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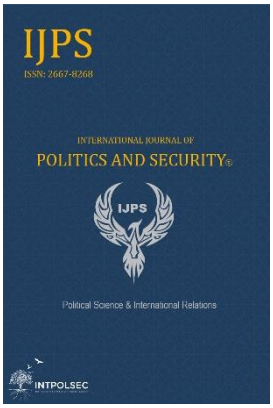

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Author(s) : Nima NOROUZI - Elham ATAEI

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Environmental Economic Diplomacy Approach in International Law of Transboundary Water Sharing

Nima NOROUZI*
Elham ATAEI**

Abstract

In this article, the existing international laws in the field of transboundary waters, as well as water treaties and the approaches used to resolve disputes, have been reviewed and analyzed by using international documents and information.

As international convention's provisions, every state in the common river basin has the right to have fair and reasonable exploitation of the water flow of the transboundary watershed in its territory, with the obligation not to cause damage to other countries. This right is determined by considering the natural factors of the watershed, existing and potential uses, social and economic needs of the countries of the basin, and the effects of exploitation on other countries. But the factors presented for this purpose are general and have different technical and legal interpretations.

Keywords: *Environmental diplomacy, hydropolitic, water security, transboundary water, Environmental water law*

1. Introduction

Legal scholars believe that one reason for the evolution of the legal regime over international rivers has been water disputes between coastal countries. In addition to international treaties, conventions, and international governmental and non-governmental institutions' efforts, we can mention the conclusion of 3600 bilateral and multilateral treaties from the 800s AD to 1985 AD.[1] The provisions of most of these treaties have been on shipping and navigation, fisheries, shared control of water resources, development of hydropower, and, most importantly, shared use of water. The first and most important international study on the legal horizons of common international water resources, especially international rivers, by Professor Smith is from the University of London in his book "The Economic Application of International Rivers." In this book, in addition to international treaties, he has referred to realist doctrines to reduce water conflicts in the international river basin.[2]

* School of Law and legal studies, Islamic Azad University, Tehran/Iran, nima1376@aut.ac.ir, ORCID: 0000-0002-2546-4288
** School of Political Sciences and International Relations, Payam Noor University, Tehran/Iran, eataei1352@gmail.com, ORCID: 0000-0001-7342-2667
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[1] Jeffrey Albert. "Rethinking the management of transboundary freshwater resources: a critical examination of modern international law and practice." In *Natural resources forum* 24, no. 1, pp. 21-30. (Oxford, UK: Blackwell Publishing Ltd, 2000).

[2] Mark Zeitoun and John Anthony Allan. "Applying hegemony and power theory to transboundary water analysis." *Water policy* 10, no. 2 (2008): 3-12.

The new evolution of the international law of international rivers is the conclusion of the Convention on the Law of Non-Shipping Use of International Waterways, dated 21 May 1997 - the Assembly adopted the draft resolution by 103 votes to 3 (Burundi, China, and Turkey) and passed 27 abstentions - the result of 33 years of work by the International Law Commission. This treaty has not yet entered into implementation.[3]

The Convention is a structural treaty aimed at using, developing, maintaining, managing, and protecting international waterways and the optimal promotion of their sustainable use for present and future generations. It deals with the main procedural aspects and practical facts as a structural convention, leaving the rest to the coastal states. To be considered on a case-by-case basis in the agreements they conclude. Such agreements may accept or amend parts of the Convention. The Convention is divided into seven sections and contains 37 articles. Besides, it contains an appendix on mediation containing 14 articles. The main areas mentioned in the Convention are the definition of the term waterway, waterway agreements, fair and rational use and non-damaging obligations, the announcement of planned actions, the protection, maintenance, management, and settlement.[4]

Research, with explicit reference to the use of international waterways for shipping, emphasizes that shipping uses are not within the scope of this Convention, except for uses that affect shipping. However, it should be noted that Article 10 of the Convention states that in the absence of an agreement or custom in opposition to this Convention, the use of international waterways shall take precedence over other uses. Therefore, it is taken from this article to show that shipping uses, which were superior (over other uses) during the nineteenth and early twentieth centuries, are no longer superior to non-shipping uses.[5]

This article goes further and wants that attention should be paid to basic human needs in case of conflict between international waterways. "Special attention is paid to the adequate supply of water to sustain human life, including drinking water and water needed to produce food for human consumption," said a statement issued by the working group reviewing the draft convention, which addresses basic human needs. "Famine prevention must be done," Article 10

[3] Lei Xie and Imad Antoine Ibrahim. "Is the ecosystem approach effective in transboundary water systems: Central Asia as a case study?." *Wiley Interdisciplinary Reviews: Water* 8, no. 5 (2021): e1542.
[4] Eyal Benvenisti. *Sharing transboundary resources: International law and optimal resource use*. Vol. 23. Cambridge University Press, 2002.
[5] Ariel Dinar and Yacov Tsur, eds. *Management of transboundary water resources under scarcity: a multidisciplinary approach*. World Scientific, 2017.

is also used by some authors to support the concept of human rights on water, along with other similar sections of the Convention in other international legal instruments.[6]

The Convention uses the term "international waterway" to mean "a waterway of which parts are located in different countries" and the waterway as representing both a system of surface and subsurface waters which, because of their physical connection to a single comprehensive "It is formed and flows naturally in a common path." This definition includes groundwater that is associated with surface water. And it does not include transboundary aquifers that neither pour water into surface water nor catch water. Imagine that because of this vacuum, the International Law Committee issued a separate resolution proposing that these laws in this Convention govern other types of groundwater.[7]

Waterway agreements related to Article 3 of the Convention state that the Convention should not affect the waterway country's rights and obligations formed under the treaties. However, if necessary, this article urges the parties to consider aligning those memoranda of understanding with the Convention's essential provisions. Besides, Article 3 refers to some, but not all, waterway states that are parties to a waterway treaty and emphasize that no provision of this Convention applies to the rights and obligations of waterway states to which they are not a party that it doesn't affect.[8]

The Convention refers to the principles of equitable and rational use contained in Article 6 and the factors and conditions that should be considered to define such use. Article 6 (paragraph 1) of the Convention states that the use of international waterways is fair and reasonable in light of the following conditions and factors. (a) geographical, hydrographic, hydrological, climatic, ecological, and other natural features; (b) take into account the social and economic needs of waterway countries; (c) the population of the waterway in the country of the waterway; (d) the effects of the use or uses of a waterway in one waterway country on other waterway countries; (e) the potential and actual capacity to use the waterways; (f) the maintenance, protection, development, and economy of waterway resources and the cost of

[6] Joseph W. Dellapenna, "The customary international law of transboundary fresh waters." *International journal of global environmental issues* 1, no. 3-4 (2001): 264-305.
[7] Jacques Ganoulis, Lucien Duckstein and Peter Literathy, eds. *Transboundary Water Resources Management: Institutional and Engineering Approaches* 7. (Springer Science & Business Media, 1996).
[8] Ariel Dinar, Shlomi Dinar, Daene C. Mckinney and Stephen C. Mccaffrey. *Bridges over water: understanding transboundary water conflict, negotiation and cooperation*. Vol. 3. (World Scientific Publishing Company, 2007).

effective means; And (g) the availability of secondary solutions, the comparable value in a particular application or current use. In this respect, the Convention is the same as the principle adopted 30 years ago in the Helsinki Convention, which established fair and rational use as the guiding principle of international water law. And taking into account the special circumstances and factors to reveal this just use.[9]

Article 7 (paragraph 2) addresses rational and equitable use principles, regardless of when serious damage has been inflicted on another waterway country. The paragraph also indicates that the injury cause must be tolerated when possible damage is considered. A careful reading of Articles 5, 6, and 7 of the Convention should lead us to the conclusion that the principle of the "obligation not to harm" is less important than the principles of "fair and reasonable use." Therefore, it can be concluded that, like the Helsinki Law, the principles of "rational and equitable use" are the guiding and fundamental principles of the UN Convention on Waterways.[10]

Other fundamental obligations of the Convention, including the obligation to cooperate among conditions, are establishing joint mechanisms or commissions, the routine exchange of data and information, and informing other waterway countries of the planned solutions governed by Section 3 of the Convention. This is the longest part of the Convention. And these obligations also include nine articles on aspects related to informing other waterway countries about planned solutions that may cause significant adverse effects.[11] Those aspects include a time frame for a response; Commitments to the notified country over a specific period include responses, non-responses, consultations and discussions regarding planned solutions, procedures in the absence of a notification notice, and immediate management of planned solutions.

Environmental protection of international waterways is covered by Section 4, Articles 20 to 26, entitled "Protection, maintenance, and management" of international waterways. This includes several waterway countries' obligations, including protecting and maintaining ecosystems, preventing, reducing, and controlling pollution, introducing dangerous or new

[9] Richard E. Just and Sinaia Netanyahu. eds. *Conflict and cooperation on trans-boundary water resources*. Vol. 11. (Springer Science & Business Media, 1998).
[10] Sharmila Murthy. "Can international water Law be a tool for water diplomacy?." *Journal of International Law of Peace and Armed Conflict* 27, (2014): 17-25.
[11] Dieter Helm and David Pearce. "Assessment: economic policy towards the environment." *Oxford Review of Economic Policy* 6, no. 1 (1990): 1-16.

species, and protecting and maintaining the marine environment. The Pledge of Understanding statement sets out clauses that set a precise standard for waterway countries.[12]

Article 33 and the annexed parts to the convention deal with the mechanism and procedures for resolving disputes. This article covers several methods of resolving disputes, including negotiations, the search for joint efforts of Jamileh, mediation and compromise by a third party, the use of joint waterway institutions, or the referral of a dispute to the International Court of Justice. However, Article 33 details the fact-finding procedures, which only include parties who review the fact-finding commission's report in good faith. The Convention gives member states the option of remitting their dispute to mediation following the Convention's provisions and the laws annexed to the International Court of Justice. It should be noted again that this principle is also not binding and is simply an option. The number of countries that acceded to the Convention on 1 Jun 2010 is 19, and the remaining 16 required are 16.[13]

No expiration date has been set for the implementation of the Convention. The Convention will be implemented by its members after 35 accessions or acceptance, no matter how long it takes. It is not surprising that complex and controversial treaties take a long time to implement. Implementing the Convention on the Law of the Sea took almost 12 years. However, judging by the prolonged process of signing, acceptance, and accession due to the misunderstandings mentioned above, there is a risk that the Convention will not be implemented because the number of admissions and accessions does not seem to reach the required level.[14]

This Convention has a significant impact on bilateral and multilateral water treaties. Several international identities, such as the International Court of Justice, support the Convention. In the South African Development Community, the member states shared their protocol on waterway systems in 1995, adapting to the Convention's provisions in 2000. Most of the revised protocol material on shared waterways in the South African Development Community is a copy of the Convention.[15]

[12] Kyoko Matsumoto. "Transboundary groundwater and international law: past practices and current implications." (2002).
[13] Yanmei He. "China’s practice on the non-navigational uses of transboundary waters: Transforming diplomacy through rules of international law." *Water International* 40, no. 2 (2015): 312-327.
[14] Gabriel E. Eckstein. "Water scarcity, conflict, and security in a climate change world: challenges and opportunities for international law and policy." *Wis. Int'l LJ* 27, (2009): 409.
[15] Anton Earle. ed. *Transboundary water management: Principles and practice*. (Earthscan, 2013).

The World Commission on Dams notes that the principles set out in the 1997 UN Convention on the Right to Non-Shipping Use of International Waterways are guaranteed and that every country must make every effort to accept and implement them. The World Water Council has described parts of the Convention and concluded that "it is worrying that even after all the time spent preparing the convention, it does not seem likely to accept enough countries to implement it." The World Water Commission has also called the Convention weak in the 21st century. The commission added that although the Convention is weak, it is worth noting that the first step is to show more respect for the global water figure.[16]

According to McCaffrey, some experts consider the basic principles of the Convention, such as the fair and rational use and commitment of non-harm, the communication and exchange of data and information, and areas related to environmental protection, to reflect the basic tenets of customary international water law. Thus, even if the Convention is not implemented, it has received widespread support and is widely believed to reflect International Water Law.[17]

Since the world's population is growing exponentially and the quantity and quality of natural resources are decreasing, the number and intensity of water disputes between countries have increased, and attention has been paid to examining and providing new and creative solutions for the peaceful resolution of resource disputes. Transboundary water is an important step in establishing stable and safe international relations. There are nearly 263 border river basins and lakes in the world, which cover almost half of the earth's surface and contain 60% of the world's river flow. About 40 percent of the world's population lives in border basins. One hundred forty-five countries have border basins, and 21 countries are completely located in border basins.[18]

In the conditions of water shortage, the main issue at the heart of transboundary water disputes is the way to divide water, which, due to the generality and lack of transparency of

[16] Bo Appelgren and Wulf Klohn. "Management of transboundary water resources for water security; principles, approaches and state practice." In *Natural resources forum* 21, no. 2, pp. 91-100. (Oxford, UK: Blackwell Publishing Ltd, 1997).
[17] Jeffrey Albert. "Rethinking the management of transboundary freshwater resources: a critical examination of modern international law and practice." pp. 21-30.
[18] Joseph W. Dellapenna. "The customary international law of transboundary fresh waters."pp. 264-305.

existing international laws, can be said to be practically a solid international standard for dividing transboundary water resources and the resulting benefits. There are none of them.[19]

In the survey conducted by a study, 250 independent international treaties, including 688 agreements on 113 common watersheds, were signed between 1820 and 2007. While the scope and content of these treaties vary widely, they cover approximately 70% of the world's transboundary basins. In terms of content, the focus of the treaties mentioned above has changed from the issues of regulation and development of water resources to the issues of water resources management and creating a structure and framework for this management as the previous issues such as hydroelectricity, water allocation, and irrigation are still important. Still, the environment is currently the most common topic mentioned in the text of the treaties.[20] Treaties also increasingly include data and information sharing and have dispute resolution mechanisms and a mechanism for the participation of parties beyond government actors.

Iran has bilateral agreements with its neighbors on most of the border rivers, including the 1920 treaty with the former Soviet Union regarding the Aras, Atrak, and other 12 common rivers, the 1954 protocol of the Sari Su and Qara Su rivers with Turkey, the 1971 river treaty Hirmand with Afghanistan and the border water agreement of 1975 with Iraq. This expansion of the border rivers in Iran clarifies the importance of researching and studying international laws in the field of transboundary waters, which is examined in this article.

2. Theories Governing Treaties and International Laws

The theories governing international agreements include four theories of absolute territorial sovereignty (Harmon doctrine), the theory of absolute river integrity, the theory of limited territorial sovereignty, and the theory of common water sovereignty. According to the literature, these four theories can be divided into extreme and moderate formats.[21]

Extreme Principles: Haqabah is based on hydrological or calendar criteria. Many of the common claims for Haqabah are based on two general bases: either it is based on hydrology, that is, where the river or aquifer originates, and the amount of runoff that is produced in a

[19] Ruby Moynihan and Bjørn-Oliver Magsig. "The Rising Role of Regional Approaches in International Water Law: Lessons from the UNECE Water Regime and H imalayan A sia for Strengthening Transboundary Water Cooperation." *Review of European, Comparative & International Environmental Law* 23, no. 1 (2014): 43-58.
[20] Alistair Rieu-Clarke and Ruby Moynihan. *Transboundary water governance and climate change adaptation: International law, policy guidelines and best practice application*. (UNESCO Publishing, 2015).
[21] Halla Qaddumi. *Practical approaches to transboundary water benefit sharing*. (London: Overseas Development Institute, 2008).

particular country, or It is the basis of the calendar, that is, who has had the longest use of water.[22]

- The theory of absolute territorial sovereignty is often used by the upstream coastal country. This principle refers to the doctrine proposed by U.S. Attorney General Harmon in 1895 in the Rio Grande River dispute with Mexico, arguing that a state has absolute rights to the water flowing through its territory. . It should be noted that this theory was immediately rejected by Harmon's successor and was later officially rejected by the United States and was never used in any other water treaty, except for rare cases in some internal tributaries of transboundary waters. This doctrine was rejected in the International Court of Justice in the "Lake Lennox" case in 1957. It is not cited in international arbitrations related to transboundary waters.[23]

- Downstream countries often refer to the theory of absolute river integrity, which shows that every country along the river has the right to use the natural flow of the entire river system entering its borders. This principle has been accepted in international forums as much as the theory of absolute sovereignty.[24]

In arid or mixed regions (wet upstream and dry downstream), downstream countries often have less rainfall than their upstream neighbors. As a result, they depend on river water for a long history and often have older water infrastructure. This principle of acquiring royalties due to old usages is known as "historical royalties" or, in other words, "first in time, first in royalties".[25]

Usually, the reference to these conflict-oriented doctrines corresponds to the position of the basin countries in terms of being upstream or downstream, and for upstream countries such as Ethiopia and Turkey, they are often based on arguments based on the theory of absolute

[22] Patricia Wouters and Sergei Vinogradov. "Reframing the transboundary water discourse: Contextualized international law in practice." *Review of European, Comparative & International Environmental Law* 29, no. 3 (2020): 385-394.
[23] Nurit Kliot. Water resources and conflict in the Middle East. (Routledge, 2005).
[24] Dombrowsky, Ines. "Revisiting the potential for benefit sharing in the management of trans-boundary rivers." *Water Policy* 11, no. 2 (2009): 125-140.
[25] A. Dan. Tarlock. "International water law and the protection of river system ecosystem integrity." *BYU J. Pub. L.* 10, (1996): 181.

territorial sovereignty, and for downstream countries such as Iraq and Egypt is based on historical rights.[26]

Moderate principles: over time, the extremist defined rights were moderated, and most countries accepted the limitations of both theories of absolute territorial sovereignty and river integrity.

The theory of limited territorial sovereignty is a consensus and a balance between the subject of the hydrological era and the calendar era. In other words, any government can use the existing waterways in its territory as long as it does not cause serious damage to the interests of other governments along the river. This theory allows the good neighborly relations of states adjacent to a waterway to be better manifested and emerge. Today, the theory of limited territorial sovereignty constitutes the dominant theory, and the procedure of governments has moved towards accepting this theory.[27]

Examples of international jurisprudence in the use of this theory are the procedure of the government of Chile (upstream state) and Bolivia (downstream state), the judgment issued in 1931 in the case of New Jersey and New York, and the judgment in the case of deposition of substances in the Danube in 1927, the opinion 1929 Permanent Court of Justice in the case of territorial jurisdiction of the International Oder River Commission, 1939 opinion of the Supreme Court of Italy in the case of Mediterranean Coast Electric Energy Company v. Le Gori Company, 1942 Rio Commission Report on the damage caused by the diversion of the Indus River by the state Punjab to the state of Sindh, the arbitration verdict of 1945 in the dispute between Ecuador and Peru regarding the Zarumilla river and the court verdict in the "Lake Lenox" case can be mentioned.[28]

All these arbitrations somehow recognize the rights of the upstream government to take advantage of the benefits of the border and common river to promote the welfare of the people and the economic progress of its country. At the same time, it has been stated that the upstream government cannot release itself from the obligation of non-compliance—damage to the ability

[26] Ibrahim Kaya. "The Euphrates-Tigris basin: An overview and opportunities for cooperation under international law." *Arid Lands Newsletter* 44, (1998).
[27] Muhammad Mizanur Rahaman. "Principles of transboundary water resources management and Ganges treaties: an analysis." *International Journal of Water Resources Development* 25, no. 1 (2009): 159-173.
[28] Günther Handl. "Territorial sovereignty and the problem of transnational pollution." *American Journal of International Law* 69, no. 1 (1975): 50-76.

to use river water for other governments. Also, the downstream government cannot ask the upstream government to waive its authority to provide the downstream government with the entire water flow. Both countries should take advantage of the benefits of the river, and these interests should be compatible as much as possible. The following explains that the provisions of the 1997 Convention are also in accordance with the theory of limited territorial sovereignty.[29]

Regarding the theory of shared sovereignty, it should be noted that despite the political borders that separate the states, the states around an international waterway form a single entity and society. At the same time, the undeniable truth is that the common sovereignty of borders and shared rivers is not observed in the practice of countries due to the difficulty of reaching an agreement regarding the use of the benefits of these rivers and the preservation of their bed.

3. Existing International Laws Regarding Non-Shipping Uses of International Waterways

The documents that reflect the current legal situation in the field of transboundary waters include:

a. The Helsinki Rules, which the International Law Society compiled in 1966.

b. The 1997 United Nations Convention on Non-shipping Uses of International Waterways is the result of the work of the International Law Commission and is based on the Helsinki rules.

c. The European Water Convention on the Protection and Use of Transboundary Waterways and International Lakes 1992 was established based on the Helsinki rules and by the United Nations Economic Commission for Europe (UNECE).

d. The Berlin Rules of 2004, in which the revised version of the Helsinki Rules is presented.

This article examines and explains the contents of the documents mentioned above.

- Helsinki rules of 1966 about non-navigational use of international waterways

First, the main provisions of this document will be discussed. The content of Article 4 of the Helsinki Rules is as follows:

[29] Hillel I. Shuval. "Approaches to resolving the water conflicts between Israel and her neighbors—a regional water-for-peace plan." *Water International* 17, no. 3 (1992): 133-143.

"Each watershed state in its territory has the right to fairly participate in the benefits of using the waters of the international basin."

According to Article 5 of the Helsinki Rules, the right to reasonable and fair participation is determined in each case based on a list of factors and conditions. This list considers three types of factors:

- Natural factors: the geography of the catchment area, especially the distribution of the basin area in the relevant countries, the hydrology of the basin, and the runoff produced in each of the relevant countries; The climate of each basin country.[30]

- Historical data: past uses, especially those that have remained until now.

- Economic and social needs are the needs of each relevant country. The possibility of development with alternative resources, the cost of this replacement, and the necessity of minimizing resource waste.

"Benefits" are mentioned in the right of fair participation. According to the interpretation of Article 4 of the Helsinki Rules, for an action to be introduced with benefits, it must be economically or socially useful. On the one hand, this means that a user with no benefit to the government and who does not bring good cannot have a fair title.

On the other hand, preference should not necessarily be given to more effective activity at the economic level. It is sufficient that that use is effective considering the economic and technological level of the relevant government. This means that the social use of activity can prevail over its economic benefits.

In addition to being fair, each coastal state's right to use the waterway must also be "reasonable." That is, it is not enough that the division is fair, but it must be ensured that the total number of uses of the waterway provides basic privileges for the relevant governments. This interpretation of the International Law Society relies on a set of convention regimes that emphasize "wise," "ideal," or "best possible" exploitation. In addition, Article 5 of the Helsinki Rules, which refers to fair and reasonable participation factors, mentions the necessity of avoiding unnecessary waste.

[30] Kliot, Nurit, D. Shmueli, and Uri Shamir. "Institutions for management of transboundary water resources: their nature, characteristics and shortcomings." *Water Policy* 3, no. 3 (2001): 229-255.

Suppose important damages are caused downstream within the framework of reasonable use. In that case, these damages are not considered legitimate. A coastal waterway government should not have reasonable activities more than its right to fair use, which shows that priority is given to fair use here. [31]

A complex set of factors is involved in preferring one situation over another. To better represent various factors, the International Law Society has imagined a hypothetical situation in its commentary on Article 5 of the Helsinki Rules, which is examined below.

The mentioned assumption is that downstream government A has used the waters of the waterway shared with government B for many years for irrigation purposes. Meanwhile, upstream government B informs government A of its intention to build a facility on the same river to produce electricity. The two mentioned activities cannot be combined. The question that arises here is how to solve this problem. If the situation is such that in the case of State A: a) the exploitation of electricity does not necessarily end irrigation activities. Still, it forces State A to use more efficient methods, methods that nevertheless do not allow State A to have the same have the previous production level. b) Government A can procure these materials from another place instead of the food it cannot produce at an approximately similar price. c) Recently, a significant amount of underground water has been discovered in the territory of state A and regarding state B: a) the production of electrical energy will have a great impact on this state, and b) many people will benefit from this new activity.

The traditional analysis of this situation gives priority to the case of current use, i.e., the irrigation activities of State A, while according to Article 5 of the Helsinki Rules, "existing uses" are only one factor, among other factors. In the present case, three other considerations will weigh heavily on government B:[32]

a) In general, this government's most profitable use of the waterway is the production of electrical energy.

[31] Marwa Daoudy. "Asymmetric power: Negotiating water in the Euphrates and Tigris." *International Negotiation* 14, no. 2 (2009): 361-391.
[32] Michelle R. Sergent. "Comparison of the Helsinki Rules to the 1994 UN draft articles: will the progression of International Watercourse Law be dammed." *Vill. Envtl. LJ* 8, (1997): 435.

b) Government A has the possibility of substitution, either through the purchase of agricultural products, the improvement of its irrigation system, or the use of its underground water.

c) To produce electric energy in another place, government B must tangibly pay a higher price.

However, some strategies can be used to protect the interests of government A: for example, restricting the authorized activities of government B, giving money to government A to allow it to upgrade its irrigation system, or paying compensation to This government is trying to compensate for the loss caused by the interruption of its irrigation activities.

The procedure of the International Law Association for drawing a concrete picture of Article 5 shows that several elements can affect the analysis and resolution of the dispute. This causes a lack of stability or, to put it better, a lack of predictability in these claims. In a better interpretation, the principle of the right to fair and reasonable participation cannot be considered a factor for stability in international relations. But at the same time, it should be kept in mind that it is impossible to prove the superiority of some uses or the precedence of existing uses in international arbitrations. The subject of the existing usage is also stated in Articles 6 and 7 of the Helsinki Rules, and it covers two issues:[33]

a) Do the existing activities take precedence over new uses, and if yes, to what extent do these activities take precedence?

b) Can a government start a new use despite the interests of current consumers?

Article 8 of the Helsinki Rules considers the current use preferable unless the reasons justifying their continuation in other new conditions are no longer acceptable and a new activity has replaced them. However, if necessary, the current user may be reduced and abandoned after compensation.

3.1. 1997 United Nations Convention on Non-Navigational Use of International Waterways

In 1970, the resolution of the United Nations General Assembly under the title "Progressive development and formulation of rules of international law related to international

[33] Salman MA. Salman. "The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: perspectives on international water law." *Water Resources Development* 23, no. 4 (2007): 625-640.

waterways" was approved. According to the resolution mentioned above, the International Law Commission started working on the issue of international waterways. Five special rapporteurs guided the activities of the commission. After twenty years, in 1991, this commission issued its first draft under the title "Law on non-navigational uses of international rivers" based on the two principles of "reasonable and fair use" of common waters and "obligation not to cause serious damage to other countries along the river." Presented This draft was presented to the United Nations General Assembly in 1994. After reforms in 1997, it was presented under the title "Convention on Non-Navigational Uses of International Waterways" for the signature of the UN member states. Finally, August 2013 became effective after reaching the number of agreeing countries' quorum.[34]

However, after the presentation of the Convention in 1997 and before its implementation, the general and important rules of the said Convention were used as common law by arbitration courts and international organizations; for example, four months after the presentation of the Convention in the United Nations. (in the same year 1997), the International Court of Justice cited it in its judgment on the Gabčíkovo-Nagymaros project. In its judgment, three requirements include fair and reasonable use, non-serious harm, and prior notification of planning measures. They were used as international customary laws.

The Convention contains 37 articles, which are arranged in seven parts: First part: Is the introduction. Part II: General principles. The third part: Planned actions. The fourth part is protection, maintenance, and management. Fifth section: emergency conditions. The sixth section is miscellaneous cases, and the seventh is cases related to arbitration and dispute resolution.

The main provisions of the Convention are in sections one, two, three, and four. The first part includes the definition of the important term international waterway. Article 2 of this section defines the term "waterway" as "a system consisting of a surface and underground water that forms a unit due to its physical connection and leads to a common point." This definition is important because it includes underground waters that are hydrologically related to surface waters, which include many underground water resources worldwide. It also defines "international waterways" as "waterways whose parts are located in different countries." In

[34] Stephen C. McCaffrey. "Convention on the Law of the Non-Navigational Uses of International Watercourses." *United Nations. Available online at: http://legal. un. org/avl/pdf/ha/clnuiw/clnuiw_e. pdf* (2008).

addition, the Convention clearly states in Article 3 that the previous bilateral or multilateral protocols and agreements between the countries are the first and prevail over the provisions of this Convention.[35]

Article 5 contained in the second part is the main expression that is the cornerstone of the Convention, which is fair and reasonable use and participation in international waterways. To ensure countries' fair and reasonable use in an international waterway, factors and conditions are provided in Article 6. According to this principle, countries participate in the use, development, and protection of international waterways fairly and reasonably.

Another key provision of the Convention is the requirement not to cause serious harm, as stated in Article 7. This article requires countries to take appropriate measures to prevent significant damage to other countries in the international waterway basin. Emphasis on prevention is important, and since it is often difficult to stop or correct an activity once it has started, it can be very complicated and expensive, so if this is possible, compensation can be paid to compensate for the damage. The principles of Articles 5 and 7 of the Convention complement each other. In the negotiations related to articles 5, 6, and 7 effectively, the goal is to reach a solution, all the basin's countries fairly and reasonably use the waterway and its benefits. This solution will likely involve compensation to achieve a fair balance of uses and benefits.[36]

The third part of the Convention includes the principle of prior notification of the planned actions and the description of some details of the different aspects of this requirement. The essence of this principle is that if the planned actions of a country are likely to cause significant adverse effects in the country or other countries along the international waterway, the said government is obliged to promptly inform other relevant countries of its plans. If the mentioned countries believe that the mentioned programs are inconsistent with the requirements of articles 5 or 7, the process of consensus and consultation and, if necessary, negotiation will be followed to reach a fair solution.

[35] Stephen McCaffrey. "The contribution of the UN Convention on the law of the non-navigational uses of international watercourses." *International Journal of Global Environmental Issues* 1, no. 3-4 (2001): 250-263.
[36] Aaron Schwabach. "United nations convention on the law of non-navigational uses of international watercourses, customary international law, and the interests of developing upper Riparians." *Tex. Int'l LJ* 33 (1998): 257.

Article 10 also says that in the absence of an agreement or custom among countries, "no use has inherent priority over other uses" and that "in case of conflict between different uses [that must be resolved], the needs of the Human life should be given special attention."

The fourth part of the Convention deals with the protection, maintenance, and management of international waterways. It includes regulations for protecting and maintaining the waterway ecosystem, prevention, reduction, and control of pollution, and advice on managing international waterways. It has also emphasized that international waterways and their facilities in armed conflicts should be protected from aggression by the parties involved.[37]

The provisions of the Convention include two general principles of fair and reasonable use to achieve optimal and sustainable exploitation and the requirement not to cause serious damage to one country to other countries in the basin. It provides factors to determine the amount of fair and reasonable use. It states that The weight given to each factor is determined according to its importance" and that "the order of these factors is not important for fair and reasonable use. Still, all of them should be considered as a whole". According to previous research, most of the discussions related to the Convention revolve around how to use it reasonably and fairly in each country of the basin to achieve the optimal exploitation of the river and the benefits arising from it in terms of the commitment to non-harming and The debate on which principle, "reasonable use" or "non-injury" should be prioritized, has been one of the focal points of the 1997 convention.[38]

According to the opinion of the second reporter of the International Law Commission, "fair use" is the priority. Still, the third reporter has argued for the priority of "not seriously harming." The commentators also had the same problem adapting the concepts as the reporters: the background findings show that the recent reporters were right. The absence of serious harm should be a priority. At the same time, some sources argued for fair use and show that Article 7 (which in The Convention includes a clause for harm reduction and dialogue on compensation) is evidence of this argument. The World Bank, which must follow international law principles in its financing projects, recognizes the importance of fair use in theory. Still, for

[37] Malgosia. Fitzmaurice. "Convention on the law of the non-navigational uses of international watercourses." *LJIL* 10 (1997): 501.
[38] Peter Beaumont. "The 1997 UN Convention on the Law of Non-navigational Uses of International Watercourses: its strengths and weaknesses from a water management perspective and the need for new workable guidelines." *International Journal of Water Resources Development* 16, no. 4 (2000): 475-495.

practical measures, the simplicity of implementation considers the absence of serious damage and a project. It will not finance any project that causes damage without the approval of all the basin's countries.[39]

According to research, the definition of deliberately ambiguous concepts ("reasonable," "fair," and "serious"), both in terms of legal interpretation and political interests, has guaranteed the continuation of ambiguity in the rules of customary law.

The relationship between reasonable and fair use and the obligation not to cause serious harm is a balance between the issue of hydrological rights and historical rights. The 1997 Convention includes provisions for both concepts without determining a clear priority between them. Although, at first sight, it seems that the provisions of the Convention are set in favor of downstream countries, upstream countries such as Turkey express their opposition to this Convention. They expressed and welcomed it in front of inferior countries like Syria. But later, the upstream countries supported emphasizing the principle of fair use in this commission because this principle gives the same weight to the needs of the present as the needs of the past. In the same way, the downstream countries support the theory of historical rights in preserving the previous uses by emphasizing the principle of no serious harm.

3.2. European Water Convention on Exploitation and Protection of Transboundary Waterways and International Lakes

The Convention on the Use and Protection of Boundary Waterways and International Lakes was established by the United Nations Economic Commission for Europe (UNECE) based on the Helsinki rules and was approved in Helsinki on 17 Mar 1992, and entered into force in 1996. The mentioned commission is one of the five regional commissions of the United Nations, which was established in 1947, which provides the possibility of studying issues and problems related to the economy, environment, and technology and providing operational solutions for the governments of Europe, North America, Central Asia, and Israel. More than 150 large rivers and 50 large lakes are within the boundaries of the United Nations Economic Commission for Europe (UNECE), which flow along or cross the border of two or more

[39] Khaled Abu-Zeid. "International water law from Helsinki rules to the United Nations convention on the law of the non-navigational uses of international watercourses." *Water Resources Impact* 3, no. 4 (2001): 26-31.

countries. Also, more than 170 underground water tables have been identified in the region, and it is expected that more of them will be identified in the future.[40]

The main goal of the Convention mentioned above is to strengthen local, national, and regional actions within the scope of UNECE to ensure the quantity, quality, and sustainable use of border water resources. According to this Convention, the general duties of countries are:

- Prevention, control, and reduction of transboundary damage to the environment, human health, and economic-social conditions

- Management of common waters rationally and fairly according to the ecosystem

- Preservation of the ecosystem

- Conducting environmental assessments to prepare emergency plans, determine environmental standards, and minimize the risk of accidental water pollution

The Convention on protecting and exploiting border waterways and international lakes consists of three parts and 28 articles. The first part contains seven articles of a set of regulations related to all members of the Convention and includes issues such as monitoring, research and development, information exchange, and information protection. The third part is the organizational provisions and includes membership conditions, the necessity of the Convention, dispute resolution, etc. The most important things that the Convention emphasizes are:[41]

- Paying attention to the importance and urgency of protecting and exploiting border waterways and international lakes, which can only be done effectively with participation and cooperation.

- Worrying about the short and long-term negative effects of changes in the status of border waterways and international lakes on the environment, economy, and health of the European Economic Commission member countries.

- Strengthening domestic and international measures to prevent, control, and reduce the discharge of dangerous substances into aquatic habitats and the pollution of marine habitats, especially coastal areas with underground water sources.

[40] Francisco Nunes Correia and Joaquim Evaristo da Silva. "International framework for the management of transboundary water resources." *Water International* 24, no. 2 (1999): 86-94.
[41] José María Santafé Martínez. "The Spanish-Portuguese transboundary waters agreements: Historic perspective." *Water international* 28, no. 3 (2003): 379-388.

- Creating a regional strategy for environmental protection and rational use of natural resources in member countries.[42]

- Cooperation between member countries in the protection and exploitation of border waters through an agreement between neighboring countries with common water resources, especially in areas where such agreements have not existed.[43]

In European countries, the issue of water quality and the environment is the main concern related to transboundary waters. The importance of water quantity in these countries is much less than what exists in arid and semi-arid countries of the world, so in In this Convention, a lot of emphasis has been placed on the issue of maintaining water quality and sustainable exploitation of border water resources. Also, in the provisions of this Convention, the issue of flood warning systems and the cooperation of the relevant countries for this purpose are stated. In 2003, the Convention mentioned above was amended to allow the membership of countries outside the scope of UNECE. For this purpose, other countries of the world were also invited to take advantage of the legal framework of the Convention and use its experiences. According to the mentioned amendment, any other country member of the United Nations can become a member of the Convention after the members' agreement. Still, it did not meet with much luck from other countries.[44]

4. Global Experiences of Water Conflicts and Their Resolution

This Section Includes Ruling Theories In Water Disputes And Allocation Methods Of Border Water Resources

[42] Andreas Thiel. "Transboundary resource management in the EU: transnational welfare maximization and transboundary water sharing on the Iberian peninsula?." *Journal of Environmental Planning and Management* 47, no. 3 (2004): 331-350.
[43] Liang Yuan, Weijun He, Dagmawi Mulugeta Degefu, Zaiyi Liao, Xia Wu, Min An, Zhaofang Zhang, and Thomas Stephen Ramsey. "Transboundary water sharing problem; a theoretical analysis using evolutionary game and system dynamics." *Journal of Hydrology* 582, (2020): 124521.
[44] Elshan Ahmadov. "Water resources management to achieve sustainable development in azerbaijan." *Sustainable Futures* 2, (2020): 100030.

4.1. Ruling Theories in Water Disputes

In the background research on 145 existing historical treaties in the field of border water, it is observed that in the experiences of water disputes and their resolution, general principles, especially the extreme principles of absolute territorial sovereignty or the absolute integrity of the river, are invoked. Not taken and fair use, the basic principle prevails, but the legal definition of the term fairness seems too vague and relies heavily on the agreement of both parties.[45]

4.2. Allocation Methods of Border Water Resources

Allocation methods of border water resources can be divided into three main categories, described below. Rights-based methods: This method focuses on water rights between countries, defined as absolute territorial sovereignty or integrity of the river or as fair use and an obligation not to cause serious damage. Extreme theories have been used only in three cases of sub-branches of international waterways:

a. Mexico and the United States of America have established absolute territorial sovereignty over some internal Rio Grande/Rio Bravo branches.

b. In the 1950 border water agreement between Austria and Germany, of the five Isar river branches that flow from Austria to Germany, one branch flows to Germany without using the upstream country (Austria); Austria fully uses two branches. And the other two branches are used by Austria, provided that there is flow at least in the winter months.

c. In the 1925 agreement on the rivers that form the borderline between Finland and Norway, half of the border stream was allocated to each country. Still, absolute sovereignty over all the tributaries on the coast of each country was given to the respective country.[46]

One of the treaties that have greatly benefited the upstream country is the 1925 agreement on the Gash River between Italy (for Eritrea) and England (for Sudan), which not only gave all the low flow and half of the average flow of the river to Eritrea as the upstream country. Sudan also agreed to pay Eritrea's share of the agricultural income in the Gash delta.[47]

[45] Patricia Wouters, and Sergei Vinogradov. "Reframing the transboundary water discourse: Contextualized international law in practice." *Review of European, Comparative & International Environmental Law* 29, no. 3 (2020): 385-394.
[46] Patricia Wouters. "International law–facilitating transboundary water cooperation." *Published by the Global Water Partnership, TEC Background Papers* 17, (2013).
[47] Mark Zeitoun, Marisa Goulden, and David Tickner. "Current and future challenges facing transboundary river basin management." *Wiley Interdisciplinary Reviews: Climate Change* 4, no. 5 (2013): 331-349.

The issue of non-serious harm is usually considered in the treaties; for example, all six existing treaties on the Nile are about the preservation of Egypt's primary uses. Most of the time, in border agreements between two countries, even without the focus of the agreement on border waters, a clause is included in the agreements, and that is the protection of existing uses; for example, Peru continues to supply water to Ecuadorian villages as part of continues from the 1944 border delimitation agreement; In the boundary water agreements between the United States of America and Canada and between the United States of America and Mexico, clauses for prior use have been included.[48]

Needs-based methods: Almost all disputes that have resulted in an agreement, especially in dry rivers, have not been rights-based (purely hydrology of the basin or specifically historical uses) as the model used for negotiations, but rather based on It has been needed. The need is based on irrigable land, population, or specific project needs. Since there is usually older and more water-based agriculture downstream of dry rivers, the downstream countries have a greater claim. Preservation of existing uses is a very clear expression of "need." In other words, rights have opened a way to meet existing needs. Of course, this does not mean allocating more water, but it means that the water needs of existing uses are guaranteed. Mexico, Egypt, Bangladesh, and Pakistan have defined and guaranteed all their needs in their respective treaties.[49]

In the agreements signed between Egypt and Sudan in 1929, the allocation amount was determined based on basic agricultural needs. Egypt argued for a greater share of the Nile River due to its large population and extensive irrigation. Then in 1959, Sudan and Egypt divided the water between the two countries for future development conditions. The current allocation is 5.55 billion cubic meters per year for Egypt and 5.18 billion cubic meters per year for Sudan, according to each country's needs.[50]

In the Jordan River, the only approach that has been negotiated so far (although it was not approved) is the Johnston Compromise, in which, instead of examining the inherent rights

[48] David G. Lemarquand. "Preconditions to cooperation in Canada-United States boundary waters." *Nat. Resources J.* 26, (1986): 221.
[49] Aaron T. Wolf. "From rights to needs." In *Management of Shared Groundwater Resources*, pp. 133-165. (Springer, Dordrecht, 2001).
[50] Abiy Chelkeba Worku. "State succession in international transboundary water obligations: South Sudan and the Nile water agreements." *Mizan Law Review* 10, no. 1 (2016): 100-125.

of each of the countries in the basin, a study was conducted based on needs. In Johnston's approach, based on the report of the Tennessee Valley Authority, regardless of political boundaries, the water needs of all the irrigated lands of the Jordan Basin, which can be irrigated by gravity flow, were estimated. After that, each country's allocation was determined based on these agricultural needs, with the agreement that each country could use its share of water in any way it wanted, including transferring it outside the basin.[51]

According to the researchers, basic human needs are defined as 50 liters per day for urban use (25.18 cubic meters per year), regardless of the region's climate. In the past, 75 cubic meters per year have been estimated as the appropriate per capita minimum for the Middle East. Some others have determined the minimum per capita basic allocation between West Bank and Jordanian Palestinians to be 100 cubic meters per year for domestic and industrial uses plus 25 cubic meters per year for agriculture.[52]

5. Economics-Based Allocation Methods of Border Water Resources

This section includes the benefit sharing approach: useful and optimal use of water and sharing the resulting benefits, water market, interest portfolio, and water interest portfolio to evaluate economics-based allocation methods of border water resources.

5.1. Benefit Sharing Approach: Useful and Optimal Use of Water and Sharing The Resulting Benefits

The approach of sharing interests is one of the most recent approaches in the discussion of changing the shape of the conflict over common water resources. This approach is based on the fact that water, like any scarce resource, should be allocated to its most efficient use, and then the profit should be distributed in a fair way among the countries of the basin.

In practice, economic criteria have not affected water allocation except in exceptional cases.[53] Out of the 28 existing treaties in the economic fields of water, payment for water itself is mentioned in 4 treaties, and payment for lost electricity generation or flooded lands is also mentioned in 10 of the 28 treaties.

[51] Graham Wright. "Devilish straits: re-interpreting the source of Boundary Waters Treaty success." (PhD diss., University of British Columbia, 2008).
[52] B. Morel. "Security and the environment in the Middle East water issues." In *Environmental Security and Environmental Management: The Role of Risk Assessment*, pp. 17-24. (Springer, Dordrecht, 2006).
[53] Laura Read, Kaveh Madani and Bahareh Inanloo. "Optimality versus stability in water resource allocation." *Journal of environmental management* 133, (2014): 343-354.

In the 1926 agreement on the Cunene River between Portugal and South Africa, no payment was made for water diverted for vital uses. Still, if the water was used for "beneficial purposes," South Africa had to pay Portugal a fee. Great Britain agreed in 1926 to pay (upstream) Eritrea a share of cultivation in the Gash Delta equal to 20% of any sales over £50,000. This payment was stopped when Great Britain took over Eritrea in World War II.[54]

5.2. Water Market

In theory, creating a water market causes efficient water allocation even in border basins. Still, in practice, organizational barriers prevent the complete formation of a water market.[55] In addition, due to the high water transfer costs, inter-basin water transfer is rarely done, and the water market is mainly limited to the basin's countries. Also, the water market still carries with it the problems caused by the undefined rights of water ownership and the lack of an enforcement mechanism. It cannot solve all the problems regarding the commodity nature of water and spiritual values. The result of these uncertainties has been that no international water market has ever been established. In 1997, in the dispute between the Euphrates basin countries, Syria strongly objected to the proposed plans for water pricing. This issue led to a temporary deadlock in the negotiations. In addition, some Islamic legal interpretations prohibit demanding money for water alone.[56]

5.3. Interest Portfolio

Recently, the relationship between water and politics and water and other resources has been increasingly discussed. These multiple relationships may create more opportunities to provide creative solutions and increase economic productivity through a portfolio of interests.[57] Some resources that are included in water negotiations are:

[54] Richard Meissner. "Hydropolitical hotspots in Southern Africa: Will there be a water war? The case of the Kunene River." *Water wars: Enduring myth or impending reality. Durban: The African Centre for the Constructive Resolution of Disputes (ACCORD)*, (2000).
[55] Henning Bjornlund. "Efficient water market mechanisms to cope with water scarcity." *Water Resources Development* 19, no. 4 (2003): 553-567.
[56] Karen Bakker. "The business of water: Market environmentalism in the water sector." *Annual Review of Environment and Resources* 39, (2014): 469-494.
[57] Udo Schneider, Markus Ziese, Anja Meyer-Christoffer, Peter Finger, Elke Rustemeier, and Andreas Becker. "The new portfolio of global precipitation data products of the Global Precipitation Climatology Centre suitable to assess and quantify the global water cycle and resources." *Proceedings of the International Association of Hydrological Sciences* 374 (2016): 29-34.

a. Financial resources, for example, the World Bank's financial resources helped resolve the Indus River disputes, and the United Nations investments helped to achieve the Mekong Agreement.[58]

b. Energy resources are one of the growing items in the interesting portfolio. Concerning the Mekong Agreement, Thailand provided financial assistance to a hydroelectric project in Laos in exchange for a share of the generated electricity. 3) Political capacity that may be done indirectly, such as the Middle East peace negotiations, or is done explicitly, such as the negotiations between Turkey and Syria on water issues that are tied to Syria's relations with Kurdish separatists.[59]

In a research, a series of ranking indicators were defined for three security, economic-social and environmental issues, presented in table 1.

Table 1. Security, Economic-social, and Environmental Indicators

Environmental indicators	Social and economic indicators	Security indicators
Importance of flow regime	GDP per capita	Military expenses as
Water quality index	Poverty Population	A percentage of GDP
flow from the environment(base current)	Life expectancy at birth	Availability/use of water
Sustainable development using water	Infant mortality rate	Water dependence ratio (%)
Biodiversity	Literacy rate	History of agreements related to water
	Energy use	cooperation within the basin
	Agriculture as a percentage of GDP	Political geography/government stability
	The industry as a percentage of GDP	Migration
	Availability/use of water	The level of regional integration

[58] Mark Zeitoun and Naho Mirumachi. "Transboundary water interaction I: Reconsidering conflict and cooperation." *International Environmental Agreements: Politics, Law and Economics* 8, no. 4 (2008): 297-316.
[59] Stavros Panageas and Mark M. Westerfield. "High-water marks: High risk appetites? Convex compensation, long horizons, and portfolio choice." *The Journal of Finance* 64, no. 1 (2009): 1-36.

5.4. Water interest portfolio

This approach refers to cases where the interesting portfolio only includes water-related cases. One of the complete baskets available in this field is the basket of water interests between India and Nepal in 1959 on Bagmati and Gandak and in 1966 on Kosi (all tributaries of the Ganges). These two treaties include provisions for various water-related projects, including irrigation, hydroelectricity, navigation, fishing, related transportation, and forestry (India planted trees in Nepal to reduce downstream sedimentation). Although Nepal has recently expressed frustrations with these two agreements, the structure of these treaties is a good example of how a broader portfolio can provide more creative solutions.[60]

6. Conclusion

Over time, the international procedure governing transboundary waters has moved away from the extreme principles of absolute territorial sovereignty and river integrity to moderate principles of fairness and justice. The theory of limited territorial sovereignty, as a middle and moderate theory, is the dominant and accepted theory among governments and international judicial and arbitration courts. International laws in the field of water are set based on the principles of this theory. According to this theory, any government can use the existing waterways in its territory as long as it does not seriously harm the interests of other governments along the river. This theory implies the good neighborliness of states adjacent to a waterway.

By adopting the moderate theory of limited territorial sovereignty, the 1997 convention has established rules for international waterways, including border surface and underground waters that are hydrologically related to the said surface waters.

According to the provisions of this Convention, "fair and reasonable use" in the international waterway is supported, and indicators for determining and distinguishing fair and reasonable use in terms of the principle of "obligation not to cause serious damage" are provided to other countries in the basin, which should all be used together. Be considered as a whole, and none of these indicators has priority over the other. Also, no use has inherent priority over other uses, except for vital human needs.

[60] Philip Hirsch, Kurt Mørck Jensen, Ben Boer, Naomi Carrard, Stephen FitzGerald, and Rosemary Lyster. *National interests and transboundary water governance in the Mekong*. Australian Mekong Resource Centre, in collaboration with Danish International Development Assistance, 2006.

The principles of "fair and reasonable use" and "no serious harm" are vague and have different interpretations for determining the physical and historical rights of the upstream and downstream countries. Although the principle of not seriously harming other countries in the basin implies the priority of previous activities (which is generally in the downstream countries) and limits the fair and reasonable use of the upstream, on the other hand, the absolute superiority of the previous activities with the principle of fair use and reasonable conflict, and the principle of fairness does not necessarily and always give priority to the first activities. As observed in the review of Article 5, existing activities are one of the factors that will ultimately determine the issue of fair and reasonable use.

Since there is no universally accepted method for the fair distribution of transboundary water resources, and the international water laws, including the 1997 Convention, due to the generality and comprehensiveness of its provisions and considering all the conditions of the world's border basins, researchers and theorists, also, some politicians are inclined to use the need-based approach instead of the legal approach. This approach is somewhat contradictory and simplistic compared to the existing approach in the international laws of transboundary waters, especially the 1997 convention. The existing uses are only one of the ten factors considered for water allocation in the said Convention.

Also, in this area, economic theories have been formed with the concept of increasing the basin's productivity to distribute water more efficiently alone or to distribute its benefits in collaborative use. This approach is also somewhat far from the provisions of the 1997 Convention because in the said Convention, in addition to the fact that economic use is one of the factors of water allocation. Still, at the same time, preference should not necessarily be given to more effective activity at the economic level. It is enough that The use should be effective according to the economic and technological level of the relevant government. This means that the social use of an activity can be superior to its economic benefits.

In the practice of governments, economic benefits have not been explicitly used in water allocation. Still, economic rules have helped define the "beneficial" use stated in the mentioned Convention. In contrast, the basket of benefits includes water resources and non-water resources, solutions in total It has been suggested positively. It seems to be of interest to policymakers, which is an example of Iran's desire to create a non-water interest portfolio with Afghanistan to ensure the stability of the Hirmand watershed and the allocation of more water

for Hamon's environmental watershed in exchange for technical and sanitary assistance and services. Security, economic, immigrants, etc., provided to Afghanistan can be seen.

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