause substantive damage to the territory of another State had evolved into an *erga omnes* obligation of prevention of damage pursuant to the precautionary principle." However, the ICJ rejected the first four arguments[195] noted above by applying general customary rules of the 1969 Vienna Convention on the Law of Treaties. It is quite clear that since the treaty itself did not contain provision regarding its termination, this issue had to be determined on the basis of the said 1969 Law of Treaties, customary international law and the statute of the ICJ.

Slovakia argued that Hungary has no valid legal ground for terminating the 1977 Agreement as there was no state of ecological necessity, fundamental change of circumstances, material breach and intervening custom by Slovakia and it was possible to perform the obligation required by the agreement. Slovakia also stressed the failure of Hungary to implement the provisional solution, which is designed to mitigate the losses suffered as a result of Hungary's breach of 1977 Agreement. Further Slovakia argued that the bilateral treaty automatically continued in force under the norms of international law after the dissolution of the former Czechoslovakia.

Thus, Slovakia requested the court to order Hungary to make reparations, including interest and loss of profits, in an amount sufficient to compensate Slovakia for loss and damage caused by Hungary's failure to implement its responsibilities under the agreement and for the cost of constructing and operating the provisional solution. Hungary contested the validity of the doctrine of necessity by stating that there was no existence of imminent ecological disaster and also by drawing the principles of state responsibility against committing the wrongful act of suspension and abandonment of its treaty obligation.

[195] They are ecological necessity; impossibility of performance of the treaty; the occurrences of fundamental change of circumstances; material breach of the treaty.

In its judgement of 25 September 1997, the ICJ found both States to be in breach of their international obligations,[196] Hungary by stopping work on the project and Slovakia as a successor to Czechoslovakia, by putting into operation "Variant C" and called on them to negotiate a settlement in good faith.[197]

The main findings of the court were: Hungary was not entitled to abandon its work on the project, Czechoslovakia was entitled to proceed to the provisional solution (Variant C) in 1991 (9 votes to 6); Czechoslovakia was not entitled to implement Variant C in 1992 (10 votes to 5); Hungary did not have legal right to terminate in 1992 (11 votes to 4); in 1992 Slovakia became party to the 1977 Treaty as a successor State of Czechoslovakia (12 votes to 3); Hungary and Slovakia must negotiate in good faith to overcome current differences (13 votes to 2); unless the parties agree otherwise, they must establish joint regime in accordance with the 1977 Treaty (13 votes to 2); the parties shall compensate each other for damages caused to each other for wrongful conduct (12 votes to 3); settlements account must be affected in accordance with the relevant provisions of the treaty (13 votes to 2).

On 3 September 1998 Slovakia filed a request for an additional judgement, arguing that Hungary was unwilling to implement its judgement and it was subsequently agreed that Hungary would file a written statements of its position regarding this request by 7 December 1998. The court came close to endorsing the no harm principle. As regards the doctrine of necessity, the court decided that Czechoslovakia, by unilaterally assuming control over the shared resources and thereby depriving Hungary of its rights to an equitable and reasonable share of its natural resources of the Danube, failed to respect the principle of proportionality which is required by international law.

In brief, in this case the court re-affirmed the status of customary international law of the principle of equitable utilisation of an international watercourse. In this case the court gave its blessing to the concept of sustainable development but stopped short of referring to it as a principle of international law. The court referred to Art. 5 para 2

[196] Judges panel consisted of 15 members.

[197] The ICJ found it difficult to support Hungary, as Hungary failed to prove threat of "grave and imminent peril" to invoke "the state of necessity," an exception defined by the ILC for the unilateral termination of the treaty. See ILC Draft Articles on State Responsibility, UN Doc. A/35/10, 1980.

of the UNCLNUIW for the development and equitable utilisation of an international watercourse. ICJ observed that reparation did not necessarily include monetary compensation and thus obligations of reparation will be fulfilled if they resume their co-operation and implement the project in an equitable and reasonable manner.

Although the transboundary watercourse law is an esoteric branch of public law, with the Gabcikovo-Nagymaros case, it had its day in court. While the ICJ stopped short of making any sweeping rulings on the content of international customary water resources law, it accorded a notable reference to the UNCLNUIW as a document that codifies customary law. As a result, the Gabicikovo-Nagymaros case and the UNCLNUIW together allow for a fuller explication of watercourse custom than would have been possible five years ago. In this case, the court breathes a new life into the powerful doctrine of community of interest, emphasising the shared nature of an international river. The judgement rendered just four months after the adoption of the UNCLNUIW, shows a strong endorsement of the treaty as an authoritative instrument in the field and evidences the modern development of the international law in the field.

III.10. India and the UNCLNUIW

With its neighbour, India has entered into treaties for resolving water-sharing issues.[198] History has shown that without a sufficiently detailed legal structure adopted by the riparian States resolution of conflict is often prone to failure.

Anyhow, the sharing of river waters across the political boundaries is an institutionalised practice in many contexts. Sharing of the Ganges waters stand as testimony to successful international cooperation on water sharing. Within India, 16 of the 18 major river basins cover two or more States. As most of the major rivers in India are inter-state rivers, sharing water between the upper riparian and lower riparian

[198] India-Nepal Treaty Concerning the Integrated Development of the Mahakali River 36 *ILM* 531(1997); Bangladesh –India Treaty on Sharing the Ganges Waters at Farakka, 36 *ILM* 519 (1997). The dispute over the Ganges arose out of an Indian decision to build barrage across the Ganges at Farakka, 11 miles upstream of the Bangladesh border. The stated purpose of the barrage was to divert water into the Hoogly River to improve the navigability of the port of Kolkata in the Indian state of West Bengal.

States has always been a bone of contention.[199] We have seen that two riparian states- Karnataka and Tamil Nadu are at war over the Cauvery issue[200].

The basic contradiction between the need to 'harmonise' existing treaties with the UNCLNUIW's principles, and the need in future agreements to 'adjust' the same principles to particular watercourse characteristics was not lost on UN members. Responding to these provisions, India remarked, "Art. 3 has not adequately reflected a State's autonomy to conclude agreements without being fettered by the UNCLNUIW."

There is much that India and others can learn from international experience and various new protocols governing inter-country and regional accords. Framework agreement setting out general principles and customary principles has been found to be helpful, with specific details being negotiated to meet the particularities of specific projects. It offers a valuable guide to co-riparian in promoting cooperative regional development and it aims at ensuring the utilisation, development, conservation, management, and protection of international watercourses. The Convention underlines the growing concern of the world over environmental and water quality issues. It can be mentioned here that India adopted its National Water Policy in 1987. The revised National Policy has also been adopted in April 2002. The 2002 Policy emphasises on integrated water resources development and management, which is to be governed by the national perspectives and involvement of stakeholders in water sector for efficiency of water use and conservation.

Yet, India did not sign in this framework Convention.[201] The main reasons why India didn't sign the UNCLNUIW are: the reference to the insufficiently defined

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[199] The inter-state issues in India have thrown up a number of legal issues starting from the provision in the Constitution, the inadequacies in central and state laws, and the need for new laws. Entry 17 of State List read with Entry 56 of the Union List of the Seventh Schedule, Art. 262 of the Constitution (adjudication of river water disputes), the River Board Act, 1956; and the Inter-state water Dispute Act, 1956 etc. may be mentioned in this regard. In 2001, the Venkatachelliah Committee has asked the government to repeal the latter Act.

[200] Re. Cauvery water Disputes Tribunal, AIR 1992 SC 522: 1993 Supp(1) SCC 96; T.N. Cauvery Sangam v. Union of India, (1990) 3 SCC 440: AIR 1990 SC 1317; State of TN v. State of Karnataka, (1991) Supp. (1) SCC 240: 1991 (2) SCR 501; State of TN v. State of Karnataka , (1997) 5 SCC 473.

[201] The UNCLNUIW is helpful in interpreting other general or specific watercourse agreements that are binding on the parties to a controversy, whether or not the UNCLNUIW itself is binding on those parties; and even before the UNCLNUIW's adoption, the ILC Draft Articles on which it is based had influenced the drafting of many specific agreements. (Example, the 1995 Protocol on Shared Watercourse Systems in the South African Development Community Region, and the 1995 Agreement on the Co-operation for the Sustainable Development of the Mekong River Basin and

concept of "sustainable", and "optimal" utilisation (Art. 5); the application of non-discriminatory legal and judicial procedures to transboundary persons citing injury, in regions where political and economic integration is lacking (Art. 32); mandatory establishment of fact-finding commission in the interests of conflict resolution between watercourses States. Art. 33 provides for a sort of compulsory fact finding commission, which can be asked for by any country which India objects. India argues that free choice of means of dispute settlement could have been provided. Any mandatory third-party dispute procedure was inappropriate and should not be included in a framework Convention.

The UNCLNUIW is drafted on Euro-centric model, hence many provisions are futuristic because in Asia regional integration is yet to take place. It can be said that a large number of provisions are equivocal, ambiguous, and indeterminate leaving grey areas for interpretative techniques. The "relevant factors" mentioned in the UNCLNUIW under Art. 6 is only an indicative list and does not exclude other relevant factors, which leaves enough space for manoeuvring for the parties to the UNCLNUIW, as anything may be included in that category. Art. 3 para 3 uses the words "apply and adjust" the provision of the UNCLNUIW which allow the party to depart from the provision of the UNCLNUIW. Hence, the element in Art. 3 on adjusting application of the UNCLNUIW's provisions to the characteristics of a particular watercourse could undermine the UNCLNUIW. Specific watercourse arrangements should be adjusted to the UNCLNUIW, not the other way around. Another reason for India's abstention is her peculiar position, as a lower riparian State to Nepal and an upstream State to Bangladesh. India had reservations regarding draft Art. 33 on dispute settlements because the mechanism provided therein was binding.

Prakash Shah, who represented India during voting, expressed regret that the UNCLNUIW was not adopted by consensus. While a framework Convention should provide general principles, the present Convention had deviated from that approach. Specifically, India had reservations regarding its Arts. 3, 5, 32, and 33. Art. 5 had not

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the 1991 Protocol on Common Water Resources concluded between Argentina and Chile). See Salman M.A. Salman, "Legal Regime for Use and Protection of International Watercourses in the South African Region: Evolution and Context", *Natural Resources Journal*, vol.41, 2001, pp.981-1022.

been drafted clearly and would be difficult to implement. The Convention had superimposed the principle of "sustainable utilisation" over the principle of equitable utilisation without appropriately defining the term "sustainable". India had abstained in the voting on draft Arts. 5, 6 and 7 in the working group. Art. 32 presupposed regional integration and hence did not merit inclusion, he went on to say. Thus, India had voted against the provision in the working group and would have voted against it had the Article been put to a separate vote today. India had therefore abstained in the voting.

After all, the UNCLNUIW is non-binding and is only a framework Convention and it leaves space even to depart from the provision of the UNCLNUIW. The Mahakali and Ganges Treaties speak of "no-harm" which the UNCLNUIW can help interpret in terms of "no-significant harm" and its mitigation or compensation if unavoidable. However, the Mahakali and Ganges Treaties show a close correspondence with the UNCLNUIW for the most part.

III.11.Conclusion

Overall, a number of conclusions can be drawn from the voting patterns. Generally, lower riparian States and countries with both lower and upper riparian geographies tended to favour the UNCLNUIW. High-income countries like those of North America and Europe, regardless of their upper or lower riparian geographies also favoured adoption of the text. Likewise, arid States, especially those in the Middle East, generally backed the UNCLNUIW. Finally, a large majority of island-nations and non-riparian States also supported the UNCLNUIW. States that disfavoured the UNCLNUIW included primarily upper riparian States with low, lower-middle and upper-middle income levels (those historically labelled as developing countries).

The negative votes of China and Turkey are probably attributable to their positions as upstream States in ongoing controversies rather than a dispassionate assessment of the law. It is to be stressed that the entire tenor of the UNCLNUIW is permissive rather than mandatory, and open to so many interpretations and value judgements that render it quite meaningless both as a potential legal document or as a draft to act as a basis for further elaboration. The importance of the UNCLNUIW remains to be seen, since it will not come into effect until it is ratified by at least 35

States. Meanwhile, it is being invoked in many discussions on transboundary waters, but usually only the portion, which an individual State agrees with. However, it will be up to the parties within a basin to negotiate their own principles.

The term such as "drainage basin" emphasises a unitary nature of international watercourses as a shared common resource. While use of the term "Boundary Rivers" or "Successive Rivers" emphasises the fragmentation of the natural unity of a fresh water system as a consequence of the existence of the political boundaries. The "Drainage Basin" approach comprises components that embrace or may embrace, not only rivers but also other units such as tributaries, lake, canals, glaciers and ground water constituting by virtue of their physical relationship a unitary whole.[202] The concept of shared natural resources is novel one. It has not yet been accepted as a principle of international law.[203]

The UNCLNUIW establishes two principles for the use of international watercourses (other than navigation): "equitable and reasonable utilisation" and "the 'due diligence' obligation not to cause significant harm." The obligation of due diligence contained in Art. 7 of the UNCLNUIW sets the threshold for lawful state activity[204]. It is not intended to guarantee that in utilising an international watercourse significant harm would not occur. It is an obligation of conduct, not an obligation of result.

The UNCLNUIW codifies the customary law of transboundary water resources, and also represents a progressive development with respect to procedural guidelines for notification and consultation among riparians. Art. 4 of the UNCLNUIW recognises the right of all riparian States to participate in consultations on possible uses of a watercourse if a riparian's use may be affected. Under the UNCLNUIW, riparians, whose potential uses of a watercourse might affect the use of

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[202] The ILC commentary, pp.110-111

[203] The Commission's commentary deals at length with the history of the UNGA Action on the Drafts Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilisation of Natural Recourses Shared by Two or More States, U.N. SALES no. B. 75. (Z.). Prepared by an Inter governmental Working Group of Experts on Natural Resources Shared by Two or More States, which had been established by the UNEP in 1975. One of the objections to the adoption of the principle by the General Assembly was that some of them 'constituted an encroachment on sovereignty,' p. 125.

[204] The ILC has defined the due diligence obligation not to cause significant harm as " not strict liability," but "such care as governments ordinarily employ in their domestic concerns."

the watercourse by other riparians, are to be given timely notification. Both downstream and upstream riparians have the right to receive notification. In the case of upstream riparians, their potential use of the watercourse might affect the viability of a project located downstream.

In an attempt to give legal recognition to physical realities and a more rational organisation to the management of international rivers, codifiers of international law have struggled to develop a workable definition of 'river' based upon hydrological and geographical concepts. ILA's Helsinki Rules focused on the international drainage basin concept, which attempted to integrate the entire watershed including rivers, lakes, canals, groundwater, and glaciers in order to "effect maximum utilisation and development of any portion of its waters". The ILC has, however, rejected the 'drainage basin' concept as being overly broad and replaced it with the term 'watercourse'. Through watercourse agreements, individual States are able to use the UNCLNUIW as a general structure and guide for creating separate bilateral or multilateral agreements that take account of the geographical and political realities of the region. In drafting their own agreements, States are free to apply and adjust the provisions of the present Articles to the characteristics and uses of a particular international watercourse or part thereof.

Art. 5 sets out these principles as twofold: First, international watercourses shall be used and developed to attain optimal utilisation consistent with adequate protection of the particular watercourse. Second, that watercourse States shall participate in the use, development, and protection of international watercourses in an equitable and reasonable manner, including the duty to co-operate in the protection and development of it. By providing that watercourse States "shall participate" in the use and protection of an international watercourse in Art. 5, the UNCLNUIW expands upon the Helsinki Rules.

In most basic terms the task of arriving at an equitable allocation involves striking a balance between the needs of the States concerned in such a way as to maximise the benefit and minimise the detriment to each. Here the distinction between factual harm and legal injury is crucial to an understanding of the principle of equitable

utilisation. It is only injury to a legally protected interest that is prohibited. Harm-benefit balancing test is an integral part of equitable utilisation analysis.

This draft is an authoritative interpretation of the law relating to the non-navigational uses of international watercourses. It is intended to form the basis of a multilateral framework agreement laying down the general principles and rules governing these areas of international watercourse law as between the State parties.

Chapter IV
Conclusions

There has never really been a time, at least in recorded human history, when control over water resources has not been an issue. Water is the most essential and fought over resources in the world, as it has vital role to play for sustainable agriculture and food security. The challenge of borderland water management is partly about geography, but mostly about power and politics. Undoubtedly, the most effective method of resolving the crucial issue of international water sharing peacefully is through direct co-operation based on bilateral and multilateral agreements between the parties concerned. Certainly, the forty-three year old Indus Treaty between India and Pakistan is an outstanding example of successful cooperative framework to resolve water-sharing issues. This reputed treaty brokered by the World Bank, remains a model for amicable sharing of resources, as it effectively institutionalised a conflict resolution mechanism. Despite, all the hostility and three wars between the two countries, the treaty has stood firm and not been abrogated.

An analysis of the river water disputes, both at national and international levels reveal that many conflicts have failed to reach a constructive resolution. Hence, international community has a lot to learn from this treaty and rational compromises should be made to resolve the ongoing water crisis and avert a future water war. History has shown that without a sufficiently detailed legal structure adopted by riparian states, the resolution of conflict is often prone to failure.

The development of international watercourse law has evolved through various international and federal cases. These include the considerable jurisprudence on river law arising to be found in the decisions of the *Jurisdiction over the River Oder; Diversion of Water from the Meuse; Lake Lanoux; Trail Smelter; Kansas V. Colorado; New Jersey V. New York; Nebraska V. Wyoming*; *Krishna Water Case* etc. The guiding principles and suggestions prepared by international organisations and compiled by international jurists have also contributed to the progressive development of this branch of law. The Helsinki Rules, 1966 being a legal regime before the United Nations Convention on the Law of the Non-navigational Uses of International Watercourses,1997 (UNCLNUIW), reflects a committed effort, for the first time, to

identify, in a comprehensive manner, the rights and obligations of States. The Helsinki Rules, though not fully binding, has obviously facilitated the process of codification by the ILC of rules relating to the non-navigational uses of international watercourses, which subsequently culminated in the emergence of the UNCLNUIW. The UNCLNUIW has laid down a global framework of general principles to guide the behaviour of States in the field of shared fresh water resources.

In brief, there are two basic forms of international law. These are the treaty law and the customary law. In the absence of an applicable treaty on shared waters, countries' rights and obligations are governed by customary international law. The rules of customary international law concerning shared freshwater have been "codified" in the UNCLNUIW. Thus, the principle of equitable utilisation has been termed a norm of customary international law by the ICJ in the *Gabcikovo Nagymaros* case decided in 1997.

However, Gabcikovo-Nagymaros case reflects traditional, modern and post modern themes. With regard to the traditional approach, the court applied the principle of State responsibility and other classical legal methods and techniques. Looking at the case more closely one can identify the modern element in view of the fact that the court urged the parties to negotiate to ensure the achievement of the objectives of the 1977 treaty, in accordance with such modalities as they may agree upon. As the court urged the need to reconcile economic development with the protection of environment, there is a reflection of post modern themes too.

A survey of the four theories concerning the theoretical basis of international watercourses makes it clear that there is virtually no support today, in either State practice or the writings of publicists for the isolationist theories, of absolute territorial sovereignty and absolute territorial integrity.

The most widely accepted theories in international legal circles for resolving trans boundary water conflict are limited territorial sovereignty and community of interests. Limited territorial sovereignty provides that each riparian State may make use of waters but not interfere with the reasonable use of each other. Limited territorial sovereignty, broadly understood, places some restrictions on State discretion, primarily based on the principle of *sic utere tuo ut alienum non laedas.* The community of interests theory requires that decision-making be undertaken collectively and in

consideration of the best use of the entire basins. The "community of interests" approach treats the entire river as one hydrological unit that should be managed in an integrated whole. Each State within the basin has a right of action against any other basin State, such that none of the basin States may affect the resource without the co-operation and permission of its neighbours. The UNCLNUIW fails to adopt the logic of the community of interest theory. Thus, limited territorial sovereignty is being manifested in the UNCLNUIW. Considering the rudimentary, vague and ever developing character of international water law, one can content that the conclusion of specific and specialised water treaties remain far and away the best solution.

In an attempt to give legal recognition to physical realities and a more rational organisation to the management of international rivers, codifiers of international law have struggled to develop a workable definition of 'river' based upon hydrological and geographical concepts. ILA's Helsinki Rules focusing on the international drainage basin concept had attempted to integrate the entire watershed including rivers, lakes, canals, groundwater, and glaciers in order to effect maximum utilisation and development of any portion of its waters. Nevertheless, The ILC has, however, rejected the drainage basin concept as being overly broad and replaced it with the term 'watercourse' and the same is reflected in the UNCLNUIW. It appears that in the first case, there is rapid development towards a basin approach. It is an established fact that the basin approach is closely related to the notion of equitable utilisation. An earnest plea is made here to set aside the approach of the UNCLNUIW and recognise the importance of the "river basin" per se, and the interdependence of the various components of the hydrographic system.

However, the term "drainage basin" emphasises the unitary nature of international watercourses as shared common resources, while use of the term such a "boundary rivers" or "successive rivers" emphasise the fragmentation of the natural unity of a fresh water system as a consequence of the existence of the political boundaries. In an endeavour to overcome this problem. ILC introduced the phrase 'international watercourse system', which constitutes a 'shared natural resource'. Reservations were again expressed concerning the terms 'system' and 'shared' because they were seen similar to the drainage basin concept, and instead an Article was proposed providing that a State is 'entitled to a reasonable and equitable share of the uses of the waters'. In sum, boundary waters are also called international watercourses

because they are already by definition international. From this reason regulation of the use of these "shared natural resources" have to be established bilaterally and multilaterally. It cannot be sufficiently stressed that the entire tenor of the UNCLNUIW is permissive rather than mandatory. Indeed, it is open to so many interpretations and value judgements that threaten to reduce its utility.

Despite divergent views, the UNCLNUIW building on the work of the IIL and ILA has brought the jurisprudence of international water law a long way. However, equitable and reasonable use is the cornerstone for establishing any legal regime on international watercourses. All in all, the UNCLNUIW establishes two principles for the use of international watercourses: "equitable and reasonable utilisation" and "the 'due diligence' obligation not to cause significant harm".

One of the most cardinal principles of international water law, which emerged in the Helsinki Rules and is further developed by ILC Draft Articles and the UNCLNUIW, is the idea of equitable utilisation. This principle reflects the emerging shared natural resource view of regulating the use of the international watercourses so as to manage the resource, as opposed to managing the individual political entity. Thus, member States have undertaken under the UNCLNUIW to use the resources of shared watercourses in an equitable and reasonable manner. Hence, several aspects must be taken into consideration in order to achieve equity and reasonableness. These include the natural physical characteristics of the watercourse, social and economic needs, as well as potential impacts and effects of the intended use on the watercourse.

Furthermore, it is to be stressed that the equitable regime for an international watercourse has to be established by taking into account all relevant factors and circumstances, including: geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character; the social and economic needs; the population; the effects of the use or uses of the watercourses in one watercourse State; existing and potential uses of the watercourse; conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect; and the availability of alternatives, of comparable value, to a particular planned or existing use. What is equitable may change with changing circumstances. What constitutes reasonable and equitable utilisation is not capable of precise determination.

The concept of equitable or reasonable use for international watercourse can be considered from two standpoints: From the use itself and from the way in which the derived benefits are to be apportioned between States. Equitable apportionment doesn't mean mathematical equal distribution of benefits but distribution according to the need of each State. This principle also implies safeguarding of the eco-systems for the benefit of present and future generations through careful planning or management, as appropriate. Co-operation and good faith fulfilment are the cornerstones for establishing an equitable regime for international watercourse and such a thing is effective only when it is institutionalised. Equitable utilisation is generally workable on a multilateral basis only if supported by appropriate institutions and co-ordinated policies.

The due diligence obligation not to cause significant harm implies "not strict liability," but "such care as governments ordinarily employ in their domestic concerns". The obligation of due diligence contained in Art. 7 sets the threshold for lawful State activity. It is not intended to guarantee that in utilising an international watercourse significant harm would not occur. It is an obligation of conduct, not an obligation of result. The UNCLNUIW replaces the earlier terminology with regard to adverse impacts from "appreciable harm" to "significant harm". This moves the argument from subjective to objective criteria and renders it possible to settle issues through ameliorative action or payment of compensation under Art.7 (2). The right to consultation in good faith is also asserted by the UNCLNUIW .

The UNCLNUIW represents the latest attempt to grapple with the relationship between the two-core substantive principles of equitable utilisation and no harm. The contradictions in the two core substantive principles of equitable and reasonable use and no-harm have been to some extent erased by striking a balance between the two principles in the UNCLNUIW. The provision on equitable utilisation (Arts. 5, 6) and no harm (Art.7) rules, inevitably strike a delicate balance. The first principle is highly indeterminate. It relies on contextual balancing of all relevant factors and circumstances and hence it implies an open-ended framework for political compromise. Thus, it is worth noting that the very incapability of the principle of equitable use to resolve disputes inspired the UNGA in 1970 to initiate the process of codification of law in the field. Strangely, the UNCLNUIW doesn't provide effective

substantive or normative guidance for the necessary balancing process leading to equitable utilisation.

At first glance, the UNCLNUIW would seem to perpetuate the competitive paradigm. Its substantive core rules remain proved in the mutual limitation of the sovereign rights. The basic and inherent approach of international watercourse law is manifested in striking a balance between these two core rules, which underlines the idea of mutual limitation of sovereign rights. This idea is reflected in the limited territorial sovereignty theory, which imposes a duty not to cause significant harm to another State. The focus of UNCLNUIW should have been to promote shared understandings of common interests but not on identifying separate entitlement. This evaluation is correct to the extent that the UNCLNUIW didn't provide for and develop an alternative conceptual framework, which could promote collective interests.

Given the circular nature of the regime established by Arts. 5 and 7, which ties the equitable utilisation and no harm rules together with resolving the priority issue, neither rule can any longer be argued as overriding. The UNCLNUIW deprives each side of convincing legal arguments for the priority of their claims but it provides little in the way of substantive guidance for the necessary balancing process. However, as the most authoritative statement of international water law, the UNCLNUIW has helped undermine the principles' capacity to structure opposing arguments.

The question whether the equitable utilisation principle should prevail over the no-harm obligation cannot be answered very easily. The available authorities indicate that no-harm principle does qualify as an independent norm. But it neither embodies an absolute standard nor supersedes the principle of equitable utilisation where the two appear to conflict with each other. Instead it plays a complementary rule, triggering discussions-between the States concerned for proscribing certain forms of serious harm. Hence no-harm doctrine complements and supports rather than overrides the principles of equitable utilisation.

The notion of due care and reasonableness are flexible ones, which prescribe a degree of care that is appropriate in the circumstances. The no harm doctrine mandates not only to refrain from causing significant physical harm but also to tolerate a certain degree of harm. After all, the no-harm obligation works in tandem with the principle of equitable utilisation. In other words, the non-harm rule is a necessary and

indispensable part of the principle of equitable utilisation. Regular consultations between States sharing fresh water recourses are almost essential in order to ensure a fair balance between their respective uses This is why so many States have established joint bodies to assist them in the cooperative management and protection of their shared water recourses. Now, regular consultation is quintessential for maintaining an equitable and reasonable regime for shared water resources. In other words, regular communication is a key element of the process of equitable utilisation.

It is of little use to speak of an obligation to co-operate in the abstract. The obligation takes on meaning in specific contexts, e.g., working together with co-riparian to achieve an equitable allocation of uses and benefits of a watercourse; working together for altering the regime of an international watercourse; and working together with the other States to fight pollution and protect the ecosystem of international watercourses. What is to be understood is that the most important 'substantive' obligations have 'procedural' components or aspects and that they are inseparable. The law governing international watercourses binds States together and require co-operation for their protection. It is an advantage always to co-operate with the co- riparian States with regard to the protection of their shared water resources. Notifications to management of international watercourses through joint mechanism, all are means to co-operation. Hence, sharing of data and information are the key to establishing an equitable regime for international watercourses and for avoiding disputes. Struggles over how to allocate waters can be best addressed by a legal regime that encompasses the body of established laws and the institution that administer these laws.

In brief, what is quintessential is the procedural mechanism like, procedure for cooperation, joint management, regular exchange of data and information, notification and consultation in order to alleviate the normative ambiguity of international watercourses law before establishing equitable regime for international watercourses.

As far as sustainable development is concerned, it is only mentioned in Art. 24, while the Preamble of the UNCLNUIW and Art. 5 speak of sustainable utilisation. Nevertheless, and given the fact that sustainable development is a concept, which refers to processes, principles and objectives, as well as to a large body of international agreements on environments, economic and civil and political rights, the incorporation of all or some of these elements into the process of the establishment of an equitable

regime for international watercourses cannot be discarded. Apart from the question concerning the role of sustainable development in the application of the principle of equitable utilisation, it is also necessary to examine what would be the role of equitable utilisation in the process of the attainment of sustainable development. The norms of international watercourses law have been keeping pace with specific development regarding eco-system interdependencies and the need to require such phenomena in an integrated manner whenever one or more component is addressed. This is a minimal requirement that needs to be fulfilled before additional considerations of ensuring system resilience and sustainability are incorporated in conjunction with precautionary principle.

Most importantly, the UNCLNUIW establishes a staged procedure for the avoidance and resolution of disputes, which is applicable, absent a relevant agreement. The UNCLNUIW provides for private recourse in Art. 32 and also provision is made in Art. 33 on the inter-state level. Art. 32 is feasible to be implemented in areas where there is regional integration. Hence, some countries are worried about the possibility of harassment of or obstruction by neighbouring States using the avenues of private challenges to proposed project. As far as Art. 33 is concerned, free choice of means of dispute settlement could have been provided. Any mandatory third-party dispute procedure was inappropriate and should not be included in a framework convention. Art. 33, on dispute settlement, contained an element of compulsion. Any procedure for peaceful settlement of disputes should leave the procedure to the parties.

The application of strict norms has become difficult with the emergence of new types of disputes necessitating a degree of flexibility. Thus, the principle of equity is getting an ever-new dimension. Further, equity in international law has both procedural and substantive side. In the former case, judge or arbitrator modifies the rule of international law. In the latter case, their application result in some form of distributive justice.

What is to be reiterated is that international law is quite instrumental in enhancing the States' willingness to co-operate. The international law can provide enough incentive for thick and direct interaction by prescribing minimal standards for equitable apportionment of water, preserving the water quality and for the sustainable development of water resources by mandating compliance with the substantive requirements of international watercourse law and by coordinating the policies of

riparian States. The establishment of effective institution for joint management of resources and machinery for resolving the disputes are crucial impetus for enforcing commitments and ensuring the long-term interdependence. The effectiveness lies in the establishment of frameworks for the exchange of information, mutual monitoring and frequent interactions. Institutionalisation is an indispensable component of designing any cooperative scheme and for establishing an equitable regime for international watercourse and for defining future rights and obligations.

It is worthy to note that most of the water sharing disputes was settled through negotiation and not by adversarial litigation. The very mode of negotiation will trigger a series of communication, exchange of data and information that will surely infuse and foster confidence and strengthen ties among the riparian States. After all, the negotiation will explore the differences, preferences, risk aversion and other dimension of disputes.

It is to be borne in mind that law can influence an open ended negotiation by setting a vague standard for the rule of equitable utilisation and no harm rather than sticking on a crystallised and clear-cut rule. This vague and flexible standard for sharing the resources will induce cooperation among the basin States and leave enough room for negotiation rather than litigate towards an unpredictable result. At this stage, minimal standard of law will be interpreted in manifold ways. Subsequently, this process will not create any clear winners and absolute losers, which in itself will be a great success of flexibility of the standard setting under international water law. All in all, the vague standard and contextual equitable criteria will enable any agreement to be updated and to make necessary adjustments in a flexible manner to meet the changing needs of the riparian States. This object is best attained through regional and international cooperation.

It is to be mentioned that international law, in the absence of strong political will and adequate financial support, can't be expected to produce immediate results for the management of international rivers. What international law can do is to set up the framework, according to which a minimum international standard can be developed to effectively deal with the problems. There are three priority areas: Firstly, the mere customary law for protecting the fresh water stocks are wholly inadequate. There is a need to develop specific international water quality standards, at the regional and global levels, which may be of general application and which take in to account of

particular regional and local circumstances. Secondly, full integration of environmental impact assessment on a broad scale into the decision making process is essential for sustainable development of fresh water resources. Thirdly, the protection of fresh water resources will not be effective without enforcement mechanisms available to private and public entities, which allow cases of non- compliance to be challenged. All in all, legal norms have to be recast and used to promote cooperation rather than permit conflict among the neighbouring States.

In drafting their own agreements, States are free to "apply and adjust" the provisions of the UNCLNUIW under Art. 3, to the characteristics and uses of a particular international watercourse or part thereof. The UNCLNUIW is thus a flexible document. It however, offers a valuable guide to co-riparian States in promoting cooperative development of a watercourse through bilateral and multilateral arrangement. This provision sets up the UNCLNUIW as a 'framework' or 'guideline' treaty, which explains the generalised nature of the majority of the articles. The efficient management of watercourses entails a process of decision making cantered on its allocation and use. Water management is the process by which the resources are distributed and put into use in combination with other resources.

The concept of equity and equitable allocation should be applied to this problem. The international community has a vital interest in the global hydrologic cycle since the present availability of the potable water continues to dwindle and threaten international peace and security. Just as the international community has devised a system for sharing the resources of the sea-with developing and geographically disadvantaged States,[1] it would seem equally important that the international community begins the elaboration of a system for the sharing of the world's fresh water resources equitably among all States, especially those that are hydrologically disadvantaged. Many of these States suffer not only from the disadvantages, but also from such conditions as poverty, expanding populations and rapid urbanisation. The shortage of fresh water gives rise to famine and social unrest. International community could assist these hydrologically disadvantaged countries through a mechanism that would enable them to obtain much-needed fresh water and avert the ongoing water crises.

[1] See UNCLOS, 10 December 1982, Articles 69, 70, 148, 254 in the United Nations, *The Law of the Sea* (New York, 1983).

Though most international water disputes depend on the successful conclusion of bilateral negotiations and regional co-operation amongst the co-riparian States, both national and international level disputes can be resolved through the implementation of appropriate plans and policies aimed at the implementation of equitable principles.

Indeed, River Basin Organisations (RBOs) need to be established for the integrated, optimum and holistic development and management of water resources with active involvement of the community.

International water disputes demand a system of regional co-operation amongst the co-riparian States to resolve the issues and enable optimal utilisation of water resources. This, however, involves a number of technical and economic considerations. Hence, all the co-riparian States should have equal access to international water resources and each nation should benefit from their development without diminishing the benefits of any other riparian.

There should be a strategy for integrated development of watercourses amongst co-basin States. The water use by the upper riparian State should not reduce its availability or adversely affect its quality in the lower riparian State, when the latter does not have a reciprocal power over the upper riparian. Instances of this situation arise when withdrawal of waters for upstream use, or use of a river for waste disposal by the upper riparian, affects the lower riparian. However, even when the natural inducement to co-operate is minimal, economic and political incentives to co-operate may be overpowering. This is evident when the project is capital-intensive and prompts a financial collaboration of the riparian States of the basin. Natural or economic incentives may sometimes be reflected in the desire of a basin State to project an international image, important for pursuing a good neighbourly relationship with the other co-basin States. Thus, these elements may sometimes comprise a crucial factor to prompt the individual basin States to co-operate in developing and utilising the water resources of the basin, in spite of the persistence of diverse problems amongst themselves. This may solve much of the politics and conflicting relationships between and amongst nations in the light of sharing their international water resources within the region.

In addition to, an excellent answer to the perennial water sharing problem is the Functionalist Theory of David Mitrani, where by solutions shall be found on a functional plane independently of politics without relation to the past claims and negotiations. The

numerous problems raised by the management of water resources are currently receiving ever-greater attention from governments around the globe. This in turn provides base pointers to the long-term need for a supra-state level organisation like the Tennessee Valley Authority to oversee environmental concerns within the most sensitive of regions.

Further, the alternative governance structure suggested to replace privatisation of the world's water supply is private public partnership (PPP) with the involvement of multi-stakeholders. PPP is different from privatisation as the private sector is just one of the stakeholders to such initiatives. Hence, this can be extensively tried in the case of fresh water too.

To sum up, we need to have an excellent hydrologic diplomacy along with the legal regime. In the changing paradigm of international relations, we need community-based management. We need to set up River Basin Organisation. Thus, what is called for is "water for peace" and "peace for water" through a "Blue Revolution", contrary to the popular belief that the next World War will be over water.

The augmentation and holistic management of fresh water resources as a finite and vulnerable resources are the better long-term solution to water scarcity. What the UNCLNUIW requires the parties to subscribe to certain basic principles, which will guide and serve as minimum standard for their practice or as corner stone for individual transboundary water agreements, which will undoubtedly foster international peace and security through good neighbourly relations.

Though the UNCLNUIW will not literally come into effect until it is ratified by at least 35 States, most of its provisions are invoked in many discussions on transboundary waters. Both ILC Draft Articles and the UNCLNUIW have already significantly influenced the drafting of a lot of international agreements, including the Protocol on Common Water Resources concluded between Argentina and Chile, 1991, the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes 1992, the SADC Protocol on Shared Watercourse Systems 1995, the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, 1995. This trend has continued even after the UNCLNUIW's adoption as is evident in the 1999 Draft Protocol to the 1992 UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes.

Precisely, after the adoption of the UNCLNUIW, most States have resorted to its provision as a starting point of their legal regime.

Thus, this framework Convention is very crucial even if it never enters into force, because, there are innumerable instances of profound reliance on its provisions in drafting and also in interpreting other general or specific watercourse agreements that are binding on the parties to a controversy, whether or not the UNCLNUIW *per se* is binding on those parties. Hence, the very fact that it is prepared by the ILC, a UN body that is responsible for the progressive development and codification of international law, and is the first UN Convention on the non-navigational uses of international watercourses adopted by a weighty majority of hundred and three countries with only three negative votes, indicating the broad agreement of the international community on the general principles governing the non-navigational uses of international watercourses, makes it a difficult task for States to ignore them or challenge its existence and effectiveness.

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