Fair exploitation of Aras border river from the point of view of international law

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Abstract

The Turkish government is trying to justify the construction of numerous dams on the Aras River by citing the principle of absolute territorial sovereignty, but in general, the principle of a country's absolute sovereignty over the river has been rejected by international law thinkers and governments. According to these principles, no country should stop or divert the natural flow of river water that naturally flows from its territory to the territory of another country, and should not use that river or the normal use of that river in a way that causes damage to the neighboring country. It is closed in its own land. It seems that international laws and documents based on them oblige governments to protect their rights in cases that have border waters, and the construction of many dams by the Turkish government is unjustified. The results show that based on the fair exploitation of border rivers and shared in international law, solutions and approaches based on the cooperation regime, the ways of fair exploitation of Aras border river can be operationalized and implemented. Guaranteeing the right to fair use of border and common rivers in international law includes general and specific guarantees. In international law, rules such as rational and wise use, fair and reasonable exploitation, and the obligation not to cause serious harm in the use of border and common rivers, including the Aras River, govern.

Keywords: Border and shared rivers, Fair utilization Iran, Türkiye , Aras River

1. INTRODUCTION

Water is a very vital substance and limitations of this vital substance affect the capacities of other resources including food, energy, fish stocks and wildlife. Extraction of other resources such as food, minerals and forest products can also be limited according to the quantity and quality of water resources. This shows the importance of shared water resources between countries. Since 80 countries have rivers in common with their neighbors and more than 150 big rivers cross the territory of several countries and more than half of the world's inhabited areas enjoy the water of these rivers. On the other hand, with the growth of the world population and the industrialization of societies, the quantity and quality of natural resources are decreasing, water disputes between countries have increased in number and intensity. Today, international rivers, apart from traditional uses, determining the border line and strategic use, fishing, etc., are used in various ways in agriculture, industry and shipping, which with the advancement of technology, more than every day Before the variety of their exploitation is increased. Exploitations are often done without considering the capacity and power of water resources, and sometimes effective and appropriate measures for its protection are not thought of. The geographical diversity of different water regions of the

world and the multiplicity and variety of polluting sources have caused the complexity of the problem. Paying attention to the review of international water rights and laws related to rivers and common water basins and providing new and creative solutions for the peaceful settlement of related disputes, especially in the Middle East, which is more exposed to the dangers of water conflicts than other regions. Yes, it is an issue that can become one of the biggest challenges if it is not given sufficient attention and precision, and these conflicts can be one of the potential threats to international peace. Iran's relations with neighboring countries, including Turkey, regarding common rivers are based on "agreement". Iran has bilateral agreements with its neighbors on most of the border rivers. including the 1999 treaty with the former Soviet Union regarding the Aras, Etrak and other 12 common rivers, the 1994 protocol on the Sari Su, Qarasu rivers with Turkey, the 1999 treaty on the Hirmand River with Afghanistan, and the 1999 border water agreement with Iraq.

The extent of border rivers in Iran shows the importance of examining and studying the legal system of border rivers and especially the importance of examining the legal status of Aras River due to the decrease in the quantity and quality of water of this river in recent years as the most important source of fresh water for residents of Azerbaijan provinces. The studies conducted show that with the construction of numerous dams by Turkey on the Aras River as an international river that passes through different countries and enters the borders of Iran downstream, it leads to a decrease in the volume of water received on the one hand. And receiving water with reduced quality. Out of the total of 14 dams that Turkey has defined for construction in the Aras River catchment area, including the Karakot Dam, 6 of them have been used so far. All the dams that have reached the operational stage are located in Kars province of Türkiye. Therefore, this research examines the right to fair use of border and common rivers in international law, relying on the case study of Aras River and the construction of numerous dams by Turkey on it.

Considering the importance and sensitivity of the discussion of the border river Aras, as well as its importance at the present time when the country is dealing with a water shortage crisis, as well as the unwillingness of the Turkish government to solve the problems related to the dams created in front of the Aras river, such researches are conducted. It can help a lot in the direction of identifying legal, international and domestic problems to solve the crisis peacefully and through legal approaches, so this research can be important and necessary for research. Conducting such issues based on their sensitivity level can be useful in the field of presenting new legal analyzes theoretically and practically, and finally considering that the issue is up-to-date and no research has been done on this issue yet.

2. MATERIALS and METHODS

In November 2002, the United Nations Committee on Economic, Social and Cultural Rights issued a non-binding declaration regarding the right to access water as a human right: the right to access water is necessary to live in human dignity and is a necessary condition for the realization Another is human rights.

This principle was reconfirmed in the third and fourth World Water Councils in 2003 and 2006, which meant revoking the conclusion of the second World Water Summit in La Haye 2000. Finally, the United Nations declared water and sanitation as human rights on July 28 [1].

2.1. National and international requirements

According to paragraph 17 of the third part of the international human economic, social and cultural rights (2002), national human rights requirements are divided into three categories of requirements for respect, protection and obligations. In addition to national obligations, there are international obligations on all countries that are parties to the agreement.

The committee obliges all the countries that are parties to the agreement to avoid any actions that hinder the access of the people of other countries to water, increase the pollution of water resources or reduce the total amount of water and prevent their people from carrying out the above actions against the people of other countries. In addition, paragraph 32 of the General Declaration obliges countries to refrain from using water as a political or economic tool for sanctions or the like.

2.2. Legal doctrine of international rivers

Water is going to take the place of oil as a strategic material, which in any case has reached the end of its useful life in many areas. The issue of water has special complications that lead to political, economic, legal, social, symbolic and environmental controversies. The issue of water in the Middle East is also a contentious issue that plays a major and important role in the region in order to determine domestic and foreign political issues. Therefore, water is a topic of tension and crisis in the world. "In an analytical assessment of the critical risks that threaten international peace in the future, the Central Intelligence Agency of America (CIA) has identified at least 10 regions of the world where the fire of war over water and its distribution may flare up. to be Most of these critical places are located in the Middle East.

Rivers are the lifeblood of the world, today, there are more than 300 international rivers in the world, in almost all of which bilateral or multilateral understandings have been established and applied, and the agreements of some of these rivers date back to The Middle Ages, that is, it goes back to about 400-500 years ago [2]. Today, there is a consensus that the lack of water and the way to use common water can be among the sources of war. About 40% of the world's population has common watersheds, and 50 to 60% of the size of each continent is made up of common watersheds [3]. Water resources are closely related to the governance and economic life of many countries. According to international law, countries have the right to sovereignty over the rivers that pass through their territory, and the problem arises when a river crosses several countries, in this case, each country has sovereignty over a part of the river that is in the territory of that country. And it is free in the implementation of construction projects as long as it does not reduce or stop the flow of water to other countries. Otherwise, disagreements may lead to war [4].

Resolving disputes and crises that arise over water between countries is difficult in at least two ways: firstly, there is currently no clear and decisive international law to protect and share water between countries and communities with interests. And a third of the world's rivers are subject to specific local and regional agreements. The Helsinki Agreement in 1966, which is about the use of international rivers, emphasizes that every country within its borders has the right to fairly use the waters of the international basin. Therefore, the uncertainty and transparency of international laws prevent the agreement between countries. Second, that the crises caused by water are considered to be part of geopolitical crises, which unlike political crises that are easily resolved in conferences, are late and cannot be resolved easily, because the conflict is over a Geopolitics is like water, and geographical values in a country are also considered part of national interests, and governments cannot easily bargain over national interests. Therefore, the simple definition of international water resources rights or international river rights, which does not include the rights of the seas, is as follows: International water resources rights is a branch of general international law that affects relations between states or between states. and international organizations govern issues related to water resources [5].

From the beginning of the 20th century, new forms of water exploitation of international rivers were formed, especially for the production of hydropower and land irrigation, and new international treaties were concluded for the exploitation of common water resources. Subsequently, other treaties were concluded in order to prevent or reduce the harmful effects of water due to floods or soil erosion and to protect against natural disasters. From the second half of the 20th century, the protection of international waterways against pollution became the most important concern of the states, and for this purpose, several treaties were approved. Also, the widespread global concern for the protection of the environment has led to the adoption of several international measures to formulate treaties for the protection of all water resources and other elements of the environment, including air, space, seas, lands, forests and other natural resources that are directly related to Water is related. It can be said that the evolution of international water resource rights is closely related to the economic, technical and social development of nations. As it was said, the legal resolution of the conflict between the upstream and downstream governments is entrusted to the rights of international waterways. But due to the lack of binding rules in the legal regime of non-navigational uses of common waterways, the countries are limited to the fundamental extent of fair and reasonable use which is usually assumed to be in the best interest of the government and the principle of prohibiting significant harm - which is usually assumed be beneficial to the downstream government, they resort to asserting their rights and use different theoretical bases to justify their actions [6].

The new evolution of the common law of international rivers is the conclusion of the treaty, "Rights of non-navigational uses of international waterways" dated May 21, 1997. The 1997 United Nations Convention, which is the result of the collective work of the most prominent jurists and based on the consideration of countries' practice and declaration of their positions in the field under discussion, was approved with 103 votes in favor, three votes against (Burundi, China and Turkey) and 27 abstentions. It was the result of the 33-year actions of the International Law Commission. This agreement has not come into force yet [7].

The number of countries that have accepted the convention is 19 countries, and 16 countries remain until the required 35 countries. It is clear that no end date has been set for the implementation of the convention. The convention will be implemented by the members before 35 accession or acceptance, regardless of how long it takes [8].Considering the small number of ratifies and in the absence of the positive opinion of important countries with an upstream position in international waterways, it can be said that there is no global binding framework for providing rules governing the behavior of countries. In such a situation, bilateral or multilateral treaties and agreements of countries and their approach to the issue of national or human security regarding common water resources become important [9].

2.3. Jurisdiction of international rivers according to international law experts

The most important principles and theories of international law experts regarding the jurisdiction of international rivers can be divided into four categories:

1- The principle of absolute territorial sovereignty: according to this principle, a part of the international river, which flows in the state territory, is like national waters, and that state can freely cut off its flow and intervene in it in any way it deems appropriate. In this regard, Heitman says: "Each of the countries along the river can divert the flow of river water in order to exploit the river water alone." This principle is accepted by the upstream states, and in other words, such states do not consider the right for other states to use international rivers that flow from another country [10]. In truth, the mentioned theory is an unconventional and extreme view that ignores the rights of the downstream states [5]. Also, the mentioned theory does not pay attention to the importance of the dual nature of the state or so-called territorial sovereignty as the source of duties and rights.

2- The principle of absolute territorial integrity: according to this principle, the coastal states of rivers are obliged to allow the natural flow of river water to continue and they have no right to cause the diversion of river water in any way. Oppenheim writes in this regard: "Changing the flow of common waters is not under the authority of one of the states adjacent to the water, because it is an international rule that no state can change the natural state of its country in a way that causes damage to the neighboring country, for example stop or divert the water flow of the river flowing in the neighboring country" [10]. Countries downstream of international rivers favor the theory of absolute territorial integrity, which is similar to the theory of natural flow of water. The theory of natural flow grants "free rights" to the neighboring countries downstream of the river. It also includes the right of veto for any exploitation of water in the upstream areas of the river, which may lead to disruption of the natural flow of water [5]. The mentioned theory has never been accepted in international law and practice, because it is considered impractical. Of course, in the 1950s, this theory was accepted by Egypt, Pakistan, and Bangladesh, which are countries located downstream of international rivers.

3- The principle of joint use of waters: According to this principle, the countries located on the coast of an international river have joint sovereignty over that river. In other words, all the mentioned countries can use the river water equally. Based on this principle, an international river is considered an economic unit, regardless of our borders between countries, and its water belongs to all coastal countries. Mary Gonak says in this regard: "When an international river passes through the territory of several countries, it is subject to the property rights of the sovereignty of the said countries, and each country must consider the rights of other countries in exercising its rights" [2].

4- The principle of limitation of the use of waters: according to this principle, the sovereignty of each of the riparian countries is limited according to the duties they undertake according to international law. In other words, the jurisdiction of each of the riparian countries is limited to not causing damage to the other riparian country. Smith, an English lawyer who has done extensive research on this matter, believes that the sovereignty and jurisdiction of nations is limited to not causing damage. He states that none of the riparian countries in the river have the right to use the water of the river without consulting the neighboring countries in a way that causes damage to the legal interests of the said countries [10].Today, the principle of limiting the use of water is accepted as a general legal principle and a reality of the current world. Examining international agreements, opinions of international law scholars, rulings of international courts and decisions made by international organizations show that governments no longer accept the principle of absolute territorial sovereignty, and in the case of rivers international act based on the principle of limiting the use of waters.

Being the ruler of water resources is a geopolitical issue that can be solved with difficulty. Efforts have been made to regulate the use of international rivers, but a precise definition of the extent of governments' sovereignty over these resources has not yet been presented in a way that is acceptable to everyone, based on which issues and disputes over the distribution of resources can be resolved. The water of international rivers dissolved [11]

Water rights consist of all legal approvals that cover various aspects of water management, including protection, exploitation and management of water resources, control of harmful effects, water pollution, etc. [5]. The issue of demarcation of rivers that cross the territory of two or more countries or separate their territory from each other is one of the most important issues that arise in the field of international water law development and has caused There have been many disputes between countries, including armed conflicts.

2.4. Theories governing treaties and international laws

The theories governing the water sharing of transboundary rivers include 4 theories of absolute territorial sovereignty, the Harmon Doctrine, the theory of absolute river integrity,

the theory of limited territorial sovereignty, and the theory of common water sovereignty. These 4 theories can be divided into extreme and moderate forms.

2.4.1. Extreme theories

The theory of absolute territorial sovereignty is often used by upstream countries. This principle refers to the doctrine introduced by US 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. This theory was immediately rejected by Harmon's successor and then officially rejected by the United States in the issue of water sharing between the United States and Canada. This doctrine was also rejected in the International Court of Law in the case of Llano Lake in 1957, and it is not invoked even now.

Downstream countries often invoke the theory of absolute riverine integrity, according to which the downstream country has rights to the entire natural flow of the upstream river system. This principle also faces non-acceptance in international forums similar to the theory of absolute territorial sovereignty. In the arid and semi-arid regions of the downstream countries, they are often located in the flood plains of the rivers and have less rainfall than their upstream neighbors. As a result, they depended more on river water and used river water for a longer period of time. These countries often have older water infrastructures, and this makes them claim to own the entire basin's water.

2.4.2. Moderate theories

Over time, the extremist defined rights were moderated and most countries accepted the limitations of both the theory of absolute territorial sovereignty and absolute river integrity. The theory of limited territorial sovereignty is actually a consensus and a balance between these two theories. In other words, 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 allows the good neighborly relations of states adjacent to a waterway to be manifested in a better way. Today, the theory of limited territorial sovereignty constitutes the dominant theory and governments have moved towards accepting this theory. Examples of international jurisprudence in the use of this theory are the 1929 judgment of the Permanent Court of Justice in the territorial jurisdiction case of the International Oder River Commission, the judgment issued in 1931 in the New Jersey and New York case, the 1945 arbitration judgment in the dispute between Ecuador and Peru in Zarumila River and the court ruling in the Llano Lake case [12].

In the theory of shared governance, the entire river basin is considered as an economic unit and its management is assigned to a single system consisting of all the countries of the basin and is divided among them either by agreement or proportionally. This principle has not been widely accepted among countries.

2.5. Turkish dam constructions in the Ares river basin

Only 2.5% of the world's water is made up of fresh water sources, and only 0.3% of this small percentage of fresh water is renewable. The consumption of the limited available fresh water is gradually increasing with the increase in population and changes in lifestyle. In such a way that during the years 1940 to 1990, the world population and along with it, the per capita consumption of water also doubled due to the change in the lifestyle. As a result, the absolute consumption of water has quadrupled during these years, and today about 149 countries in the world face a water shortage. The growing trend of water scarcity in the world has caused the competition of source countries over international waters such as shared rivers and even within the countries it has affected the relations between cities and villages. In this context, so far, about 300 agreements have been signed between different countries to agree on common water resources, and in the text of about 2000 international agreements, parts of the water sector have been mentioned [13].

The growing shortage of water has caused some thinkers to consider water as the main source of war in the future. In such a way that Homer Dixon considers the future wars and civil and social violence mainly caused by the lack of water, food, forest and fishery resources; In 1995, Ismail Sirajuddin, the vice president of the World Bank, stated that the wars of the next century (21st century) will be over water and not oil; "Garth Porter", "Nazley Jursi", "Simon Dalby" and "Robert North" have also made statements in this regard. International rivers are very important as one of the transboundary common resources. In this regard, water is considered as a source of power and the lack of water can lead to the formation of political, economic and security problems for countries. It is on this basis that a group of scientists attach much more importance to water than oil in the future; Because it is possible to live without oil, but human life is not possible without water. Due to these issues, nowadays international rivers (cross-border) are considered a very important factor in political and diplomatic relations between countries [10, 14-15]. Figure 1 shows the aerial view of Aras River on the common border of Iran and Türkiye.

In general, hydropolitics (geopolitics of water) studies the role of water in the relations, convergence and conflicts of human communities and nations and governments, whether it is within countries or between them and has transnational dimensions. be regional, global and international [13].

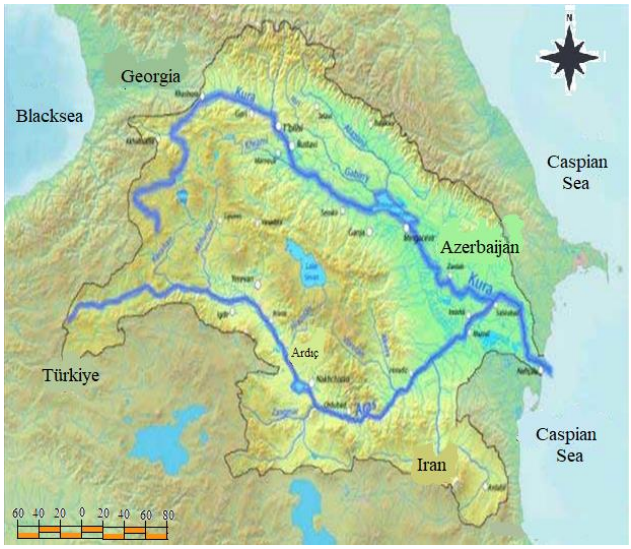

Figure 1. Aras River on the border between Iran and Türkiye

In the context of Turkey's unilateral hydropolitical measures in the field of dam construction in the Aras basin, it seems that the movement towards the formation of a water diplomacy strategy with the presence of four countries, Turkey, Armenia, Azerbaijan and Iran, can be a way forward. The success of the water diplomacy strategy, in turn, requires the formation of a systemic view of water, considering the sustainable development in the Aras Basin, which creates close connections between water scarcity, food security, energy and environmental security through maintaining the stability of the region's ecosystem [16].

3. RESULTS and DISCUSSION

3.1. Türkiye's regional development projects

Turkey has tried to reduce or eliminate the difference in the level of progress between different provinces of the country by designing and implementing regional development projects; In this regard, the concept of regional development has been given attention in the last two decades in this country in order to prevent the migration of the residents of these regions to the big cities in the center and west of the country by creating employment in the eastern regions of the country. Although discussions related to regional development in Türkiye started in the 1960s; But during the 1970s, 1980s and 1990s, since Ankara's main goal was rapid industrialization, the country's industry and economy flourished around Istanbul and the Marmara region in the west of the country, and the final expansion of this rapid development process reached Central Anatolia and the region. It was the Aegean.

For the new millennium, 6 regional development projects have been designed and implemented in the eastern and central regions of Turkey. These projects include "Southeast Anatolia Project (GAP)", "East Anatolia Project (DAP)", "Konya Plain Project (KOP)", "Eastern Black Sea Project (Dukap)", "Yeshil Irmag Basin Development Project (Y "HGP" and "Zonguldagh Project Bartin Karabuk (ZBK)" are in the less developed areas of this country.

DAP project centered on the city of Erzurum as one of the regional development projects of Turkey in 2011 by the government planning organization and with the participation of 5 universities including Atatürk (Erzurum), Inunu (Malatia), Euphrates (Elazig), Caucasus (Kars) universities. And Yuzunjo Yale (Van) located in Eastern Anatolia region started its work. The aim of this project is to improve the level of development of 15 eastern provinces of Turkey, including Agrari, Ardahan, Erzurum, Arzanjan, Elazig, Ighdir, Bitlis, Bingul, Tunjali, Sivas, Hakkari, Kars, Malatya, Mosh and Van [17].

The main activity of the people of Eastern Anatolia region and their livelihood is through agriculture and animal husbandry, and 70% of the residents of this region are related to agriculture. As a result, contrary to the prevailing notion that development is possible through industrialization, in the DAP plan, which is specific to Eastern Anatolia, agricultural mechanization is considered as the basis of advanced industry. In this regard and considering the existence of the sources of Euphrates, Tigris, Aras and Kura rivers in Eastern Anatolia, one of the ways to industrialize the region is to build more dams (Management and Planning Organization of West Azarbaijan Province).

The DAP project focuses on equipping and modernizing the livestock industry by improving the condition of pastures, breeding livestock and promoting livestock trade. The main activities of DAP in recent years include building places for raising, buying, selling and slaughtering animals, developing irrigation of agricultural lands, developing new energies, increasing the diversity and productivity of crops, developing horticulture, building libraries and restoring historical monuments. and it is cultural [16].

3.2. Türkiye's regional development projects

The water of the cross-border Aras River originates from two branches - one of the "Bingul" heights of Turkey in the south of Erzurum and the other from the "Vardinsky" mountain of the Caucasus. These two branches then join as Aras River and this river first forms the common border of Turkey with the Republics of Armenia and Azerbaijan and then the common border of Iran with the Republics of Azerbaijan and Armenia. The total area of the Aras River catchment area in the four countries sharing this basin is equal to 102,000 square kilometers, of which 39% is

located in Iran, 38% in Azerbaijan and 23% in Turkey. 54% of Aras River water is supplied through Azerbaijan and Armenia, 34% through Turkey and 12% through Iran [15].

Hydroelectric energy refers to electrical energy produced by water power. Today, this type of energy produces about 30% of the world's total electrical energy. These power plants do not need fossil fuel, they do not pollute the environment, and their average lifespan is longer than thermal power plants. Based on the annual power production capacity, hydropower plants are divided into 3 main categories: large (with more than 100 MW), medium (with 15-100 MW) and small (with 1-15 MW).

In the Turkish part of the Aras River catchment area, there are 14 dams or hydroelectric power plants, of which 5 dams and hydroelectric power plants with a capacity of 134 megawatts per year are being operated and 9 dams and hydroelectric power plants are in hand. are being built or planned, and with their exploitation, the total capacity of these dams and hydropower plants will reach 387 megawatts per year [18]. Of course, the Kara Kurt dam, as the largest and most important dam in Turkey in this basin, has recently been put into operation, which will bring the total power generation capacity of Turkey in the Ares basin to 244 MW per year [19].

3.3. Legal challenges of the right to fair use of border rivers

Since the world's population is growing exponentially, the quantity and quality of natural resources is decreasing, the number and intensity of water disputes between countries has increased, and attention has been paid to investigating and providing new and creative solutions for the peaceful settlement of related disputes. to transboundary water resources, is an important step in establishing stable and safe international relations. 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 existing international laws, it can be said that there is practically a strong international standard for dividing border water resources and the benefits derived from them. does not have.

In the survey, 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 are widely different, they cover approximately 70% of the area of the world's transboundary basins. In terms of content, the focus of the said treaties is from the issues of regulating and developing water resources to the issues of managing water resources and creating The structure and framework for this management has been changed and as the previous issues such as electricity, water allocation and irrigation are still important, but currently the environment is the most common issue mentioned in the text of the treaties. 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 treaty of 1299 with the former Soviet Union regarding the Aras, Etrak and other 12 common rivers, the 1334 protocol of the Sari Su and Qara Su rivers with Turkey. 1351 Hirmand River Treaty with Afghanistan and 1354 Boundary Waters Agreement with Iraq.

The documents that reflect the current legal situation in the field of transboundary waters are: 1) The Helsinki Rules, compiled by the International Law Society in 1966. 2) The 1997 United Nations Convention on Non-Navigational Uses of International Waterways is the result of the work of the International Law Commission and is based on the Helsinki rules. 3) The European Water Convention on the Protection and Use of Transboundary Waterways and International Lakes in 1922, which was established based on the Helsinki rules and by the United Nations Economic Commission for Europe (UNECE). 4) The Berlin Rules of 2004, in which the revised version of the Helsinki Rules is presented.

In the research done by Wolf [20] on 145 existing historical treaties in the field of border water, it is observed that in the experiences of water disputes and settlement, they are general principles, especially the extreme principles of absolute territorial sovereignty and or the absolute integrity of a river has not been invoked, fair use is the prevailing principle, but the legal definition of the word fairness seems too vague and relies heavily on the agreement of both parties. The methods of allocation of border water resources are described below.

3.3.1. Methods based on international and domestic law

This method has focused on water rights between countries, whether it is defined as absolute territorial sovereignty or absolute integrity of the river, or whether it is defined as fair use and an obligation not to cause serious harm. The views are extreme only in three cases. Sub-branches of international waterways have been used. 1- Mexico and the United States of America have each established absolute territorial sovereignty over some internal branches of Rio Grande/Rio Bravo. 2- In the border water agreement of 1950 between Austria and Germany, one of the five branches of the Isar river that flows from Austria to Germany flows to Germany completely and without the use of the upstream country (Austria). Two branches are fully exploited by Austria, and the other two

branches are used by Austria, provided that there is flow at least in the winter months. 3- In the 1925 agreement on the rivers that form the border line between Finland and Norway, half of the border flow is assigned to each country, but absolute sovereignty over all the branches on the coast of each country is given to the respective country.

One of the treaties that has been very beneficial to 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 and half of the middle 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. The issue of non-serious harm is usually addressed in treaties, for example, all six treaties on the Nile deal with 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 support of existing uses, for example, Peru continues to supply water to Ecuadorian villages as part of continues from the 1944 border delimitation agreement; The transboundary water agreements between the United States and Canada and between the United States and Mexico include prior use clauses.

3.4. Water market

In theory, the creation of a water market causes efficient allocation of water even in border basins, but in practice, organizational barriers prevent the complete formation of a water market [21].

In addition, due to the high costs of water transfer, it seems that the transfer between water basins is rarely done and the water market is mainly limited to the countries of the basin. Also, the water market still carries with it the problems caused by the undefined rights of water ownership as well as the lack of enforcement mechanism, and it cannot solve all the problems in terms of the commodity nature of water and spiritual values. The result of these ambiguities has been that no international water market has ever been established. In 1997, in the dispute between the countries of the Euphrates basin, 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.

3.4.1. Resource basket

Recently, the relationship between water and politics and between water and other resources is increasingly discussed. This multiple relationship may create more opportunities to provide creative solutions and for more economic productivity through a portfolio of interests. Some resources included in the water negotiations are: 1) financial resources, for example, the financial resources of the World Bank helped to resolve the disputes of the Indus River, and the investments of the United Nations helped to achieve the Mekong Agreement. 2) Energy resources, which is one of the growing items in the interest portfolio. In relation to the Mekong Agreement, Thailand provided financial assistance to the hydroelectric project in Laos in exchange for a share of the generated electricity. 3) Political capacity, which may be done indirectly, such as the Middle East peace negotiations, or explicitly, such as the negotiations between Turkey and Syria on water issues.

The interest portfolio only includes water-related items. One of the most complete baskets in this field is the basket of water interests between India and Nepal in 1959 on the Bagmati and Gandak and in 1966 on the Kosi (all tributaries of the Ganges). These two treaties include provisions for all kinds of water-related projects, including irrigation, hydropower, navigation, fishing, related transportation, and even forestry. India planted trees in Nepal to reduce sedimentation downstream. Although Nepal has recently expressed frustrations with these two agreements, the structure of these treaties are good examples of how a broader portfolio can provide more creative solutions.

3.4.2. Challenges of exploitation of international shared aquifers

The most important area that suffers from the lack of an agreement or an international binding law to manage and plan its use is the issue of the exploitation of common water resources. Although the public understanding of international cooperation to solve the problems of shared water resources has increased in recent years, the world community is still unable to agree on an effective international law regarding the management and protection of shared water resources. It has not been decided. The existence of different doctrines and attitudes regarding environmental law and philosophy can be considered as one of the important reasons for this situation [22].

3.5. The international solution to the crisis in Aras River

Based on the rule of "fair and reasonable use and participation" of the waterway (according to Article 15 of the plan approved by the Commission in 1991). This principle is based on the balance between the sovereign rights of the government over the waters of its territory and the interests of the downstream country in using these waters. According to this rule, which represents a completely accepted and well-established custom, the exploitation of a waterway by a government should not result in excessive losses for another government. Since

1984, the International Law Commission has been trying to formulate this principle.

A government that proposes a new development plan that may change the method or change the volume of nearby water resources, must inform other governments that are affected by the proposed development plan. The said government should fully consider the interests of other governments that are likely to be affected by the plan. These regulations emphasize the necessity of accepting the negotiations between the mentioned governments, and on the one hand, it accepts the terms of negotiations between the relevant governments, and on the other hand, it gives an opinion on arbitration in this particular case [23].

Management and exploitation of waterways is one of the manifestations of the sovereignty of governments over their water resources. In general, it is an accepted rule that the riparian government has the right to take the necessary measures for better exploitation of the water of that part of the waterway that passes through its territory, without first asking permission from the downstream country. Before resorting to arbitration, the upstream country should remove the restrictions and adjust the water flow according to its neighbor's needs for water for agriculture, because in this way, all the water will flow in the river during the irrigation season. Therefore, there is no doubt that the requirements of contiguity limit the freedom of action of governments; The freedom that governments generally have to exploit their land. Therefore, any government can build a facility on a waterway, provided that it does not consider the legitimate interests of the downstream country.

3.6. Legal challenges and solutions of the common water exploitation system with a view to the legal regime

The Islamic Republic of Iran has common watersheds and important border rivers such as Arvand River, Hirmand, Harirud, Etrak and Aras with its neighbors on its four sides, and therefore it is one of the beneficiary countries in discussions related to the exploitation of common waters. [24]. More than half of the world's area is located in the common watersheds that are located in the territorial territory of two or more countries, and therefore the use of water located in such areas, especially in arid and semi-arid areas such as the Middle East, is often controversial. According to the principle of the sovereignty of the states over the territorial territory, which is one of the long-standing and certain legal principles in international relations, the exploitation of the waters located in the territorial territory is also under the sovereignty of the respective government. However, the limits of this sovereignty, which was absolute in the past and the governments did not accept any quantitative or qualitative limitations in exploiting these resources, have been gradually reduced. How to divide common waters and protect their environment, as well as their quantitative and qualitative control, how to implement water projects in common watersheds and manage them, and how to resolve disputes arising from exploitation are among the important challenges in this direction. It requires the right one. Since the early 1970s, the United Nations has started its efforts to define an efficient legal system that contains appropriate solutions to solve the existing challenges, and in 1997, it succeeded in approving the Convention on the Rights of Non-Navigational Uses of International Waterways. in the general assembly [25-29]. In this convention, the concept of watershed as an integrated system that goes far beyond the apparent limit of the river is recognized in the legal system of exploitation of common waters, and governments cannot rely on the existence of a river in their territory. Regardless of the concept of the common watershed, they should exercise their absolute sovereignty over it and make any interference and occupation they want in it. And therefore, any exploitation of a common watershed in its broad and defined sense must be done within the framework of international rules and respecting the rights of other countries located in the watershed. In addition, establishing and developing principles such as reasonable and fair exploitation of common waters and environmental protection of them, informing and cooperating in the implementation of water projects, as well as proposing the idea of joint management of such basins and dispute resolution mechanisms in the field Exploiting the appropriate solutions of this convention is to solve the challenges.

3.7. The position of fair exploitation rights in the Convention on the exploitation rights of international waterways

"Convention on the Rights of Exploitation of International Waterways for Non-Navigation Purposes" was approved. The legal principles of this convention are based on three principles:

1- The principle of rational and fair exploitation and use, 2- The principle of prohibition of damage to the territory, 3- The principle of international cooperation and other similar principles. For example, Article 5 of this convention states: Coastal governments, lakes and international waterways must use the interests located in their territorial territory in a reasonable and fair manner. Or in Article 21, any harmful changes to the composition or quality of water caused by human activities, governments are obliged to refrain from causing any pollution. Currently, 35 countries have signed this convention, Iran and other neighboring countries are not included in this list [30-34].

As the population increases and the amount of demand approaches the final limit of existing (or renewable) water resources, encroachments on the boundaries of common riverbeds and boundaries have increased, causing competition between countries in the use of water and the emergence of international legal and political challenges in this field. Examining the number of treaties between countries confirms that more than 300 treaties have been concluded between different countries of the world to solve common water issues, and in more than two thousand international treaties, requirements related to water resources are also considered among other issues. Today, international rivers, apart from traditional uses, determining the border line and strategic use, fishing, etc., are used in various ways in agriculture, industry and shipping, and with the advancement of technology, the diversity of exploitation is increasing day by day. Therefore, exploitation of transboundary waters, especially in the Middle East, is an issue that can become one of the biggest challenges if it is not given sufficient attention and precision.

4. CONCLUSION

Recent studies and surveys show the fact that the water shortage in the Middle East has increased, and as a result, the competition between the governments has become more serious and will lead to unprecedented developments. Iran is facing many neighbors in the Middle East region, which Some of them, such as Turkmenistan, Azerbaijan, Turkey, Iraq and Afghanistan, have common water resources. Environmental, economic and political factors are among the factors that have caused the crisis in political relations between Iran and its neighbors on the water axis. In this research, generalities about the management of transboundary waters, international rules for the exploitation of common rivers, their indicators and characteristics, their shortcomings and problems and their comparison are mentioned, as well as the introduction of the river. border rivers and how to jointly manage them were discussed and finally suggestions were presented for better management of border rivers in Iran. Undoubtedly, it is not possible to increase cooperation and reduce conflicts and disputes in the exploitation of common rivers without citing and using international laws, so that international laws should be applied in practice at all international, national and local levels. be taken Since international laws are considered in practice, it should be noted that the main source of international law is contracts and their review. In other words, in order to make international law effective in practice, countries must also be successful for the mechanism of observation and review of all cases of dispute resolution, as well as an enforcement tool in response to non-compliance. Mandatory obligations under international law can be considered as a useful political tool if governments use it. In addition, governments must have sufficient means to implement the discretionary decision of officials.

The most emphasis of the 1997 convention is based on the principle of equitable, rational and fair exploitation. Article 5 of this convention, referring to equal and rational and cooperative exploitation, states that the countries along the waterways exploit the international waterway located in their territory in an equal and rational way. An international waterway will be used and developed especially by the countries along the waterway and with the aim of its ideal and sustainable exploitation and benefiting from it, provided that it does not create an obstacle for the countries along the waterway and with sufficient protection. It is compatible with waterways. Other principles of the above convention deal with the obligation not to inflict major damage (Article 7); These general obligations towards cooperation (Article 8); and regular exchange of findings and information (Article 9) takes place. It is interesting to note that in line with this goal, different types of exploitations are discussed. Article 10 stipulates that in the absence of an agreement or the existence of a custom contrary to the agreement, no exploitation of an international waterway has major priority over the exploitation of another waterway (Article 10 paragraph 1). If there is a conflict between the exploitation of an international waterway, this conflict will be resolved by referring to articles 5 to 7 and with special attention to the conditions of vital human needs (Article 10 paragraph 2).

The said convention establishes a regime for cooperation on "planned measures" (projects), whereby riparian states are required to exchange information and consult with each other regarding the possible consequences of "planned measures". (Article 11). This is the process of exchanging information and subsequent consultations and negotiations to set the details (Articles 12 to 18).

The importance of water has caused numerous disputes regarding water issues and related environmental issues to be referred to international courts in recent decades. Based on the declarations and recommendations of the United Nations, international courts have issued their rulings on the principles governing international law, which have become the basis of later judgments regarding water resources, especially border rivers.

The construction of a dam upstream in these critical global conditions, despite the drought and climate change, is considered an act against the friendly relations and good neighborliness of the governments, and certainly the victims of the reduction of water rights and the pollution of Aras water are mostly low-income people who have

enough financial power to access They do not have access to water and sanitation for normal daily activities and taking care of their children, and the use of Aras healthy water is considered a means for their livelihood. According to the restrictions imposed by the Institute of International Law at the Madrid Conference (1911), it is forbidden to build a dam in such a way that the amount of water entering the downstream country is reduced to such an extent that the waterway loses its exploitation properties downstream. Regarding the Aras River, it is necessary to check the amount of water rights of this river in its normal conditions based on the memorandums and contracts of the neighboring countries, according to the amount needed by each person (according to the standard) for a healthy life and considering the population changes in the beneficiary countries. Examining the death statistics and the increase in the disease rate in the downstream, the decrease in the living and economic standards of the downstream people who live through Aras water, and considering other related matters, can indicate the violation of human rights in the downstream.

In the process of dividing water resources, there are transboundary rules and regulations at the international level, the most valid of which is the 1997 Convention. According to the provisions of this convention, every state located in the common river basin has the right to fair exploitation in its territory. and reasonable from the water flow of the transboundary watershed, with the requirement of not seriously harming other common countries, this right should be taken into consideration the natural factors of the watershed, the existing and potential uses, the social and economic needs of the countries of the watershed, and the effects of exploitation.

It is determined on other countries of the basin, but the factors presented for this purpose are general and have different technical and legal interpretations in each of the transboundary water basins. For this purpose, new approaches have been defined to solve water conflicts in transboundary basins, which are mainly based on meeting the needs of the countries in the basin or relying on economic approaches that include the efficient use of water, the sharing of benefits from different exploitations of transboundary water instead of Water itself and the creation of a portfolio of water and non-water benefits. It seems that these approaches can help to solve the water disputes between countries and attract the attention of politicians.

Examining the types of river demarcation, taking into account its history, existing cases, and examining the advantages and disadvantages of each of them, allows us to generally divide them into three main categories: the first category of those There are those that seem to be unacceptable due to unfairness. The motivation behind such methods is not based on justice and securing the rights and interests of the parties equally.

This issue causes many problems as well as continuous conflicts between the two coastal countries, which in some cases may lead to harmful and disastrous effects such as war. One of the two shores as a border and in some cases using various criteria for different parts of a river are other examples of such methods.

In connection with such methods, it may be suggested that international rules and regulations be set up so that such coastal countries who suffer from the existence of such methods, will be provided with the right to revise their treaties in this regard. to be In this regard, there may be problems that there is no need for international regulations and the revision of the relevant treaty is done with the consent and assistance of the two relevant governments. But it should be noted that in this type of methods, one government actually suffers and the other government benefits - in fact, it benefits a lot.

Therefore, in addition to referring the dispute to arbitration or the International Court of Justice with the agreement of the two countries, it may be suggested that the international community think of a solution in this regard. However, the mandatory application of such regulations may not be easy due to the sovereignty of the countries.

The use of non-governmental organizations in neighboring countries to solve human and environmental problems can help countries find a common solution.

Although Iran shares a very small border with Armenia, the environmental pollution caused by this country has caused irreparable consequences in the region. Therefore, it is suggested that this issue be investigated from the perspective of international law and the right to life of water-dependent organisms in this basin.

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