Module 2

Transboundary Water Governance: An Introduction to Concepts, Principles and Legal Instruments

The designation of geographical entities in this publication, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN concerning the legal status of any country, territory, administration, or concerning the delimitation of its frontiers or boundaries. The views expressed in this publication are the authors' personal views and do not necessarily reflect those of IUCN.

Author: Shawahiq Siddiqui, Advocate, Supreme Court of India & Partner, Indian Environment Law Organization (IELO)

Coordination: Archana Chatterjee, IUCN and Aditi Jha, Independent Consultant

Table of Contents

Introduction

Water is life. At the same time, water is power. One who controls water, controls all aspects of life of others, flora and fauna. Due to this, water in today's world has increasingly become a contested resource. Increasing water scarcity and the emergence of a global water crisis had made it imperative to focus on the sharing and management of freshwater resources at all levels of governance.

Nearly half of the world's population is located within one or more of over 260 international drainage basins shared by two or more states, and at least 145 nations have territory within international basins[1]. Transboundary water agreements have been playing a critical role in addressing some of the complex issues around water allocations, water sharing, flows and utilisation of transboundary water resources which stabilise and enhance peace and security on a regional and global scale.

Disagreements over water can heighten international tension and lead to conflict. It is therefore of utmost importance that a space for mitigating disagreements, by ensuring transparent and enabling negotiations, is brought in place. The process of such negotiations usually widens political participation and confidence among two or more basin states. In some cases, the mere exchange of information and data between two countries, in the absence of any formal agreement, can increase confidence in their bilateral relationship. For example, China and India do not have any agreement over transboundary rivers but there is an understanding over sharing of flood season data and information for a specific period between them. Commentators on international water law also view that bilateral cooperation on transboundary watercourses paves the way for regional cooperation in other domains of politics, economics, environment and culture.

Water conflicts and only project centric cooperation initiatives worldwide have contributed to tensions and uneasy political climate worldwide and South Asia is no exception. However, the presence of functional water agreements and water treaties in South Asia indicate that countries in the region continue to be inclined to respect the water agreements concluded between them and all differences or disputes that arise out of water sharing or utilisation of water resources are addressed within in the

[1]UN Water Factsheet on TransboundaryWaters, http://www.un.org/waterforlifedecade/transboundary_waters.shtml; AVO 01.05.2018 at 16.31 hrs

legal and institutional framework that exists. For example, disputes over the development of Indus River Systems are by far addressed by resorting to the dispute settlement mechanism provided within the Indus Water Treaty, 1960 between India and Pakistan.

Context of the Module

Freshwater resources are faced with incremental challenges of pollution, competing demands for their consumptive use and their diminished supply. The challenge is compounded by climate variability. As a result there is mounting evidence of water insecurity. Globally, water crisis is recognised as a crisis of governance[2] and water governance has been identified as one of the seven key challenges faced by humankind that requires priority of action. United Nations General Assembly as adopted water related Sustainable Development Goal No.6 alongside sixteen other SDGs in September 2015. Centrality of water governance is also acknowledged by the multilateral agencies such as FAO, UNESCO-IHP, OECD, the World Bank and other multi-track processes.

Amongst multiple dimensions of water governance, one important aspect is the development of mechanisms for the prevention and resolution of disputes over allocation and beneficial use of shared water resources. International law, particularly international environmental law and international water law developed over a period four decades has been helpful in assisting governments to develop national, bilateral and regional frameworks for managing their natural resources.

In the last few decades, the international environmental law has progressed and the developments therein provide a regime of globally accepted conventions and protocols that contain principles that are essential for improving environmental governance that includes governance of transboundary water resources. The countries, including in South Asia that are party to the multilateral environmental treaties have also been attempting to mainstream environmental concerns, including pollution of water resources and their poor management, into their regulatory processes. However, from the international water law perspective, the thrust of water

[2] *World Water Development Report* (UNESCO-WWAP, 2003) Pg 528

security debate is the allocation of water and the benefits that would potentially accrue from the development of a transboundary river. In cases where water resource development involves political boundaries, as they do in case of all the major river systems in South Asia, concerns over national security and regional peace often arise. It is in this context that understanding of international law, international environmental law and international water law becomes important for comprehending water governance challenges in South Asia.

Learning objectives of this module

The Module is aimed at facilitating understanding of key concepts, theories and principles in relation to international law, international water law and legal and institutional dimensions of governance of international watercourses as provided under the United Nation's Watercourses Convention, 1997.

This module by design is intended to be very simple and succinct aimed at only introducing concepts that are fundamental to understanding complex water treaties and institutional arrangements. Therefore, for brevity and in the interest of diverse group of participants, the Module has been rather over simplified to the extent that it has very clear and succinct brief on the background of fundamentals that informs the treaty practice of states and negotiations to enable participants grasp key ideas.

Topics and the content summary covered under the Module

Topic 1: Introduction to elementary concepts under international law in context of water cooperation. The understanding of elementary concepts under international law is useful for appreciating complexities involved in international water law and difficulties faced by riparian countries in negotiating and implementing treaties and agreements on sharing and development of water resources.

Topic 2: Evolution of International Water Law- An Overview. This topic highlights the historical context of difficulties faced by various UN agencies involved in developing watercourses law for the global fresh water commons. This historical perspective is useful for appreciating the complexities involved in arriving at common definitions and concepts for the governance of freshwater ecosystems which is

relevant and useful in developing or negotiating in the bilateral or regional framework scenario.

Topic 3: The United Nation's Convention on the Non-Navigational Uses of International Watercourses (UNWC), 1997. Principles, procedures, institutions. The UNWC, 1997 is the framework convention on international watercourses. The Convention is an important instrument for all purposes, regulation, use, cooperation and resolving conflicts in international watercourses. Hence it is important to have knowledge and understanding of basic principles and procedures under the UNWC.

Module 2: Transboundary Water Governance: An Introduction to Concepts, Principles and Legal Instruments

Topic 1: Introduction to elementary concepts under international law in the context of water cooperation.

Understanding of elementary concepts under international law is useful for appreciating the complexities involved in international water law and difficulties faced by riparian countries in negotiating and implementing treaties and agreements on sharing and development of water resources.

International law- A set of rules aimed at enhancing 'cooperation'

International legal system is different from national level legal systems. In a national legal system, generally there are three organs – legislature that makes the laws, the executive that implements the laws and judiciary that interprets and applies the law. There are no equivalents to these bodies in the international legal system.

International law is mainly based on the concept of sovereignty which in simple terms means a state has absolute power and control over the resources and activities within its territory. Based on this concept, nation states make laws, rules and regulations that govern their citizens and utilisation of natural resources, land, internal waters, air, and territorial sea within the territorial limits of their countries. Areas and resources outside the national jurisdictions, are governed by international legal rules or specific rules agreed by countries that may claim their share over them. If a state agrees to follow certain international legal rules, its power with respect to those subject matters get limited and regulated by the international legal rules that a nation state has agreed to follow. Therefore, considering the dependence of humankind on natural resources, multilateral environmental treaties (METs) are designed to be framework treaties so that nation states may be able to adopt the frameworks suited to their socio-economic and developmental context. For example, the Convention on Biological Diversity, 1992 that deals with conservation, sustainable use and equitable sharing of benefits arising out of biological resources

is a framework convention. Similarly, the United Nations Convention on the Non-navigational uses of Watercourses, 1997 that deals with the utilisation of fresh watercourses. The fundamental principle under these METs being that the nation states enjoy sovereignty[3] over natural resources within their territorial jurisdiction and are free to use them. In case of transboundary river systems, the notion of sovereignty becomes much more critical. The nation states assert their sovereign claims over rivers originating or passing through their territories based on conflicting doctrines of hydrography (science of surveying and charting water bodies to claim their origin or chronology (unhindered flow of the river as per memory and customary knowledge). These claims based on conflicting doctrines or extreme theories often become the key contentions in transboundary management of watercourses. (Wolf, 1999)[4]

Another fundamental norm of international law is 'cooperation'[5]. Treaties affect only those states that consent or agree to be legally bound by the written agreement. Thus the need to cooperate creates an incentive to comply with international law. When such agreements between the countries are violated, they may attract diplomatic pressures, sanctions, reprisals, and in extreme cases, military intervention[6].

Thus, International law encompasses global, multilateral or bilateral agreements, as well as customary law, state practice, institutions that develop and administer the law and the extra-territorial application of domestic law. Among other things, international law attempts to promote cooperation on controlling and preventing damage to the natural environment. International law broadly concerns itself with pressing issues facing the world, deterioration of environment and freshwater being such issues.

Brief Introduction to 'key sources of international law'

Source	Definition

[3] Under contemporary international law the most important feature of the state power is the sovereignty, which means supremacy internally and independence externally." (Mazilu, 2001, p. 130) http://journals.univ-danubius.ro/index.php/juridica/article/view/2798/2585

[4] Aaron T. Wolf, Criteria for equitable allocations: The heart of international water conflict *Natural Resources Forum*.Vol. 23 #1, February 1999. pp. 3-30.

[5] It is a more significant principle under the international water law (emphasis mine).

[6] Paisley, Richard Kyle, , FAO in the Training Manual on International Watercourses and River Basins, available at https://www.internationalwaterlaw.org/bibliography/UN/UNFAO/FAO-Negotiations_Simulation.pdf

Treaty	In the international arena treaties are agreements between states to take common action on a problem that transcends national boundaries. Treaties have a fixed geographic scope. The Vienna Convention on the Law of Treaties, 1969 defines a treaty as "an international agreement concluded between states in written form and governed by international law whether embodied in a single instrument or in two or more related instruments and whatever its particular designation[7]". A treaty cannot conflict with a "peremptory norm" of international law (jus cogens norm). These norms are universal, applicable to all states and cannot be contracted out of through the treaty process. Further, Article 53 of the Vienna Convention on the law of treaties, 1969 states that a treaty is void if it conflicts with a peremptory norm of international law.
Legal obligations under a treaty	Only sovereign countries are the subject matter of international legal system. In certain instances an international organisation, such as United Nations, may also enter into a treaty. However a treaty between a country and a private corporation is not a valid treaty under international law.
Framework Convention/Treaty	A "framework Convention/treaty" is a type of treaty that contains general obligations, usually with a procedure for reaching more detailed agreement on specific obligations through protocols or subsequent legal agreements in the future. Examples of framework treaties include the UN Framework Convention on Climate Change, 1992; the Convention on Biological Diversity, 1992 and the Vienna Convention for the Protection of the Ozone Layer, 1985.
Self-Contained Treaty	A self-contained treaty is an instrument where rights and obligations of parties are well defined within the treaty itself. The

[7] Article 2 (1)(a), The Vienna Convention on the Law of Treaties, 1969, text of the Convention is available on https://treaties.un.org/doc/publication/unts/volume%201155/volume-1155-i-18232-english.pdf

	need for more detailed agreement between the contracting parties is thus done away with. A self contained treaty works through annexes or appendices which are revised periodically by the Contracting Parties at Conferences or meetings. Usually, such treaties have a list or appendix which is easier to revise for any amendments. Examples of this type of Convention include the World Heritage Convention, 1972 and the Convention on International Trade in Endangered Species (CITES), 1973
Protocol	The term "Protocol" is usually used to describe a legally binding agreement that elaborates on, or contains detailed substantive commitments to implement the objectives of a framework treaty. Protocols are generally negotiated separately and subsequently to a framework treaty.
Optional Protocol	An Optional Protocol to a treaty establishes additional rights and obligations, and allows some willing Parties to go farther than the original treaty. An example from the human rights field is the Optional Protocol to the International Covenant on Civil and Political Rights, 1966[8].The Optional Protocol underlines that in order to further achieve the objectives of the Covenant of Civil and Political Rights, 1966 and its implementation an optional protocol is being promulgated.
Bilateral/Multilateral Treaties	Treaties may be bilateral—i.e., have two states as Parties—or multilateral—i.e., have more than two states as Parties. The major environmental treaties, such as the United Nation's Convention on Climate Change, 1992 and the Convention on Biological Diversity, 1992, are multilateral environmental treaties.

[8] Optional Protocol to the International Covenant on Civil and Political Rights, 1966; available on http://www.ohchr.org/EN/ProfessionalInterest/Pages/OPCCPR1.aspx

Main stages of treaty making

A multilateral environmental treaty can be proposed by any one country, a group of countries or non-governmental organisations or by a more common method by adopting a resolution by a group of countries, accepted usually by a UN body (United Nations Environment Program for example). The different stages of treaty making is given in Table 1

Table 1: Treaty making stages

No.	Treaty Making Stage
1.	Identification of the scientific problem
2.	Building political consensus to address the problem
3.	Convening global meetings to draft the treaty text by negotiation Signing the completed treaty
4.	Ratification, acceptance, approval or accession to the treaty (alternate procedures for making the treaty binding on a state) The treaty comes into force
5.	Elaborating on the treaty, or developing more detailed actions that must be taken, either in a protocol to the treaty or through Plans of Action or programmes of work that set out what needs to be done
6.	Amendments to the treaty and expanding on the treaty secretariat's programme of work

Understanding the Procedure by which a state agrees or becomes 'party to the treaty'

The Vienna Convention on the law of Treaties, 1969 provides that states can demonstrate their intent to be legally bound by a treaty in a variety of ways,

including: signature, exchange of instruments constituting a treaty, ratification, acceptance or approval, accession, or any other agreed means[9].

Key Stages	Explanation
Signing of the Treaty	Signature by a country to a multilateral treaty only conveys 'only its intention' to become a Party. Purposes of signature could be distinct. A state may sign just to convey its approval of the final text or its consent to be bound by a treaty. Signature alone is usually insufficient to show consent to be legally bound to a multilateral treaty, but shows that the state is willing to proceed with the international law-making process. Environmental treaties commonly state that they will be "open for signature" until a specified date. When a state signs a treaty, it agrees to refrain from any acts which would defeat the object and purpose of the treaty.
Exchange of instruments	This procedure allows states to exchange instruments, or written documents, to conclude the treaty. Usually, an exchange of instruments will be used to formalise a bilateral treaty.
Ratification	This is the most common way states show consent to be bound by environmental treaties. The Vienna Convention on the law of Treaties, 1969 defines ratification as "the international act so named whereby a state establishes on the international plane its consent to be bound by a treaty". Ratification occurs when a state completes the necessary formal procedures for executing an instrument of ratification, and then exchanges this document with another state for a bilateral treaty or, for a multilateral treaty, sends it to a depository, the place where all the documents of ratification are collected.

[9] Article 11, The Vienna Convention on the Law of Treaties, 1969, text of the Convention is available on https://treaties.un.org/doc/publication/unts/volume%201155/volume-1155-i-18232-english.pdf

Acceptance or approval	These are alternatives to ratification process with same legal effect.
Accession	This procedure allows a state to agree to be bound by a treaty that has already been concluded by other states.
Party to a Treaty	Before a treaty enters into force, a state that has demonstrated its intent to be bound is called a “contracting state.” Only after the treaty has entered into force is a state that has consented to be bound called a “Party.”

Topic 2: Evolution of International Water Law. An Overview

This topic highlights water conflicts in the historic context and difficulties faced by various agencies involved in developing watercourses law for the global fresh water commons. This historical perspective is useful for appreciating the complexities involved in arriving at common definitions and concepts for the governance of freshwater ecosystems.

History of water conflicts[10]: A Case Study

Historical evidence suggests that conflicts over water between ancient city "states" or principalities resulted in the conclusion of formal agreements concerning water, boundaries, allocation, or similar matters in dispute. The best known of these is the earliest recorded treaty of any kind (Nussbaum, 1954). It was concluded in approximately 3100 B.C. following hostilities between the Mesopotamian city states of Umma, the upper riparian, and Lagash (known today as Telloh), the lower riparian (Nussbaum, 1954; Teclaff, 1967). These cities appear to have been in almost constant conflict over water supplies. The dispute in question erupted when Umma violated a previous allocation of waters and ended with a victory by Lagash, the laying of a boundary stone and the digging of a boundary canal into which Euphrates waters were diverted (Nussbaum, 1954; Teclaff, 1967).The treaty memorializing these terms is recorded on the well-known "Stela of the Vultures," which is housed in the Louvre (Teclaff, 1967). Unfortunately, however, the agreement did not end the dispute over irrigation water between the two city states.

With a view to finally settling it, a later ruler ordered that a new canal be dug to bring water to Lagash from the Tigris. This canal, known today as Shattal-Hai, is still in use (Lloyd, 1961). Both the facts that the observance of the agreement was provided for and the manner in which this was done are of present interest. The boundary stone was laid not by the ruler of the victorious party, Lagash, but by the king of an upper riparian city state that exercised hegemony over both Umma and Lagash. In addition, the citizens of Umma — the city that had precipitated the conflict — swore to uphold the treaty in the name of the most powerful Sumerian gods, which both

[10] For further reading see: *The Development and Application of International Water Law* 59 July 9, 2007 21:51 spi-b465 Bridges Over Water 9.75in x 6.5in ch03 FA1

parties worshipped. The deities would in effect be guarantors of the agreement and would punish any violation (Nussbaum, 1954).

Key Lessons from the Case Study:

- This case study demonstrates that for thousands of years, political units have been involved in conflicts over shared freshwater resources. It further shows that the contesting parties have attempted to resolve those disputes through recorded agreements.
- The very fact that co-riparian social and political units have found it expedient and even necessary to enter into cooperative relationships with regard to their shared water resources since ancient times provides valuable insight into the way in which groups of humans have been brought together and have interacted with regard to rivers throughout history.
- Historically, the importance of water to humans, individually and in organised groups, has led them to seek stability in their relations concerning shared watercourses through the development and acceptance of customs, as well as through more formal acts such as agreements. These customs and agreements form what we know today as international law.

Development of Regulatory Regime from Navigational Uses to Non-Navigational Uses of International Watercourses

For centuries, rivers served as a major mode of transportation and navigation remained the single largest user of rivers. The supremacy of navigation was further affirmed with the commencement of the Industrial Revolution in Europe as industrial expansion required movement of goods and people from one place to the other. Since other modes of transport such as railways or roadways were very limited or at an early stage of development, rivers were used as waterways for trade and commerce. Consequently, by the beginning of the 19th century, navigation became the single largest user of rivers in Europe, virtually turning such rivers into international highways. As rivers were used extensively for commerce by all industrially advanced nations in Europe, it required some form of regulation to ensure that navigational rights and connectivity for all interested in a particular waterway continue to be enjoyed uninterrupted. Owing to this the Act of Congress of Vienna, 1815 was passed which was a form of treaty among major European countries that established the freedom of navigation on reciprocal basis as well as its

priority over other uses[11]. The legal regime establishing freedom and priority of navigation was expanded with the objective to facilitate the movement of colonial powers in Africa to the Congo and Niger Rivers in Africa by the General Act of the Congress of Berlin, 1885. Notably, this Act extended the freedom of navigation to non riparian countries also. This was followed by another treaty called the Peace Treaty of Versailles, 1919 aimed at liberalisation of navigation and opening all the rivers in Europe to all European countries.

Industrial growth led to advancements in machines and hydropower as well as irrigation possibilities started to emerge and soon became major contenders of freshwater from rivers. Global growth in population meant more water for irrigation was required for growing food. With rising commerce, cities also grew and expanded and, more freshwater was required for municipal-urban use resulting in the competing demands between industry, agriculture and urban/municipal use.

The legal thinking in this era took a note of this changing scenario and the Barcelona Convention (Convention and Statute on the Regime of Navigable Waterways of International Concern), which was concluded in 1921, reconfirmed the principle of freedom of navigation, but recognised other uses of rivers as well. Two years later in 1923, the Geneva Convention (General Convention Relating to the Development of Hydraulic Power Affecting More than One State, 1923) was adopted. Geneva Convention dealt with the right of any riparian state to carry out on its territory any operations for development of hydraulic power that it may consider desirable, subject to "the limits of international law". The need for hydropower for running industries and power to be supplied to industrial areas, irrigation and other energy needs propelled by growth in population necessitated other uses of rivers, including hydropower. The adoption of the Hydraulic power Convention marked yet another step in the decline of the supremacy of navigation that prevailed throughout the 19th century[12].

Emergence of Theories and Rules Regarding Non-navigational Uses

By the time industrial revolution matured and with the growth of population, the use of international rivers for non-navigational purposes also grew and many theories

[11] Salman MA (2007) The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: Perspectives on International Water Law, Water Resources Development, Vol. 23, No. 4, 625–640, December 2007

[12] Ibid

around regulating such uses started to emerge . One of them is the absolute territorial sovereignty which is also known as the Harmon Doctrine. Judson Harmon was the Attorney General of the United States of America when he gave an opinion in 1895 regarding the uses of the waters of the Rio Grande that the United States and Mexico share. His opinion concluded that a state is free to dispose, within its territory, of the waters of an international river in any manner it deems fit, without concern for the harm or adverse impact that such use may cause to other riparian states. However, this opinion and the principle it entailed were criticised and discredited, for obvious reasons, by subsequent decisions of international tribunals and writings of experts in this field. The basic principles of international law, contrary to the Harmon Doctrine, prohibit riparian states from causing harm to other states, and call for cooperation and peaceful resolution of disputes.

In contrast to the theory of absolute territorial sovereignty which favoured a riparian on the basis of hydrology or origin of a river, the second theory that emerged was the theory of absolute territorial integrity. As per this theory a lower riparian state is entitled to demand continuation of the natural flow of an international river into its territory from the upper riparian. Such right to unrestricted natural flow also entailed a corresponding duty on the lower riparian not to restrict the flow of water to other lower riparian. Thus, in essence, this principle protects existing uses of a lower riparian and is inclined to favour lower riparian states and is recognised as a part of contemporary international water law.

Due to non-recognition of either of the above theories, a third theory emerged which is known as the theory of limited territorial sovereignty or limited territorial integrity, which asserts that every riparian state has a right to use the waters of the international river, but is under a corresponding duty to ensure that such use does not harm other riparian. Thus this theory is found to assert equality of all riparian in the uses of waters of a transboundary river. It is this theory that has been recognised as part of existing international water law.

There is a fourth theory too. The fourth theory is the community of co-riparian states in the waters of an international river. The basis of this theory is that the entire river basin is an economic unit and the rights over the waters of this basin are vested in the collective/community of riparian states or can be divided among them on the

basis of agreement or on the basis of proportionality. This theory too was rejected by scholars and countries that share international rivers.

Therefore, it is only the third theory which the theory of limited territorial sovereignty or territorial integrity that is part of modern international water law as it is based on the principle of equality of all riparian states and encompasses both the right to use the waters of the shared watercourse, as well as the duty not to cause significant harm to other riparian.

The Helsinki Rules

The work by the International Law Association (ILA), a scholarly body of multi-disciplinary lawyers, paved the way for 'Helsinki Rules on the Uses of the Waters of International Rivers 1966'. The Helsinki Rules established the principle of "reasonable and equitable utilisation" of the waters of an international drainage basin among the riparian states as the basic principle of international water law. For that purpose, the Helsinki Rules have specified a number of factors for determining the reasonable and equitable share for each basin state. For example, (a) the geography of the basin, including in particular, the extent of the drainage area in the territory of each basin state; (b) the hydrology of the basin, including in particular, the contribution of water by each basin state; (c) the climate affecting the basin; (d) the past utilisation of the waters of the basin, including in particular, existing utilisation; (e) the economic and social needs of each basin state; (f) the population dependent on the waters of the basin in each basin state; (g) the comparative costs of alternative means of satisfying the economic and social needs of each basin state; (h) the availability of other resources; (i) the avoidance of unnecessary waste in the utilisation of waters of the basin; (j) the practicability of compensation to one or more of the co-basin states as a means of adjusting conflicts among uses; and (k) the degree to which the needs of a basin state may be satisfied, without causing substantial injury to a co-basin state. It is noteworthy that this is the first international legal instrument to include rules for both navigational and non-navigational uses of international rivers. (Salman M.A., 2007).[13]

Like other ILA rules and resolutions, the Helsinki Rules have no formal standing or legally binding effect per se. However, until the adoption of the UN Convention 30

[13] Salman M.A (2007) The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: Perspectives on International Water Law, Water Resources Development, Vol. 23, No. 4, 625–640, December 2007

years later, they remained the single most authoritative and widely quoted set of rules for regulating the use and protection of international watercourses. Indeed, those Rules are the first general codification of the law of international watercourses. As noted by Charles Bourne, the Helsinki Rules were soon accepted by the international community as customary international law (Bourne, 1996).

The entry into force of the United Nations Watercourses Convention, 1997

On 8 December 1970, the United Nations General Assembly adopted a resolution asking the International Law Commission (ILC) to study the topic of international watercourses. The ILC is a UN body composed of legal experts nominated by states, elected by the United Nations General Assembly, and is tasked with the codification and progressive development of international law. The ILC started working on the draft Convention in 1971. It completed its work and adopted the articles of the draft Convention in 1994, and recommended the draft articles to the General Assembly that year. After three years of informal and formal deliberations by the Sixth Committee of the UN (the Legal Committee), convened as Working Group of the Whole (the Working Group), and by the General Assembly of the United Nations, the Convention was adopted by the General Assembly on 21 May 1997. A total of 103 countries voted for the Convention, with 3 against (Burundi, China and Turkey), and there were 27 abstentions, while 52 countries did not participate in the voting. The Convention was opened for signature on 21 May 1997, and remained open for three years until 20 May 2000. By that time only 16 states signed the Convention. Although signatures closed on 20 May 2000, states can still become parties to the Convention by acceding to it[14]. The UNWC, 1997 was brought into force on August, 17, 2014 with Vietnam signing the Convention as the 35th member state. The key features of the Convention are dealt with in the next section below.

[14] Ibid ; Also see (Eckstein, 2002) available at http://www.salmanmasalman.org/wp-content/uploads/2015/01/GabrielUNconventionEssaysPartOne.pdf

Topic 3: The United Nations Convention on the Non-Navigational Uses of International Watercourses (UNWC), 1997. Key features

The UNWC, 1997 is the framework convention on international watercourses. The Convention is an important instrument for, regulation, use, cooperation and resolving conflicts in international watercourses. Hence it is important to have knowledge and understanding of basic principles and procedures under the UNWC

UNWC, 1997: A General Introduction

The UNWC is a framework convention (please refer to the table in Unit-I above for the definition of framework convention) that aims at ensuring the utilisation, development, conservation, management and protection of international watercourses, and promoting optimal and sustainable utilisation thereof for present and future generations.

As a framework convention, it addresses some basic procedural aspects and few substantive ones, and leaves the details for the riparian states to complement in agreements that would take into account the specific characteristics of the watercourse in question. Such agreements can adopt or adjust the provisions of the Convention.

The Convention is divided into seven parts and consists of 37 Articles. In addition, it includes an Annexure on arbitration. The main areas that the Convention addresses include the definition of the term ‘watercourse’; watercourses agreements; equitable and reasonable utilisation and the obligation not to cause harm; planned measures; protection, preservation and management; and dispute settlement.

The term ‘watercourse’ is defined by the Convention to include both “surface water and ground waters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus”. This definition is based largely on that of the international drainage basin under the Helsinki Rules, and includes only groundwater that is connected to surface water.

General Principles under the UNWC, 1997

Part-II of the UNWC, 1997 provides for different principles of transboundary water resources management. These are:

Equitable and reasonable utilisation and participation (Article 5), Obligation not to cause significant harm (Article 7), General obligation to cooperate (Article 8), Regular exchange of data and information (Article 9), Relationship between different kinds of uses (Article 10). These Principles are discussed below

1. Principle of Equitable and Reasonable Utilisation

This use-oriented principle is a sub-set of the theory of limited territorial sovereignty. It entitles each basin state to a reasonable and equitable share of water resources for beneficial uses within its own territory. Equitable and reasonable utilisation rests on a foundation of shared sovereignty and equality of rights, but it does not necessarily mean an equal share of waters. Article 6 of the UNWC provides that in determining an equitable and reasonable share, relevant factors such as the geography of the basin, the hydrology of the basin, the population dependent on the waters, economic and social needs, the existing utilisation of waters, potential needs in the future, climatic and ecological factors of a natural character and availability of other resources, etc. should all be taken into account[15]. It entails a balance of interests that accommodates the needs and uses of each riparian state. This is an established principle of international water law and has substantial support in state practice, judicial decisions and international codifications (Birnie & Boyle, 2002, p. 302).

2. Obligation Not to Cause Significant Harm

According to this principle, no state in an international drainage basin is allowed to use the watercourses in their territory in such a way that would cause significant harm to other basin states or to their environment, including harm to human health or safety, to the use of the waters for beneficial purposes or to the living organisms of the watercourse systems. This principle is widely recognised by international water and environmental law. However, the question remains about the definition or extent of the word ‘significant’ and how to define ‘harm’ as ‘significant harm’. This principle is incorporated in all modern international environment and water treaties,

[15] (Article V of the Helsinki Rules, 1966 and Article 6 of the UN Watercourses Convention, 1997), Salman MA (2007); Also see UN Watercourses Convention : User's Guide IHP-HELP Centre for Water Law, Policy and Science, June 2012; available at https://www.researchgate.net/publication/230734482_UN_Watercourses_Convention_User's_Guide

conventions, agreements and declarations. It is now considered as part of the customary international law (Eckstein, 2002, pp. 82–83).

3. General Obligation to cooperate

As per this principle the community of states in an international drainage basin shall cooperate on the basis of equality, territorial integrity, mutual benefit and good faith. No state shall be superior to the other in terms of claiming their rights of a watercourse. This, as per the Convention is essential to achieve twin objectives of optimal utilisation and adequate protection of an international watercourse. This principle also provides a procedural guidance as how the watercourse states may cooperate. In order to utilise the watercourse optimally and ensure its protection, the parties may establish joint mechanisms and institutions in the form of commissions or in any other form as deemed necessary by them. Such joint mechanisms could be based on the previous experiences of the parties gained through cooperation in existing joint mechanisms on other areas of cooperation in their own region or in various other regions.

4. Regular Exchange of data and information

The principle of regular exchange of data and information (Art.9) is an extension of and builds upon the principle of general obligation to cooperate (Art.8). As per this principle, pursuant to general obligation to cooperate, watercourse states ‘shall’ on a regular basis exchange readily available data and information with other watercourse state. Not only data related to quantity of water has been referred to but the data related to water quality and condition of the watercourse is also required to be exchanged on a regular basis. Even for the data which is not readily available, a watercourse state needs to employ its best efforts to make it available, to another watercourse state, upon a reasonable cost, if such a request has been made by another watercourse state sharing an international drainage basin.

5. Relationship between different kinds of uses

Another important principle that UNWC provides is that any particular use of an international watercourse shall not get priority over other uses, unless there is an agreement or an established custom to the contrary. Thus for example, it cannot be said that a watercourse shall only be use for hydropower generation. In case of conflict between various uses, human needs shall attain the special regard.

Procedural aspects under the UNWC, 1997

The UNWC also provides procedural guidance to the watercourse states. The procedural aspects dealt in Articles 11 to 19 are is in the context when Planned Measures[16] are to be undertaken and are likely to impact a shared watercourse[17]. The UNWC provides that possible effects of planned measures on an international watercourse shall be communicated with another watercourse state. In the event of likely adverse effects, before implementation of planned measures is undertaken, the implementing state shall notify, with credible technical data to the state likely to get affected by such planned measures[18]. The notified state shall have a period of six months to evaluate the information and likely impacts of planned intervention and for replying to the said notification, the notified state is further entitled to a period another six months upon request based on special difficulty, if any, to be sent to the notifying state[19]. However, the notified state is under obligation to send its reply on findings as early as possible[20]. The notifying state shall not implement the planned measures with the consent of the notified state. However, if the notified state fails to submit its substantiated reply in view of Article 5 (reasonable and equitable utilisation and participation) and Article 7 (obligation not to cause significant harm), then the notifying state can proceed with the planned measures taking into account its obligations under Art 5 and Art 7. The procedural guidance under the UNWC goes further on negotiations and compensation aspects so as to ensure that watercourses states are facilitated in the event when such situations arise[21].

Protection, Preservation and Management of an international watercourse

Part IV of the UNWC, 1997 provides for the protection and preservation measures and encourages states to undertake measures individually as well as jointly, where feasible[22] to protect an international watercourse from any detrimental alterations in water quality, environment of a watercourse and if such alterations in quality are

[16] Part III, Planned Measures, UNWC, 1997, available at http://legal.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf
[17] Article 11, UNWC, 1997
[18] Article 12, UNWC, 1997
[19] Article 13 (a), (b), UNWC, 1997
[20] Article 15, UNWC, 1997
[21] See Article 11-19 of the UNWC, 1997
[22] Article 20, UNWC, 1997

likely to harm human health or safety. Harmonisation of national policies in this regard is one important measure provided under the UNWC[23]. Not only freshwater ecosystems but there are an obligation to protect marine environment, particularly estuaries, either individually or jointly[24]. Regulation of the flow of an international watercourse shall be undertaken cooperatively and protection of installations for such regulated flows shall be ensured by consultations between watercourse states[25].

Emergency and Miscellaneous provisions

Part V and VI of the UNWC, 1997 deal with emergency situations and miscellaneous aspects respectively. In case of an emergency situation arising due to natural or human causes, such as floods, landslides or industrial disasters, the watercourse state in whose territory such emergency occurs has the duty to immediately inform other state likely to be impacted and inform the international agency with requisite expertise and capacity that could help in the situation[26]. UNWC then deals with additional mechanisms under Part VI related with indirect procedures, data vital to national defence and security etc, vital being Article 33 that provides that any dispute between the watercourse states shall be settled involving peaceful means. This is followed with detailed guidance on settlement of disputes[27]. Final clauses[28] deal with signature, ratification, entry into force and deposition of authentic text of the Convention.

[23] Article 21, UNWC, 1997
[24] Article 23, UNWC, 1997
[25] Article 25 and Article 26, UNWC 1997
[26] Article 28, UNWC, 1997
[27] For a detailed discussion on Article 33 of the UNWC, please see Attila Tanzi & Enrico Milano (2013) Article 33 of the UN Watercourses Convention: a step forward for dispute settlement?, Water International, 38:2, 166-179, DOI: 10.1080/02508060.2013.782262
[28] Article 34 to 37, UNWC, 1997

Topic 4: Concluding Remarks

This module by design is intended to be very simple and succinct aimed at only introducing concepts that are fundamental to understanding complex water treaties and institutional arrangements. While international law, international environmental law and international water law are all closely intertwined, there can also be an overwhelming degree of details that one can get absorbed while dealing with the subject. Therefore, for brevity and in the interest of diverse group of participants, the Module has been rather oversimplified to the extent that it has very clear and succinct brief on the background of fundamentals that informs the treaty practice of states and negotiations so as to enable participants grasp key ideas. The discussion under the topics has been dealt with very objectively and no criticism as to the virtues or merits of the existing law in practice has been made. Author has deliberately refrained from venturing into analysis or critique of the law or legal theories as seen in practice. The discussions under this Module lead to a better understanding of water conflict and cooperation in South Asia which has been dealt with in another Module 5.

References

1. Birnie Patricia W, Boyle Alan E, International Law and the Environment, 1994 Clarendon Press, Oxford
2. United Nations Convention on the Non-navigational Uses of Watercourses, 1997 legal.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf
3. ILA, Helsinki Rules on the Uses of the Water of International Rivers, International LawAssociation, 1966,http://www.internationalwaterlaw.org/IntlDocs/Helsinki_Rules.htm
4. Salman MA Salman The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: Perspectives on International Water Law; Water Resources Development, Vol. 23, No. 4, 625–640, December 2007
5. Daene C McKinney, Transboundary Water Challenges. Case Studies, 2011
6. McCaffrey, S. (1998) The UN Convention on the Law of the Non-Navigational Uses of International Watercourses: prospects and pitfalls, in: S. Salman & L. Boisson de Chazournes (Eds) International Watercourses—Enhancing Cooperation and Managing Conflict, pp. 17 –28, World Bank Technical Paper No. 414. McCaffrey, S. (2001)
7. The Law of International Watercourses—Non-Navigational Uses (Oxford: Oxford University Press). Salman, S. (2006) International water disputes—a new breed of claims, claimants and settlement institutions, Water International, 31, pp. 2–11.
8. Gleick, P.H., Water and Conflict: Fresh Water Resources and International Security,*International Security*, Vol. 18, No. 1, 79-112, 1993.
9. Gleick, P.H., Basic water requirements for human activities: Meeting basic needs, *WaterInternational,* Vol. 21, No. 2, pp. 83-92, 1996
10. Gleick, P.H., The human right to water, *Water Policy*, Vol. 1, No. 5, pp. 487-503, 1999
11. Gleick, Peter H., The Changing Water Paradigm: A Look at Twenty-first Century WaterResources Development, Water International, Vol. 25, No. 1, pp. 127-138, 2000.
12. Gleick, Peter H., Coping With the Global Fresh Water Dilemma: The State, MarketForces, and Global Governance, in The Global Environment in the Twenty-FirstCentury: Prospects for International Cooperation, P.S. Chasek (ed.), UnitedNations University Press, Tokyo, pp.204-222, 2001.
13. Hübner, Danuta, “Limits to national sovereignty,” United Nations Economic Commissionfor Europe, European Forum Alpbach, 28 August 2000

14. Korzun, V.I., et al. 1976. *World Water Balance and Water Resources of the Earth*.
15. Unesco-USSR Committee for the International Hydrological Decade. (ISBN 92-3-101497-8) Pp. 1756
16. McCaffrey, S. C., The Law of International Watercourses: Non-Navigational Uses,Oxford University Press, Oxford, 2001
17. Postel, S.L., Securing Water for People, Crops, and Ecosystems: New Mindset andNew Priorities, Natural Resources Forum, 27, 89-98, 2003
18. UN-ECE, Helsinki Convention on the Protection and Use of Transboundary
19. Watercourses and International Lakes, UN Economic Commission for Europe,1992, www.unece.org/env/water/
20. UN. 2000. Millennium Development Goals. www.un.org/millenniumgoals/UN. 2004. Millennium Development Goals: Progress Report.www.un.org/millenniumgoals/mdg2004chart.pdf
21. Wolf, A.T. et al, International River Basins of the World, *Water Resources Development,*Vol. 15, No. 4, 387-427, 1999.
22. Hydrodiplomacy, Legal and Institutional Aspects of Water Resources Governancehttp://unesdoc.unesco.org/images/0024/002452/245262e.pdf
23. The Vienna Convention on the Law of Treaties, 1969
24. The United Nation's Convention on Climate Change, 1992
25. The Convention on Biological Diversity, 1992
26. UN Water Factsheet on TransboundaryWaters, http://www.un.org/waterforlifedecade/transboundary_waters.shtml; AVO 01.05.2018 at 16.31 hrs
27. *World Water Development Report* (UNESCO-WWAP, 2003) Pg 528
28. Under contemporary international law the most important feature of the state power is the sovereignty, which means supremacy internally and independence externally." (Mazilu, 2001, p. 130) http://journals.univ-danubius.ro/index.php/juridica/article/view/2798/2585
29. Aaron T. Wolf, Criteria for equitable allocations: The heart of international water conflict *Natural Resources Forum*.Vol. 23 #1, February 1999. pp. 3-30.
30. Paisley, Richard Kyle, , FAO in the Training Manual on International Watercourses and River Basins, available at https://www.internationalwaterlaw.org/bibliography/UN/UNFAO/FAO-Negotiations_Simulation.pdf
31. Article 2 (1)(a), The Vienna Convention on the Law of Treaties, 1969, text of the Convention is available on

https://treaties.un.org/doc/publication/unts/volume%201155/volume-1155-i-18232-english.pdf

32. Optional Protocol to the International Covenant on Civil and Political Rights, 1966; available on http://www.ohchr.org/EN/ProfessionalInterest/Pages/OPCCPR1.aspx
33. Article 11, The Vienna Convention on the Law of Treaties, 1969, text of the Convention is available on https://treaties.un.org/doc/publication/unts/volume%201155/volume-1155-i-18232-english.pdf
34. Nussbaum, 1954;
35. Teclaff, 1967
36. Lloyd, 1961
37. Salman M.A (2007) The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: Perspectives on International Water Law, Water Resources Development, Vol. 23, No. 4, 625–640, December 2007
38. Bou Eckstein, 2002) available at http://www.salmanmasalman.org/wp-content/uploads/2015/01/GabrielUNconventionEssaysPartOne.pdf

Annexures

Annexure 1: List of Learning Resources

Books

1. Birnie Patricia W, Boyle Alan E, International Law and the Environment, 1994 Clarendon Press, Oxford

2. The Law of International Watercourses—Non-Navigational Uses (Oxford: Oxford University Press). Salman, S. (2006) International water disputes—a new breed of claims, claimants and settlement institutions, Water International, 31, pp. 2–11.

3. Grethel Aguilar and Alejandro Iza, Governance of Shared Waters Legal and Institutional Issues, IUCN, 2009

Research Papers

4. Salman MA Salman, The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: Perspectives on International Water LawWater Resources Development, Vol. 23, No. 4, 625–640, December 2007 https://www.internationalwaterlaw.org/bibliography/articles/general/Salman-BerlinRules.pdf

5. Wouters Patricia, The Legal Response to International Water Conflicts: The UN Watercourses Convention and Beyond http://heinonline.org/HOL/LandingPage?handle=hein.journals/gyil42&div=14&id=&page