Activating international responsibility resulting from the impact of nuclear radiation on climate and water and the position of international environmental law on it.

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Abstract:

If the environment is the natural environment in which humans live, and itincludes the sum of the elements, factors, and conditions surrounding living organisms, the latter always remain exposed to human violations, perhaps the most prominent of which is the industrial field, such as pollution resulting from nuclear radiation dating back to the end of World War II, where it is... The introduction of pollutants that cause negative change in the natural environment and its elements, such as water and climate, and this leads, for example, to global warming, sea level rise, etc. Hence, it was necessary for the international community to take the initiative to devote international protection to the environment from the dangers and threats of nuclear radiation that surround it. Through measures taken, whether at the international or regional level, such as the important roles played by international organizations such as the International Atomic Energy Agency and the measures they take to preserve the environment from pollution resulting from the use of atomic energy, in addition to international agreements and treaties.

Keywords: Environment – pollution - nuclear radiation – climate – water - international environmental protection/international organizations - internationalagreements and treaties.

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Introduction:

The history of nuclear pollution dates back to the end of World War II, when humanity was on the verge of annihilation as a result of the two most famous atomic bombs on the cities of Hiroshima and Nagasaki, following Japan's attack on the American fleet at Pearl Harbor. Japan had rejected the Potsdam Conference Declaration, which stipulated Japan's unconditional surrender. This declaration was a final statement stating that if Japan did not surrender, the Allies would attack the country, and this would lead to the inevitable and complete destruction of the Japanese armed forces and the entire nation. The statement did not mention anything about the bomb. The Prime Minister of Japan, Kantaro Suzuki, ignored this report and the period he set for surrender, so US President Harry Truman ordered the launch of nuclear weapons, as the bombs contained enriched uranium and had the effect of exploding 13,000 tons of TNT. The first nuclear weapon, called "Little Boy," was launched at the city of Hiroshima, while the second nuclear weapon, called "Physical Boy," was launched at Nagasaki. As a result of this bombing, 140,000 people were killed in Hiroshima and 80,000 people in Nagasaki, most of them civilians. Half of them died within half the day of the bombings, and the rest later. A large number died years later due to cancers caused by nuclear radiation. (Muhammad , 1996, p. 13)

Referring to the "Blue Jerboa" bomb, it was the result of 17 nuclear tests conducted by France in Algeria. The most severe of these tests was the Blue Jerboa bomb made of "plutonium", equivalent to 4 times the power of the Hiroshima bomb, and naming the Blue Jerboa was a symbolic name for the first French nuclear test. She performed it The Operational Group for Nuclear Tests (GOEN) is a unit affiliated with the French Joint Special Weapons Command.

These nuclear tests were conducted at the Desert Military Experiments Center near " Reggan " in the Sahara region in the "Tanzaroft" plain during the French colonization in Algeria, where General "Pierre Marie Gallois" played a key role.In this endeavor, he subsequently earned the title "Father of the Atomic Bomb." The number of Algerian victims of these

experiments reached at least 30,000 after suffering from diseases resulting from exposure to radioactivity (The French , 2000, p. 17).

After the nuclear attack on Japan, up to the present time, approximately 2,000 nuclear explosions have occurred, all of which were experimental explosions and tests carried out by the eight countries that declared their possession of nuclear weapons: the United States of America, the Soviet Union (currently Russia), France, the United Kingdom, China, Pakistan, India, North Korea.

As is known, these pollutants and nuclear radiation have a negative impact on the environment and climate. This has led to the occurrence of many strange environmental phenomena, most notably the phenomenon of globalwarming, the melting of ice on the Earth's surface, and the rise in sea and ocean levels, which has led to compromising environmental security as this has become The latter today focuses on the impact of human conflicts and international relations on the environment. Therefore, the term environmental security is considered one of the most important necessities of life that aims to achieve the interests of peoples. For this purpose, many international and regional agreements and treaties were concluded, including the Convention on Combating Long-Range Trans boundary Air Pollution in Geneva 1979, theConvention on Combating Long-Range trans boundary Air Pollution in Geneva 1979, emissions Montreal Aircraft Engines 1981, Air Quality Agreement between the United States of America and Canada on Acid Rain 1986, Vienna Convention for the Protection of the Ozone Layer 1985, Helsinki Convention forthe Protection of International Trans boundary Watercourses and Lakes 1992, Convention on Civil Liability for Damage Occurring in the Carriage of Goods Hazardous by Road, Rail and Navigation Ships Geneva 1989, International Convention for the Prevention of Pollution from Ships 1972, London International Convention for the Prevention of Sea Pollution by Oil 1954-1962- 1969, Barcelona Convention for the Protection and Development of the Marine Environment and the Coastal Zone of the Mediterranean Sea

1976 In addition to many agreements on nuclear safety, we mention the Comprehensive Nuclear Test Treaty of 1996, the Vienna Early Notification Convention of 1986, and the Treaty Banning Nuclear Weapon Tests in the Atmosphere, Outer Space, and Underwater. (Mahdaoui , 1963, p. 43)

The importance of this topic is generally evident in protecting the environment and its elements, including water, climate, etc., from the danger of nuclear radiation. Therefore, it has become necessary for countries and international organizations to take all measures to protect the latter, and from here the international commitment to protect the environment from the danger of nuclear radiation is highlighted. An example of this is what was approved by the International Atomic Energy Agency (International atomic energy agency (IAEA), which operates under the supervision of the United Nations and aims to (Tawfiq , 2013, p. 35) Encouraging the peaceful uses of nuclear energy, taking into account its destructive effects on the environment, especially since international environmental responsibility is based on the existence of a humanitarian legal base that protects the environment, the occurrence of differences in environmental protection rules, the occurrence of damage affecting the environment and its elements, and the availability of criminal intent.

From here also the position of international environmental law appears to us as a set of customary international legal rules and an agreement agreed upon between countries to preserve the environment and its elements from pollution. As is known, international environmental law, as a branch of public international law, is based on a set of legal rules that We find its source in international agreements, general principles, and international judicial decisions,and this is in the field of environmental protection and in the field of international responsibility for the damage of environmental pollution.

Based on the above information, the problem that can be raised is as follows:

To what extent can international responsibility resulting from the impact of nuclear radiation on climate and water be activated, and what is the perspective of international environmental law?

In order to gain familiarity with the subject and in order to reach the desired goal, the approach that we decided to adopt is the descriptive analytical approach by dividing the research plan into two basic axes. The first represents the impact of nuclear radiation on water and climate resources. As for the second axis, we have devoted it to the manifestations of the formation or embodiment of international protection approved by the law. International Environmental Committee for Water and Climate let us conclude the topic of theintervention with a conclusion in which we decided to propose some recommendations.

The first axis: The impact of nuclear radiation on water and climate resources:

If the environment is the natural environment that contains the totality of biotic and abiotic natural resources and includes all forms of interaction between these resources, this environment always remains exposed to various human activities and the nuclear pollution they cause.

The history of nuclear pollution dates back to the end of World War II, when the first atomic bomb was dropped on the city of Hiroshima in 1945. This explosion had a destructive power of more than 15,000 tons of NNT, as it instantly destroyed 11.4 square kilometers of the area of this city. The second atomic bomb that was detonated was of the plutonium type and was dropped on Nagasaki with an explosion equivalent to 21,000 tons of NNT.

Nuclear pollution factors are not limited to what is caused by intentional nuclear explosions. Rather, this pollution sometimes occurs unintentionally as a result of drinking radiation from nuclear power reactors when explosions occur in them. There is no doubt that all of this has a negative impact on the environment, including its water and climate elements, which is Which affects the environmental balance in general. (Bawadi , p. 332)

Based on this, we decided to address in this topic the concept of nuclear radiation and then address the negative effects of the latter on water and climate resources.

First: The concept of nuclear radiation: Nuclear radiation is a physical phenomenon and a strong natural atomic activity that occurs inside the atoms of atomically heavy elements, in which the atomic nucleus loses some of its particles and the atom of the element turns into another element or into another particle of the same element.

The word radiation is nothing but energy or particles that are liberated from the nucleus of the atom as a result of a state of instability in which the nucleus is. The substance whose nuclei of atoms are unstable is called “radioactive material.” The released energy, or what is called "gamma"

rays, is one of the forms of electromagnetic radiation, which in addition to it includes radio waves, infrared rays, ultraviolet rays, and “They have high energy, although their energies and their ability to penetrate resources vary. (Hoda , 1997, pp. 16-17)

Second: The negative effects of nuclear radiation on water and climateresources: Environmental pollution has increased during the last quarter of the current century as a result of human activity in the industrial field due to the introduction of pollutants that cause negative change in the natural environment.This pollution may be in the form of a solid, liquid or gaseous substance or in the form of energy such as radioactivity, which is the subject of our intervention.This pollution resultingfrom radioactivity has many negative repercussions on the environment and its elements, such as water and climate,which, for example, increases carbon dioxide emissions, which is the cause of

global warming. (Ali , 2008, p. 36)

The erosion of the ozone layer, for example, is one of the biggest examples of pollution resulting from radioactivity. The environmental damage resulting from the erosion of the ozone layer is largely represented by theclimatic changes occurring on the planet, such as sudden changes in weather andclimate, nuclear activities, and the rise in sea level. The ozone layer Or what some call the ozone layer, it is part of the atmosphere at the top of the Earth. It forms the area between 15 and 35 kilometers above the surface of the Earth. The most important function of this layer is that it prevents some harmful rays from entering the surface of the Earth, such as ultraviolet rays, which cause noticeabledamage. When many gases resulting from nuclear radiation leak, this directly affects the climate, leading to an increase in the Earth’s temperature. This is by preventing heat from escaping outside the atmosphere and trapping it inside, which leads to weather and climate change. It absorbs and traps infrared raysand heat in the atmosphere. Earth's lower atmosphere. (Hussein , 2006, p. 29)

Nuclear radiation also leads to water pollution. For example, carbon dioxide emissions cause ocean acidification, and when carbon dioxide decomposes, it causes a continuous decrease in the pH of the Earth's oceans.

The second axis: aspects of consecrating (embodying) international protection approved by international environmental law for water and climate:

In order to put an end and ward off, if true, the dangers and threats of nuclear radiation to environmental elements such as climate and water, direct protection measures include a set of broad standards that protect the environment and provide a growing set of mechanisms to address all the damageto the environment as one of the most prominent pollutants, perhaps the most prominent of which is nuclear radiation and for this reason In this topic, we decided to address the role of the international community in protecting the environment by addressing the role of international organizations in protecting the environment, as well as the role of international agreements in protecting thelatter.

First: The role of international organizations in protecting the environment:

Many international organizations have taken measures at the international and regional levels to limit the damage to the environment from various human activities, such as the nuclear field. These measures have contributed to the development of international environmental law. For example, we have theestablishment of the International Atomic Energy Agency, which is an agency concerned with preserving the environment from pollution. natC on the use of atomic energy and the establishment of international standards and mechanisms for protection from radiation. This agency includes reporting without delay on major incidents so that the agency can provide the necessary assistance in the event of an emergency to protect the environment from atomic radiation. It also works to encourage the safe and peaceful uses of atomic energy while preventing its use. Environmentally destructive (Mahmoud , 2004, p. 29).

Second: The role of international agreements in protecting the environment:

Many international agreements have been concluded to protect the air andmarine environment. We have, for example, the London International Convention for the Prevention of Pollution by Petroleum Oil in the Seas of1954, and many amendments have occurred to it, most recently in 1971, based on suggestions from the International Maritime Organization. We also have, for example, the Brussels Convention regarding... Intervening on the high seas incases resulting in petroleum pollution, we also have the Brussels International Convention on Civil Liability in the Field of Maritime Transport of Nuclear Materials of 1972, the United Nations Convention on the Law of the Sea of 1982, and the Outer Space Convention of 1967. This Convention in particular affirmed the obligation States Parties are required to limit their use of outerspace to peaceful purposes only and are prohibited from establishing any military facilities or bases or conducting any Nuclear tests that cause harm and cause harmful pollution to the environment. (Riyad , 2009, p. 125)

Conclusion:

In conclusion, based on the overall contents of our intervention, we cameup with the following recommendations:

1- The necessity of working to conclude many, many international agreements and treaties related to protecting the environment and its components frompollution resulting from radioactivity.

2- The necessity of working to develop international approaches aimed at dealing with climate issues such as global warming, environmental pollution,etc.

3- Intensifying international efforts to develop a strategy to implement recommendations related to international agreements and reducing nuclear radiation emissions.

4- Working to establish institutes and joint research centers between countries, especially to protect the environment and its components.

5- The necessity of stipulating in international agreements to limit the productionand spread of nuclear weapons and bombs that are harmful to the environment.

6- The necessity of working to store radioactive materials in safe places in a way that does not cause harm to the environment, while ensuring the necessary ventilation in workplaces with radiation and radioactive materials.

7- The necessity of working to ensure the provision of infrastructure for nuclear programs, which includes preparing for and dealing with the environmental impacts of nuclear plants.

8- The necessity of applying appropriate legal, administrative, organizational and technical measures to secure radioactive sources to ensure environmental protection.

9- The need to strengthen international responsibility for environmental damage resulting from radioactive contamination.

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