

Evaluation of Legal Solutions to Pollution of the Environment Caused by Oil Extraction Activities in Kuwait

Abdelmonem Ali Naeem^{*}, Thamer Khalifa Al-Hemeda, Mohamed Ibrahim Al-Homoud

Faculty of Law, Department of Public Law, Kuwait University, Kuwait City (Main campus), Kuwait

Email address

abdelmonem212@hotmail.com (A. A. Naeem)

^{*}Corresponding author

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Abstract: Over the years, there have been growing concerns about the environmental influences of oil extraction. The environmental effects of oil extraction are mainly harmful to human health because of the toxicity of the oil extraction that contributes to air pollution, acid rain, and various human diseases. Causing serious harm to the health of living organisms, especially human beings, which requires the payment of appropriate compensation for those affected by these harmful environmental effects. This is stated in the Environmental Law of the State of Kuwait No. 42 of 2014. Thus, this paper concern of legal solutions that could help decrease the problems associated with oil pollution were evaluated. More than 500 international treaties and 323 regional treaties aimed at protecting the environment from pollution caused by oil extraction and transport activities have been signed by Kuwait. A direct relationship has been found between the use of oil and its derivatives and oil pollution despite many regional and international agreements about protecting the environment from oil pollution having been signed. These agreements do not effectively promote the development of protocols to prevent environmental problems caused by oil extraction and transport activities because of the requirement of each state to maintain absolute sovereignty over its territory.

Keywords: Environmental Pollution, International Treaties, Legal Solution, Oil Extraction

1. Introduction

Oil has offered many benefits but is a major source of air, soil, and water pollution, and there have been many environmental disasters caused by emissions of oil. The effects of oil on the environment are controversial. Maintaining and improving the environment have become priorities at the local and international levels because oil pollution is an international rather than regional problem (Conserve Energy Future, 2017). It is therefore important to establish national and international rules for preventing oil pollution, to implement strict national and international measures to protect the environment from oil pollution, to impose sanctions on perpetrators of environmental crimes relating to oil, and to establish rules for civil responsibility and compensation [1, 2]. Many countries have taken steps to

decrease environmental pollution. Several international conferences on oil pollution have been held, and these have led to many international agreements being signed. Kuwait has participated in various international fora and conferences because it is one of the main oil-exporting countries. The last such conference took place in Johannesburg, South Africa, in late August 2002. Discussion at that conference played a role in 6 November being made global [3]. Act 42 on protecting the environment from pollution, implemented in 2014, was the first national law in Kuwait intended to protect the environment. This act contained 53 environmental terms, which markedly altered environmental law in Kuwait. The act included a section on rules and procedures for protecting the environment from pollution, a chapter on penalties, and a chapter related to civil liability for environmental damage. The legislation created a public environmental authority and was developed by the Ministry of the Interior, Environmental

Police, and environmental observers. Oil is the most important source of income for the State of Kuwait, providing 94% of national income [4]. Kuwait has the fifth largest reserves of crude oil in the world [5]. It is therefore important that Kuwait bears the indirect costs of oil production and distribution, including costs involved in protecting the environment from oil pollution [6-8].

One difficulty faced when studying oil pollution in Kuwait is that few such studies have previously been performed even though oil pollution is a serious problem. The legal library at Kuwait University contains very few publications describing studies of oil pollution in Kuwait. Researchers studying oil pollution in Kuwait have depended on using comparative historical approaches. Such studies have been focused on legislative texts, including Kuwaiti environmental law No. 42 (implemented in 2014) and international agreements involving the State of Kuwait. Studies of the historical development of methods for preventing oil pollution in Kuwait and other countries have also been performed. Here, this study presenting the legal solutions for the environmental problems caused by oil-extraction activities. The study is divided into two parts. In the first part, we describe relevant international treaties and conventions, and in the second part we describe State of Kuwait legislation related to the environment, particularly environmental law No. 42, which was implemented in 2014 and amended by law No. 99 in 2015.

2. International Legislation

International legislation for protecting the environment from pollution is necessary because no single country can unilaterally protect its environment. Pollutants released in one country cannot be confined to that country, but can be transported to and affect the environments of other countries (called transboundary pollution) [9, 10]. The first step to protecting the environment from pollution was taken during the Second World War, when the League of Nations cooperated with some governments to conclude several international agreements, including a convention on decreasing environmental pollution caused by ships and oil tanker [6]. More than 500 international institutes and 232 regional agreements have been established, and 60% of these were established since a conference in Stockholm in 1972 [11]. Some international conventions on protecting the environment from oil pollution are described below.

2.1. International Conventions on Protecting the Marine Environment

- a. The international convention for the prevention of sea pollution by oil was held in London from 26 April to 12 May 1954 and produced legislation that came into force on 26 May 1954 [12, 13].

An important aspect of this convention is that each ship of more than 400 -tons and each tanker of more than 150 tons must carry a valid international certificate for preventing pollution, an oil record, and a plan for preventing pollution [14, 15].

- b. The international convention on interventions on the high seas in oil pollution disasters was held in Brussels on 19 February 1969 and produced legislation that came into force on 6 May 1975 [16].
- c. The aim of this convention was to enable coastal states to take necessary precautions to prevent coastal and open-sea oil pollution after maritime disasters [8, 17]. The first item of the convention allows contracting states to take necessary measures to prevent, decrease, or remove serious dangers to their coasts. The measures include banning shipping if it can be shown that this would stop or decrease environmental damage. The measures taken must match the magnitude of the damage that has occurred or may occur, but such measures may not be used against military ships or ships owned by the state and operated for non-commercial purposes.
- d. The international convention on civil liability for damage resulting from oil pollution, held in Brussels in 1969.

The aim of this convention was to provide appropriate compensation to persons harmed by the effect of pollution caused by oil spills or discharges from ships and to standardize procedures and international rules for identifying liability and appropriate compensation. The agreement obliges the owner of a ship to notify the relevant authorities when an oil pollution accident occurs and take responsibility for any damage caused even if the accident was caused by an act of war, an unusual natural phenomenon, a deliberate act of a third party, or negligence by a government agency or authority performing regular maintenance work [18, 19].

- e. The international convention establishing an international compensation fund for damage resulting from oil pollution, held in Brussels in 1971. The aim of this convention was to help ships owners, to decrease the financial burden posed by the liabilities caused by oil pollution, and to establish a ship owners' liability fund to cover all the costs of removing oil pollution and paying compensation [20-22].
- f. The international convention on civil liabilities caused by the exploration and exploitation of mineral resources under the sea, held in London in 1977. The aim was to ensure that adequate compensation is paid to victims of pollution, including in third world countries [23, 24].
- g. The convention on preparation for, responses to, and cooperation during oil pollution incidents, which was held on 30 November 1990. The aim was to facilitate international cooperation and joint assistance to prepare for and respond to major oil pollution situations that threaten maritime navigation. The convention obliges state parties to report pollution cases involving ships and buildings along the coast. The protocol on preparation for, responses to, and cooperation during oil pollution incidents and for pollution caused by harmful and dangerous materials became active in 2000.

2.2. International Conventions for Protecting Air from Oil Pollution

- a. The Vienna convention on protecting the ozone layer was held in 1985 and came into force on 22 September 1988. The aim of this convention was to restrict activities that negatively affect the ozone layer. A legal obligation was placed on state parties to take measures to protect ecosystems from harm caused by anthropogenic destruction of the ozone layer [25, 26].
- b. The Kyoto convention was held in 1992 and was the largest gathering of representatives of countries related to air pollution [27]. Representatives of 178 countries participated, and the theme was the Earth Summit held in Rio de Janeiro, Brazil. The convention was an executive function of the United Nations convention on weather change. Representatives of about 25 international authorities were involved, and the aim was to rebalance the relationship between the environment and development to control the concentration of greenhouse gases (carbon dioxide, methane, nitrous oxide, perfluorocarbons, and sulfur hexafluoride) in the atmosphere and decrease the concentrations to prevent anthropogenic effects on the climate [15, 28].
- c. This is one of the most important national and international legislative principles and policies aimed at rationalizing the consumption of natural resources, decreasing environmental damage caused by the policies of various authorities, and developing strategies for scientific growth while preventing environmental pollution [28, 29].

2.3. International Conventions for Protecting the Terrestrial Environment from Oil Pollution

- a. The Basel convention on controlling the transportation and disposal of dangerous waste. The aim of this convention was to protect environmental resources and biota from damage caused by exposure to pollutants released from dangerous waste [30, 31].
- b. The protocol on liability and compensation for damage resulting from dangerous waste and their disposal, which was established to help in the application of the Basel convention described above and to establish a mechanism for settling disputes between state parties involved in applying the provisions of the Basel convention.
- c. The world climate summit, which was held in November and December 2015 in Paris, with participants from 150 countries. The aim was to reach a global agreement defining the scientific steps to be followed until 2020 to decrease the impact of global warming and to limit warming to a maximum of 2 °C in coming years. Global warming is affected by many human activities, and particularly by gases emitted by factories and the production and use of fossil fuels [32].
- d. Of the 195 countries in the world, 186 have announced

measures aimed at decreasing emissions of micro-particles to ambient air by between 2025 and 2030.

3. Results and Discussion

In Kuwaiti law, item 181 (relating to the environment and protecting natural resources, the air, and the marine and coastal environment) was added to improve biological management, civil liability, and penalties previously addressed in items 128–157. The aim of this law is to protect the environment and natural resources and to maintain natural equilibria throughout Kuwait for both the short term and long term. The law is also aimed at protecting the Kuwaiti environment from the negative effects of activities outside the territory and borders of the State of Kuwait. Kuwaiti environmental law follows a modern approach in that the state is committed to ratifying international and regional environmental conventions. This positive approach to international conventions and treaties is laid down in Kuwaiti law. Including this obligation in domestic legislation also activates agreements at the national level, committing the executive and judicial authorities to implementing the relevant conventions. This brings international obligations into domestic legislation. The Kuwaiti legislation makes the public authorities responsible for the environment legally responsible for the required budgets provided by the Council of Ministers and puts the authorities under the supervision of the Supreme Council of the Environment. The functions and work of the relevant bodies are also described, including about 19 important tasks, including: developing policies, strategies, and action plans for protecting the environment; supervising and following up activities and procedures related to environmental protection; evaluating and preparing draft laws and regulations for environmental protection; identifying problems caused by environmental pollution taking national and international resolutions into account; proposing appropriate solutions for problems; and monitoring environmental pollution to allow environmental quality to be continually assessed.

Recognizing the roles of government ministries and institutions and other organizations in protecting the environment, the legislation established the Environmental Police, which is a specialized military unit and is part of the Ministry of the Interior. Part of the work of the Environmental Police is to apply relevant laws and environmental requirements and produce an annual report for the council. The Supreme Council for the Environment entrusts the Environmental Police to manage its own work, and the necessary means for the work to be performed are provided by the Ministry of the Interior, although it would be better to leave this to specialists. This would be like an environmental commission [33]. Important environmental laws require ships that use specific sea areas to be equipped with equipment and devices to prevent pollution occurring and to treat waste in accordance with international requirements. Legislation requires ships intended to transport 150 t or more of oil and all terrestrial sites involved in oil

transportation to have a contingency plan to prevent oil pollution. Dumping or discharging oil from any ship (from any country) is an offence punishable by law. Vessels transporting oil must unload waste at specific facilities (items 70–77 in the relevant Kuwaiti law 42/2014). All vessels transporting oil must keep a register of the oil being transported and log the dates, times, and locations of all oil shipments and discharges (item 78 in the relevant Kuwaiti law). The Kuwaiti Environmental Protection Act also requires the owner of a ship operating in any specified sea area to provide the competent authority with a financial guarantee or bank guarantee to cover civil liability for terrestrial and marine pollution. This guarantee must be effective on entering the territorial waters of the State of Kuwait. A large part of the legislation is devoted to ensuring the effective application of environmental law (items 128–157 in the relevant Kuwaiti law). The penalties for any person causing environmental harm are imprisonment for 1–3 y (depending on the type of environmental offence) or a fine of 50–50,000 dinars. The penalty may be a primary punishment [34, 35] or a supplementary punishment in addition to a primary punishment [36]. A financial penalty for an environmental offence may be applied by confiscating property (expropriation of money from the owner of a property and adding the money to the king's estate) [37]. The penalties prescribed for environmental crimes include administrative penalties (e.g., closure of a facility), withdrawal of licenses, and monetary penalties to compensate for damage. The perpetrator of an environmental crime may be required to pay (directly or by paying the commission) to negate the effects of the crime and restore the environment, whenever possible [38]. The Kuwaiti legislation applies civil liability for environmental damage through strict liability (not because of a mistake), in the sense that punishments are made for direct environmental harm (the environmental harm not being a result of a legitimate action) [2, 39]. The Kuwaiti legislation also uses the principle of collective liability when it is not possible to determine who is responsible for environmental pollution if more than one person was involved, to ensure that injured parties are compensated and the affected environment is rehabilitated [40, 41].

4. Conclusions

Our assessment of the legislative solutions to environmental problems caused by oil extraction and transportation led us to reach the conclusions shown below. The results summarized that pollution of the environment with oil is not a new problem, but the rate of oil pollution incidents has increased. Interest in avoiding oil pollution incidents increased from the 1980s because many oil spills that seriously damaged the environment occurred before that. The oil production cycle (research, prospecting, exploration, drilling, production, refining, distribution, and consumption) is harmful to the environment, and all stages pose risks of environmental pollution. Oil pollution is likely

to be transboundary, meaning it is not confined to the original location and can cause widespread damage. Some of this damage is invisible (cannot be seen with the naked eye) because it is gradual. Pollution of air, soil, and water affects biota and the non-living environment. In particular, it may cause many chronic diseases in humans, both immediately and over time. There is a direct correlation between the use of petroleum and its derivatives and environmental pollution. The more oil is used the more oil pollution occurs. There are many reasons for protecting the environment from oil pollution, and international laws and regulations have been developed to protect the environment. The environment is indivisible and its components and natural resources are the common property of all the inhabitants of the Earth. The exploitation of natural resources shared by more than one country cannot be achieved only through international legislation. Vast areas are not subject to the sovereignty or jurisdiction of any state, and are classed as international zones that are considered to be the common heritage of all. The exploitation of natural resources in these areas can only be regulated through international legislation. 8- The environmental dangers of oil are already global in nature and scope, so many countries have insisted on protecting the environment from pollution using international rules and regulations. More than 500 international treaties and more than 300 regional treaties have been implemented to achieve this. International environmental protection conventions aimed at avoiding pollution have not been effective at dealing with the serious nature of oil pollution for a number of reasons. The most notable reason is the concept of absolute sovereignty of each state. Most international conventions on environmental issues have not come into force and therefore are simply recommendations that states are not obligated to apply. Most international environmental oil conventions are independent of each other. The Kuwaiti legislature implemented law 42 in 2014, and this was amended by law 99 in 2015. Nine sections of these laws are related to the environment, protection of natural resources, protection of ambient air and aquatic and coastal environments from pollution, protection of biodiversity, biological and environmental management, and civil liability and penalties.

5. Recommendations

1. Measures for achieving environmental rehabilitation and improving the conditions of areas contaminated by oil need to be developed.
2. Strict measures for preventing desertification and erosion and expanding green areas need to be developed.
3. A strategy for decreasing the use of hydrocarbon energy (particularly oil) and encouraging the use of environmentally benign alternative energy sources (e.g., geothermal energy, hydropower, solar energy, and wind energy) need to be developed.

4. A unified international convention that limits the proliferation of conventions and treaties on all aspects of oil pollution of the air, land, and sea (similar to the Framework Convention on Climate Change, developed in 1992) needs to be developed.
5. Integrated environmental protection systems (particularly compulsory insurance systems and compensation funds to cover the potential risks posed by oil pollution) need to be developed.
6. Taxes on environmental violators and incentives for using environmentally benign technologies need to be introduced.
7. A global network of stations for monitoring oil pollution needs to be established.
8. Awareness of environmental problems needs to be increased through the national media to ensure people understand how the environment can be protected from oil pollution and the appropriate organizations for reporting environmental crimes and perpetrators. The same channels should also be used to disseminate information on a range of issues relating to oil pollution.
9. Use should be made of the United Nations Environment Programme by establishing centers to allow universities to establish training courses on oil pollution, as is the case in Singapore and Sri Lanka.
10. A global center for research into environmental affairs and the prevention of oil pollution should be established, and scientific and legal seminars in this field should be established.
11. Environmental experts should be appointed to the Department of Experts of the Ministry of Justice to perform tasks assigned by the authority, particularly in relation to establishing pollution offences and assessing the damage caused by pollution.
12. Measures for quickly eliminating pollution with petroleum and its derivatives should be implemented to prevent further environmental pollution problems.
13. Specialized courts should be established and specialized judges appointed to investigate the oil pollution crimes to be judged quickly with relevant experts and technicians involved. People involved in environmental pollution disputes and special issues need to be trained, like for family courts.

Conflict of Interest Statements

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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