Examining the Legal Status of Environmental Law in Iran with Emphasis on Pollution in the Pars Special Economic Zone (South Pars)

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Abstract

The aim of the present study is to examine the legal status of environmental law in Iran, with a particular emphasis on pollution in the Pars Special Economic Zone (South Pars). Considering the significance of human life and its direct correlation with environmental issues, environmental problems have become one of the greatest challenges of contemporary life. As a result, this issue has garnered attention from international organizations, governments, non-governmental organizations (NGOs), civil society groups, and especially citizens. Findings indicate that gas and petrochemical industries in Asaluyeh emit various types of pollutants into the environment. Moreover, the presence of hazardous pollutants such as heavy metals and polycyclic aromatic hydrocarbons (PAHs) in the coastal sediments of the South Pars region has been identified in multiple studies. In addition, research on marine organisms such as mollusks has shown extremely high and toxic concentrations of heavy metals including cadmium, lead, arsenic, strontium, tin, silver, antimony, and molybdenum. Other investigations have also revealed significantly elevated levels of heavy metals in the trees of the Asaluyeh area. Asaluyeh County, known as the beating heart of Iran's economy and the hub of the largest oil refineries and petrochemical industries, is regarded as the most prominent city in gas production in the country—an accomplishment that instills pride in every Iranian. Nevertheless, the refinery flares in the region, which also constitute one of the country's main sources of income, have led to severe environmental pollution in the area.

Keywords: Environment, Legal Status, Pollution, Pars Special Economic Zone (South Pars)

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1. Introduction

With the development of various phases of the South Pars Special Economic Zone (Asaluyeh), environmental pollution has become a serious challenge threatening both local residents and the workforce in this large industrial-economic region. For years, while efforts have focused on expanding industrial activities and increasing production capacities, regional administrators have also been urged to prioritize environmental issues and the health of those living and working in the area. However, neglect of these concerns has led to consequences that are gradually surfacing, causing significant worry among the local population. In addition to respiratory illnesses caused by air pollution, the interaction of sulfur and nitrogen oxides with

atmospheric moisture during rainfall leads to acid rain, which not only damages the region's flora and fauna but also contaminates soil and groundwater resources. Furthermore, acid rain significantly contributes to the corrosion of the area's industrial equipment. In general, the expansion of different phases of the Pars Special Zone is inversely related to the health of the environment.

Environmental law, among the branches of law, does not have a long historical legacy, as environmental concerns and the necessity of preserving and protecting it were not traditionally part of legal discourse in human societies. However, with the intensification of environmental degradation and pollution, coupled with the influence of global public opinion that began shaping in the second half of the 20th century, the foundation for international cooperation to preserve the environment was laid. Consequently, it is said that the right to a healthy environment reflects the emergence of a relatively new element in the list of human rights. This intrinsic human right gradually gained recognition in public international law from the 1970s onward (Jankuv, 2019).

Given the increasing pollution and degradation of the environment, along with uncontrolled population growth and depletion of natural resources—which have led to successive environmental crises—laws, regulations, and environmental rights serve as essential and reliable mechanisms for the implementation of rational management laws and the realization of environmental objectives and programs. The South Pars gas field and its associated facilities, including gas extraction, condensate production, storage, export, and processing plants, comprise 24 phases. To assess the environmental harms of these projects, identifying activities and processes during both construction and operational phases is critically important. Therefore, oil and gas projects, regardless of their scale, are required to prepare an Environmental Impact Assessment (EIA) report in accordance with the guidelines of the Supreme Council for the Environment. Project execution is permissible only after approval of this report. Nationally, environmental law is regarded as an important and independent branch of public law. It begins with Article 50 of the Constitution and has gradually evolved with the ratification of regulations related to environmental impact assessment.

The awareness of planners, decision-makers, economic and industrial stakeholders, managers in various non-governmental sectors, and environmental activists regarding the legal status of environmental issues—especially given that some environmental matters have a criminal dimension—can play a crucial role in fostering a culture of environmental protection and enhancing the integration of development and environmental concerns. Given the essential link between human life and environmental issues, environmental challenges have become the greatest obstacle of contemporary life. As such, the issue has garnered the attention of international organizations, governments, NGOs, civil society groups, and most importantly, the general public. Accordingly, this topic has been widely discussed by researchers and planners. The aim of the present study is to investigate the status of environmental law in Iran, with a particular emphasis on pollution in the Pars Special Economic Zone (South Pars) (Taghizadeh Ansari & Faeghi Rad, 2010).

In every country, depending on the importance and priority that authorities place on protecting and preserving the environment and natural resources, social, cultural, economic, and historical capacities are developed to raise public awareness and environmental consciousness, ultimately encouraging environmental protection. In Iran, as a developing country—especially in industrial and refinery cities such as Asaluyeh—the environment has not yet found its rightful place within the legal framework. Although relatively effective environmental protection laws and regulations have been enacted since 1974, the intensification of developmental activities and increasing levels of environmental pollution and degradation underscore the need for more efficient laws. Moreover, existing laws and regulations face significant implementation challenges. Environmental law encompasses rules from multiple domains, each with its own legislative history, but historically was not collectively labeled as "environmental law." This is because various components of the environment, especially natural resources, were previously governed by separate laws and managed by their own organizations and institutions. For instance, the exploitation of aquatic resources, especially Caspian Sea fisheries, and forest use in northern Iran have a longer legislative history. In Iran's legal literature, issues related to the protection and utilization of renewable natural resources were traditionally defined as entirely exploitable assets, contrary to accepted international norms that regard natural resources as part of the environment. Legislative efforts in fisheries date back to the early 20th century (1927 onwards), and in forestry to the 1930s, while legislation specifically addressing environmental protection only began in the 1970s.

Bushehr Province is rich in oil and gas resources, which grants it a critical role in Iran's economy, to the extent that the province—especially the Asaluyeh region—is recognized as the country's energy hub. Since the largest oil and gas reserves

are located in Asaluyeh, this region is more exposed to environmental pollution than other parts of Bushehr Province due to the presence of oil and gas refineries and petrochemical plants.

Undoubtedly, these pollutants have devastating and irreversible effects on both humans and the environment. For years, Asaluyeh's residents have suffered from this pollution, forced to inhale toxic emissions and live with its environmental consequences. Asaluyeh is industrially strong and brings considerable economic returns to the country. However, these benefits are not shared with its residents, who instead bear the full brunt of pollution's painful impact.

General legal principles—including environmental law principles—go beyond ordinary statutes and rules. These principles play a foundational role in shaping legal judgments and in strengthening and developing legal systems overall. Even if not codified, legal principles maintain their value and influence in society and among jurists by virtue of legal custom, much like the principles of pacta sunt servanda (respect for agreements) and the no-harm rule (la zarar), which serve as guiding principles for protective legal norms in the field of individual rights.

This study seeks to answer the question: What are the environmental challenges and legal mechanisms for addressing them in the South Pars region? How can general principles of environmental law positively influence the protection of the environment in South Pars? How are environmental protection measures—particularly those concerning water resources—represented in the Vision Document and general policies of the Islamic Republic of Iran? What legal strategies have been developed for compensating environmental damage caused by pollution?

2. Methodology

The present study employs a descriptive-analytical research method. This research examines the nature and foundation of environmental laws within the Iranian legal system by collecting data from authoritative domestic legal texts using descriptive methods and content analysis. It is essential to consider that content analysis is merely a tool; it is a research technique for making replicable and valid inferences from data concerning their context. As a research technique, content analysis includes specialized procedures for processing scientific data. The objective, as with all research techniques, is to provide understanding, novel insight, an accurate depiction of reality, and guidance for action.

In this method, a comprehensive examination of the subject of environmental law within Iran's public law framework is necessary and vital.

2.1. Findings

This section presents the findings derived from library research and document analysis in the area of environmental claims and related legal materials, followed by a conclusion based on the identified findings.

Part One: Sources of Environmental Claims

Sources of environmental claims against the state refer to the legal foundations that may be utilized in filing such claims. The most significant sources are undoubtedly international environmental law documents. This section provides a concise examination of specialized environmental law sources that may serve in initiating legal actions against the state. Similar to the bases of environmental claims, these sources can be classified into two categories: national (domestic) and international sources.

Section One: Sources of Environmental Claims Against the State in Iranian Law

Domestic legal systems provide certain sources that authorize the filing of environmental claims against the state. Alongside dedicated sources, there also exist general legal foundations that support the initiation of environmental lawsuits and establish liability for environmental degradation. This subsection briefly reviews the sources that directly or indirectly enable such claims. Notably, some sources may serve as direct legal bases for filing environmental claims against the state, while others may assist in formulating defenses in such cases.

A) Constitution of the Islamic Republic of Iran

The constitution of any country reflects its fundamental values and overarching principles. Accordingly, governmental actions must conform to the written principles of the constitution and serve its objectives. Failure to do so may result in government liability. The Constitution of the Islamic Republic of Iran addresses environmental matters in several articles and provides guidelines for the protection, preservation, and proper utilization of environmental resources. Key articles include:

1. Article 50

This article states that environmental protection is a public duty in the Islamic Republic of Iran, as both present and future generations should enjoy a growing social life within a healthy environment. Economic and non-economic activities that result in environmental pollution or irreversible degradation are prohibited.

2. Article 48

According to this article, the exploitation of natural resources and the distribution of national income and economic activities among provinces and regions of the country must be free of discrimination. Each region should receive appropriate investment and resources in accordance with its development potential and needs.

3. Article 45

This article stipulates that public wealth and assets—including abandoned or unused lands, mines, lakes, seas, rivers, public waters, mountains, valleys, forests, marshlands, natural woodlands, grazing lands without ownership, heirless property, unclaimed assets, and public property recovered from usurpers—are to be administered by the Islamic government in accordance with public interests. The law specifies the manner and conditions of their use.

4. Article 153

This article prohibits any treaty that results in foreign domination over the natural and economic resources, culture, military, or other affairs of the country.

As can be seen, environmental matters are addressed both explicitly and implicitly in the Constitution. A close examination of the relevant articles demonstrates that the framers of the Constitution of the Islamic Republic of Iran paid special attention to environmental issues, emphasizing both the protection and sustainable use of natural resources, and even restricting negotiations over them.

B) Islamic Penal Code

The Islamic Penal Code is one of the deterrent legal instruments against acts leading to environmental destruction. Certain articles of this code explicitly and implicitly prohibit environmentally destructive behavior and prescribe penalties for such acts. Notable provisions include:

1. Article 688

Under Article 688 of the Islamic Penal Code, any act considered a threat to public health—such as contaminating drinking water, unsanitary disposal of human or animal waste and hazardous substances, dumping toxic materials in rivers, littering in public spaces, unauthorized animal slaughter, or using untreated wastewater for agricultural purposes—is prohibited. Perpetrators, unless subject to harsher penalties under specific laws, face up to one year of imprisonment.

According to Note 1 of this article, it is the responsibility of the Ministry of Health, the Department of Environment, and the Veterinary Organization to determine whether an act constitutes a threat to public health or causes environmental pollution, and to report such offenses.

Note 2 defines environmental pollution as the release or introduction of foreign substances into water, air, soil, or land in such quantities that alter their physical, chemical, or biological characteristics in a way that is harmful to humans, other living beings, plants, artifacts, or buildings.

Although the main text of the article uses the term "public health" rather than "environment," the proximity of the term “environmental pollution” to “threat to public health” in the same provision clearly indicates the legislator’s intention to prohibit environmental pollution. Since environmental degradation poses a threat to public health, the term “public health threat” is used as the leading concept (Kooshki, 2009).

2. Article 690

According to Article 690 of the Islamic Penal Code, anyone who, by means such as excavation, wall-building, altering boundary markers, obliterating property lines, trenching, well-digging, tree planting, or cultivation, seeks to demonstrate illegal possession of lands—including cultivated or fallow agricultural lands, nationalized forests and pastures, mountains, orchards, plantations, water sources, springs, natural waterways, national parks, agricultural and livestock facilities, barren lands, or properties owned by the state, its affiliated companies, municipalities, endowments, or public trusts designated for public use—shall be punished with imprisonment from one month to one year. The same penalty applies to those who act without authorization from the Department of Environment or other competent authorities in ways that lead to environmental or natural resource destruction, or who engage in encroachment, trespass, harassment, or obstruction of rights in the aforementioned areas.

The court is obligated to order the restoration of the previous condition, removal of trespass or obstruction, or cessation of illegal possession as appropriate.

Regarding the interpretation of this article and its connection to environmental lawsuits against the state, it should be noted that the article prohibits actions that result in the unlawful seizure of environmental assets—particularly natural features such as forests and streams. Thus, the article clearly forbids encroachment on environmental components. The provision is addressed to all individuals, whether natural or legal persons, public or private, as the legislator uses the general term "any person" at the outset.

In the author's view, this article goes further than Article 688 in protecting the environment, displaying greater sensitivity. While Article 688 addresses actual destruction, Article 690 addresses acts prior to destruction. It not only prohibits the destruction of shared environmental heritage but also criminalizes unauthorized possession of environmental resources, as such actions contradict the public's right to a healthy environment. Whether the offender is a private individual or a legal entity—state-owned or otherwise—the prohibited act is the same. While the prescribed penalty of imprisonment typically applies to natural persons, the article nonetheless offers a legal basis for initiating environmental claims against state institutions, state-owned companies, or government agencies.

It must be emphasized that, within domestic law, environmental claims against the state generally refer to lawsuits against a faulty governmental body or state-owned company—not the state in the sense of sovereignty or the executive branch, although in exceptional cases it may include the latter as well.

3. Article 686 of the Islamic Penal Code

According to this article, anyone who knowingly and intentionally, and in violation of the Green Space Development Act, cuts down or causes the destruction of trees referenced in Article 1 of the aforementioned Act shall, in addition to compensating the damages incurred, be sentenced to discretionary imprisonment ranging from six months to three years, or a fine of three million to eighteen million Iranian rials.

As the legislator uses the phrase "any person" at the beginning of this article, the prohibition also applies to governmental bodies. In the case of violations, the responsible public agency, in addition to being required to compensate for damages, is subject to the statutory penalties. Article 1 of the Green Space Development Act also explicitly prohibits the cutting of any tree with a trunk diameter exceeding 50 centimeters without authorization. Therefore, Article 686 of the Islamic Penal Code may be considered one of the principal legal sources that can substantiate environmental claims against the state.

4. Article 685 of the Islamic Penal Code

Pursuant to this article, any person who, without legal authorization, cuts down or destroys a date palm tree by any means shall be sentenced to three to six months of imprisonment, a fine ranging from 1.5 million to 3 million rials, or both penalties.

5. Article 680 of the Islamic Penal Code

This article provides that any person who, in violation of the law and without proper authorization, hunts or captures protected wild animals shall be sentenced to imprisonment from three months to three years, or a fine ranging from 1.5 million to 18 million rials.

6. Article 679 of the Islamic Penal Code

According to this article, anyone who intentionally and without necessity kills, poisons, mutilates, or causes the death of a halal (permissible) animal belonging to another person, or animals whose hunting is prohibited by the government, shall be sentenced to imprisonment from 91 days to six months or a fine ranging from 1.5 million to 3 million rials.

As can be observed, the legislator in the Islamic Penal Code has specifically addressed the destruction of the natural environment and the unauthorized hunting of protected species. In addition to requiring compensation for environmental damages, both fines and imprisonment have been prescribed for violators.

While the Islamic Penal Code does not explicitly address state actors in environmental violations, the general terminology used throughout these provisions—particularly in defining offenders—suggests that such prohibitions are not limited solely to natural persons. In many large-scale environmental violations, legal entities, particularly in economic and developmental projects, are more often the responsible actors. Therefore, it is more reasonable to interpret that legal persons, whether private or public, including state entities, are subject to these environmental regulations. From this perspective, the Islamic Penal Code may serve as a legitimate source for establishing the legal basis of environmental claims against state institutions.

B) The Hunting and Fishing Act (Enacted 1967, Amended 1996) and its Executive Bylaw

To conserve and protect wildlife and the environment, the legislator established the Department of Environment (DOE) through the Hunting and Fishing Act. The law explicitly recognizes the DOE as a legal entity under the supervision of the Supreme Environmental Protection Council. The legislator has granted the DOE the authority to issue hunting and fishing permits, with appropriate restrictions. Furthermore, it obligates state agencies to cooperate with and seek input from the DOE in implementing development projects.

This authority enables the DOE to act as a plaintiff in environmental lawsuits. Thus, if any government agency or ministry, through the execution of development projects or the issuance of administrative directives, causes environmental harm, the DOE may, based on Article 26 of the executive bylaw of this Act and within the scope of its legal powers, request the competent court to mandate the cessation of unlawful activity or the removal of illegal encroachments.

C) The Fair Water Distribution Act (Enacted 1982)

According to Article 46 of this Act: “Pollution of water resources is prohibited, and the responsibility for prevention and protection of water resources is assigned to the Department of Environment.”

By entrusting water protection to the DOE, the law enables this organization, as a legal entity, to file environmental claims against water polluters in competent courts—whether the accused is a governmental body, private company, or natural person.

D) The Law on Reclaimed and Coastal Lands (Enacted 1975)

Under Article 11 of this law: “Anyone who, with the intention of unlawful possession, encroaches upon coastal lands owned by the state, or lands within the maritime domain, lakes, or wetlands, or causes their destruction by extracting sand, gravel, soil, or stones, shall be sentenced to misdemeanor imprisonment of up to three years and dispossession. The Ministry of Agriculture and Natural Resources is obligated to immediately remove the encroachment via the Forest Guard or its agents and shall report the incident in writing to the local prosecutor’s office for judicial investigation and criminal prosecution. Any structures erected on the encroached land shall, by court order, be confiscated or demolished in favor of the government.”

Given the inclusive term "anyone" used at the beginning of the article, this provision can also serve as a practical legal basis for environmental claims against government-affiliated companies or agencies.

E) The Law on the Protection of the Sea and Border Rivers from Oil Pollution (Enacted 1975)

According to Article 2 of this law: “Polluting border rivers, internal waters, or the territorial sea of Iran with oil or any kind of petroleum mixture—whether by ships, offshore drilling platforms, artificial islands (fixed or floating), pipelines, installations, or storage tanks on land or at sea—is prohibited. Violators shall be punished with misdemeanor imprisonment ranging from six months to two years or a fine ranging from one million to ten million rials, or both. If the pollution is caused by negligence or carelessness, the minimum fine shall apply.”

This law establishes clear liability for pollution originating from both state and non-state sources, particularly in marine and coastal environments.

F) Note to Article 42 of the Budget Law of 1992

According to this note, beginning in 1992, all road construction and maintenance projects are subject only to royalty payments and are exempt from sand and gravel extraction fees. The Ministry of Roads and Transportation is also a member of the committee responsible for determining the authorized entities for extracting ordinary sand, gravel, and clay. Priority is given to extraction for road construction and maintenance.

Any extraction of riverbed or coastal sand, gravel, or clay without prior authorization from this committee constitutes illegal encroachment on public property. Offenders will be subject to legal prosecution and must compensate for damages incurred.

H) Regulation on Riverbeds and Buffer Zones of Rivers, Streams, Watercourses, Marshes, Natural Ponds, and Water Supply, Irrigation and Drainage Networks (Enacted 2000)

According to Article 13 of this regulation, “Ministries, governmental institutions and companies, municipalities, and affiliated organizations and entities are obliged to inquire about the riverbeds and buffer zones of rivers, streams, watercourses, marshes, and natural ponds prior to executing their own projects and issuing the necessary permits. Any form of encroachment into riverbeds and buffer zones is conditional upon prior written consent from the Ministry of Energy. Violators of this article shall be prosecuted and punished in accordance with applicable regulations.” As seen, this provision, especially with regard to the obligation of state agencies to inquire about the legal boundaries of natural features, can undoubtedly serve as a key legal basis for environmental litigation.

I) Fair Water Distribution Act (Enacted 1982)

According to Note 3 of Article 2 of this Act, "Any form of construction, excavation, or interference in the riverbeds, natural streams, public canals, watercourses, marshes, natural ponds, and also in the legal buffer zones of seas and lakes (natural or reservoir) is prohibited unless authorized by the Ministry of Energy."

J) Radiation Protection Act (Enacted 1989)

Under Article 18 of this Act, it is a criminal offense to use radiation sources or engage in activities involving radiation without taking the required protective measures, such as using shielding equipment, adhering to protective procedures, or complying with the license's limitations. Violations include failure to use protective gear, failure to follow protective guidelines, mishandling radiation sources, and employing individuals under the age of 18 or those medically barred from exposure to radiation. The law provides penalties including imprisonment and monetary fines.

K) Environmental Health Regulation (Enacted 1992)

Article 2 of this regulation states that any act considered a threat to public health is prohibited, and violators of public health regulations shall be legally prosecuted. Article 3 further stipulates that contaminating drinking water is forbidden. Accordingly, if a government-owned production unit pollutes drinking water, the act would be deemed illegal under this regulation and could serve as grounds for filing an environmental lawsuit against the state actor.

L) Law on the Prevention of Air Pollution

According to Article 1 of this law, all governmental institutions and all natural and legal persons are required to comply with its provisions in order to cleanse and protect air from pollutants.

Article 2 declares that any act causing air pollution is prohibited. "Air pollution" is defined as the presence of one or more pollutants—whether solid, liquid, gaseous, or radioactive—in the open air, in quantities and durations that degrade air quality to the detriment of human health, other living organisms, plants, property, or buildings.

Given the inclusive language referencing "all natural or legal persons" and "all institutions and agencies," this law is a powerful source for initiating environmental claims against the state. Specifically, it enables legal action against government-owned factories that cause air pollution.

Article 4 of the law prohibits the use of motor vehicles emitting pollutants above the legal limit. Unfortunately, the use of nonstandard public transport vehicles emitting excessive smoke is widespread, thereby opening the possibility of legal action against public transportation agencies under this provision.

According to Article 12 of the law, any noise pollution exceeding permissible levels is also prohibited. Hence, if a government-run factory causes excessive noise pollution, this article provides a legal basis for complaint and prosecution.

M) Law on Environmental Protection and Enhancement (Enacted 1974, Amended 1992)

According to Article 9 of this law, any act that causes environmental pollution is prohibited. "Environmental pollution" is defined as the discharge or mixing of foreign substances into water, air, soil, or land to the extent that it alters their physical, chemical, or biological properties in a way that is harmful to humans, other living beings, plants, cultural heritage, or buildings.

The law also defines certain environmental crimes. Article 14 designates the Department of Environment (DOE) as the complainant or private claimant in environmental crimes outlined in the law. Article 1 establishes the DOE as an independent legal entity with financial autonomy. Given the authority vested in the DOE to initiate legal actions, it can sue government bodies if they are found responsible for causing environmental damage.

Section Two: Sources of Environmental Claims Against the State in International Law

Sources of environmental claims against the state in international law refer to the legal instruments that states or environmental organizations can invoke in initiating such claims to establish rights and demand enforcement. These sources enable plaintiffs to file suits before competent courts. Conversely, the defendant state or government-affiliated company may also use these sources in its legal defense. Courts adjudicating international environmental disputes must consult international environmental law sources in evaluating the claim and ultimately issue rulings based on those standards. Hence, identifying legal sources is a crucial step in filing a lawsuit against a state.

Part Two: Elements of State Liability for Environmental Damage in Domestic and International Law

The possibility of initiating environmental claims against a state arises from the legal establishment of state liability due to environmental harm. Regardless of what kind of legal actions this liability may allow, identifying the elements of state liability for environmental destruction is critical to framing the legal claim.

As with other legal topics addressed in this article, these elements must be analyzed in both domestic and international contexts. In this part, "state liability" refers specifically to the obligation to compensate for environmental damages. However, this is not the only type of liability discussed in this article. The primary aim is to emphasize the legal responsibility of states *prior* to the occurrence of environmental damage. That is, the goal is to explain the legal mechanisms that allow a claim to be filed against a state suspected of causing potential future environmental harm.

The article extensively explores this type of responsibility in the context of preventive or protective legal remedies. In this section, however, we focus on the traditional framework of state liability for environmental harm, which necessitates examining the following elements under both domestic and international legal systems:

1. **Damage**
2. **Wrongful Act**
3. **Causal Link**

Section One: Environmental Damage

Since the earliest periods of human history, mankind has been in interaction—and often conflict—with nature. Following the advancement of science and the transformations brought about by the Renaissance and the emergence of European anthropocentrism, the process of environmental degradation gradually began. Consumerism and profit-centered ideologies governed these emerging paradigms. By the 18th and 19th centuries and leading up to World War II, states and public opinion began to take notice of environmental degradation. Non-instrumentalist views of nature started to emerge. Humans had come to dominate nature, no longer subject to its whims. From the 1970s onward, a form of environmental consciousness began to take shape, prompting governments to address environmental issues, thereby giving rise to state obligations for environmental protection. Consequently, domestic legal systems began to incorporate the concept of state liability for environmental damage. In the 1990s, the notion of sustainable development was introduced, integrating environmental dimensions into development discourse. Development was now expected to occur with respect for nature—placing a limitation on previously dominant ideologies of consumption and profit (Mashhadi & Keshavarz, 2012).

A) Environmental Damage in Iranian Law

1. Definition of Environmental Damage in Iranian Law

With the enactment of the *Environmental Protection and Enhancement Act* in 1974, a modern legal perspective on the environment began to form in Iran. Prior to that, environmental regulations existed only in a fragmented form. After the Islamic Revolution and the adoption of the Constitution of the Islamic Republic of Iran, Articles 45 and 50 addressed the previously absent environmental provisions, thereby creating a comprehensive legal framework for environmental protection—a position that has remained largely uncontested. This development reflects the growing legal attention to environmental concerns. Subsequently, specific laws were passed to address different types of pollution, including the *Fair Water Distribution Act* (1982), the *Law for the Protection of Agricultural Land Use*, and the *Waste Management Act* (2003) (Mashhadi & Keshavarz, 2012).

One of the primary challenges facing environmental protection in Iran stems from legislative shortcomings. For example, in the past, pedestrians were required to prove the fault of the driver in traffic accidents to establish liability. Over time, the law evolved to presume the driver's liability to better protect pedestrians. Similarly, in environmental matters, legislation must evolve to match the gravity of the damage, and liability for environmental harm should be based on strict liability, not fault. In other words, anyone who causes harm to the environment should be held liable—without requiring proof of intent or negligence. For instance, imposing a mere 2 million rial fine for killing an endangered Asiatic cheetah is ecologically ineffective, especially when parts of such animals can fetch much higher prices on the black market. This is referred to as the "commodification of crime."

Moreover, although a draft bill on soil pollution was submitted to Parliament in 2009, it has yet to be enacted. Today, Iranian soil is illicitly trafficked to Gulf countries. The problem of dust pollution also directly relates to soil degradation.

2. Types of Environmental Damage Recognized in Iranian Law

As evident from the definition of environmental damage, such harm exists in various forms, each of which must be examined for its legal claimability:

a) Actual and Potential Damage

Legal literature sometimes refers to this distinction as present and future harm. However, the terms *actual* and *potential* are more precise. In environmental incidents, not all consequences materialize immediately; some effects manifest later. For instance, the depletion of the ozone layer represents a clear case where environmental harm materializes over time, with inevitable and unavoidable impacts on Earth. This distinguishes potential environmental harm from merely hypothetical future damage, making it as claimable as actual harm. In Iranian law, by analogy to Article 5 of the *Civil Liability Act*, one can infer the legislature's intent to permit the recovery of such damages (Fahimi, 2012).

b) Direct and Indirect Damage

Another classification involves direct versus indirect harm. Under Iranian law, only damage that results directly from a harmful act is claimable; compensation for indirect harm is generally not permitted. This principle can be deduced from Article 520 of the *Civil Procedure Code* and Article 4 of the *Executive Bylaw on Mandatory Motor Vehicle Insurance*.

3. Conditions for Claiming Environmental Damage

Given the range of potential environmental damages, not all are legally compensable under the current Iranian legal system. For a damage claim to be enforceable, certain conditions must be met:

a) Compensability

As will be elaborated later, financial compensation is just one form of environmental remedy. In fact, financial compensation is generally considered secondary to restorative justice, such as restoration to the original state. Environmental harm often has both material and immaterial dimensions. While monetary compensation may address physical damage, immaterial damages—such as the destruction of scenic landscapes due to the construction of a dam—are harder to redress. For example, the drying of the Zayandeh Rood River in Isfahan has had a profound emotional impact on local residents. Though such harm is intangible, financial penalties serve two functions: (1) facilitating environmental rehabilitation, and (2) deterring future violations (Fahimi & Mashhadi, 2011, 2014).

b) Uncompensated Damage

Environmental damages are only claimable if they have not already been remedied. If the government has already taken steps to restore the environment after causing harm, it cannot be compelled to pay compensation as well. Similarly, if a defendant has been ordered to pay financial damages, they cannot also be compelled to restore the harm. However, when compensation serves as a criminal penalty, it does not conflict with the legal obligation to restore the environment—though both remedies cannot serve as simultaneous legal enforcement mechanisms.

c) Property Status and Economic Value of Damage

Under Iranian civil liability law, to claim compensation, the subject of the harm must be economically valuable and owned by another party. This can be inferred from Article 1 of the *Civil Liability Act*. In the case of environmental harm, this condition is met, as Articles 49 and 50 of the Constitution classify the environment as public property—possessing economic value and being legally ownable under Article 140 of the *Civil Code*.

B) Environmental Damage in International Law

There is no substantive difference between environmental damage under international and domestic law. However, due to the transboundary nature of certain environmental harms, some forms of damage acquire international significance. Marine pollution is one of the most prominent types of environmental damage. This explains why many international environmental conventions focus on oceans, seas, and water resources. Given that waterways are crucial for communication and transportation, global concern over marine pollution is well-founded.

States maintain the most interaction with each other in this domain, which justifies the need for international order and cooperation. International law addresses marine pollution and related environmental damage in areas such as shipping, oil extraction, waste dumping, seabed operations, and even land-based activities that impact marine ecosystems, as well as atmospheric pollutants affecting marine environments. Numerous international conventions have been ratified to regulate these matters, and the most important of these conventions are discussed in the section on state liability and environmental litigation (Fahimi & Mashhadi, 2011, 2014; Taghizadeh Ansari & Faeghi Rad, 2010).

Section Two: Environmentally Harmful Acts

The significance of environmental law lies in the recognition that the right to a healthy environment is one of the fundamental human rights. Without access to clean water, fresh air, unpolluted soil, and a safe natural environment, other rights—such as freedom of speech or thought—lose their relevance, as they become secondary in importance. Key examples of environmental harm include water and air pollution, the excessive exploitation of non-renewable resources such as oil and freshwater, noise and chemical pollution from waste, visual pollution (e.g., the high-rise buildings around Mecca), and light pollution, which interferes with bird migration and threatens reproduction and survival. For example, sea turtles are fatally disoriented by artificial lights near roads. Similarly, noise pollution in industrial cities violates the right to auditory health. Constructing a highway through a forest in France disrupted the forest ecosystem; certain bird species, which hunt at night, could no longer do so due to vehicle light pollution. Deforestation removes natural flood barriers, thereby increasing the damage and death toll from floods.

A) Environmentally Harmful Acts in Iranian Law

The second element of civil liability in Iranian law is the commission of a harmful act. State liability for environmental destruction is not exempt from this principle. Thus, a plaintiff filing an environmental lawsuit against the government must prove that a harmful act was committed by a government agency.

In the context of state responsibility for environmental harm, a harmful act can be either positive (an act) or, in some cases, negative (an omission), provided that a causal link can be established between the state's omission and the environmental damage. This causal relationship will be discussed in the following section. In this section, we aim to identify examples of harmful acts under Iranian environmental law (Fahimi & Mashhadi, 2014; Faryadi, 2008).

It is important to note that the identification of harmful acts under domestic law is influenced by the legal basis chosen by the legislature for state civil liability. According to Article 11 of the *Civil Liability Act*, the government is only civilly liable for harmful acts committed in its administrative (non-sovereign) capacities and only on the basis of fault. This severely limits the scope of actionable harmful acts, restricting them to unlawful behaviors. In contrast, international treaties have moved toward recognizing state liability for *lawful but harmful* acts. In Iranian law, proving the actor's fault is generally equated with proving the unlawfulness of their action.

Nonetheless, based on domestic laws and regulations, various examples of environmentally harmful acts can be identified, including:

- Cutting or uprooting forest trees and burning saplings or trees (Article 42 of the *Forest and Rangeland Protection and Exploitation Act*, enacted 1967);
- Unauthorized grazing of livestock and dry farming around dams and reservoirs (Article 43 of the same Act);
- Burning vegetation in fields or gardens near forests without permission (Article 45 of the same Act);
- Physical, chemical, or biological alterations of soil, water, or air due to agricultural pesticide use or unauthorized construction (Article 6 of the *Hunting and Fishing Act*, enacted 1974);
- Emitting pollutants into the environment by factories or polluting workshops (Article 11 of the same Act);
- Unauthorized hunting and fishing (Article 8 of the same Act);
- Pollution of border rivers and internal waters with oil or oil mixtures (Article 13 of the *Marine and Border River Protection Act*);
- Noise pollution (Single Article of the *Act on Aggravated Penalties for Offending Motorcyclists*);
- Encroachment on coastal and riverine buffer zones (under the *Law on Reclaimed and Coastal Lands*);
- Dumping garbage in public environments (under the *Act on the Prevention of Venereal and Infectious Diseases*);
- Use of radiation sources or operations involving radiation without safety measures (under the *Radiation Protection Act*).

B) Environmentally Harmful Acts in International Law

Actions undertaken by states within their own territory may have transboundary environmental impacts, thereby giving rise to international state responsibility. Furthermore, some acts committed by states beyond their territory may also produce international environmental effects. Some of these actions are prohibited under international law, while others—though not explicitly prohibited—may nonetheless result in state liability if they cause environmental harm, as agreed upon in international treaties.

For example, the use of biological weapons that destroy crops, vegetation, and soil—ultimately leading to famine and environmental degradation—has been prohibited under the *1925 Geneva Protocol*. The *Additional Protocol to the Geneva Conventions* further bans attacks on food sources, agricultural areas, livestock, drinking water facilities, and irrigation systems when these are used to support civilian populations.

The international trade and trafficking of endangered plant and animal species are also considered environmentally harmful acts and are punishable under international law. Moreover, the release and marketing of genetically modified organisms (GMOs) have been categorized as high-risk activities under the *2004 EU Directive*, due to their potential environmental consequences.

The *1982 United Nations Convention on the Law of the Sea* (UNCLOS) emphasizes environmental protection in marine activities such as drilling, dredging, and waste dumping—activities that could lead to environmental damage. This convention obligates states to exercise due diligence and take all necessary measures to prevent marine pollution.

These examples illustrate how international legal instruments recognize a wide array of acts—both unlawful and harmful—as establishing grounds for international environmental claims and the liability of states.

Part Three: The Causal Link Between the Harmful Act and the Environmental Damage

A) Causal Link Between Harmful Act and Environmental Damage in Iranian Law

In filing a civil liability claim against the state, merely proving that a harmful act was committed and that environmental damage occurred is insufficient. The claimant must also prove the existence of a *causal relationship* between the harmful act and the environmental harm. This is a general principle of the Iranian civil liability system and applies equally to state liability for environmental damage. Here, "cause" refers to an action without which the environmental harm would not have occurred, and whose occurrence is intrinsically linked to the resulting damage. Thus, cause and damage are interdependent in both positive and negative senses.

However, even when a causal link is established, the law exempts the liable party in certain exculpatory conditions. These include *force majeure*, necessity, benevolence, legitimate defense, warning, consent, and coercion—any of which the defendant may invoke to mount a defense.

An additional issue in establishing causation in environmental damage claims is identifying the *liable cause* in cases involving multiple concurrent causes. In Islamic jurisprudence, various theories exist to address this, including the theories of the "dominant cause," "subsequent cause," "preceding cause," and "most effective cause." Iranian law aligns primarily with the theory of the *most effective cause* (Articles 332 of the Civil Code and Articles 363–366 of the Islamic Penal Code), while Article 364 of the Islamic Penal Code supports the "preceding in effect" theory.

B) Causal Link Between Harmful Act and Environmental Damage in International Law

The requirement to establish a causal link in attributing environmental harm to a state's action is not unique to domestic law—it is also a fundamental principle of international law. In international law, proving causation is one of the essential elements of state liability. However, in the case of certain types of *transboundary pollution*, establishing causation can be particularly challenging due to the multiplicity of pollution sources, the transnational nature of the harm, and its indirect character (Katouzian & Ansari, 2008; Kooshki, 2009; Mashhadi & Keshavarz, 2012).

For example, in a case filed in France by a group of beekeepers, it was claimed that numerous bees had died after feeding on flowers contaminated due to an explosion at a nearby chemical factory. However, the French court rejected the claim due to the inability to demonstrate a *direct causal link* between the explosion and the death of the bees.

3. Conclusion

A review of domestic laws and regulations on environmental protection reveals a significant legislative silence where the state is the agent of environmental degradation. Most environmental laws in Iran are designed to prevent environmental harm by private individuals and primarily address *criminal penalties* for such acts. In contrast, the entities with the authority and capacity to undertake large-scale projects that affect environmental health are usually government agencies or private actors operating with governmental authorization.

According to Articles 50, 48, 45, and 153 of the *Constitution of the Islamic Republic of Iran*, the responsibility for protecting the environment has been explicitly assigned to the state. These articles grant the government control over the administration and utilization of natural resources and prohibit the signing of agreements that would allow foreign control over these resources.

Despite the constitutional provisions emphasizing state responsibility for environmental protection, Articles 688, 690, 686, 685, 680, and 679 of the *Islamic Penal Code* are silent regarding harmful environmental acts committed by the state. Any extension of these provisions to state entities relies on the general language of the law—an interpretative approach that judges often dismiss with little consideration.

Moreover, even where the law prohibits environmental harm by both natural and legal persons, there is frequently no *explicit enforcement mechanism*. For example, Article 1 of the *Law on the Prevention of Air Pollution* prohibits all individuals and entities from engaging in actions that pollute the air, yet fails to specify legal penalties for violations.

The *legal foundation chosen by the Iranian legislature* for state civil liability is not conducive to environmental protection. Civil liability is examined only in terms of harm caused to individuals, and Article 11 of the *Civil Liability Act* attributes responsibility primarily to government employees—except where the damage results from faulty equipment or facilities. Moreover, when damage arises from *sovereign acts*, the state is not obligated to provide compensation, and *there is no mention of environmental harm or damage to nature* in these provisions.

In such a legal vacuum, state defendants in court are likely to be acquitted on the grounds that (1) no individual was harmed and (2) the state was acting in a sovereign capacity. This legal framework offers no meaningful protection for the environment and demands fundamental reform. The legislature should adopt a liability model based on *strict liability* or the *guarantee of rights* for environmental damage caused by the state. Given the state's broad authority and competence, it must also bear comprehensive responsibility. Laws must explicitly state that the government bears absolute liability for environmental harm resulting from its actions—sovereign acts must not be immune from legal accountability.

Additionally, the current legal approach, which focuses on *individual employee fault* under the *Civil Liability Act*, fails to serve environmental protection. The state must assume *direct and primary responsibility* for damages caused by its employees and managers acting within their official duties, while retaining the right to seek reimbursement from the responsible individuals later. Otherwise, the burden of paying compensation—especially environmental damages—falls on employees who may be financially insolvent.

In contrast, *international law* holds states liable for environmental harm even when the acts are *lawful* and not explicitly prohibited. The principle of *common but differentiated responsibilities* in international law dictates that a state's level of responsibility corresponds directly to its power and capacity—not inversely, as in Iran's domestic law. In international law, any state causing environmental harm while acting in a sovereign capacity is liable based on the circumstances and resources available to it.

The *polluter-pays principle* in international law goes beyond compensation and mandates *preventive funding* for environmental protection. Project developers must pre-fund environmental safeguards to minimize the risk of ecological harm. Iranian environmental legislation must evolve in this direction.

Based on the analysis of domestic laws, it must be acknowledged that, under current conditions, the possibility of filing environmental lawsuits against government agencies remains *limited*. Such actions can only be initiated by *non-governmental public environmental entities*, responsible government agencies, or private individuals—and even then, only specific types of claims in specific forums.

Recommendations

1. Supervise the effective implementation of environmental laws and regulations in accordance with the conventions Iran has ratified, as failure to comply could trigger state liability.
2. Review and analyze international environmental conventions to which Iran is not yet a party, and submit a report to Parliament and propose recommendations to the government regarding the benefits and drawbacks of accession.
3. Organize scientific conferences on restoring degraded environmental regions in Iran and examine the necessity of pursuing international legal action regarding potential environmental damage.
4. Draft a comprehensive procedural code for prosecuting environmental crimes, including strict penalties for individuals or entities—public or private—that harm the environment. These laws must explicitly define the government's legal responsibility for environmental protection and establish clear enforcement mechanisms.

5. Recommend to the Judiciary the establishment of specialized courts and public prosecutor's offices for environmental crimes, at least one branch per provincial capital, and create civil courts dedicated to environmental damage claims—whether brought against private or public entities, or state-affiliated organizations.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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