

Jordanian Legislation, Civil Liability and Compensation for Damages to the Environment

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Abstract

The Industrial Revolution was mainly caused by industrial and technological developments. However, this revolution has influenced environmental pollution to a large extent. Natural resources and ecosystem balance have been put under pressure, with food, water and air being polluted. Hence, it is essential to realize the damage being done to the environment on a global basis and to establish strategies to protect human health and the environment at large.

In the present research, Jordanian legislation is assessed within the context of the environment, where pollution risks are present. The concept of responsibility has not been analyzed appropriately, which is why the environmental protection regulations and laws are also analyzed. There exists a legislative gap, which could be filled by stating the general norms of adequacy.

Keywords: Jordanian Legislation, Civil liability, Compensation, Environment.

1. Introduction

Organisms and human beings are present within the biosphere and physical environment. Humans have always been associated with the environment. They consume energy and other items from the environment; however, in the earlier years, the utilization was quite limited. In the environment, pollution exists mainly due to the pollutants that harm the environment. This environmental pollution has been increased by the progress of the scientific and technological fields, which exploit natural resources by making extraordinary use of energy sources and which increase the need for transportation. Pollution is caused by industrial products; additionally, gases and smoke from toxic chemicals cause water and air pollution. Natural resources cannot be renewed by the environment, and there exists an imbalance between the various elements, which cannot sustain human activities in the world today. There has been a drastic increase in the degradation of the environment.

The environment is negatively affected by technological risks, and legislators are unable to manage these damages through protection rules or regulations. The modern sources of technology are quite pollutant, and the liabilities can only be managed through extra care. This aspect is mentioned in the present research to indicate how the modern environmental damage is being managed through civil liability and eco-damage compensation.

The objective of the research is to propose methods to reduce environmental pollution and grant civil protection to the ones affected. Additionally, Jordanian law within the context of civil liability and eco-damage compensation is discussed. Before civil liability and eco-damage compensation are assessed, it is necessary to understand what the term 'environment' refers to and the causes of eco-damage, along with other relevant terms.

2. Definition: The Environment

The environment has not been legally defined yet, as scholars have been unable to reach agreement. In some cases, the environment has been defined as the external conditions or factors in which organisms live and

the associated bioprocesses, with environmental consequences and generating abiotic and biotic mechanisms. Organisms that live in several environmental circles are referred to as biotic components, and non-living things like soil, air, water and others are referred to as abiotic components.¹

Many scholars also state that the environment is where humans or other organisms are influenced by cultural, social, biotic, economic and natural factors in an indirect or direct manner.² Additionally, the group of key factors that are seen or sensed by humans and that are able to influence them (like moisture, heat and light) are referred to as the environment.³

Several agreements have been formed regarding the environment. In 1972 in Sweden, a human environment conference ('the Stockholm conference') was held, where a declaration was made regarding the environment.⁴ In this declaration, the definition of the environment is everything that surrounds human beings, whether living or non-living. In 1977 in Tbilisi, Georgia, the World Congress on Environmental Education was held, where the environment was defined as the framework for human beings within which the life elements are attained and relationships are practiced with other humans.

Jordanian environmental law⁵ defines the environment as the surroundings of living and non-living beings and all other components (including earth, water and air) that may interact or the aspects that have been created by humans.

The global population is increasing drastically, causing strong concern for the protection of the environment and a balance. Environmental pollution is a vital issue that must be observed, as urbanization and industrial development are enhancing and negatively affecting the ecosystem.⁶ By analyzing the concept of environmental pollution, it is possible to understand the damage caused by this pollution and how it can be reduced. First, the concept of environmental pollution is defined, followed by the nature of environmental damage.⁷

3. Pollution in the Environment

In the modern world, environmental pollution is considered a serious issue, as it affects living and non-living beings to a large extent. Initially, it was subtle, but now it has dangerous effects, as the environmental elements are unbalanced. Pollution is referred to as the addition of new components into land, air or water that may be referred to as natural but do not play a natural role. It is usually caused by activities conducted by human

¹ Salamah, Ahmad Abdul Kareem, *Islamic Environmental Protection Law Connected with Positive Laws* (1st edn., Dar Alnahda Alarabia, Cairo, 1996) P.28.

² Zedan, Zaki Hussein, *Environmental Damages and its Influences on Human and how Islam Dealt with it*, (1st edn., Dar Al Kitab Al Qnuni, 2009) P11.

³ Al-Sughairy, Abdul Hakeem Abdullatif, *Environment in Human Thought*, (1st edn., Al-Dar al-Masriah al-Lubnaniah, Beirut, 1994) P.17.

⁴ Declaration of the United Nations Conference on the Human Environment Stockholm, 16 June 1972, available at: <<http://legal.un.org/avl/ha/dunche/dunche.html>>. accessed on 1st January, 2017.

⁵ Environmental Protection Law No. 52 of 2006, published on P.4037 of official newspaper No. 4787 on 16/10/2006 and replacing Temporary Environmental Law No.1 of 2003.

⁶ Alshukheili, Abdulqadir, *Environment Protection in the Light of Sharia Law, Management, Education and Media* (1st edn., Al-Halabi Legal Publications, Beirut, 2009) P.3.

⁷ Mustafa, Fahmi Khalid, *Legal Perspectives for Protection Environment from Pollution in the Light of National Legislations and International Conventions, Comparative Study*, (1st edn., Dar Alfikr Aljam'y, Egypt, 2011, P. 123).

beings. Pollution has also been defined as animals', humans' and organisms' biological and chemical features being affected by the quantitative and qualitative changes.¹ Pollutants have been defined as the microbes or materials that affect the ecosystem and endanger organisms or indirectly or directly threaten the safety of natural resources.²

Environmental pollution has been defined by various international organizations. According to the Organization for Economic Co-operation and Development (OECD), pollution is the addition of energy or materials into the environment by humans in an indirect or direct manner that eventually causes harm and endangers the health of humans or biomaterials or damages ecosystems.³

According to the World Bank, environmental pollution is anything that adds issues to land, water or air such that the resource quality is influenced.⁴ The 1972 documents of the Stockholm Environment Conference provide a definition that is not only similar to the one presented by the World Bank but is also quite simple and clear. It is stated that environmental pollution is where human activities are able to influence the environment and its energy sources in a definitive manner on a regular basis. This may endanger the lives, resources and welfare of humans in a direct or indirect manner.⁵

Pollution has been defined in Jordanian law as a change that occurs in environmental elements that may harm the environment directly or indirectly. The disruption of elements may also negatively affect the natural life exercises carried out by humans or upset the natural balance.⁶

In the mentioned definitions, there are some aspects that prove to be quite common in terms of harm. For environmental damage, the main source is pollution. The following elements of environmental damage have also been included:

- 1- The physical environment's natural or innate balance between the environmental components and elements is disrupted. This may be changes to the presence, feature or quality of elements. It is not possible for humans to establish raw materials in the environment, but it is possible for them to change the environmental assets.
- 2- Foreign activities in a direct or indirect manner are being conducted through nuclear explosions, commercial activities, industrial activities, pesticides and chemical weapon disarmament.
- 3- Living and non-living beings are being affected in a harmful manner due to the physical environment or environmental change.

4. Damages to the Environment

If a reasonable environmental damage definition were extracted, it would be possible to state which Environmental Protection Law would be suitable and how the responsibility could be defined, along with

¹Salamah, Ahmad Abdul Kareem, *Environmental Protection Law: Fundamental Study of National Systems and International Conventions* (1st edn., King Saud University, Riyadh, 1997) P.21.

²Younis, Ibrahim Ahmad, *Environment and Environmental Legislation* (1st edn., Dar Al Hamid, Jordan, 2008) P.21.

³Al Abdeen, Kanso Miloud Zain, *International Liability for Environmental Damages*, Master's Thesis (University of Sidi-Bel-Abbes, 2012) P.18.

⁴Hilmi, Khalid Saad Zaghoul, "Environmental Issues and Continued Economic Development," *The Journal of Law and Economics Research* (Faculty of Law, Menofia University, 1992) P.17.

⁵Amer, Salah Aldeen, "Introduction to International Environmental Law," *Journal of Law and Economics* (Faculty of Law, Cairo, 1983) P.282.

⁶Environmental Protection Law, Article 2.

compensating for the damages. Hence, an appropriate definition is extracted for the purpose of this research.

In the juristic context, environmental damage has been defined as damage that influences the objects or individuals within the surrounding environment. The damage has consequences upon the objects and individuals.¹

It has also been defined as a harmful effect upon an individual due to the contravention of their legal interests or rights. These interests relate to honor, freedom, status, emotions or health and would require compensation.²

In the European 2004/35/CE Directive³, environmental damage is defined as damage to protected land, water and natural habitats. The detailed definition is as follows:

(a) damage to protected species and natural habitats, which is any damage that has significant adverse effects on reaching or maintaining the favourable conservation status of such habitats or species. The significance of such effects is to be assessed with reference to the baseline condition, taking account of the criteria set out in Annex I; Damage to protected species and natural habitats does not include previously identified adverse effects which result from an act by an operator which was expressly authorised by the relevant authorities in accordance with provisions implementing Article 6(3) and (4) or Article 16 of Directive 92/43/EEC or Article 9 of Directive 79/409/EEC or, in the case of habitats and species not covered by Community law, in accordance with equivalent provisions of national law on nature conservation. (b) water damage, which is any damage that significantly adversely affects the ecological, chemical and/or quantitative status and/or ecological potential, as defined in Directive 2000/60/EC, of the waters concerned, with the exception of adverse effects where Article 4(7) of that Directive applies; (c) land damage, which is any land contamination that creates a significant risk of human health being adversely affected as a result of the direct or indirect introduction, in, on or under land, of substances, preparations, organisms or micro-organisms

It is also defined as any kind of harm that influences the living or non-living aspects that maintain the environment and that would eradicate the elements, mostly or all, that are essential to the lives of humans. An individual who damages the environment is held responsible for the activities carried out; if evidence of environmental damage is present, then the individual is prosecuted using the law.⁴

4.1 Environmental Damage Features

For the compensation of damage, there are civil liability rules. This damage should be real and it should actually occur or be probable. Compensation should be offer if the damage is to occur later. It should be personally or directly related to the individual who accepts the compensation and it must happen due to the

¹ Hamida, Jamila, *Legal System for Environmental Damage and the Mechanisms of Compensation* (1st edn., Dar Al Khaldoniah for Publishing and Distribution, Algeria, 2007) P.32.

² Murqus, Sulayman, *Adequate Interpretations of Civil Law* (1st edn., Alam Al Kotob, Egypt, 1991) P.19.

³ Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004, on environmental liability with regard to the prevention and remedying of environmental damage, available at <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:143:0056:0075:en:PDF>>. accessed on 1st January, 2017.

⁴ Salameh, Ahmad Abdul Kareem, "Environmental Protection in Islamic Legislation: Comparative Research in Positive Legislation," *Introduction to the Effective Role of Law in Protecting and Developing the Environment Conference* (United Arab Emirates University, 1999) P.10.

actions of the one who is held responsible.¹

If general rules are applied, environmental compensational elements have several sources, and the damage is of a progressive and cumulative nature. It usually does not occur due to personal or actual opportunities.²

The following definitions help to explain the differences among different types of environmental damages.

4.1.1 No Personal Aspects Related to Environmental Damage

The specific individual may not have known that the damage would be caused by the object. It may be public property that is being used by all. In the case of personal interest, the biotic and abiotic environmental resources are affected due to environmental damage, and this damage is a direct injury to the environment at large. The individuals and properties of the area are affected, as legally the environment is not a legal individual.³

For instance, in Corsica, toxic waste was being dumped at the seaside. Not only was there sea pollution, but it also reached the territorial waters, causing large amounts of pollution in the sea. Fishing and other sea activities were affected due to the environmental damage, and the property values close to the sea also declined. Fishermen and tourists vacated the area. Hence, the negative impact was subjected upon the individuals.⁴

4.1.2 Environmental Damage of an Extensive Nature

Environmental damage can prove to be quite extensive in terms of time and place. There are no borders for the issue of pollution. Environmental hazards that may transfer across borders are referred to as trans-boundary pollution. In this case, the pollution originates from one area but may transfer to another state or across several states.

The damage source and the responsible individual are extracted with difficulty by the judge.⁵ A causal relationship is observed where the environmental damage legal protection is not only limited by the state's protective legislation but also by the state's national interests. The state also needs to carry out the required activities to mitigate the environmental damage effects that are being discussed at international conferences and conventions.⁶

4.1.3 Environmental Damage Caused by Progressive Indolent Damage

Progressive indolent and cumulative damage is where the effects are initially limited but become stronger over time. There are relations present and usually observed from the radiation source emissions. This

¹ Hamadeen, Issa Mustafa, *Tort Civil Liability for Environmental Damages*, (1st edn. Dar Alyazouri. Jordan, 2011) P. 87.

² Hawas, Ata Saad, *Civil Liability for Environmental Pollution Damages in the Scope of Neighbors. Comparative Study* (1st edn., Dar Elgamaa Elgadida, Alexandria, 2011) P.80.

³ Ibid.

⁴ Hamida, Jamila, note 15 above, P.65).

⁵ Hawas, Ata Saad, note 20 above, P.86.

⁶ Stockholm Conference 1972. The general secretary of the conference assured this in his speech: "We're here only to assure our liabilities towards environmental problems that are shared by all of us".

long-term radiation may lead to cancer or several other serious diseases. A radioactive item has been defined by Jordanian legislators as a device or material that emits or may emit harmful radiation.¹

5. Civil Liability for Environmental Damage in Jordanian Legislation

The environment may be protected through civil liability. The liability system may include not only deterrents but also reforms. Civil liability aims to compensate for the damage but may also be quite protective in some cases. At times, there are individuals who carry out activities that harm the environment, but these individuals need to implement modern measures and practices to avoid any sort of pollution or to reduce it as much as possible, otherwise they would be subjected to paying heavy compensation.²

The civil liability rules, procedures and compensation regarding environmental damage are not clearly stated in Jordanian environmental law. It also does not indicate the reforms needed in the physical environment or special regulations. Hence, it is essential that civil liability provisions present a general legislation regarding these aspects and make sure that significant compensation is paid by those harming the environment. The responsibility subjected upon an individual due to the damage caused by not being able to fulfill an obligation is referred to as civil liability.³

There are two kinds of civil liability: tort and contractual. In the present research, environmental damage compensation is assessed within the context of the general rules applied by tort liability. There are various aspects that determine why tort liability is more widely and much more comprehensively applied compared to contractual liability. It has the ability to absorb the violations against the environment by humans, and the violations are considered under tort rules, which are referred to as the general regulations. Humans may violate these rules and harm the environment and thus may be required to pay compensation. The damage should be compensated based on tort liability, which includes direct or unexpected damage. At the same time, contractual liability only includes direct expected damage.⁴ When a contract is formed, environmental control is usually included. If environmental damage is suffered, then it means that there has been non-compliance.

The liability elements are stated in Articles 256–287. If the elements are present, then compensation must be provided. The elements relate to infringement, injurious acts, damage and casual relationships. Liability action can occur if the elements are present and compensation is owed to the injured.

5.1 Prejudice or Act of Injury

The legislative origin is Article 256, which states that if any injuries occur, the perpetrator is required to compensate according to the harm caused. Injurious acts have been described by Civil Code Article 257, which states that the act may be causative or direct. Unconditional damages occur if the influence is direct and if the act led to an injury or intent to cause injury.

¹ Jordanian Nuclear Energy and Radiation Protection Law No. 14 of 1987, which is the same definition as that in Article 2 in Jordanian Nuclear Energy Law No. 42 of 2007 and published in official journal No. 4831 on 17/06/2007.

² Sa'ad, Ahmad Mahmoud, *Extrapolating of Civil Liability Rules in Environmental Pollution Disputes*, (1st edn., Dar Al-Nahda Al Arabia, Cairo, Egypt, 1994) P. 317.

³ Al-Shawarbi, Abdul Hameed, *Disciplinary, Criminal and Civilian Liability of Hospitals, Pharmacists and Doctors* (1st edn., Al Maaref Establishment, Alexandria, 2000) P.201.

⁴ Al-Thnon, Hasan Ali, *The Couch in Civil Liability* (Iraqi National Library Archives, Baghdad, 1991) P.146.

Mecelle states that a causative act is when an individual carries out actions against the object but another object is hurt. For instance, say a rope that carries a lamb is cut and the lamb falls and breaks its legs. The rope was damaged but the harm was caused to the lamb. Also, say a well was dug and a man fell into it and died. The death was causative.¹

Responsibility is attributed by Jordanian legislature if the damage caused is due to the intent of trespassing or damaging the environment. The environment should be protected if a direct act is carried out and environmental elements are harmed. Actions committed against the law by the person who was causing the harm to the environment intentionally or carelessly would also be taken into account. Carelessness includes harm caused without the intention of doing any harm but carrying out actions that would cause harm. Article 256 also presents that the Jordanian legislature considers the responsibility of the damage without cause. The opportunities should be widened and compensation should be provided easily. The assurance idea was integrated by Jordanian legislators to make sure that appropriate compensation is paid. The purpose of civil liability is to provide compensation to the injured, not worrying about the individual who caused the injury. Punishment is part of criminal liability and not a part of civilian law.²

5.2 Damage

In terms of environmental damage, it is necessary to define responsibility and to compensate appropriately. The three kinds of damage are moral, material and physical. Regarding environmental pollution liability's scope, physical damage is quite essential, as the pollution is usually caused by industrial waste from food factories and others.

Pollution may also be caused by organic content, chemicals or metallic components. Alternatively, there may be inorganic pollution due to radioactive materials that would harm the health of humans. Harm may be caused to the body in a manner that the people become disabled or their organs stop functioning temporarily or permanently. These effects may advance to a level where the children of the affected may also suffer from the affliction (hereditary defects). Such damage may even cause death.³

If the damage affects properties, it is material and the property may be seized, defected, damaged or reduced. An example of material damage where the environment is being affected and compensation should be given is in the case of creating a factory that decreases the real estate values of the neighbors due to the emission of smoke. For instance, in 2011, the Jordanian Court of Cassation required compensation to be made for the damages caused by the Jordan Cement Factories Co. Ltd and the lands near it. The jurisprudence by the causation court stated that Jordan Cement Factories was creating damage affecting the real estate and land, as dust was accumulating due to the factory. The material damages suffered by the owners of the land would be

¹Al-Rasheedi, Waleed Ayed, *Civil Liability Arising from Environmental Pollution – Comparative Study*, Thesis (Middle East University, Jordan, 2012) P.39.

²Al-Sarhan, Adnan Ibrahim, "Civil Liability for Environmental Damages According to Jordanian and French Laws", *Al-Manara Magazine*, Vol. 5, Issue 2 (Al Albeit University, 2000) P.23.

³Dasouqi, Mohammad Ibrahim, *Commitment Sources* (Dar Al-Nahdah, Egypt, 1981) P.456.

compensated. The factory emitted dust, which affected the planted trees, as well as the land.¹

Physical damage due to environmental issues can also lead to psychological issues, birth defects or even death, as toxic gases may have been inhaled. Radioactive material emissions or toxic waste affect the ability of humans nearby to lead healthy and happy lives.²

Moral damage is also compensated as part of the Jordanian Civil Code. In Article 267, security rights, financial considerations, social status, honor, reputation and freedom are all considered, and the assaulter is required to compensate for the damage.

An example of moral environmental damage and judicial application is where the Tire and Rubber Industry Company was held accountable by the US courts. The toxic waste of the organization was being buried under land near a residential complex. The residents of the area filed a lawsuit against the organization, stating that this action had affected their water and polluted it. The court took into account the complaints as part of the moral damage, as the toxic materials were expected to cause damage, as well as injuries. The court required the organization to provide compensation to the residents based on their fear of being affected by cancer. This compensation was based on the scientific and medical opinions brought forward, which claimed that cancer symptoms may arise due to the toxic materials.³

Hence, when considering the kinds of damage (material, moral or physical) caused by environmentally harmful activities, it is necessary to realize if the environmental damage is sufficient to require compensation.

Jordanian legislation also suggests that if legal interests and protection are to be preserved, the damage must be personal, direct, certain and actual. The environmental damage must also be occurring at present or must be probable to occur in the future to require compensation.

There is a condition that the damage from the environment must occur directly and the pollutant should commit the harmful action. There must be enough evidence for the harmful action, for instance where toxic gases were emitted from a factory that was close to homes and the gases were inhaled by the residents. Due to these gases, the residents suffered from vomiting and dyspnea. The damage may be direct or instant, and the claim must be proved by the injured. The defendant must have caused the damage or injury in a direct manner.

In the case of indirect damages, the Jordanian Civil Code suggests that no compensation would be presented. Within the environmental damages scope, there can be direct expected and unexpected damages. The Jordanian Environmental Protection Law does not contain any compensation related to indirect environmental damages. The general regulations are only applied to direct damage compensation. This is appropriate, as it is not convenient to calculate the damage caused indirectly. The individual impact must be assessed, and an acute parameter may not be found. Additionally, it is difficult to extract the difference between indirect and direct damages, as a causative association is present between the indirect damage and the incident.

As part of the environmental damages, it is essential to recognize how groundwater is affected due to pollution. Close to the land, there are land filled wastes, and the authorities responsible for these areas must provide residents with clear and healthy water. The residents must make use of a special source until the time

¹Case 638/1989 [1990] Lawyers' Association Journal, P320.

² UAE Supreme Court judgment in claim No. 1884/1983 referred decision through Arab Journal of Jurisprudence and Judiciary. General Secretariat of League of Arab States. Issue No. 11. April 1992, P.274.

³Al-Sarhan, Adnan Ibrahim & Hamad, Khater Fawzi, *Interpreting the Civil Code – Personal Rights Issues* (1st edn., Dar Al Thaqafa, Amman, 2008) P.434.

when the authorities manage to provide a healthy source. The residents are being harmed in an indirect manner, as the landfill is being affected by the wastes. However, compensation cannot be attained for such claims. At the same time, the damage caused to the soil in this case is direct environmental damage. This uses a terrestrial environment concept, and Jordanian Environmental Protection Law Article 11/1/1 states that an individual who dumps, discharges or collects substances (whether thermal, radioactive, gaseous, liquid or solid) that negatively affect the environment and its safety would be subjected to punishment. This punishment would be imprisonment for over three months and less than two years. They may also pay a fine of over 10,000 dinars and less than 50,000 dinars. It is also possible that both kinds of punishment would be applied.

Hence, it is difficult to define indirect environmental damage and its compensation. The compensation charged is futuristic and only for direct environmental damage. For the present scenario, the damage must be direct as well as definite. In a disciplined manner, the judge must be able to state the damage. For instance, say a factory has radioactive emissions that may affect local fruit trees, which is why the leaves may fall. After five years, the trees may also stop producing any fruit, which is why the futuristic damage should be compensated for.

It must, however, be considered that the damage is potential and may not occur. For instance, an individual who is subjected to toxic radioactive substances would not issue a lawsuit stating that they might suffer from cancer in the future due to the substances. The affliction is not definitive (it may or may not occur), which is why compensation cannot be imposed by the judge.

Lastly, personal damage should be present where the injured issues a lawsuit in a direct manner, as the damage directly affects them. The environmental damage may affect a legal individual, association or company. The legal individual cannot fix the activities but does have the right to ask for compensation through an appropriate representative for the personal damage caused.¹

It should also be stated that collective or individual environmental claims may be presented. Each individual must have the right to instate a lawsuit. It may not be efficient to carry out such a lawsuit, as the claimant may suffer some hindrance for instating the lawsuit. The claim may also be refused by the judge if the claimant is unable to identify the damage source or if personal interest cannot be extracted or understood by the court. Hence, in such cases, it is quite possible that another environmental claim would be brought forward, referred to as collective claims. Individual claims have high costs, and this is a natural result of their development. Usually, it is quite difficult to hold the pollutant responsible for the damage being caused.

The individuals who are injured by the environment may be single or many, and a collective claim may be made. The only condition present is that the damage must be caused to an individual group and the names of each individual should be mentioned as part of the list of prosecution. Each party would be obligated to state their names, and the decided compensation would be allotted to each individual who has made the claim.²

In the case of a collective claim due to the environment, the individual claims are removed. Hence, the individuals who have not presented a claim collectively are not present on the list for the claim. They may not be aware of the case or may not be interested. The only benefit they gather would be that they would be protected in

¹ Al-Jammal, Sameer Hamid, "Civil Liability for Biological Damages: Comparative Study", *Journal of Sharia & Law*, College of Law, United Arab Emirates University, Vol. 42, 2010) P.146.

² Al- Haresh, Faraj Saleh, *Environmental Pollution Crimes: Comparative*, (1st edn. Cairo Publishing House, Egypt, 2006) P.147.

an indirect manner, as anti-pollution devices would be installed by the defendant. In France, this kind of collective environmental claim is present; however, in Jordan, there are no collective claims present. The judge may accept or reject a collective claim, as it is not necessary for a collective claim to be accepted. It is quite possible that the collective claim is not against the morals or the general laws. In this case, the claim has no basis and it is necessary for the Environmental Protection Law to be included or for litigation rights to be used through the associations of environmental matters. A causative relationship is the final element that may be liable for carrying out damage. It is mentioned in the next section.¹

5.3 Causative Relationship: Damage and Action

Damage and action have a durable association. This means that it is action that eventually leads to damage. By observing the injured, it is possible to prove this relationship. There is no liability if no relationship is present. The injured needs to claim compensation regarding the injuries caused under the liability regulations. It is necessary for the injured to prove the causative relationship: a direct relationship between the activity and the injury caused. This harmful activity would be due to either carelessness or a failure to carry out the needed protection by the individual who is actually causing the damage. The injured may not be able to apply the required regulations and provisions in relation to the activities, like the Environmental Protection Law. In identifying the individual carrying out the environmental damage, there may be difficulty in stating the causative relationship between the damage caused and the environmental pollution. The issues may be in terms of extracting the damage source or the kind of pollution that led to the damage. There are various causes that lead to damage, which is why it is difficult to identify the main source. Additionally, the issue of active pollution is difficult, as there can be many contributors. Hence, in such cases, compensation is usually not claimed, as it is quite difficult to identify the appropriate defendant.²

To manage the issue and identify the responsible party, there are two theories that can be applied. First, the equivalent reasons theory helps to extract the reason behind the damage without which it would not be possible to be subjected to such damage. This is the actual reason behind the damage and indicates all reasons present for the assault. The second theory is the produced reason theory, which may suggest several reasons that led to the damage. There may be accidental and productive reasons where if the first reason is appropriate, then the second can be ignored. For normal cases, the theory must be considered as being active and productive. Jordanian Civil Code Article 265 states that where various individuals are responsible for the harmful activities, they will all be held responsible in court in an equal or joint manner.

The Jordanian Environmental Protection Law clearly states that an individual who causes environmental damage through radioactive substances will receive higher financial penalties. The judge is not able to reject a claim that attains a joint principle of law. This joint principle is the specific damage being caused and the one injured pointing it out.

Tort civil liability actions are subjected to penalties, which increase the compensation rights for the one

¹Al Hudaithy, Hala Salah, *Civil Liability Resulted by Environmental Pollution*, (1st edn., Dar Juhaina for publication, Jordan 2003) P. 246.

² Al-Jammal, Sameer Hamid, note 35 above.

injured.¹ The individual who has caused the injury is required to compensate, and the judge is expected to grant a just system for the completely fair compensation of the injured. The kind of compensation to be provided is also stated by the judge, which may be financial or in-kind.²

5.4 In-kind Compensation

In this kind of compensation, a fair judgment is made where it is necessary to carry out restitution and revert to the state that was present earlier. It is required to remove the issue, and the injured must be restored to the state as it was before the environmental damage. The best kind of compensation is in-kind if it is actually possible to carry it out.³

The White Book⁴ suggests that the natural resource must be as it was before it was injured as part of the restitution. The issue should be estimated; historical data must be referred to, and the natural features related to the issue should be identified to understand the original state of the natural resources that have been injured.

The White Book was unable to extract the various kinds of restitutions that can be made to return the natural resource to its earlier state. However, if the process is considered complex, there is no specific requirement for the restoration of the state to be exactly the same as before the pollution occurred. However, the state must at least be similar to the one that was present before the pollution. No standards were mentioned for the restitution.⁵

In-kind compensation for environmental damage is considered the most appropriate, as it restores the area to the state it was in before the damage was inflicted. The damage is not only removed but its increase or aggravation is also avoided. However, this kind of compensation may not be possible in all cases. There may be various hindrances that do not allow the judge to order in-kind compensation. It is vital to recognize the harm to the environment. Various elements may interact that lead to pollution, and these elements may establish interactions by creating new kinds of pollutants that harm the environment and are hazardous. They may also cause death for some humans, which is why it is not always possible to restore to an earlier state and be compensated in this manner.⁶

At times, in-kind compensation is not ordered by the judge, as it can prove to be costly. An organization may not be closed down, even if its factory is the actual source of pollution. If the factory has been created after attaining administrative licenses, the organization is obliged to carry out activities that help to reduce pollution, even if the procedures are expensive. This may also affect the private sector's budget and its freedom of trade.⁷

Despite the above aspects, it can be stated that in-kind compensation is the most appropriate form of compensation for damage caused to the environment. The damage can be removed or prevented from increasing.

¹ Environmental Protection Law, Article 19.

² *Jordanian Civil Code No. 43 of 1976, Published on 2 of official newspaper No. 2645 on 1/8/1976.*

³ Al-Amer, Sa'doun, "Compensating Damages through Tort Liability" Legal Research Center, Ministry of Justice. (Baghdad, 1981) P.149.

⁴ European Commission (2000) *White Paper on Environmental Liability* available online at <<http://www.europa.eu.int/comm>> accessed on 1st January, 2017.

⁵ Al-Menawi, Yasir Mohammad, *Civil Liability Arising from Environmental Pollution* (1st edn., Dar Elgamaa Elgadida, Alexandria, 2008) P.403.

⁶ Al Hudaithy, Hala Salah, note 37 above, P.194.

⁷ Hawas, Ata Saad, note 20 above, P.142.

However, it may not be applied if the damage is irreparable or significant. In such cases, financial compensation is ordered by the judge.¹

5.5 Financial Compensation

Financial compensation is the money that is paid equal to the damage caused if a required obligation was not met. This kind of compensation is usually made when in-kind compensation cannot be made and the damage to the environment is to be reformed at a high cost.²

Jordanian Civil Law Article 355/2 states the law related to financial compensation. The execution in kind is referred to as if it is not being carried out by the debtor, on the request of the same debtor, the court would limit the creditor to attain financial compensation. Minor advantages must be attained by the debtor. Article 266 of the same law states that the compensation must be estimated on the basis of the damage caused to the injured party and the profit that has been lost due to the injurious activities. The compensation must not be lower or higher than the damage value.

There are some exceptional cases where the personal and contingent conditions of the injured parties are taken into account. The damage may be responsible for injuring various parties but there may be one person who was injured much more, but the law only suggests that the severity is equally distributed.

It must be considered if the damage changed (increased or decreased) from the damage date until the date that judgment was carried out, based on the circumstances. The damage is estimated, and the compensation is calculated from the damage date to the judgment date.

The compensation is estimated by the Jordanian jurisprudence based on the judgment date if there is variable damage.³ If the damage is variable, the compensation must be based on what is presented on the judgment date. The judge orders the compensation to be made, but this may not be enough to cover the damage subjected. The injured and their rights are observed by the judge when the judge states that damage has negatively affected the injured and that compensation must be made.

6. Conclusion

In the modern world, pollution and natural environment utilization are major issues. Environmental pollution usually causes damage to the environment. It not only affects the environment but also animals, plants, soil, air and water. Hence, the damage that is caused must be compensated after liability is imposed.

In the present research, environmental damage compensation has been analyzed within the context of Jordanian legislation. The tort of civil liability has been focused upon when considering the compensation provided for damages inflicted. There is limited legal text upon this subject.

When civil liability rules are applied to the issue of environmental pollution, all pollution forms are covered, based on the fact that damage must be reduced. However, civil liability challenges are present. There

¹Al-Deen, Yousfy Noor, *The Reparation of Environmental Pollution – Analytical Study under Civil Law Regulations and Environmental Legislation*, PhD Theses (University Mohamed Khider of Biskra, 2011, P.310).

² Qindeel, Saeed Alsayed, *Compensation Mechanisms of Environment Damages*, (Dar Elgamaa Elgadida, Alexandria, Egypt, 2004) p.145.

³ Case 830/99 [2000] Lawyers' Association Journal, P 1038.

exists an issue with causative relationships, as the damage is usually indirect or impersonal. Such damage may enhance in a progressive manner and is difficult to estimate.

This article has presented how compensation can be carried out in two ways under the general rules of civil liability. Discretion lies with the judge to state which form of compensation is suitable, based on the nature of the damage and conditions related to the case. The judge may require that the environment be restored to how it was before the damage took place: in-kind compensation. However, it may be impossible to restore, which is where financial compensation is made.

Lastly, there are a few changes that must be brought forward to manage the above-mentioned aspects. First, the Jordanian Environmental Protection Law text should be amended, and compensation and civil liability rules should be included. The legislators in Jordan must implement a new liability system where liability is determined, the assessment of the compensation is appropriately carried out. The activities causing harm to the environment must be subjected to litigation, and a special fund should be created that manages the compensation for the injured. Furthermore, the Judicial Institute must be supplemented with specialized legal courses regarding civil liability for damage to the environment.

BIBLIOGRAPHY

(In Alphabetical Order of the Name of the Author)

- Al Abdeen, Kanso Miloud Zain, *International Liability for Environmental Damages*, Master's Thesis (University of Sidi-Bel-Abbes, 2012).
- Al-Amer, Sa'doun, "Compensating Damages through Tort Liability" *Legal Research Center*, Ministry of Justice, Baghdad, 1981.
- Al-Deen, Yousfy Noor, *The Reparation of Environmental Pollution – Analytical Study under Civil Law Regulations and Environmental Legislation*, PhD Theses (University Mohamed Khider of Biskra, 2011).
- Al- Hareh, Faraj Saleh, *Environmental Pollution Crimes: Comparative*, (1st edn., Cairo Publishing House, Egypt, 2006).
- Al Hudaithy, Hala Salah, *Civil Liability Resulted by Environmental Pollution*, (1st edn., Dar Juhaina for publication, Jordan, 2003).
- Al-Jammal, Sameer Hamid, "Civil Liability for Biological Damages: Comparative Study", *Journal of Sharia & Law*, College of Law, United Arab Emirates University, Vol. 42, 2010).
- Al-Menawi, Yasir Mohammad, *Civil Liability Arising from Environmental Pollution* (1st edn., Dar Elgamaa Elgadida, Alexandria, 2008).
- Al-Rasheedi, Waleed Ayed Awad, *Civil Liability Arising from Environmental Pollution – Comparative Study*, Thesis (Middle East University, Jordan, 2012).
- Al-Sarhan, Adnan Ibrahim, "Civil Liability for Environmental Damages According to Jordanian and French Laws", *Al-Manara Magazine*, Vol. 5, Issue 2 (Al Albeit University, 2000).
- Al-Sarhan, Adnan Ibrahim & Hamad, Khater Fawzi, *Interpreting the Civil Code – Personal Rights Issues* (1st edn., Dar Al Thaqafa, Amman, 2008).
- Al-Shawarbi, Abdul Hameed, *Disciplinary, Criminal and Civilian Liability of Hospitals, Pharmacists and Doctors* (1st edn., Al Maaref Establishment, Alexandria, 2000).
- Alshukheili, Abdulqadir, *Environment Protection in the Light of Sharia Law, Management, Education and Media* (1st edn. Al-Halabi Legal Publications, Beirut, 2009).
- Al-Sughairy, Abdul Hakeem Abdullatif, *Environment in Human Thought*, (1st edn., Al-Dar al-Masriah al-Lubnaniah, Beirut, 1994).
- Al-Thnon, Hasan Ali, *The Couch in Civil Liability* (Iraqi National Library Archives, Baghdad, 1991).
- Amer, Salah Aldeen, "Introduction to International Environmental Law," *Journal of Law and Economics* (Faculty of Law, Cairo, 1983).
- Dasouqi, Mohammad Ibrahim, *Commitment Sources* (1st edn., Dar Al-Nahdah, Egypt, 1981).

- Hamadeen, Issa Mustafa, *Tort Civil Liability for Environmental Damages*, (1st edn., Dar Alyazouri, Jordan, 2011).
- Hamida, Jamila, *Legal System for Environmental Damage and the Mechanisms of Compensation* (1st edn., Dar Al Khaldoniah for Publishing and Distribution, Algeria, 2007).
- Hilmi, Khalid Saad Zaghoul, "Environmental Issues and Continued Economic Development," *The Journal of Law and Economics Research* (Faculty of Law, Menofia University, 1992).
- Hawas, Ata Saad Mohammad, *Civil Liability for Environmental Pollution Damages in the Scope of Neighbors, Comparative Study* (1st edn., Dar Elgamaa Elgadida, Alexandria, 2011).
- Murqus, Sulayman, *Adequate Interpretations of Civil Law* (1st edn., Alam Al Kotob, Egypt, 1991).
- Mustafa, Fahmi Khalid, *Legal Perspectives for Protection Environment from Pollution in the Light of National Legislations and International Conventions, Comparative Study*, (1st edn. Dar Alfikr Aljam'y. Egypt, 2011).
- Qindeel, Saeed Alsayed, *Compensation Mechanisms of Environment Damages*, (1st edn., Dar Elgamaa Elgadida, Alexandria, Egypt, 2004).
- Sa'ad, Ahmad Mahmoud, *Extrapolating of Civil Liability Rules in Environmental Pollution Disputes*, (1st edn. Dar Al-Nahda Al Arabia, Cairo, Egypt, 1994).
- Salameh, Ahmad Abdul Kareem, "Environmental Protection in Islamic Legislation: Comparative Research in Positive Legislation," *Introduction to the Effective Role of Law in Protecting and Developing the Environment Conference* (United Arab Emirates University, 1999).
- Salamah, Ahmad Abdul Kareem, *Environmental Protection Law: Fundamental Study of National Systems and International Conventions* (1st edn., King Saud University, Riyadh, 1997).
- Salamah, Ahmad Abdul Kareem, *Islamic Environmental Protection Law Connected with Positive Laws* (1st edn., Dar Alnahda Alarabia, Cairo, 1996).
- Younis, Ibrahim Ahmad, *Environment and Environmental Legislation* (1st edn., Dar Al Hamid, Jordan, 2008).
- Zedan, Zaki Hussein, *Environmental Damages and its Influences on Human and how Islam Dealt with it*, (1st edn., Dar Al Kitab Al Qnuni, 2009).

TREATIES AND LEGISLATION

- Jordanian Civil Code No. 43 of 1976, Published on 2 of official newspaper No. 2645 on 1/8/1976 .
- Environmental Protection Law No. 52 of 2006, published on P.4037 of official newspaper No. 4787 on 16/10/2006 and replacing Temporary Environmental Law No.1 of 2003.
- Jordanian Nuclear Energy and Radiation Protection Law No. 14 of 1987, which is the same definition as that in Article 2 in Jordanian Nuclear Energy Law No. 42 of 2007 and published in official journal No. 4831 on 17/06/2007.
- Declaration of the United Nations Conference on the Human Environment Stockholm, 16 June 1972,
- Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004, on environmental liability with regard to the prevention and remedying of environmental damage.