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# Risk Theory as a Modern Basis for International Liability in Addressing Environmental Damage

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**Abstract**
This paper examines Risk Theory as a modern legal foundation for international liability in addressing environmental damage caused by hazardous but lawful activities. Traditional fault-based frameworks are increasingly inadequate in managing transboundary harm resulting from technological advancements. Risk Theory shifts the focus from proving fault to establishing damage and causality. The study highlights the theory's legal basis, international support, and application in treaties and judicial rulings, advocating for its broader adoption to ensure environmental protection and justice.

**Keywords**: risk theory, environmental liability, strict liability, international law, environmental damage

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## Introduction

In recent times, the international community has witnessed significant scientific and technological advancements, particularly in major industrialized countries. These developments have led to a remarkable surge in scientific innovations, resulting in tremendous progress and successive steps in the field of modern technology.

This reality has given rise to hazardous international activities that are not prohibited by international law, activities which have reached their peak and carry multiple severe risks and damages. As a result, it has become increasingly difficult to identify the causes and prove the occurrence of fault attributable to an international legal person. Furthermore, the traditional foundations of liability have proven inadequate and incapable of addressing environmental issues, as they fail to keep pace with scientific advancement.

Consequently, international jurisprudence and courts have been driven to seek new foundations that align with these evolving circumstances. International legal scholarship has thus settled on Risk Theory[i] as a modern basis for addressing environmental damage.

Legal scholars have concluded that establishing international liability based on previous theories is no longer viable, given that such activities are not prohibited by international law and are inherently classified as hazardous. Therefore, proving the damages resulting from these activities can be achieved through reliance on Risk Theory[ii], without the need to establish fault or unlawful conduct[iii]. Accordingly, it is necessary to address the content of this theory (Section One), and then assess the extent to which its application is suitable as a basis for liability in international practices (Section Two).

### Section One: Risk Theory

The concept of risk theory is based on the idea that any party engaging in hazardous activities must bear responsibility for the resulting risks, without the need to prove fault or breach of an international obligation[iv]. Accordingly, this section addresses the definition of risk theory (First), and the position of international legal scholarship on it (Second).

#### Subsection One: Definition of the Theory

**First: Definition of the Theory**

It is difficult to provide a precise definition of risk theory, as it continues to evolve alongside developments in both the international community and international law. Even scholarly opinions differ in offering a definitive definition of this modern theory, particularly because it has emerged in parallel with changes in the international landscape. Moreover, it arose in response to criticisms of the theory of wrongful acts, which can no longer be relied upon as a basis for addressing environmental damage.

According to legal scholars, risk theory refers to the imposition of liability on a state for damage caused by activities that, while lawful, involve significant risks—regardless of whether there was negligence, omission, or fault on the part of the state or the operator of the hazardous activity[v]. Advocates of this theory emphasize that liability under risk theory is based on the consequences of engaging in hazardous activities, not on the presence of fault[vi].

Therefore, the concept of this theory lies in the possibility of holding an international legal person accountable if they engage in an activity that is lawful under international law but is of such a degree of risk that it results in damage to a neighboring state. The focus of this modern theory is on the occurrence of harm, which establishes international liability against states undertaking lawful international activities (such as owning companies and factories, nuclear weapons, launching ships, vehicles, and satellites for the exploration and exploitation of outer space, etc.)[vii]. Hence, the existence of this theory is of significant importance within the context of international liability, which, under risk theory, is based on the presence of two fundamental elements: damage and a causal link between the damage and the act of the defendant.

Liability for the consequences of acts not prohibited by law has gained acceptance in the context of environmental damage, as fault is not a required element. Any act that causes harm to others obliges the actor to provide compensation[viii]. Moreover, this theory is founded on a key principle: compensatory justice, which justifies its existence. Whether this justice is based on the notion of newly emerged risks or the application of the principle of *qui lucrum facit, periculum sustinet* (he who gains must also bear the risk), any party introducing a hazardous element into the international community and causing harm thereby is held liable—even if no fault or negligence can be attributed to them, and regardless of whether the act was lawful or unlawful[ix].

Undoubtedly, the theory aims to uphold an essential principle in international relations: the principle of balance between the interests of the state engaging in lawful activities that caused the harm, and the state harmed as a result of such activities. In cases of transboundary harm, compensation serves as a means to restore equilibrium between the states involved in the dispute[x].

**Second: Foundations of the Theory**

The legal foundation of strict (objective) liability lies in the idea of bearing responsibility or the principle of "benefit entails burden"[xi]. This principle is expressed in a specific, restricted form, whereby the burden of proving the right to compensation is lifted from the harmed party and placed upon the one who benefits from conducting a particular activity. That party must bear the loss when damage is inflicted upon others—this is the application of the rule *"the polluter pays."* [xii]Thus, whoever gains the benefit must also bear the liability, in accordance with the legal maxim *"no harm and no reciprocation of harm"* [xiii].

This foundation is based on the unique nature of modern industrial and commercial activities, which often result in environmental pollution that is difficult to attribute to a specific polluter under general liability rules. Therefore, the burden and the profit should fall upon the party conducting such activities, regardless of any fault[xiv].

Modern scientific and technological developments have exacerbated the harmful consequences of certain activities permitted under international law. However, addressing these harms remains ambiguous in terms of proving their unlawfulness or character, requiring greater international cooperation to protect the rights and interests of states potentially affected by such damage[xv].

In this regard, the International Law Commission (ILC) has made noteworthy efforts by addressing the issue of international responsibility for the harmful consequences of acts not prohibited by international

law. The United Nations General Assembly supported this direction and encouraged the inclusion of this topic through Resolution No. 32/151 dated 19 December 1977, to which the Commission responded during its 30th session in 1978[xvi].

Thus, even actions permitted under international law that result in harm to others can give rise to liability and require compensation under risk theory.According to proponents of this theory, states or entities that cause environmental damage through high-risk activities bear responsibility for the harm—even if they have taken all necessary precautionary measures and regardless of whether any fault was committed.

Undoubtedly, the legal basis of strict liability fits perfectly in cases of environmental damage, where the burden on the injured party to prove presumed fault is significant. Therefore, strict liability has become a legal safeguard that ensures individual rights and facilitates compensation for environmental damage in cases where it is impossible to prove fault against the party responsible[xvii]. Strict liability also relies on the principle of territorial sovereignty[xviii], which grants states exclusive rights over their territories and prohibits other parties from violating that sovereignty. This has led to recognition of the need to establish provisions defining the sovereignty rights of neighboring states. Hence, no state can invoke its territorial sovereignty without respecting that of its neighbors[xix].

Moreover, this concept has expanded to include liability for activities conducted outside a state's territory but still under its control, for which the state is held responsible for any resulting harm[xx].

**Subsection Two: Scholarly Debate on the Adoption of Risk Theory**

**First: Opposing Views on Applying Risk Theory to Establish International Environmental Responsibility[xxi]**

Some scholars argue that the concept of risk, as recognized in various national legal systems, cannot be transplanted into international law. They assert that international responsibility always requires the existence of fault or a wrongful act under international law, whereas risk alone does not fulfill this requirement.

For instance, Russian judge Krylov expressed in his dissenting opinion in the *Corfu Channel Case* that state responsibility arising from an internationally wrongful act presupposes at least some degree of fault on the part of the state. He rejected the importation of risk theory from domestic law into international law[xxii].

Similarly, Egyptian judge Abdel Hamid Badawi, in his dissenting opinion in the same case, maintained that international law does not recognize strict liability, which is based on risk theory as adopted by some national systems. He argued that the evolution and development of international law do not yet allow for the application of this theory, nor is it likely to do so imminently[xxiii].

Legal scholar Dupuy also opposed the application of risk theory in international relations, noting that—with the exception of the 1972 United Nations Convention on International Liability for Damage Caused by Space Objects—customary international law does not recognize this type of liability, whether concerning environmental damage or other harms.

Among the scholars who oppose the theory of risk, we find Professor Hamed Sultan, who maintains that: "A distinction must be made between fault as a basis for international responsibility and risk, which may serve as a foundation for liability in certain domestic legal systems. Fault is a fundamental requirement for establishing international responsibility, whereas risk alone does not give rise to such responsibility.[xxiv]"

Dr. Mohamed Talaat Al-Ghoneimy also argues that the risk theory is not free from criticism. He believes that: "It exaggerates the guarantee of absolute protection for the injured party and goes beyond what is currently practiced in international law—which remains characterized by individual accountability, inherently tied to the concept of fault[xxv]."

Similarly, Dr. Tounsi Ben Amer opposed this theory, stating: "Even if some domestic legal systems have adopted rules similar to this theory, it does not necessarily follow that these rules can be transferred into international law. Such a transformation depends on international practices and the extent to which parties

accept them—something that has not occurred in the case of strict liability. In fact, some states have refused to acknowledge international responsibility based on this theory, and any compensations they granted were merely for humanitarian considerations.[xxvi]"

As for the jurist Raefrath, he affirms that:"The theory of risk has no actual existence in international law and asserts that it has no basis in customary international law[xxvii]."

**Secondly: Views Supporting the Application of the Risk Theory to Establish International Environmental Responsibility**

The previous opposing viewpoint seems weak and hinders the ability of international law to keep pace with modern changes in international relations. Therefore, some argue that, in light of modern principles and as a result of activities by various states based on advanced scientific methods, many problems and damages have arisen which have been addressed by the national legal systems of states, and that international law cannot continue to ignore these problems and this progress[xxviii].

The jurist Charles Rousseau supported the application of this theory in the field of international relations based on the idea of guarantee, away from the personal concept of fault. He considers that this theory has an objective dimension and prefers it over the fault theory in establishing responsibility in international law[xxix].

Similarly, Rosalyn Higgins, former President of the International Court of Justice, emphasized that:

"If the requirement for something to fall under the scope of the law of state responsibility is that it results from an internationally wrongful act, then what is internationally wrongful is allowing the damage to occur."
She thus regarded the occurrence of damage, which is the basis of strict liability, as an internationally wrongful act that necessitates establishing international responsibility[xxx].

The jurist Jenks argued that the dominance of new technological and scientific means calls for the development of the traditional concepts of the theory of international responsibility, especially in the areas of hazardous activities. He added:

"Responsibility for damage resulting from highly dangerous activities or those associated with the use of modern advanced means should be established without the need to prove a specific fault.[xxxi]"

The jurist **George Sale** believes that:

"The idea of responsibility begins with damage and ends with compensation… and there is no necessary link between the starting point and the point of arrival.[xxxii]"

Dr. **Nabil Bashir** also holds that:

"Damage is the decisive element in establishing international responsibility because its result harms another international legal person. An example of this is the nuclear tests conducted by a state on its territory whose harmful effects extend to neighboring states, thereby giving rise to international responsibility[xxxiii]."

Similarly, both jurists **Jean Salmon** and **Karl Zemanek** argue that, according to the idea of international responsibility based on the theory of risk,

"The state's responsibility is absolute for compensating damage without the need to prove fault[xxxiv]."

It goes without saying that, after presenting the various scholarly opinions—most of which support and tend toward the necessity of adopting the theory of risk in the field of international relations, especially concerning damages arising from modern industrial and technological activities that cannot be described as unlawful or faulty—this theory is considered the most appropriate basis for establishing international responsibility toward an international legal person and aims to achieve the principle of balance between the interests of the concerned states[xxxv].

**Second Requirement: The Application of the Risk Theory in International Practices**

Despite the scholarly disagreement regarding the adoption of the risk theory in international relations, the international community affirms its acceptance through international practices, notably through its inclusion in international agreements (firstly), and international judicial rulings (secondly).

**First Subsection: The Theory of Risk in International Conventions**

**First: The 1967 Outer Space Treaty**

This treaty is considered one of the important conventions related to the theory of risk and holds particular significance in the field of scientific advancement. It established the principle of absolute state responsibility without requiring proof of fault or unlawful act on the state's part for all damages caused to others resulting from the launch of space vehicles[xxxvi]. Accordingly, the principle of absolute responsibility provides an important foundation for some cases of international responsibility, especially in relation to environmental damage resulting from the use of hazardous activities such as nuclear explosions in navigation and the environmental harm they cause[xxxvii].

Due to the severity of accidents resulting from atomic and nuclear installations and ships, and the seriousness of damages that may affect individuals and states beyond borders, many international treaties[xxxviii] were concluded to protect the environment and settle disputes that may arise between states. These treaties include basic rules stipulating that it is not necessary to prove the fault of the operator to establish their liability, nor can the operator be absolved of responsibility by proving that no fault was committed on their part or by proving that the fault lies with others. Therefore, under no circumstances can liability be imposed on anyone other than the operator.

**Second: The Convention on Pollution of the Seas by Hydrocarbons**

The extensive use of petroleum led to successive accidents caused by massive oil spills, resulting in serious pollution of the marine environment. This necessitated a radical change in the traditional foundations of civil liability related to maritime transport, as confirmed by the 1969[xxxix] International Convention on Civil Liability for Oil Pollution Damage. The convention set the compensation amount at 14 million British pounds per incident, with a compensation fund covering any additional amount up to 30 million pounds if the repair costs exceed the compensation limit.

Additionally, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes adopted the theory of strict liability[xl]. In September 1993, legal experts convened to review the draft protocol of the Basel Convention to provide compensation to victims of damage caused by the transboundary movement of hazardous wastes. Articles 8 and 9 were added to the proposed protocol to ensure the relevant liability[xli].

**Third: The 1972 Convention on International Liability for Damage Caused by Space Objects**
This convention stipulates that the state launching space objects bears absolute liability concerning compensation for damages caused by the space object on the Earth's surface or during aircraft flight[xlii]. Accordingly, absolute international responsibility is realized in three exceptional cases:

- Damage caused by space objects;
- Peaceful use of nuclear energy;
- Marine pollution by hydrocarbon pollutants.

In this regard, there is a near consensus among legal scholars that the theory of risk has become the foundation of international responsibility in cases involving dangerous and lawful activities that contemporary life requires for its vitality, such as the peaceful use of nuclear energy and petroleum exploration activities. Therefore, liability must arise for any damage resulting from these activities based on the principle of "the one who profits must bear the burden"[xliii].

**Second Subsection: Application of Liability Based on Risk in International Judicial and Arbitration Rulings**

Legal scholarship points to many applications that have adopted the theory of risk in international court rulings and arbitration decisions.

**First: Within International Judicial Rulings**

The case of French nuclear weapons tests from 1973, which took place on islands in the Pacific Ocean such as Moruroa[xliv] Island between 1966 and 1996, led to widespread international condemnation and concerns by countries like New Zealand and Australia about harmful nuclear radiation leaks. Consequently, these countries demanded that France end the tests. Following France's refusal, Australia filed a lawsuit against France before the International Court of Justice (ICJ).

On May 9, 1973[xlv], Australia requested the court to consider the case based on the illegality of these tests due to the damage they caused and sought to prevent France from continuing nuclear tests in the South Pacific Ocean, arguing that these tests violated international law. Australia requested that the court issue an order to cease nuclear testing[xlvi]. In response, the court ordered provisional protective measures pending the final judgment, relying on Article 41 of its Statute[xlvii].

The French side argued that the court lacked jurisdiction to hear the case, based on the French government's declaration issued on May 20, 1966, accepting the jurisdiction of the International Court of Justice (ICJ)[xlviii]. However, France refused to appear before the court. Consequently, the sessions proceeded without France's presence, and on June 22, 1973, the court issued its order by a majority of 8 votes to 6 stating:
"The French government shall temporarily cease conducting nuclear tests that cause radioactive fallout on Australian territory until the final judgment in the filed case is issued[xlix]."

The court issued its judgment on December 20, 1974[l], in which it stated that Australia's claim was no longer subject to the merits because the ultimate objective of the claim was achieved after France's multiple declarations—especially the June 1974 declaration—stopping such atmospheric nuclear tests. The court considered this a unilateral declaration addressed to the international community, including Australia, and binding on France. The ruling indicated an acceptance of the theory of risk concerning nuclear tests[li].

Regarding the case on the legality of the use or threat of use of nuclear weapons, on May 14, 1993, the World Health Organization (WHO) adopted a resolution requesting an advisory opinion from the court on the following question:
"In relation to the effects of nuclear weapons on the environment and health, does their use by states during war or armed conflict constitute a breach of their obligations under international law, including the Constitution of the World Health Organization?[lii]"

The Court ruled that it could not provide an advisory opinion, stating that while the World Health Organization (WHO) has the right to address the health effects of the use of such weapons and to take necessary precautions in the event of their use, given their impact on health and the environment, the jurisdiction of international organizations is specialized. Since the WHO's role is confined to global health matters, issues related to the use of force and arms control fall within the jurisdiction of the United Nations[liii]. This decision was issued by a majority of 11 votes to 3. Judge Ranjeva expressed support for the decision in a separate opinion[liv], while Judge Koroma stated that the refusal was inconsistent with the mandate of the International Court of Justice, arguing that the Court had misinterpreted the question and excluded it from its jurisdiction, reminding that health is a foundation for peace[lv].

**Second: In International Arbitration Decisions**

There are several famous cases in international law, such as the *Trail Smelter* case (1941) and the *Lake Lenox* case (1956), decided by international arbitration tribunals. These tribunals focused on the occurrence of harm when determining international responsibility and did not consider the nature of the

activity that caused the harm. These are considered applications of the theory of risk. According to some legal scholars, these rulings do not clarify whether states are only liable for intentional conduct resulting in harm, or also for negligent or reckless behavior, or whether their liability is absolute in all cases of transboundary harm[lvi].

In the *Trail Smelter* case, due to the continued emission of fumes from the smelter, the United States resumed its protests to the Canadian government. The diplomatic negotiations between them concluded with an agreement to refer the dispute to a special arbitration tribunal, which issued two rulings:

- The first, on April 16, 1938, dealt with compensation for damages that occurred between January 1932 and October 1937.
- The second ruling, issued in March 1941 and more relevant in this context, required the tribunal to address the issue of fumes emitted by the smelter and determine whether there was a legal obligation to prevent environmental pollution.

The tribunal concluded by establishing a permanent operating regime for the smelter. This included Canada's obligation to pay compensation for damages caused to U.S. interests by emissions from the smelter, even if the smelting activities were fully compliant with the tribunal's established regime[lvii].

Although the tribunal confirmed the lawfulness of operating the smelter, it obligated the Canadian government to pay appropriate compensation to the U.S. government. This was regarded as an acknowledgment of the application of the theory of risk as the basis of international responsibility. However, some legal scholars question this ruling's reliance on the theory, pointing out that it was based on a specific agreement between Canada and the U.S. affirming Canada's responsibility for the damages, while leaving the assessment of damages and compensation to the tribunal[lviii].

Similarly, in the *Lake Lenox*[lix] case, the ruling was based on the existence of an international customary obligation prohibiting the upstream state from polluting waters that flow into the downstream state[lx].

It becomes clear that the theory of risk can address problems resulting from environmental pollution in general. Therefore, resorting to this theory is necessary to ensure effective protection of the environment from the dangers of modern technology. This aligns with the legal opinion supporting its applicability in all cases of pollution[lxi]. Moreover, its core principle requires the establishment of international responsibility when damage occurs due to an act committed by a state, regardless of the nature of that act or whether it was lawful. Consequently, it has become an effective legal safeguard to guarantee the rights of those affected and to facilitate the compensation for damages resulting from environmental pollution, especially in cases where proving fault is difficult[lxii].

Due to the theory's inadequacy in covering modern sources of pollution, the "polluter pays principle" emerged as a new objective foundation. Its emergence coincided with the concept of sustainable development, which calls for achieving economic growth without depleting the available natural environmental resources.

**Conclusion:**

The central issue of this research revolved around understanding the prospects for the development of international civil liability rules in the field of environmental protection, in order to identify effective policies to address environmental harm. It was essential to begin this study by clarifying the general concept of the environment, presenting various definitions of it. The research concluded that the environment encompasses all external conditions and factors in which living organisms exist and which influence their life processes—whether created by God Almighty or by human beings.

In addition to highlighting the concept of the environment, the study also emphasized the notion of environmental damage, defined as any change that affects the living or non-living components of the environment or ecosystems, including damage to marine, terrestrial, or atmospheric life.

In light of the problem posed for investigation, it became evident that the concept of international responsibility has undergone several developments, similar to the evolution of liability systems in domestic law. These developments were necessitated by the progress of international society and the international legal system. International responsibility is no longer confined to personal fault-based criteria (such as fault theory or unlawful acts), but has begun to shift towards **strict** liability or risk-based liability to address the scientific and technological advances occurring worldwide.

We found that absolute international responsibility, which is based on the occurrence of damage and the causal link between the act and the harm without the need to prove fault, now constitutes a broad foundation that can be relied upon to claim compensation for environmental damage—particularly in cases where the threat to the environment is significant. As such, acknowledging liability without requiring proof of fault has become highly important in this field.

Although there is no binding international customary rule to enforce this theory in international relations, it is increasingly being applied through international treaties, as observed in this study.

We also found that there are a number of difficulties and obstacles preventing the application of traditional international liability rules to environmental damage caused by hazardous and harmful activities. Therefore, there is a need to explore modern, advanced systems, policies, and foundations that match the specific nature of environmental problems and their protection—especially in areas not under the sovereignty of any state. We reviewed the efforts made in this direction, particularly the International Law Commission's Draft Articles on the Prevention of Transboundary Harm and on Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law, as well as insights from international jurisprudence concerning environmental harm.

It also became clear that preventive environmental policies are the most urgent and suitable systems for environmental protection. This is reflected in the damage resulting from activities that are not internationally prohibited, which represents one of the modern trends in addressing environmental harm by establishing a general international obligation on international legal persons to prevent harm and avoid the emergence of unnecessary international environmental disputes.

Despite all this, it is not too late. However, there must be international solidarity and cooperation. International organizations must coordinate their efforts, and states must enact strict environmental laws and fill the legal gaps in environmental protection. The media must also mobilize its powerful resources for environmental awareness. The ultimate goal is for humans to live stable, safe lives—free from dangers, diseases, and all forms of fear and anxiety—so that we may then achieve our desired hopes.

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[i] Some scholars refer to this theory by various terms: sometimes it is called absolute liability, at other times objective liability, and others refer to it as liability without fault. Still, some label it as the theory of risk assumption. All these terms express the same underlying concept. For example, in Anglo-Saxon countries governed by Common Law, the expressions "Strict Liability" or "Liability Without Fault" are commonly used to denote what is referred to as objective liability.

[ii] The theory of risk emerged in France in the late 19th century. Among its most prominent proponents were the jurists Saleilles and Josserand, who considered the notion of fault to be a relic of the past.

[iii] Source: Haajar Maidi, Judicial Jurisdiction in Cross-Border Pollution Damage Compensation Disputes, Doctoral Dissertation, Environmental Law specialization, Faculty of Law, University of Youssef Ben Khedda, Algiers 1, 2020/2021, p. 173.

[iv] Charaf Ben Tali, Liability Based on Risk in International Environmental Law, Doctoral Dissertation in Legal Sciences, Faculty of Law and Political Science, Hassiba Ben Bouali University, Chlef, Algeria, 2020/2021, p. 12.

[v] Abdulaziz bin Saud bin Salem Al-Maamari, "The Legal Framework of International Liability for Environmental Damage," The Arab Journal of Literature and Human Studies, The Arab Institution for Education, Science and Literature, Egypt, Vol. 6, No. 21, January 2022, pp. 146–163

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[viii] Ismail Hammad Zakaria Hussein, The Legal System of International Liability for Environmental Damage, Master's Thesis in Law, Faculty of Law, Graduate Studies College, Al-Neelain University, Sudan, 2018/2019, p. 35.
[ix] Ahmed Abdel Karim Salama, Environmental Protection Law (Pollution Control – Natural Resources Development), previously cited reference, p. 472.
[x] Ghazi Hassan Sbarini, A Concise Guide to the Principles of Public International Law, Dar Al-Thaqafa, Jordan, undated edition, 2007, p. 317.
[xi] Mohamed Ali Hassouna, State Responsibility for Environmental Pollution Damages, previously cited reference, p. 62.
[xii] See also the resolution: A/RES/32/151, available at the following electronic link: https://www.legal-tools.org/doc/7282a7, accessed on 12/12/2023 at 17:15.
[xiii] Salah Abdulrahman Abdul-Hadithi, The International Legal System for Environmental Protection, Al-Halabi Legal Publications, Beirut, Lebanon, 1st ed., 2010, p. 223.
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[xv] Kouider Chachoua, "Applying the Risk Theory to Establish International Environmental Liability," previously cited reference, p. 58.
[xvi] Charaf Ben Tali, Liability Based on Risk in International Environmental Law, previously cited reference, p. 24.
[xvii] Mohamed Bouat, International Liability for Environmental Damage, previously cited reference, p. 41.
[xviii] Pierre-Marie Dupuy, Droit international public, op. cit., p. 337.
[xix] Hamed Sultan, Public International Law, Dar Al-Nahda Al-Arabiya, Cairo, Egypt, 4th ed., 1999, p. 320.
[xx] Mohamed Talaat El-Ghoneimy, The Intermediate in the Law of Peace, Al-Maaref Establishment, Alexandria, Egypt, undated edition, 1982, p. 245.
[xxi] Ben Amer Tounsi, The Basis of State Responsibility During Peacetime, Doctoral Dissertation, Faculty of Law, Cairo University, Egypt, 1994/1995, p. 101.
[xxii] Bernhard Graefrath, "Responsibility and Damages Caused: Relationship Between Responsibility and Damages," Recueil des Cours de l'Académie de Droit International (R.C.A.D.I.), 1984, p. 110.
Cited in: Charaf Ben Tali, Liability Based on Risk in International Environmental Law, previously cited reference, p. 26.
[xxiii] Pierre-Marie Dupuy, Droit international public, op. cit., p. 337.
[xxiv] Hamed Sultan, Public International Law, Dar Al-Nahda Al-Arabiya, Cairo, Egypt, 4th edition, 1999, p. 320.
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[xxix] Charles Rousseau, Droit international public, Les Rapports Conflictuels, Volume V, Siry, Paris, France, 1983, p. 22.
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Quoted from: Mohamed Bouat, previously cited reference, p. 42.
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[xxxviii] See also: Paris Convention of 29/07/1960 on Liability in the Nuclear Field, Brussels Convention of 31/05/1963, which is a supplementary convention to the Paris Convention, Brussels Convention of 25/05/1963 on Civil Liability in the Field of Maritime Transport of Nuclear Materials (Article 2/1), Vienna Convention of 19/05/1963 (Article 4/1).
[xxxix] Article 3 of the convention establishes the liability of the oil tanker for damages caused to the state or individuals due to oil leakage or discharge resulting from accidents that the tanker may encounter during the transportation process.
[xl] See also: Article 8 of the Basel Convention, previously cited reference.
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Accessed on: 01/11/2023, at 21:45.
[xlii] See also: Paris Convention of 29/07/1960 on Liability in the Nuclear Field, Brussels Convention of 31/05/1963, which is a supplementary convention to the Paris Convention, Brussels Convention of 25/05/1963 on Civil Liability in the Field of Maritime Transport of Nuclear Materials (Article 2/1),
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[xliii] Kouider Chaachoua, "Applying the Theory of Risk to Establish International Environmental Responsibility," previously cited reference, p. 65.
[xliv] Rabih Ajaimi, The International Legal Regime for the Possession and Use of Nuclear Energy for Peaceful Purposes, Master's thesis in Law, Department of International Law and International Relations, Faculty of Law Ben Aknoun, University of Ben Yousef Ben Khadda, Algeria, 2009/2010, pp. 134-135.
[xlv] Walid Zerqan, "The Theory of Risk as a Basis for State Responsibility for Its Peaceful Nuclear Activities – Between Theory and International Practice," Journal of Law and Political Sciences, Setif 2, Algeria, Vol. 3, No. 2, June 15, 2016, p. 419.
[xlvi] Khadija Ben Qattas, The Role of International Mechanisms in Combating Radioactive Pollution of the Atmosphere, Master's thesis in Law, Department of International Law and International Relations, Faculty of Law, University of Ben Yousef Ben Khadda, Algeria, 2013/2014, p. 63.
[xlvii] See also: Article 41 of Chapter III of the Statute of the International Court of Justice, which provides that: The Court may indicate provisional measures to preserve the rights of all parties when it considers that the circumstances so require. Until a final judgment is delivered, the parties to the case and the Security Council shall be immediately informed of the measures the Court considers should be taken.
[xlviii] According to **Article 36, paragraph 2 of Chapter II of the Statute of the International Court of Justice**, paragraph 3 excludes the Court's jurisdiction in matters related to national defense activities, which applies in this case concerning the French nuclear tests in the Pacific.
[xlix] I.C.J.: "Nuclear Tests Cases (Australia v. France and New Zealand v. France)", Reports, 1973, p. 106. Annex No. 1, p.
[l] Summary of Judgments, Advisory Opinions, and Orders of the International Court of Justice 1948–1991, United Nations, p. 128.
[li] Youssef Maallem, *International Responsibility Without Damage – The Case of Environmental Harm*, Doctoral dissertation in Public Law, Department of International Law, Faculty of Law and Political Science, Mentouri 1 University, Constantine, Algeria, 2011/2012, p. 29.
[lii] Youssef Maallem, *International Responsibility Without Damage – The Case of Environmental Harm*, previously cited reference, p. 195.
[liii] Summary of Judgments, Advisory Opinions, and Orders of the International Court of Justice, 1992–1996, previously cited reference, pp. 107–108.
[liv] In a separate opinion by Judge Ranjeva, he stated that the decision was in accordance with the relevant law; however, he would have preferred the Court to be more explicit regarding its advisory jurisdiction by emphasizing that the structure of the question posed by the organization did not permit the Court to exercise

its jurisdiction. For more details, see: Summary of Judgments, Advisory Opinions, and Orders of the International Court of Justice, previously cited reference, p. 111.

[lv] In a separate opinion by Judge Shahabuddeen, he argued that the Court, in his view, did not fully grasp the meaning of the WHO's question. The organization had not actually asked whether the use of nuclear weapons by one of its members was lawful under general international law, but rather asked whether such use would constitute a breach of that member's obligations under the WHO. Judge Christopher Gregory Weeramantry added that this was the first time the Court refused to give an advisory opinion requested by the agency, and that the agency should be commended for raising such a question. The issue posed by the WHO addressed obligations in three specific areas: health-related obligations of states, environmental obligations, and obligations towards the organization itself. He emphasized that this question was entirely different from that posed by the General Assembly concerning the threat or use of nuclear weapons, and that the Court treated it as a general question, without discussing the specific obligations of states in the areas mentioned. For more details, see: Summary of Advisory Opinions of the International Court of Justice, same reference, p. 112.

[lvi] Mohamed Adel Askar, International Environmental Law, previously cited reference, p. 816.
UN.R.I.A.A., Vol. III, pp. 1980–1981.

[lvii] Leila Ben Hammouda, International Responsibility in Space Law, Houma Publishing, Algeria, no edition stated, 2009, p. 16.

[lviii] Mohamed Bouat, International Responsibility for Environmental Damage, previously cited reference, p. 51.

[lix] Based on the content of Principle 22 of the Stockholm Declaration, which calls upon states to develop international law regarding responsibility and compensation for damage caused by pollution and other environmental harm resulting from activities carried out within their jurisdiction or under their control, which affect areas beyond their jurisdiction.
See in this regard: Mohamed Mahmoud Mehran, Arbitration in International River Disputes, Faculty of Law, University of Alexandria, Egypt, no edition stated, 2023, p. 201.

[lx] Abdel Aziz Mokhaimer Abdel Hadi, The Role of International Organizations in Environmental Protection, Dar Al-Nahda Al-Arabiya, Cairo, Egypt, no edition stated, 1986, p. 60.

[lxi] Moamer Rateeb Mohamed Abdel Hafez, International Responsibility for the Transport and Storage of Hazardous Waste, previously cited reference, p. 378.

[lxii] Nazih Mohamed Al-Sadiq Al-Mahdi, "The Scope of Civil Liability for Environmental Pollution," paper presented at the conference Toward an Effective Role of Law in Environmental Protection and Development in the United Arab Emirates, May 2–4, 1999, p. 25.