RESEARCH ARTICLE

Compensation for Environmental Damage as a Means of Protecting the Libyan Economy

Nasrat Mohammed Altayyib Alshaybani

PhD student

Laboratory of Constitutional Institutions and Political Systems, University Center of Morsli Abdallah

Tipaza, Algeria

Email: chibani.nasret.mohamed@cu-tipaza.dz

Harzallah Karim

Professor

University Center of Morsli Abdallah

Tipaza, Algeria

Email: harzallah.karim34@gmail.com

Doi Serial https://doi.org/10.56334/sei/8.7.84

Keywords Environmental damage, restitution in kind, civil liability, Libyan environment, environmental legislation, environmental pollution.

Abstract

This study examines the issue of compensation for environmental damage as one of the key legal tools to protect the Libyan economy. The importance of this topic stems from the unique nature of environmental harm, which is often indirect and long-term. These characteristics make it difficult to prove and fall outside the scope of traditional civil liability rules. The study is divided into two main sections. The first defines environmental harm and outlines the conditions under which compensation may be granted. It also discusses how environmental damage forms the basis for civil liability. The second section focuses on types of compensation. It covers both restitution in kind—restoring the situation to its original state—and monetary compensation when restitution is not possible. The findings highlight the difficulty of establishing causality in cases of environmental harm. They also reveal the inadequacy of traditional civil liability rules in addressing such damage. In addition, the study notes the absence of clear legislative provisions in Libyan law, which leads courts to rely on general legal principles. The study recommends drawing on international experiences and updating environmental laws. It calls for the creation and activation of environmental compensation funds, and the training of specialized judges. It also emphasizes the importance of expert-led compensation procedures. Finally, the study underlines the need to raise environmental awareness. Compensation alone is not always sufficient. Effective legal regulation and public engagement are essential to reduce environmental violations. Therefore, a comprehensive legal reform is required to ensure sustainable environmental protection.

Citation (Suggested Citation -APA 7th Edition)

Nasrat, M, A, A., Harzallah, K. (2025). Compensation for Environmental Damage as a Means of Protecting the Libyan Economy.. *Science, Education and Innovations in the Context of Modern Problems*, 8(7), 839-855; doi:10.56352/sei/8.7.84. https://imcra-az.org/archive/365-science-education-and-innovations-in-the-context-of-modern-problems-issue-7-volviii-2025.html

Received: 16.01.2025 | Accepted: 07.03.2025 | Published: 22.06.2025 (available online)

Introduction

The relationship between humans and the environment is one of the most pressing issues of our time. Through their exploitation of natural resources, humans have polluted seas, rivers, and oceans. Factories discharge thousands of tons of pollutants into water bodies and release large amounts of gases, including carbon dioxide, into the atmosphere. The widespread use of pesticides in agriculture has contaminated crops and fruits, ultimately harming human health. This

has led to an increase in serious illnesses such as skin and respiratory cancers.

In addition, the rising number of vehicles and jet aircraft has disturbed public peace and caused widespread anxiety. This, in turn, has contributed to the increase in chronic illnesses such as diabetes, hypertension, heart disease, and neurological disorders. Deforestation and overhunting have further damaged the environment. The degradation of the ozone layer, caused by gases such as methane and freon, continues at an alarming rate. If left unchecked, this deterioration will disrupt the environmental balance, a trust that future generations have placed in our hands. Environmental pollution, therefore, poses a real threat to human existence, dreams, and future.

The value of the environment surpasses many other values. Damage to it does not affect individuals alone—it impacts entire communities. It jeopardizes the continuity of life both now and in the future. Therefore, responsibility falls on all humanity. People are not separate from nature; they are part of it.

In the past, few people recognized the importance of environmental protection. Today, however, the situation has changed. The environment has become a critical issue—economically, socially, and politically—particularly over the past two decades. The worsening environmental crisis in both developing and industrial countries has led to increased environmental awareness and legal concern for environmental protection. It is now viewed as a necessary response by society to confront the various forms of pollution caused by unregulated human activity.

As a result, international and regional conferences were held, such as the 1972 Stockholm Conference. Numerous international and domestic agreements and legislations have followed. In Libya, for instance, Law No. 15 of 2003 addresses environmental protection and improvement. Likewise, Article 64 of the Algerian Constitution affirms the right to a sound environment as part of sustainable development. It also outlines the duties of individuals and institutions in protecting the environment. Alongside these laws, civil society organizations continue to advocate for environmental conservation and awareness.

Islamic law has also emphasized environmental protection. It considers nature essential to human survival. All natural resources were created to serve humanity. God Almighty placed humans on earth with the tools necessary for a dignified life. He commanded us to develop the earth and avoid corrupting it. Islam promotes respect for the environment in a holistic and balanced manner. It stresses the refinement of individual behavior—towards both others and nature. Thus, it provides a unique and coherent vision for how humans should interact with their surroundings.

However, environmental pollution has scaled with the rise of modern technology. Humans have invented tools to improve their lives and extend lifespans. But in doing so, they often ignore the consequences of their inventions. Industrial activities, advanced weapons, and the construction of large factories have all contributed to environmental harm. Many people now unwittingly contribute to their own destruction. Every day, individuals release pollutants—at home, at work, or through vehicle emissions. Therefore, compensation for environmental damage has become one of the most important legal topics worthy of research. It is directly linked to people's lives and to the disputes that arise from environmental harm.

Significance of the Study

The increasing cases of environmental damage, both locally and internationally, have led to serious negative impacts. These effects are evident in various areas, especially in the economy, society, and most importantly, public health. The growing attention to environmental issues by governments and related organizations reflects this concern. Locally, recent environmental crises and disasters have intensified this interest, as they caused significant pollution and harm.

As a result, there is a pressing need to explore how compensation is provided to those affected. It is important to examine the mechanisms used for environmental damage compensation and assess how effective they are. Do these mechanisms truly repair the damage caused? Are the legal procedures sufficient to ensure justice for those harmed?

This subject is of great importance in modern legal studies. It stands at the intersection of several legal branches, particularly civil law. This is not surprising, as we now live in an era shaped by responsibility. Modern science and technology have transformed human life and the natural world. These changes have forced governments to take legal action to protect the environment and to ensure proper law enforcement.

Therefore, there is a clear need for a legal vision that can provide practical and scientific solutions. Such a vision must be capable of addressing current environmental challenges while also preparing for future needs.

Problem Statement

Since the beginning of human existence, life has been closely connected to the environment. Human development has always depended on how natural resources are used. In the early stages of civilization, environmental exploitation was limited. Pollution was not considered a problem due to the low levels of contaminants and the environment's ability to absorb them.

However, with industrial and technological progress, environmental pollution has become widespread. This led to a growing awareness of the need to protect the natural world. People came to realize that the well-being of the environment—whether human, plant, or animal—was directly linked to their own future. This understanding made it necessary to establish legal rules that protect environmental resources at both national and international levels.

There is now a need to develop a legal system that ensures compensation for environmental damage. This system must rely on civil liability principles that reflect the unique nature of such damage. It is also essential to adapt the general rules of civil liability to the specific features of environmental harm, ensuring fair and effective compensation.

Methodology of the Study

The methodology adopted in this study is the descriptive and analytical approach. This method is used to examine the mechanisms of compensation as a result of establishing civil liability for environmental damage.

The approach involves describing the legal rules that govern this type of liability, analyzing them, and presenting relevant decisions where available. It allows for assessing the extent to which the expected goals align with actual legal outcomes.

The research is based on a thorough review of existing literature. It includes collecting information related to environmental damage compensation. The study refers to books, academic research, legal journals, court rulings, and studies that address this topic.

Structure of the Study

Based on the objectives of this research, the study has been divided into two main sections.

The first section discusses the concept of environmental damage that requires compensation. In the first subsection, the study defines the nature of environmental harm and outlines its legal conditions. In the second subsection, it explores environmental damage as a basis for establishing civil liability.

The second section examines the types of compensation for environmental damage. The first subsection focuses on in-kind compensation. The second subsection addresses monetary compensation for environmental harm.

Section One: Defining Environmental Damage That Requires Compensation

The growing spread of environmental pollution affects everything around us. It expands at an alarming rate, reaching all parts of the world. It has become a crisis that we helped create and accelerate by providing the conditions for its growth.

Scientists have been warning of the dangers threatening the environment for many years. These dangers now pose risks not only to nature but to humanity itself. Any harm that affects a person's body, property, reputation, or dignity is, under general legal principles, considered sufficient to establish liability.

Every person has the right to live in a safe and clean environment. Because of this, environmental damage has

attracted the attention of both scientists and legal scholars. They have tried to define the concept and explain its implications. The first part of this section will address the nature of environmental damage and its legal conditions, while the second part will focus on environmental damage as a basis for civil liability.

Subsection One: The Nature and Conditions of Environmental Damage

The concept of environmental damage requires careful legal analysis. It is not limited to harm inflicted on a single individual. Rather, it extends to elements of life that affect all living beings. It targets the core of the environment in which all species live[1]Environmental damage refers to present or future harm that affects any component of the environment. This harm may result from human activities or natural causes. It involves a disruption to the environmental balance, whether the source is within the affected area or external to it.

In general terms, damage can be understood as the harm caused by a range of natural or human actions. These actions alter the characteristics of the environment in a way that directly or indirectly exposes a group of individuals to risk. This risk may affect their bodies, property, or mental well-being. It may also cause harm to other living or non-living organisms.

The core idea behind environmental degradation lies in the damage inflicted on the essential vitality of environmental elements. In this context, harm is the outcome of destructive behavior. Its occurrence marks the completion of the conditions needed to establish environmental liability[2].

The concept of environmental damage has evolved over time. This evolution is closely linked to advances in technology and knowledge. Before the Industrial Revolution, environmental harm was limited to household waste and minor byproducts of basic human activity. It is well known that, up to the early eighteenth century, solar radiation was the only available energy source.

However, with the Industrial Revolution, as noted by Philippe Saint-Marc, the balance between humans and nature began to break down. Production became tied to the use of machines and the discovery of new energy sources. These sources were consumed at an increasing rate, which had a major impact on the natural environment. It led to widespread pollution through unknown industrial waste in earlier times. This waste became more diverse and appeared in vast quantities.

In the chemical industry alone, more than five million substances have been introduced—many of which affect the purity of air and oceans. Technical advances in hazardous industries, including chemical and nuclear production and fertilizer manufacturing, have brought undeniable risks. These industries produce millions of tons of waste with dangerous organic properties. This waste poses serious threats to both the environment and human health[3].

Legal scholars have differed in how they define harm. Each has used a term that varies slightly from the others. Some have defined harm as the injury a person suffers when one of their rights or legitimate interests is violated. Others have argued that recognized harm is the loss or reduction of a person's natural or financial rights. [4].

Some legal scholars have defined environmental harm based on its unique characteristics. This type of harm results from an attack on the environment or one of its elements. The environment is seen as a complex ecological system. The overlapping nature of environmental phenomena makes it difficult to clearly define environmental damage.

Many ecological processes occur in aquatic environments, which adds to the challenge of reaching a precise definition. These definitions vary depending on the elements and fields of the environment involved.

---

[1]Ahmed Mohamed Hashish, The Legal Concept of the Environment in Light of the Principle of Islamization of Contemporary Law, no edition, Dar Al-Kotob Al-Qanuniya, Arab Republic of Egypt, 2008, p. 163.

[2]Tariq Ibrahim Al-Dasouqi Attia, Environmental Security - The Legal System for Environmental Protection, Dar Al-Jamia Al-Jadida, Arab Republic of Egypt, 2008, p. 292.

[3]Mahmoud Ahmed Attia, Radiation Hazards between the Environment and Legal Legislation in the Arab World, 3rd Edition, Dar Al Fikr Al Arabi, Cairo, Arab Republic of Egypt, p. 29.

[4] Boufelja Abdelrahman, Civil Liability for Environmental Damage and the Role of Insurance, PhD Thesis, University of Tlemcen, Algeria, 2016.p. 65-66.

There are also forms of environmental damage caused by nuclear pollution. In this context, nuclear pollution is considered environmental harm when it leads to loss of life or damage to property[1].

Most of the definitions given for environmental damage cannot be confined to a single scope. They vary according to the diversity of environmental fields and the multiple sources of harm. For this reason, some scholars argue that environmental damage covers several key areas, including:

1. Harm affecting biological diversity.
2. Harm to natural landscapes, which leads to the loss of aesthetic values and recreational enjoyment, as well as the decline of tourism resources.
3. Damage that results in the loss of economic resources due to the destruction of environmental elements[2].

Regarding the conditions for compensable environmental damage, civil liability requires that actual harm results from a breach of obligations, particularly the duty to protect the safety of others. Such harm can only be subject to compensation if certain conditions are met. These conditions include that the environmental damage must be real, direct, and not previously compensated. This can be detailed as follows:

The environmental damage must be actual, meaning the harm claimed must have already occurred or its occurrence must be certain in the near future, even if its effects may be delayed over time. Definite damage differs from possible or potential damage, which does not qualify as future damage eligible for compensation. This latter type is considered hypothetical and is thus excluded by jurists and civil law commentators from compensation claims. This principle is reflected in the ruling of the International Court of Justice in the Chorzów Factory case, which held that speculative or uncertain damages cannot be taken into consideration.[3]

When this condition is met, there is no issue if the damage has already occurred. However, damage that is certain to occur in the future must also be compensated. For example, if a person suffers from a disability that prevents them from working, they should be compensated for the harm already suffered, such as loss of earnings and medical expenses. They should also be compensated for the harm that will inevitably occur in the future due to their inability to work. On the other hand, if the damage is future but has not occurred yet and can be avoided, prevention is preferable. In cases where the damage is only possible and may or may not occur, compensation is only granted if the damage actually materializes[4].

The damage must be direct. This means that a person is responsible for the harm they cause and for all immediate and exclusive consequences of their actions. They are liable for damages suffered by the claimant only if these damages occur directly, following the normal and natural course of events. It is essential that these results be prevented and that the causal link remains unbroken. This can be determined by assessing whether the damage would have occurred even if due care had been taken, or if the person was acting to fulfill a legal duty, or if the damage resulted from efforts to mitigate harm.

An example is the Waugh v. Mond case of 1961, where oil leaked from a chartered ship in Sydney harbor. The charterer did not expect the oil to ignite on the water; However, it caught fire due to maintenance work in the area. This caused significant damage. The court ruled that the respondent was not liable because the damage was not reasonably foreseeable"[5].

[1]Ahmed Abdel Karim Salama, Environmental Protection Law: An Analytical Study of National Systems and Agreements, First Edition, Scientific Publishing of King Saud University Press, Riyadh, Saudi Arabia, 1997, p. 499.
[2] Hamida Jamila, The Legal System of Environmental Damage and Compensation Mechanisms, no edition, Dar Al-Khaldouniya, Algeria, 2011, p. 75.
[3]Khalil Abdul Mohsen Khalil, Compensation in International Law and its Applications to Iraq, Master's Thesis, College of Law, University of Baghdad, Iraq, 1995, p. 27.
[4]Muhammad Ali Al-Badawi Al-Azhari, The General Theory of Obligations, Part One: Sources of Obligations, Al-Wahda Library, Fourth Edition, Tripoli, Libya, 2022 AD, p. 323.
[5]Majeed Hamid Al-Ankabi, Compensation Imposed on Iraq (Direct and Indirect Damage), Proceedings of the First Symposium on Compensation Imposed on Iraq, Al-Nahrain University, Center for International Law Studies, First Edition, Fourth Section, Baghdad, 2001, p. 2.

The damage must not have been previously compensated. A person cannot receive compensation more than once for the same harm. The purpose of compensation is to repair the damage, not to enrich the injured party at the expense of the polluter. This principle is fundamental and applies to all types of damage[1].

Section Two: Environmental Damage as a Basis for Civil Liability

Any activity that causes harm to the environment or its elements makes the responsible party legally accountable for their harmful actions affecting environmental resources. Civil law serves as the general legal framework aimed at remedying damages caused by harmful activities. The law seeks to repair such damages, either by eliminating the harm or reducing its effects.

Liability, in its broad sense, refers to accountability or legal obligation. It is a legal system that requires anyone who commits an error or unlawful act to compensate the harmed party for damages caused to their person or property. Thus, the harmful act establishes the legal link between the liable party and the injured party. It creates the obligation to compensate for any harm caused to others.

While general rules of civil liability have become well-established and straightforward in many legal systems, this is not the case for liability related to environmental damage. This is due to the relatively recent emergence of legal issues concerning environmental harm[2] To establish civil liability, its essential elements must be present: fault, damage, and the causal link. These elements can be detailed as follows:

First: Environmental Fault

Fault is the fundamental element in tort liability. Essentially, a person has the freedom to act and make choices, provided that their actions do not cause harm to others, their property, or their assets. However, if a person's unlawful act results in damage to another, that person becomes obligated to provide compensation.[3] Article 166 of the Libyan Civil Code defines fault by stating: "Any fault that causes harm to another obliges the person who committed it to provide compensation." [4]Most legislators have refrained from providing a formal definition of fault. Instead, they have left this task to jurists and legal scholars. This approach aligns with sound legislative policy, which advises against the legislator involving themselves in definitions that may vary depending on political tendencies, economic factors, and social conditions—all of which are subject to change. For instance, although the drafters of the French legislation did not define fault explicitly, they made a brief reference to the standard of fault in Article 1383, where mere negligence and lack of foresight were recognized as wrongful acts.

Let me know if you want it more detailed or simplified![5] Fault in the material sense consists of two elements:

1. **Transgression:**
This refers to a physical act, which the law considers as a deviation by the individual from their personal circumstances. It represents a breach of a legal duty, specifically the failure to exercise the necessary caution to avoid causing harm to others.
2. **Awareness:**
This element requires the individual to possess discernment. Fault cannot be attributed to a person who lacks awareness of their actions. The legislator has established awareness (discernment) as an essential component in the application of the theory of fault[6].

[1] Ibrahim Saleh Al-Sarayrah, The Adequacy of General Rules for Compensation for Environmental Damage in Jordanian Civil Law, Journal of Arts and Social Sciences, Sultan Qaboos University, 2015., p. 9.
[2]Ali Saidan, Environmental Protection from Pollution by Radioactive and Chemical Materials, First Edition, Dar Al-Khaldouniya for Publishing and Distribution, Algeria, 2008, pp. 328-329.
[3]Walid Ayed Awad Al-Rashidi, Civil Liability Arising from Environmental Pollution, Master's Thesis, Middle East University, 2012, p. 37.
[4]Libyan Civil Code, Official Gazette, General Administration of Law, Tripoli, Libya.
[5]Hassan Ali Al-Danoun, A Simplified Explanation of Civil Law, Error, Wael Publishing House, First Edition, Amman, Jordan, p. 63.
[6]Boufelja Abdel Rahman, the previous reference, p. 56.

The basis of liability is discernment, meaning awareness, which is the mental element of fault. The mere physical act of wrongdoing is not enough to establish fault. For fault to exist, the person who committed the wrongful act must be aware of their actions. There can be no liability without such awareness. Therefore, minors without discernment, the insane, those who are completely mentally incapacitated, and those who have lost their mental capacity due to temporary conditions such as intoxication, coma, illness, hypnotic sleep, or narcolepsy, cannot be held at fault because they lack awareness of their actions. [1]This is affirmed by Article 167 of the Libyan Civil Code in its first and second paragraphs, which states:

1. A person shall be held responsible for their unlawful acts whenever they are of sound mind.
2. However, if damage is caused by a person who lacks discernment and there is no other responsible party, or if compensation from the responsible party is unattainable, the judge may require the person who caused the damage to provide fair compensation, taking into account the circumstances of the parties involved.

Secondly: Environmental Damage Legal scholars agree that damage is harm inflicted upon a person due to an infringement of a right or a legitimate interest, whether this right or interest concerns the safety of their body, property, freedom, or honor. Damage thus represents the second essential element in environmental civil liability, whether contractual or tortious. It is not sufficient to establish civil liability solely based on fault; The fault must result in actual damage. Therefore, there can be no environmental civil liability without the existence of damage. Damage is considered the core of liability in general, as it serves as the initial trigger for the question of liability and the determination of who bears responsibility. In other words, damage is the harm caused to a person by violating a right or legitimate interest, whether material or moral[2]Environmental damage refers to present or future harm that affects any component of the environment. This harm results from human activity or natural causes and manifests as a disruption of the ecological balance, whether originating within the polluted environment or from external sources.

Thirdly: Causal Relationship The causal link is the central element on which traditional civil liability rests. It refers to the direct connection between the fault committed by a person and the resulting damage. This link represents the third pillar of liability. It is not enough that fault and damage exist; The damage must be a necessary and direct consequence of the fault. The elements of traditional liability are not complete unless all three pillars—fault, damage, and causal relationship—are present. Proving the causal link in cases of damage liability falls on the injured party. Due to the difficulties involved, the injured often struggles to establish this link, which may lead to evasion of liability and the victim's inability to obtain compensation for the harm suffered.[3] Therefore, for contractual liability to be established, it is not enough that there is a fault on the part of the debtor and damage to the creditor. It is also necessary that the fault be the cause of the damage. The law presumes the existence of a causal link between the fault and the damage and does not require the creditor to prove this connection. The debtor, however, may avoid liability by disproving the causal link between their fault and the damage. This can be done by showing that the damage resulted from an external cause beyond their control[4]

Section Two: Types of Compensation for Environmental Damage

Compensation for environmental damage is a broad and constantly evolving concept. This is because the legal domains related to the environment, which these rules embody, cannot be fully anticipated in advance, as both the world and the environment are constantly changing. Pollution may directly harm a person or their property, giving them the right to seek compensation from the party responsible. However, environmental damage has a distinct nature, making it difficult to assess compensation. Any harm inflicted on others, whether natural persons or legal entities, requires compensation proportional to the damage caused.

Undoubtedly, redressing environmental harm and compensating for it is a matter of significant scholarly interest. Environmental damages are challenging for judges to compensate due to the involvement of multiple factors in causing harm. This harm affects the environment and nature in all its elements. Moreover, the full effects of this damage

[1]Abdul Razzaq Al-Sanhouri, Al-Wasit in Explaining Civil Law, Part Two, Dar Al-Shorouk Al-Ula, Cairo, Arab Republic of Egypt, 2010 AD, p. 708.
[2]Ahmed Abdel Rahman, Sources of Obligation, Dar Al Nahda for Publishing and Distribution, Cairo, Arab Republic of Egypt, 1997, p. 313.
[3]Boufelja Abdel Rahman, the previous reference, p. 74.
[4]Muhammad Ali al-Badawi al-Azhari, the previous reference, p. 223.

require a certain period to manifest. Therefore, it is necessary to explore methods of compensation for environmental damage that judges may rely upon when handling compensation disputes.

The Libyan Law No. (15) of 2003 regarding the Protection and Improvement of the Environment does not contain detailed provisions on liability rules or compensation for environmental damage. Likewise, Algerian Law No. (03/10) lacks specific texts concerning liability and compensation for environmental damage, except for some phrases found in certain articles. For instance, paragraph (4) of Article (2) of the Environmental Law states that "restoration of damaged environments" is among the objectives of this law. Also, Article (25) of the same law provides that "when damage results from the operation of a facility not listed classified among installations... the governor excuses the operator and sets a deadline to take the necessary measures to remove the remaining dangers and damages"[1] This contrasts with French law, which includes provisions regulating this through responsibility Law No. (757) of 2008 on environmental liability. This law was issued to implement the European Directive (35) of 2004 concerning the prevention and remedy of environmental damage.

As for Egyptian environmental law, it explicitly refers compensation matters to general rules. Clause (28) of Article One, which defines compensation, states that it "means compensation for damages resulting from pollution incidents, subject to the application of the provisions of the Civil Code and the substantive rules set forth in the international convention to which the Arab Republic of Egypt is a party..."[2] Given the absence of any provisions in Libyan law specifying how compensation or restoration of environmental settings should be handled, and the lack of reference to special rules, it becomes necessary to resort to the general rules of civil liability. These serve as the overarching legal framework aimed at filling such gaps and providing the greatest possible compensation for environmental damages.

However, considering the circumstances and factors that have shaped the development of civil liability rules, along with the particular nature of environmental harm, the task faced by the judiciary appears challenging. This difficulty lies in how to apply general rules to such damages, which creates obstacles to obtaining compensation.

Referring to Article (174) of the Libyan Civil Code regarding types of compensation, it states:

1- The judge determines the method of compensation according to the circumstances. Compensation may be made in installments or as a fixed income, and in both cases, the debtor may be required to provide security.
2- Compensation may be monetary. However, the judge may, depending on the circumstances and upon the injured party's request, order the restoration of the original condition or rule to perform a specific act related to the wrongful deed as a form of compensation."

From this article, it is clear that compensation takes two forms: either in kind or monetary, as follows:

Section One: Compensation in Kind for Environmental Damage

Compensation in kind is considered the best method of compensation. It aims to repair the damage by restoring the situation to its previous state. Compensation in kind is often possible in contractual obligations but is usually difficult to grant in tort liability cases. Nevertheless, it is conceivable in some tort cases—for example, ordering the demolition of a wall that blocks light from a neighbor's property constitutes compensation in kind.

Compensation in kind involves obliging the responsible party to restore the condition as it was, meaning the responsible party must remove the damage. If compensation in kind is impossible or insufficient, the judge may, based on the general rules of compensation, order monetary compensation. The judge may not substitute monetary compensation for compensation in kind, which involves removing the damage, unless removing the damage is impossible, would impose excessive hardship on the responsible party, or cause severe harm. In such cases, the judge may decide on monetary compensation.

[1] Law No. 03/10 of July 19, 2003, relating to environmental protection within the framework of sustainable development, Official Gazette of the Republic of Algeria, No. 43.
[2] Egyptian Law No. 4 of 1994 on Environmental Protection, Official Gazette, Issue No. 5.

This process requires the judge to balance the conflicting interests of the parties involved[1]This is affirmed by Article 166 of the Libyan Civil Code, which states: 'Any fault that causes harm to another obliges the person who committed it to provide compensation [2]Here is a formal, accurate, and academically styled translation of the provided Arabic text, crafted to appear as if written by a skilled human translator. The structure is kept clear and straightforward, avoiding complex sentences, and suitable for publication in high-indexed journals:

"This corresponds to Article 163 of the Egyptian Civil Code. In contrast, the Algerian Civil Code addresses this type of compensation in Article 164, which states: 'The debtor shall be required, after being formal given notice in accordance with Articles 180 and 181, to perform his obligation in kind, whenever such performance is possible[3].

However, the question arises: Is compensation in kind always applicable?

Compensation in kind is not applicable in every case. There are exceptions to its application, including:

1. Compensation in kind may be impossible from a human or ethical perspective. For example, physical or moral harm, such as when someone inflicts injury or attacks another's honor. In such cases, compensation can only be monetary, since compensation in kind would be unacceptable on humanitarian grounds.
2. The debtor may be required to provide monetary compensation when in-kind performance is impossible in contractual obligations. This applies if the subject matter is a specific item that has been destroyed, unless the debtor proves an external cause.
3. In cases where in-kind compensation is relatively impossible for the debtor in obligations to perform or refrain from an act. This refers to situations where the debtor must personally fulfill the obligation but is prevented by a personal obstacle. For instance, a painter who commits to painting a specific artwork but is injured before completion. Likewise, in tort liability, it is impossible to return stolen goods if the thief has lost them.

Moreover, in-kind compensation cannot violate the principle of separation of powers. For example, if the executive authority licenses a factory's operation but it causes harm to neighbors, the judiciary cannot order the factory's closure as in-kind compensation for the neighbors. This would infringe on the executive's jurisdiction. In such cases, compensation is limited to monetary damages, unless the factory operated without a license or exceeded the granted license's limits[4].

Compensation in kind in the environmental context can take one of two forms: either by stopping harmful activities or by restoring the situation to what it was before the environmental damage occurred.

First: Stopping Harmful Activities

Measures aimed at removing harm relate directly to the damage itself. Therefore, it is important to distinguish between means intended to eliminate the harm and those aimed at removing the source of that harm. Preventive measures focus on addressing the source to eliminate it. Stopping illegal activity, as a form of compensation, serves a preventive role that applies only to the future.

If damage has already occurred, halting the harmful activity does not compensate for it. Instead, it prevents further damage from happening. For example, if a factory discharges pollutants into a water source, the factory is obligated to cease this harmful action to prevent recurrence. This obligation does not compensate those already affected by the damage; Rather, compensation for past harm is assessed separately from this duty.

Stopping harmful activity does not necessarily require prior harm to others. This requirement becomes relevant only when the request to stop unlawful activity is coupled with a claim for compensation. Compensation is granted only for

[1] slaveAl-Mun'im Faraj Al-Sadda, Sources of Obligation, Dar Al-Nahda Al-Arabiya, Cairo, Arab Republic of Egypt, 1992 AD, p. 565.
[2] Libyan Civil Code, Official Gazette, General Administration of Law, Tripoli.
[3] Article 164 of the Algerian Civil Code, Official Gazette.
[4] Damana Mohammed, Compensation in kind for environmental damage: The philosophy of compensation in Algerian legislation, Studies Journal of the University of Laghouat, Issue 32, October 2024, Algeria, pp. 142-143.

harm that has actually occurred. In such cases, the judge may rule on both claims simultaneously: ordering the cessation of the harmful activity and awarding compensation to the injured party for the pollution[1].

It is important to note that the suspension of harmful activities may be temporary or permanent, as follows:

a) Temporary Suspension of Polluting Activities

Some industrial and commercial activities may be temporarily halted until the necessary measures and requirements for practicing certain polluting activities are completed. This includes repairs needed for classified facilities to prevent future environmental damage or to avoid an imminent environmental disaster.

This principle is supported by Article (85), Paragraph (2) of Law No. (03/10), which states that if there is no need to carry out construction or preparation work, the judge may set a deadline for the convicted party to comply with the obligations arising from the relevant regulation. The civil judge may also order the suspension of activities causing pollution until all necessary repairs and preparation work are completed to ensure the facility operates under optimal conditions.

This approach creates a balance between conflicting interests. It protects individuals from imminent harm while allowing the operator of the polling activity to continue working under safe and suitable conditions. This benefits the operator first and, subsequently, the economy[2].

b) Permanent Session of Polluting Activities

Industrial and commercial activities often pose a threat to the environment due to the use of polluting technologies. This situation requires state intervention to regulate such activities. Therefore, these activities are subject to prior permits issued by the relevant administrative authority.

Legally and administratively, the exercise of polluting activities is considered lawful. Consequently, a ruling ruling ordering the permanent cessation of a polluting activity faces several obstacles.

The first obstacle is that such a ruling would involve the judiciary interfering with powers legally assigned to the administration, which constitutes a clear violation of the principle of separation of powers.

The second obstacle is that civil courts have jurisdiction only over disputes within their legal scope. Since some polluting activities are classified as regulated facilities, they fall entirely under administrative law concerning licensing and closure procedures.

In countries with a unified judicial system, this issue does not arise. To avoid overstepping the boundaries of authority, permanent closure of a project falls outside the jurisdiction of civil courts. However, temporary suspension remains within their scope[3].

Second: Restoring the Situation to Its Condition Before the Environmental Damage

Restoring the environment to its original state before the damage occurred means returning the affected environmental setting to how it was. Often, a ruling to stop the source of harm is accompanied by an order to restore the situation to its prior condition regarding the damage caused.

[1]Oujit Frouja, Environmental Damage, Master's Thesis, Mouloud Mammeri University of Tizi Ouzou, Faculty of Law and Political Science, Algeria, 2016, p. 43.
[2]Boufelja AbdelAl-Rahman, the previous reference, p. 175.
[3]Saeed Al-Sayed Qandil, Mechanisms for Compensating Environmental Damage, A Study of Legal Systems and International Agreements, Dar Al-Jamia Al-Jadida for Publishing and Distribution, Alexandria, Arab Republic of Egypt, 2004, p. 19.

This restoration acts as a supplementary penalty imposed on the responsible party, in addition to the primary penalty, which may be criminal or administrative. It represents the only environmental remedy that is most suitable for addressing environmental damage.

This approach has led many civil liability agreements and national laws to consider restoration as a preferred method for compensating environmental harm. It is also regarded as the best option for the environment itself because it addresses the pollution directly and returns the environment to its former state. This is preferable to monetary compensation, which may not be directed toward restoring the environment[1] There are specific means to restore the situation to its original state. These include repairing the damaged environment or rehabilitating it. When restoration to the original condition is impossible, it is appropriate to establish a new site that meets the same conditions as the damaged area, either nearby or at some distance.

While it may be conceivable to compensate human harm by paying a sum of money, the damage caused to the environment—such as the destruction of ecological systems—cannot be addressed in the same way.[2]It can only be fixed by restoring the situation to what it was, and it is known as ecological systems.[3]This is confirmed by Article 3 of Algerian Law No. 03/10 concerning the protection of the environment within the framework of sustainable development. The article outlines the key principles upon which the law is based. These include the principle of non-degradation of natural resources, which requires avoiding harm to essential resources such as water, air, soil, and subsoil. It also affirms the principle of substitution, which calls for replacing environmentally harmful activities with alternatives that pose less risk, even if the alternatives are more costly—provided that the cost remains proportionate to the environmental values being protected. Lastly, the principle of preventive action is emphasized, which prioritizes addressing environmental harm at its source by using the best available techniques at an economically reasonable cost[4].

However, an important question arises regarding the means of restoring the original state.

The Lugano Convention defines restoration measures as "any reasonable means intended to rehabilitate or repair the damaged environmental components, as well as any measures aimed at creating an equivalent condition, provided this is reasonable and feasible in relation to the affected environmental elements.""[5],This text shows that the primary goal of ordering the restoration of the original state—as a form of in-kind compensation—is to return the polluted site to the condition it was in before the environmental harm occurred, or to bring it as close as possible to that state. At the same time, the cost of restoring the site should not exceed its actual value before the damage took place. Therefore, excessive expenses for restoration should be avoided.

Restoration can take two main forms:

1. Repairing and rehabilitating the polluted environment. This may include cleaning the area, planting new trees to replace those lost due to pollution, or introducing new species to replace birds or animals that died.
2. Re-establishing suitable living conditions risks in areas threatened by environmental.

However, returning the situation to its original state is not always possible. Practical or technical obstacles may arise, especially in cases involving bodily harm to humans or damage to personal property. In such situations, monetary compensation becomes necessary. This applies, for example, when people inhale toxic gases or when animals or birds die as a result of pollution[6].

Section Two: Monetary Compensation for Environmental Damage

[1] Youssef Nour El-Din, Compensation for Environmental Pollution Harm, PhD Thesis, University of Mohamed Khider, Biskra, Algeria, 2012, p. 316.
[2] The study of organisms in their natural habitats.
[3] Ibrahim Saleh Al-Sarayrah, the previous reference, p. 10.
[4] Faisal Boukhalfa, Types and Means of Compensation for Environmental Damage, Journal of Real Estate and Environmental Law, Volume 7, Issue 13, Algeria, 2019, p. 23.
[5] Lugano Convention on Jurisdiction and Enforcement of Judgments in Civil and Commercial Matters, 1995.
[6] Faisal Boukhalfa, the previous reference, p. 25.

Compensation for environmental pollution may take the form of money. This is the most common form of compensation in tort claims in general. Monetary compensation refers to a sum of money paid by the party responsible for the harm to the party affected by pollution.

When it is impossible to restore the situation to its original state, it is more appropriate to order the liable party to pay financial compensation. This means awarding a sum of money to repair the damage suffered.

The judge resorts to monetary compensation when the environmental harm has already occurred and it is no longer possible to reverse its effects[1];The unique nature of environmental damage—both in its temporal and geographical scope—has created significant challenges in determining the appropriate method of compensation. In order to assess monetary compensation, it is first necessary to evaluate the damage. This task is particularly difficult in cases involving pure environmental harm.

Financial compensation for environmental damage includes all losses affecting the natural environment. It covers the costs required to repair, restore, or compensate for the harm, destruction, and degradation caused by irrational or excessive use. It also includes the expenses related to assessing the extent of the damage.

Monetary compensation is considered a secondary option available to the judge. In some cases, compensation is awarded in kind; In others, it is awarded in the form of money, depending on the specific circumstances[2] Some legal scholars hold that judges typically award compensation in the form of money. This applies whether the liability arises from a contract, a tort, or another legal source. However, compensation may take non-monetary forms in certain cases. For example, in defamation and insult claims, the judge may order the publication of the verdict in newspapers as a form of moral compensation. This publication is considered non-monetary redress for the harm suffered. In some cases, compensation may be awarded in kind. A judge may order the demolition of a wall built arbitrarily by a property owner to block light and air from a neighbor. Likewise, if a person unlawfully demolishes a lower floor and refuses to rebuild it, the judge may order the sale of the property to someone willing to reconstruct it.

To study monetary compensation for environmental harm, it is necessary to examine both how this value is assessed and the challenges involved in doing so. These are addressed as follows:

First: Assessing the Monetary Value of Environmental Damage

Monetary compensation is considered a secondary form of redress, used only when restoring the original condition is no longer possible. It must correspond to the scale of environmental harm. In fact, it should go beyond that, ensuring a level of compensation capable of addressing potential future pollution caused by the polluter's negligence[3].

It is difficult to encompass all the elements involved in monetary compensation. Many challenges confront the judge, who is obliged to award compensation when the physical restoration of the damage is not possible. Environmental and natural elements are impossible to fully capture in terms of all costs and financial amounts related to their economic value. The estimated compensation often exceeds what a judge can determine in monetary terms, even with the assistance of experts to assess the environmental damage. The complexities involved in such evaluation are considerable. Environmental resources are part of the economic cycle and constitute a major contributor to the national economic development of any country. Given their economic value, it becomes challenging to assign a precise monetary assessment to these elements. This is supported by Article 174, paragraph two, of the Libyan Civil Code, which states: "Compensation shall be assessed in money; however, depending on the circumstances and upon the injured party's request, the judge may order restoration of the situation to its previous state, or may rule the performance of a specific act connected to the unlawfully deed, as a form of compensation.""[4] Corresponding to Article 170 of the Egyptian Civil Code, scholars have proposed two methods for assessing environmental damage: the unified assessment and the lump-sum assessment. These methods will be examined in some detail.

[1] Al-Mun'im Faraj Al-Sadah, the previous reference, p. 55.
[2] Hamida Jamila, the previous reference, p. 314.
[3] Samia Qarja, Civil Liability for Environmental Damage in Algerian Legislation, Tajsir Journal for Research and Studies, Volume 2, Issue 1, Algeria, 2022, p. 118.
[4] Libyan Civil Code, Official Gazette, General Administration of Law, Tripoli.

1. Unified Assessment of Environmental Damage: The unified assessment involves evaluating the costs necessary to restore the environment to its original state. This process is often difficult to determine precisely, especially in cases of pure environmental damage. Therefore, a quasi-actual value can be established based on market prices for certain elements and situations that closely resemble the case under evaluation. The core principle of this approach is to estimate the reasonable cost required to return the affected environmental elements to their previous condition or to a state close to that before the damage occurred[1] This type of assessment is based on assigning commercial values to the polluted natural elements and resources. It involves calculating the costs of damage to the natural wealth. For example, French courts ruled against a contractor responsible for water pollution. The contractor was fined a symbolic amount of one franc and ordered to pay full compensation for the damage, which was estimated at 25,000 French francs[2] Due to the difficulty of assigning a direct monetary market value to natural elements and their resources, it is possible to establish approximate values. This can be done by referencing market prices for similar elements or cases that closely resemble the polluted condition presented before the court. To estimate natural elements in monetary terms, several methods are used:

1. **Market Value of the Natural Ingredient:** This is a direct monetary method based on the market value of the natural element. It depends on the use of these natural resources and elements. This approach depends on the utility price derived from real estate values, which ultimately results in a material valuation of the environment.
2. **Based on Future Use Potential:**This method focuses on the possibility of utilizing these resources in the future. It does not depend on actual current or future use of the asset concerned.

The unified estimation of environmental damage offers advantages by allowing a monetary valuation of natural resources that generally lack market prices. Accordingly, this method serves as a means to assign value to these resources and to prevent their loss[3].

2. Lump-Sum Assessment of Environmental Damage:

This method is based on preparing legal tables that specify the common value of natural elements. These values are calculated using data provided by environmental experts. This approach is applied in French legislation through specialists in environmental law.

For example, the Forest Law stipulates that anyone who cuts down or burns forest trees shall be fined. The fine is determined according to the number of hectares of damaged or burned trees.

Regarding pollution that affects a watercourse both longitudinally and laterally, monetary compensation is calculated based on the extent of pollution along the length and width of the water body. Specifically, compensation is set at one franc per meter along the length of the watercourse. The pollution across the width of the same watercourse is calculated at half a franc per meter.

These represent standardized computational criteria for compensation, as detailed in the lump-sum compensation tables:

1. **Number of Hectares:**This measure applies when calculating monetary compensation for pollution damage to forest trees, such as burned or destroyed forests. The value per hectare of damaged or burned forest is fixed at 100 dollars.
2. **Cubic Meter:**This unit is used to calculate compensation for pollution affecting marine and land areas, such as oil contamination. The contaminated cubic meters are calculated according to a specified unit value.
3. **Linear Meter and Square Meter (Width):**These units are used to estimate compensation for pollution affecting rivers in length and width. The compensation for pollution along the length of the watercourse is one franc per meter, while the width pollution is assessed at half a franc per meter.
4. **Quantity of Pollutant Released:**This criterion is applied to estimate monetary compensation for water pollution and damage to aquatic resources. The weight of oil or toxic substances spilled into the water is calculated, with

[1]Faisal Boukhalfa, the previous reference, p. 27.
[2]Boufelja AbdelAl-Rahman, the previous reference, 179.
[3]Yasser Mohamed Farouk El-Meniawy, Civil Liability Arising from Environmental Pollution, Dar Al-Jamia Al-Jadida, Mansoura, Arab Republic of Egypt, 2008, pp. 413-414.

compensation set at 100 dollars per ton of pollutant.[1] Among the laws that have adopted this method of assessing environmental damage is American law. Since 1982, US coastal and fisheries authorities have established tables to evaluate environmental elements. These include plants, animals, and even the amount of sand removed from polluted shorelines. This system helps determine the compensation owed by the party responsible for damaging or destroying these resources. A similar approach is also applied in Alaska.

However, the question arises: what are the challenges involved in calculating monetary compensation for environmental damage? And when should this compensation be assessed?

To address the first question, scholars widely agree that assigning monetary value to environmental damage is difficult. Environmental elements harmed by pollution are typically public goods. They cannot be seized or claimed as private property. Therefore, they often hold no direct market value because they lie outside commercial transactions and the traditional market system.

This situation has led polluters to deny that damaging the environment constitutes compensable harm. Some jurists even argue that such damage does not warrant any compensation. When courts do grant compensation, it is often symbolic. For a long time, recognizing environmental harm faced obstacles due to the difficulty of assigning it a monetary value.

For example, if a river is polluted, how should the damage be evaluated? Should it be based on the destruction of the fish population? Or on the costs required to clean the river from pollutants? What about the losses suffered by fishermen who relied on the river? And how can one estimate the economic loss resulting from tourists avoiding the area?

Likewise, if a forest is destroyed, how should the damage be assessed? Should it reflect the total natural value of the forest? Or the market value of the trees? Or the value of the extracted timber? What about the living organisms in that forest and their natural value?

In most cases, the value is ultimately linked to the benefits these elements provide to humans. This often leads to relying on real estate value or other tangible economic measures for compensation[2].

The Lugano Convention, in its Articles 2 and 7, along with the European Directive on Environmental Offences in Articles 1 and 2, defined the concept of compensable damage. This includes death, bodily injury, and damage to property. However, the convention excluded certain categories. It ruled out facilities engaged in the activity itself, as well as property located within such facilities that falls under the supervision and control of the operator.

Notably, the convention explicitly recognized the principle of compensation for harm caused to the environment as such. This type of harm is referred to as pure environmental damage.

There is no doubt that assessing financial compensation for harm to a person or their property is relatively straightforward. By contrast, estimating environmental damage in monetary terms presents greater difficulty. However, these challenges cannot justify the denial of compensation for pure environmental harm. This category of damage has a distinct nature that makes its financial assessment particularly complex[3].

It is worth noting that assessing damages in monetary terms requires identifying a specific date for the creation of the obligation on the part of the liable party in favor of the injured party. Jurists have disagreed over how to determine this date.

1. One group of jurists supports the first date, which is the day the harmful act occurred, even if the damage had not yet been materialized. They argue that the injured party's right to claim compensation arises only when all elements of liability are fulfilled. According to this view, both the date of the wrongful act and the date of the damage are relevant.

[1] Youssef Nour El-Din, the previous reference, p. 332.
[2] Anwar Juma Ali Al-Tawil, Arab Republic of Egypt, 2012, p. 23.
[3] Saeed Al-Sayed Qandil, the previous reference, p. 24.

However, this position has faced criticism. The date of the harmful act may help to identify the responsible party, but it does not exclusively mark the beginning of the injured party's right to compensation.

2. Another group of jurists supports the second date, which is the day the damage actually occurs. This view better protects the rights of the injured party's heirs, especially in cases where the person dies before their legal right to compensation is established. According to this opinion, the occurrence of the damage clearly marks the beginning of the debtor's obligation. Still, it is important to note that most jurists favor the date the damage took place as the starting point for the injured party's right. However, the actual amount of compensation is not determined until the judgment is issued.

As for the second part of the question, concerning the timing of determining the amount of compensation for environmental damage:

The time the judge considers to assess and define the damage in its final form—thus issuing a ruling in favor of the injured party—is usually the date of the judgment. The general rule is that the appropriate time to determine the damage, its scope, and its components is the date on which the court delivers its decision. This is because, by that time, the damage is typically fully realized and clearly defined.[1] However, the judge may not be able to determine the amount of compensation at the time of issuing the ruling. In such a case, the injured party has the right to reserve the option to request a future reassessment of the compensation value. This principle is affirmed in Article (173) of the Libyan Civil Code. The article states: "The judge shall determine the extent of compensation for the damage suffered by the injured party in accordance with Articles (224–225), taking into account the relevant circumstances. If it is not possible at the time of the judgment to determine the compensation definitively, the judge may preserve the right of the injured party to request a reassessment within a specified period.

In conclusion, there is a need to search for additional legal mechanisms that complement compensation for environmental damage. These mechanisms must be able to capture all aspects of harm, while also recognizing its diffuse nature and gradual development. This requires careful and detailed legal analysis.

Compensation may take two forms: in-kind or monetary. Monetary compensation can include halting polluting activities. In this context, it becomes clear that the Libyan legislator's position is lacking and inconsistent. There is no dedicated law regulating environmental compensation, nor is there an explicit reference to general legal rules.

There is a strong connection between the general principles of environmental law and the achievement of human security. This relationship has led the Libyan legislator to incorporate these principles into many legal texts. These principles have diverse dimensions that are critically important in addressing environmental risks that threaten human security in all its forms.

However, these efforts remain insufficient unless applied in a serious and proper manner. The realization of human security depends on effective implementation by individuals, as well as by public and private institutions.

CONCLUSION:

Through our study of the topic of compensation for environmental damage as a form of protection for the Libyan economy, it has become clear that this topic is worthy of significant attention and scholarly investigation. There is a pressing need to formulate new legal rules that are better suited to the nature of environmental harm. Traditional legal frameworks have proven inadequate to address this modern type of damage.

We have observed that the harm resulting from environmental pollution—what is referred to as environmental damage—has a distinct character and unique features that set it apart from other types of harm. Most environmental damages are indirect, which often excludes them from compensation under conventional rules. This leads us to argue in favor of compensating all forms of damage caused by environmental pollution, whether direct or indirect, even if doing so deviates from the general principles of liability.

[1] Mustafa AbdelAl-Hamid Ayyad, The Involuntary Issue of Obligation in Libyan Civil Law, Benghazi, Garyounis University Publications, 1990, pp. 115-116.

We also conclude that the issue of compensation for environmental damage is of critical importance due to its potential to reduce the risks and burdens that such damage imposes on states. There appears to be a shift in the foundation of liability: the focus is moving toward specific performance—particularly the restoration of the environment to its original state—as the primary form of compensation. Monetary compensation, then, becomes secondary. This means that the guiding rule in environmental cases is restoration before repair.

However, restoring the environment to its original condition is not an easy task. It is demanding, especially in the absence of accurate scientific and technical data. Environmental disasters can also be so widespread that restoring the affected areas or returning rights to their rightful holders may no longer be feasible. In theory, the judge can rely on experts to assess the situation and overcome the practical challenges, but in practice, the judge's ability to do so is limited by the complexities of the scientific issues involved.

Following this study and the findings presented, we have arrived at a number of conclusions and recommendations, which are outlined above.

First: Findings

1. The specificity of civil liability for environmental harm lies in the unique nature of environmental damage, which is often indirect. This creates challenges in proving the causal link between the damage and its perpetrator.
2. Environmental damage is typically gradual and long-term. This characteristic affects the limitation periods for claims seeking compensation.
3. Proving legal interest in environmental damage claims is difficult, as the environment is considered a shared heritage for humanity. This has hindered judicial decisions in environmental cases and can be explained by the limited expertise and in-depth knowledge of environmental matters among judges.
4. Traditional civil liability rules have become inadequate and fail to protect the harmed parties generally, and workers specifically, within the scope of environmental damage.
5. Lybian law lacks specific provisions regarding compensation for environmental damage. Therefore, general liability rules are applied by default.

Second: Recommendations

1. It is essential to benefit from the experiences of leading countries in enhancing environmental insurance systems by enacting and updating laws that develop this important aspect of civil liability and its enforcement mechanisms.
2. Civil liability rules for environmental damage should be developed to facilitate compensation claims against those responsible for harm to the environment or its elements.
3. There is a need to draft specific legal provisions to define the types of environmental damage, clearly distinguishing between direct and indirect damage to the environment.
4. Special compensation mechanisms must be established for environmental damage and pollution, emphasizing the role of expert testimony.
5. The Libyan legislature is urged to expedite issuing legal texts that activate procedural mechanisms enabling the right to information at both public and private levels.
6. The establishment of environmental damage compensation funds is necessary, alongside activating their role and increasing their financial resources within the state budget, to provide effective protection for victims of environmental harm.
7. The principle of prevention being better than cure should be strengthened in environmental protection by promoting environmental awareness and culture among society members. Merely having environmental laws, organized administration, and strict judiciary is insufficient to confront environmental risks. The goal is not only to compensate for environmental damage through monetary payment—which is often ineffective or only partially effective—but also to reduce environmental violations.
8. Judges specialized in environmental civil disputes must be trained and qualified.
9. Environmental cases should be given an urgent status to allow for prompt control and mitigation of environmental damage.

References:

1. Abdel Naim Faraj Al-Sadda, Sources of Obligation, Dar Al-Nahda Al-Arabiya, Cairo, Egypt, 1992.

2. Damana Mohammed, "Specific Performance Compensation for Environmental Damage: The Philosophy of Compensation in Algerian Legislation," University of Laghouat Studies Journal, Issue 32, October 2014, Algeria.
3. Awjit Farouja, Environmental Damage, Master's Thesis, Mouloud Mammeri University, Tizi Ouzou, Faculty of Law and Political Science, Algeria, 2016.
4. Boufelja Abdelrahman, Civil Liability for Environmental Damage and the Role of Insurance, PhD Dissertation, University of Tlemcen, Algeria, 2016.
5. Said El-Sayed Qandil, Mechanisms for Compensating Environmental Damage: A Study in Legal Systems and International Conventions, New University Publishing and Distribution House, Alexandria, Egypt, 2004.
6. Youssef Nour El-Din, Compensation for Environmental Pollution Damage, PhD Dissertation, Mohamed Khider University, Biskra, Algeria, 2012.
7. Ibrahim Saleh Al-Saraira, "The Sufficiency of General Rules in Compensation for Environmental Damage in Jordanian Civil Law," Journal of Arts and Social Sciences, Sultan Qaboos University, 2015.
8. Faisal Boukhalfa, "Types and Methods of Compensation for Environmental Damage," Real Estate and Environmental Law Journal, Vol. 7, No. 13, June 2019, Algeria.
9. Samia Qarja', "Civil Liability for Environmental Damage in Algerian Legislation," Tajseer Journal for Research and Studies, Vol. 2, No. 1, Algeria, 2022.
10. Abdel Razzaq Al-Sanhouri, Al-Waseet in Explanation of Civil Law, Part Two, First Edition, Dar Al-Shorouk, Cairo, Egypt, 2010.
11. Ahmed Mohamed Hasheesh, The Legal Concept of the Environment in Light of the Principle of Islamicization of Contemporary Law, Unpublished edition, Legal Books House, Egypt, 2008.
12. Tarek Ibrahim Al-Dasouki Atiya, Environmental Security – Legal System for Environmental Protection, New University House, Egypt, 2008.
13. Mahmoud Ahmed Atiya, Radiation Hazards Between Environment and Legal Legislation in the Arab World, Third Edition, Dar Al-Fikr Al-Arabi, Cairo, Egypt.
14. Ahmed Abdul Karim Salama, Environmental Protection Law: An Analytical and Fundamental Study of National Systems and International Conventions, First Edition, King Saud University Press, Riyadh, Saudi Arabia, 1997.
15. Hamida Jamila, Legal System of Environmental Damage and Its Compensation Mechanisms, Dar Al-Khaldounia, Algeria, 2011.
16. Khalil Abdul Mohsen Khalil, Compensations in International Law and Their Applications in Iraq, Master's Thesis, Faculty of Law, University of Baghdad, 1995.
17. Mohammed Ali Al-Badawi Al-Azhari, General Theory of Obligations, Part One: Sources of Obligation, Al-Wahda Library, Fourth Edition, Tripoli, Libya, 2022.
18. Hussein Al-Dannoun, Simplified Explanation of Civil Law: Fault, Dar Wael Publishing, First Edition, Amman, Jordan, 2006.
19. Waleed Aayed Al-Rashidi, Civil Liability Arising from Environmental Pollution, Master's Thesis, Middle East University, 2012.
20. Ali Sidan, Protection of the Environment from Pollution by Radioactive and Chemical Substances, First Edition, Dar Al-Khaldounia for Publishing and Distribution, Algeria, 2008.