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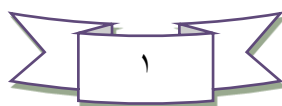
**Criminal Responsibility of Oil and Gas Companies for Environmental
Crimes: A Comparative Study**

Dissertation Overview

I. Introduction

It is not an exaggeration to say that, over the past fifty years, we have entered a phase of critical environment protection. Given the earth's rising population and the demand by all for clean air, land and water, the imperative to protect the environment has reached epic proportions.¹ But development, which

¹ The last few years have witnessed a lot of conferences and treaties to protect the environment. Most recently, for example, there was the 2015 United Nations Climate Change Conference in Paris, France (COP21), in which nearly two hundred nations participated. There are many others examples that precede it, in addition to Stockholm Declaration which is mentioned in the main text. These include: the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, finalized at London; The 1969 Convention Relating To Intervention On The High Seas In Cases Of Oil Pollution Casualties; The International Convention on Civil Liability for Oil Pollution Damage, finalized in Brussels in 1969, the Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution, formalized in 1978; the 1980 World Charter for Nature; the 1982 Vienna Convention for the Protection of the Ozone Layer; the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, the 1992





is also an imperative, sometimes causes damage to the environment. This can be a particular problem in areas such like the energy sector, because the environmental demands have to be balanced against the global demand for energy, which will only rise over time.

In this regard, there has been much scholarly and media attention globally to the manner in which a good balance can be achieved through appropriate legislation and regulation². Most of this attention has focused on the use of regulation and civil law to address the problem. There has been less focus on the role that criminal law can play. The purpose of this dissertation is to explore the potential role of the criminal law in environmental protection, by offering a comparative analysis comparing two jurisdictions, that of the United States on the one hand, and Iraq on the other.

This introductory chapter proceeds in four parts. First, I set forth in greater detail the developments that have arisen over the past half century that render the protection of the environment urgent, and particularly difficult to balance against ever increasing demands for energy. Second, the chapter explains the scope of

Rio Declaration on Environment and Development in 1992, The 1992 Kyoto Protocol in Concerning Climate Change and the 1998 Tokyo Protocol.

² We will discuss this issue in detail in the next section.



the study. Third, the chapter lays out in brief detail prevailing views in the current approaches to environmental protection. In this part, I will focus on the most important theories in the jurisprudence to protect the environment, which are free market, common law and regulatory. Finally, the last part will be about the benefits of the criminal law. This is where I will discuss the role that criminal law can play in environmental regulation, and the limitations of those examinations to date.

II. Importance of the Issue

Our era of environmental protection can probably most feasibly be said to begin in 1972,³ with the convening of the United Nations Conference on the Human Environment in Stockholm, and the subsequent issuing of the Stockholm Declaration.⁴ This conference is one of the most important events which made a significant change in the history of the environmental protection, as will be noted later. The Stockholm Declaration was founded on the articulated need for a common outlook and for common principles to inspire and guide the people of

³ This is not to say that there were no efforts to engage in environmental regulation prior to this time. In fact, there are many others examples precede it. There were such efforts, though they were more limited in their scope. Such efforts include London's International Convention for the Prevention of Pollution of the Sea by Oil, concluded in 1954, The Convention Relating To Intervention On The High Seas In Cases Of Oil Pollution Casualties, concluded in 1969, Aad The Brussels' International Convention on Civil Liability for Oil Pollution Damage, also concluded in 1969. Finally, there is the 1960 Paris Convention on Nuclear Tests and on The Hunting and Bird Protection Agreement, concluded in Brussels in 1970.

⁴ Dr. Enas Al-Khalidi, OIL NAVIGATION POLLUTION OF THE SEAS IN INTERNATIONAL LAW 13 (2012).



the world in the preservation and enhancement of the human environment. The Declaration obligates the signed countries to undertake processes that are important to protect the environment in general and the marine environment specifically.⁵ The urgency of environmental protection has only risen since then, and the challenges of doing so has at the same time become increasingly difficult.

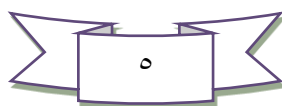
Specifically, over the last forty years, the world has seen the following developments. First, there has been increasing damage to the ecosystem though activities of the energy industry, as the activity of oil extraction and transport has had a negative effect on the environment around us. For example, there have been over thirty oil spills around the world during oil extraction or transport involving the release of ten million or more gallons of oil. One of the most well known of these is the Mexican Gulf oil spill in 2010, which is recognized as the worst oil spill in the U.S history. On April 20 of that year, a blowout of oil, natural gas, and mud occurred during Deepwater drilling operations at the Macondo well, located on the Outer Continental Shelf ("OCS") in the waters of the Gulf of Mexico. At the time of the blowout, the Deepwater Horizon, a drilling rig chartered by BP plc ("BP") from Transocean Ltd. ("Transocean"), was attached

⁵ *Id.* at 13-14.



to the Macondo well. Eleven men died from the resulting explosions and fires on the Deepwater Horizon. The blowout resulted in the discharge of 130,000,000 gallons of oil into the Gulf of Mexico.⁶ However, it is hardly the only example of a major disaster in recent years. Another notable one is the oil spill off the Galician coast, in north-west Spain, which followed the sinking of the tanker 'Prestige' in 2002. This has been a matter of great concern for environmental scientists and ecologists after spilling more than tons of fuel⁷. Finally, of course, there is the Exxon Valdez leak, in 1990, which spilled more than 1,092,500 gallons of crude oil into Prince William Sound.⁸ Most of the examples in this first chapter concern oil in particular. However, it is my intention to address issues relating to energy beyond this. One important area, for example, in the United

⁶ *United States v. Kaluza*, 2013 U.S. Dist. LEXIS 173134, 2013 WL 6490341 (E.D. La. Dec. 10, 2013),
⁷ C. Garcia-Soto, 'Prestige' oil spill and Navidad flow, 84 J. MAR. BIOL. ASS. U.K. 297 (2004). These are not the only examples of environmental damages done in the context of energy extraction. To name a few others, in the Persian (Arabic) gulf spill in 1991 around 240,000,000 gallons of oil were released. In 1979's Ixtoc I Oil Well, Ciudad Del Carmen, Mexico spilled around 140,000,000 gallons of oil in the Gulf of Mexico. Around 80,000,000 gallons' oil in the Persian (Arabic) gulf during the Nowruz field accident in 1983 were spilled and the same amount was spilled in the Fergana oil well, Uzbekistan in 1992. About 78,500,000 gallons of oil in 1983 was spilled off of the Castillo de Bellver tanker, just offshore from Cape Town, South Africa. 68,670,000 gallons were spilled in 1978 off the Amoco Cadiz tanker, offshore from Tobago. In 1980, the Production well D-103, Tripoli, Libya spilled 42,000,000 gallons and in the same year 36,600,000 gallons were spilled off of the Irenes Serenade tanker, Pilos, Greece. Finally, in Kuwait, storage tanks spilled 31,170,000 gallons in 1981. Lately, the number of small spills has been undergoing a steady increase while large-scale spills have stayed relatively constant. The cumulative effect of small spills of less than 100,000 gallons adds up to about 10 million gallons per year worldwide. Dara O'ROURK, Sarah CONNOLLY, *Just Oil? The Distribution Of Environmental And Social Impacts Of Oil Production And Consumption* 599, 600 (ANNU. REV. ENVIRON. RESOUR. 2003).
⁸ *Lakosh v. Alaska Dep't of Env'tl. Conservation*, 49 P.3d 1111, 2002 Alas. LEXIS 91, 156 Oil & Gas Rep. 361 (Alaska 2002).





States in particular, concerns hydraulic fracturing, or “fracking.”⁹ This is discussed in greater detail in Chapter 2. Furthermore, I will extend my research to cover the environmental damage that caused by some industries related to energy industry such as petrochemical industry.

Consequently, there has been negative impacts to native species and ecosystems which led to habitat loss. For instance, the operations of oil and natural gas’s extraction from shale is increasing quickly in North America, with documented impacts to environment. With shale oil and gas resources on nearly every continent, this development will make a significant change of global land-use. It is increasingly critical to quantify spatial habitat loss driven by this development to implement effective mitigation strategies and develop habitat offsets. Habitat selection is a fundamental ecological process, influencing both individual fitness and population-level distribution on the landscape. Investigations of habitat selection have provided a natural means for understanding spatial impacts. According to research that examined the impact of natural gas development on habitat selection patterns of mule deer on their winter range in Colorado. They fit resource selection functions in a Bayesian

⁹ For more information see in general; Wiseman, Hannah, FRACTURING REGULATION APPLIED, 22 Duke ENVL. L. & POL’Y F. 361 (2012).



hierarchical framework, with habitat availability defined using a movement-based modeling approach. Energy development drove considerable changes to deer habitat selection patterns, with the most substantial effects manifested as avoidance of well pads with active drilling to a distance of at least 800 m. Deer showed more nuanced responses to other infrastructure, avoiding pads with active production and roads to a greater degree during the day than night.¹⁰

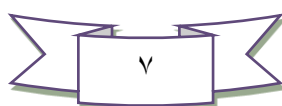
The second development is an ever increasing popular demand for cheap and reliable energy, in developed and developing states alike. For example, the number of vehicles (cars & light trucks) registered in the United States in 2015 was 257.9 million¹¹. As a result, the gasoline consumed in the United States on a daily basis is about 384.74 million gallons.¹² In 2016, the number of vehicles registered increased to 261.8 million,¹³ which means the gasoline consumed increases as well. This is to say nothing of the substantial amounts of electricity consumption in the United States, which is 4,986,400,000 (MW-h/yr), in 2013,

¹⁰ For more information see in general; Joseph M Northrup; Charles R Anderson, George Wittemyer, QUANTIFYING SPATIAL HABITAT LOSS FROM HYDROCARBON DEVELOPMENT THROUGH ASSESSING HABITAT SELECTION PATTERNS OF MULE DEER, 21 Blackwell Publ'g Ltd 3961 (2015).

¹¹ <https://hedgescompany.com/automotive-market-research-statistics/auto-mailing-lists-and-marketing>. November 9, 2016.

¹² <https://www.eia.gov/tools/faqs/faq.cfm?id=23&t=10>. November 9, 2016.

¹³ <https://hedgescompany.com/automotive-market-research-statistics/auto-mailing-lists-and-marketing>. November 9, 2016.





for instance.¹⁴ Similarly, Iraq, as a developing country, not only has a large number of automobiles, but also faces vociferous demonstrations in opposition whenever fuel subsidies are reduced. In addition, demonstrations often arise out of public demands that the government do more to provide electricity.¹⁵

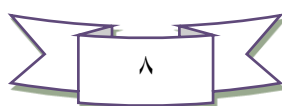
Third, there is rising public interest in ensuring that the environment is safe and protected. One illustration of this lies in the numbers of people purchasing hybrid cars in the United States specifically because they reduce air emissions.¹⁶ But an even better example of the public demand for environmental protection lies in the fact that developed and developing nation alike have established regulatory regimes of different sorts in an attempt to limit the environmental impact the activities of the energy sector.

III. Scope of the Study

The previous section has shown there has been an increased interest among states and interested international organizations to advocate for the environment to provide greater protection to the ecosystem because of the activities of the energy industry that is almost universal in scope. Thus, in the 2015 United

¹⁴ https://en.wikipedia.org/wiki/List_of_countries_by_electricity_consumption. November 9, 2016.

¹⁶ By 2020, hybrids are estimated to emit about over 8 million tons of carbon dioxide and about 49,000 tons of benzene. United States, Hybrid Cars: Increasing Fuel Efficiency and Reducing Oil Dependence 9 (U.S. G.P.O. : 2007).





Nations Climate Change Conference in Paris, France (COP 21),¹⁷ the membership of the UN Framework Convention on Climate Change (UNFCCC) consisted of 197 parties, which is nearly all of the states currently in existence.¹⁸ In addition to this international framework, nearly every state has its own domestic system of regulation as well.

Still, it is fair to say that most of this focus on environmental protection already described has been on the use of civil penalties and civil regulatory mechanisms, including private law, to address the problem. However, as the environment grows ever more precarious, it becomes clearer that the exclusive use of private law and civil liability to protect the environment are proving insufficient.

Accordingly, the purpose of this thesis is to lay out how the criminal law can be used as an effective tool in the state's toolkit to protect the environment while still being deployed in a way that attracts multinational energy companies

¹⁷ COP21: "is the latest in the annual "Conference of Parties", which began in Berlin in 1995, with a main aim to review the implementation of the Rio Convention". Rhodes, Christopher J. *The 2015 Paris Climate Change Conference: COP21* 99 SCIENCE PROGRESS 1 (2016)

¹⁸ COP21 is not only the example of the increased interest among states and interested international organizations. It was preceded by many other conferences which were about the climate change such as COP3 (where the Kyoto Protocol was adopted in [1997]), COP 11 (the Montreal Action Plan was agreed, in [2005]), COP 15 in Copenhagen (agreement not achieved to implement the Kyoto Protocol, in [2009]) and COP 17 in Durban (Green Climate Fund agreed, in [2011]). *Id.* For more examples about this issue see also, footnote number 2 above. COP 21 stands out from all previous conferences. It has the greatest membership and we believe that this occurred because of the developments that we mentioned above.



to exploit a country's energy resources. Using comparative analysis, this study will explore how criminal law is deployed in various jurisdictions, and primarily the United States and Iraq, to show how it might optimally be used, as one of many tools of regulation, and the extent to which its optimal use depends on the legal system in question.

Of course, the general reticence to use criminal law to regulate the environment and limit the activities of energy companies is understandable. Some of it, no doubt, arises because of the expanding size of international oil companies, which not only increases their capacity to negatively affect the environment, but it also results in their greater political and economic influence, particularly in developing countries, where many damages are done. Another important, and more legitimate, factor lies in the potential abuse in using the tools of criminal law, especially in states with developing legal systems. After all, the imposing of strict criminal sanctions, especially a prison sentence¹⁹, also raises legitimate concerns among oil and gas companies. If tools like this are used too frequently, the result is over deterrence, which negatively impacts the interests of the countries in the investing of its natural resources. This dissertation will show,

¹⁹ For example, articles 34 and 35 of the Iraqi Statute for Protection and Improvement of the Environment, Number 27 of 2009, punishes the person who violates the provisions of this law to prison for up to 15 years.



however, that despite these limitations, the criminal law has an important role to play, and serves functions that civil law on its own could hardly serve.

I have selected the United States and Iraq for a variety of reasons. First, the two countries are different in important ways that help to show the benefits and limitations of the use of criminal law in different contexts.²⁰

Specifically, they are different, in their judicial systems, their legal systems and their economic development. The United States is a developed country, a leader in the field of environmental legislation, while Iraq is a developing country. It has a humble legal system but is considered as one of the best and oldest legal systems in the area. An even more salient difference is that their approaches to criminal adjudication differ considerably. The United States adopts an adversarial model, wherein it is the role of prosecutors and police to bring cases, and largely to settle them through plea-bargaining where deemed suitable. Iraq adopts among the purer forms of the inquisitorial model, where the role of investigation of criminal activity is left to the judicial branch.²¹ Thus, where the

²⁰ The two countries are similar in one important way, in that they are both federal states. This could be quite important in some contexts, and in particular in the manner in which federal and local authorities might cooperate and compete in regulating the environment. This is a matter, however, which is beyond the scope of this dissertation to discuss, as it does not relate to any unique features of the criminal law, nor, in my view, does it relate to how criminal law can be used as a partial means to effect optimal environmental regulation.

²¹ Cherif Bassiouni, *Post-Conflict Justice in Iraq: An Appraisal of the Iraq Special Tribunal*, 38 CORNELL INT'L L.J. 327, 17-18 (2005).



state might use criminal law as a means to enforce civil regulation in the United States, if the prosecutors are willing to work with civil authorities to achieve this, such an approach is much harder to envisage in Iraq, where separation of powers concerns are raised if executive officials seek to use influence to affect an judicial investigatory project. This will be explored in more detail in succeeding Chapters.

There are other differences as well. The United States legal system follows the Anglo-American “common law” system²², while the Iraqi legal system follows the Latin “civil law” legal system.²³ And each of these two systems has own legal means and methods using criminal law.

Finally, the U.S. follows the free market system and limiting of the government interference in the work of commercial companies in general. In contrast, Iraq recently emerged from a brutal dictatorship, where the prevailing experience was the government intervening in the various areas of economic life pervasively. It is only now progressing in slow steps towards an open economy.

²² Wilson Steven, U.S. JUSTICE SYSTEM, THE: AN ENCYCLOPEDIA 113 (ABC-CLIO 2011).

²³ Cherif Bassiouni, supra note 19, at 18.



The differences offer opportunities to explore a variety of solutions. I will be able to compare between two different systems each with its advantages and disadvantages. It should be noted that the comparative study might not be limited to Iraq and the United States. I will include the United Arab Emirates, or other jurisdictions, as necessary to help illustrate the variety of systems that exist across the globe, and the means by which they can use criminal law as a means to effectively assist in environmental regulation in a manner that is more considered than is currently deemed fashionable.

Having thus defined the thesis, the next section illustrates how scholars currently envisage the methods and policies involved in environmental regulation. It also sets forth the limitations on those approaches.

IV. Current Approaches to Environmental Regulation

A. Free Market

According to the free market approach, environmental protection should be based on a property rights regime.²⁴ At the heart of free market environmentalism is the establishment a system of well-specified property

²⁴ See Terry L. Anderson and Donald R. Leal, FREE MARKET ENVIRONMENTALISM (1991). For additional formulations of free-market environmentalism, see Jonathan H. Adler, ECOLOGY, LIBERTY & PROPERTY: A FREE MARKET ENVIRONMENTAL READER (2000); Bruce Yandle, COMMON SENSE AND COMMON LAW FOR THE ENVIRONMENT (1997).



rights to natural and environmental resources, primarily through the issuance of permits or licenses that are tradable. Whether these rights are held by individuals, corporations, nonprofit environmental groups, or communal groups, a discipline is imposed on resource users because the wealth of the property owner, in the form of such permits, is at stake if bad decisions are made.²⁵

Moreover, if private owners can trade their rights to use resources, the owners must not only consider their own values, they must also consider what others are willing to pay. In the market setting, the argument runs, it is the potential for gains from trade that encourages cooperation.

By contrast, both the discipline of private ownership and the potential for gains from them do not transfer to the political setting. When resources are controlled politically, the costs of misuse are more diffuse and the potential for cooperation is minimized because the rights are essentially up for grabs.²⁶ For free market advocates, the main reason for the pollution problem is a failure to permit markets and create them where they do not yet - or no longer - exist.²⁷ Therefore, where there is a lack of markets, usually, environmental problems

²⁵ Anderson and Leal, *supra* note 22 at 4.

²⁶ *Id.*

²⁷ Jonathan H. Adler, *Free And Green: A New Approach To Environmental Protection*, 24 HARV. L.J. & PUB. POL'Y 653, 667 (2001).



are most severe, specifically, when there are no property rights that are capable of enforcement and exchange.

In general, free market environmentalism emphasizes the positive incentives associated with prices, profits, and entrepreneurship, as opposed to political environmentalism, which emphasizes negative incentives associated with regulation and taxes.²⁸ Environmental resources that are incorporated in market institutions because they are privately owned are typically well-maintained, according to such advocates.²⁹ As conservation scholar R.J. Smith explains:

Wherever we have exclusive private ownership, whether it is organized around a profit-seeking or nonprofit undertaking, there are incentives for the private owners to preserve the resource.... [P]rivate ownership allows the owner to capture the full capital value of the resource, and self-interest and economic incentive drive the owner to maintain its long-term capital value".³⁰

²⁸ Anderson and Leal, *supra* note 22 at 4.

²⁹ Peter J. Hill & Roger E. Meiners, *Property Rights and Externalities: Problems and Solutions*, in WHO OWNS THE ENVIRONMENT? xi (1998).

³⁰ Robert J. Smith, *Resolving the Tragedy of the Commons by Creating Private Property Rights in Wildlife*, 1 CATO J. 459, 456 (1981). For example, When the U.S. witnessed enormous forest regrowth from 1952 to 1991, the timberlands found greater forest volume than existed before. Roger A. Sedjo, FORESTS: CONFLICTING SIGNALS, IN THE TRUE STATE OF THE PLANET 177, 189-90 (Ronald Bailey ed., 1995). The significant share of this regeneration occurred in private lands. See Jonathan H. Adler, POPLAR FRONT: THE REBIRTH OF AMERICA'S FORESTS, in ECOLOGY, LIBERTY & PROPERTY 65, 72 (Jonathan H. Adler ed., 2000) (citing U.S. Forest Service report that found increasing timber volume for all ownerships save national forests). Private timberlands are around eighty-five percent of total tree planting and seeding. See Sedjo, *supra* note 28 at 203.



Perhaps the best example of how these characteristics of private ownership can enhance environmental quality comes from the Nature Conservancy, the largest environmental group in the United States that depends on private landownership. When the conservancy obtains title to a parcel of land, it uses a formal system for evaluating whether the property has significant ecological value. Consider the case in which the Wisconsin Nature Conservancy was given title to beachfront property on St. Croix, Virgin Islands. One might think that the Nature Conservancy would go to great lengths to prevent development of oceanside property in the Caribbean. But, indeed, it actually traded the property for a much larger tract in Wisconsin and allowed selective beachfront development to occur under some protective covenants.³¹ Thus, environmental problems are "essentially property rights problems" which are solved by the extension, definition, and defense of property rights in environmental resources.³²

However, free market environmentalism is not free from some criticisms. In particular, it needs to account for externalities in order to maintain a sensible system of environmental regulation, and this is not easy to do. Thus, in his well

³¹ Anderson and Leal, *supra* note 22 at 4.

³² Hill, *supra* note 27 at xi.



known essay on "the tragedy of the commons", Garrett Hardin points out, "there is no incentive for any individual to protect the commonly owned grazing pasture in a rural village."³³ To elaborate, imagine a pasture open to the public. It is to be anticipated that each herdsman is going to try to keep as many cattle as possible on the commons. Every shepherd wishes to have his herd overgraze the pasture. The shepherd who has the largest herd will obtain the greatest benefits from that, but all of the villagers will pay the cost of overusing the pasture. In other words, the benefits of increased use are concentrated, while the costs are dispersed. As a result, all experience an overgrazed pasture, and there is no winner.

Moreover, the shepherd, who expects that the pasture will become barren later, will not be patient. He has the additional incentive to overgraze now to acquire benefits or he would be the loser. Refusing to add another animal to one's own herd does not change the incentive of every other shepherd to do so.³⁴ In summary, to quote Hardin:

³³ Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968).

³⁴ *Id.* at 1244.



Ruin is the destination toward which all men rush, each pursuing his own best interest in society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.³⁵

In a reverse way, the tragedy of the commons appears in problems of pollution. Here it is not a question of taking something out of the commons, but of putting toxic substances into sewage; chemical, radioactive, and heat wastes into water; noxious and dangerous fumes into air; and distracting and unpleasant advertising signs into the line of sight.³⁶ The calculations of utility are much the same as before. The rational person finds that her share of the cost of the wastes she discharges into the commons is less than the cost of purifying her wastes before releasing them. Since this is true for everyone, we are locked into system of “fouling our own nest” so long as we behave only as independent, rational, free-enterprisers.³⁷

In essence, the problem that arises is a market failure because of externality of costs in connection with pollution. That is, in maximizing profits, a firm would not necessarily consider pollution because the harm is external to its profits and

³⁵ *Id.*

³⁶ *Id.* at 1245.

³⁷ *Id.*



losses. This would result in something akin to the tragedy of the commons.

Thus, a means needs to be created to internalize these external costs.

As alluded to above, the means to internalize costs in order to preserve the principle of the free market in environmental regulation is through a tradable permit regime. This system works by releasing tradable permits in the market.

The tradable permit authorizes a utility or industrial source to emit, for instance, one ton of emissions during a given compliance period. Allowances are fully marketable commodities. Once allocated, allowances may be bought, sold, traded, or banked for use in future years. For examples, Environment Protection Agency (EPA) allocates allowances for the Acid Rain Program based on a rate of SO₂ emissions (in lbs/million British thermal units) and baseline fuel consumption.³⁸ For other programs, such as The Clean Air Interstate Rule

³⁸ These regulations are listed in 40 CFR 73.10, Phases 1 and 2.



(CAIR)³⁹ and Cross-State Air Pollution Rule (CSAPR)⁴⁰, allowances can be allocated according to formulas recommended by EPA, or by an alternative method in states that have an approved State Implementation Plan (SIP).

In some important ways, free market environmentalism offers a partial solution to the problem of pollution. However, there are limitations on the model as a complete solution to environmental problems. First of all, I agree with advocates of the tragedy of the commons respecting the innate nature of private actors that would push them to prefer their interest over the public interest.

Second, I acknowledge that a tradable permit regime offers a good solution to address this challenge. However, it does have problems and limitations of its

³⁹ The Clean Air Interstate Rule (CAIR) was designed to address interstate transport of ozone and fine particulate matter (PM_{2.5}) pollution. To do so, CAIR required certain states to limit emissions of nitrogen oxides (NO_x) and sulfur dioxide (SO₂), which contribute to the formation of ozone and PM_{2.5}. CAIR developed three separate cap and trade programs that could be used to achieve the required reductions — the CAIR NO_x ozone season trading program, the CAIR annual NO_x trading program, and the CAIR SO₂ trading program. The CAIR NO_x ozone season and annual programs began in 2009, while the CAIR SO₂ annual program began in 2010. The reduction in ozone and PM_{2.5} formation resulting from implementation of the CAIR programs provides health benefits as well as improved visibility in national parks and improved ecosystem protection in the eastern U.S. For more information, see https://www.epa.gov/sites/production/files/2015-08/documents/cair09_environmental_results.pdf. November 7, 2016.

⁴⁰ On July 6, 2011, the US Environmental Protection Agency (EPA) finalized a rule that protects the health of millions of Americans by helping states reduce air pollution and attain clean air standards. This rule, known as the Cross-State Air Pollution Rule (CSAPR), requires states to significantly improve air quality by reducing power plant emissions that contribute to ozone and/or fine particle pollution in other states. In a separate, but related, regulatory action, EPA finalized a supplemental rulemaking on December 15, 2011 to require five states - Iowa, Michigan, Missouri, Oklahoma, and Wisconsin - to make summertime NO_x reductions under the CSAPR ozone season control program. CSAPR requires a total of 28 states to reduce annual SO₂ emissions, annual NO_x emissions and/or ozone season NO_x emissions to assist in attaining the 1997 ozone and fine particle and 2006 fine particle National Ambient Air Quality Standards (NAAQS). On February 7, 2012 and June 5, 2012, EPA issued two sets of minor adjustments to the Cross-State Air Pollution Rule (CSAPR). For more information, see <https://www3.epa.gov/airtransport/CSAPR/>. November 7, 2016.



own. Specifically, it requires the creation of a market which does not exist, which obviously necessitates regulation of that market to ensure that players are indeed abiding by the rules. One need not look far to determine what it is that happens in the absence of such regulation—players simply engage in fraud, either by emitting pollutants without a permit or by exceeding the limit allowed by their permit. The regulation in question must be extensive, and it must be well administered. It must also deal manage the problem of negligence, gross negligence, and reckless or intentional harm to the environment and offer differing sanctions for each.

One of the tools that would be helpful, indeed fundamental, if such a system were to function properly, would be criminal sanction for particularly egregious violations of the trading system. Other markets, including the securities markets, routinely use criminal law as part of the regulatory system, and criminal law features in consumer protection as well. It would only stand to reason that given the self-interest of private actors in private markets, there need to be some measures that serve to deter violations of the regulatory rules to further that very self interest that led to the creation of the market based regulatory rules in the first place. In the end, then, it is my view that free market environmentalism may well have its place within the toolkit of



environmental regulation more broadly, but that it cannot function sensibly without the assistance of criminal law sanction for particularly egregious violators. This will be explored further in subsequent chapters.

B. Common Law

For many years, common law doctrines of nuisance and trespass were used by landowners to defend against pollution.⁴¹ While the United States has largely stopped using common law doctrines as tools to protect the environment, in parts of England, these doctrines still provide robust protection for water quality in rivers and streams.⁴²

Many scholars consider the abandonment of the common law to be a mistake. They argue that to protect the environment by property rights, it is essential to apply common-law-style liability rules to pollution problems.⁴³ The use of property rights to define who has a right to claim an injury from a given environmental action is also opposed on many grounds. Most importantly, some

⁴¹ Elizabeth Brubaker, PROPERTY RIGHTS IN THE DEFENSE OF NATURE 18 (1995). See generally, Roger Meiners & Bruce Yandle, *Common Law and the Conceit of Modern Environmental Policy*, 7 GEO. MASON L. REV. 923 (1999).

⁴² See Roger E. Meiners, *Elements of Property Rights: The Common Law Alternative*, in LAND RIGHTS: THE 1990'S PROPERTY RIGHTS REBELLION, 86-87 (Bruce Yandle ed., 1995).

⁴³ For a discussion of how common law rules can be used to protect property rights in environmental resources, see Jonathan H. Adler, *Stand or Deliver: Citizen Suits, Standing and Environmental Protection*, 10 DUKE ENVTL. L. & POL'Y F., 29, 70-73 (2001).



assert that insofar as this scheme was the basis for common law nuisance protections, property rights failed to protect environmental quality, leading to the existing regulatory regime.⁴⁴ Yet there has been much in the historical record that challenges this account, including considerable proof that both legislatures and courts undermined common law rules in favor of liability rules or even de facto easements for polluters.⁴⁵ In other words, the common law did not fail so much as legislatures changed it, and courts failed to apply it in the classical form that it could have been applied.

Thus, there is an ongoing debate in the scholarly and policy communities about the extent to which common law instruments should be a significant aspect of climate change law as it develops. Some commentators propose that there are solid grounds for including common law causes of action in the toolkit of

⁴⁴ See, e.g., Robert V. Percival & Joanna B. Goger, ESCAPING THE COMMON LAW'S SHADOW: STANDING IN THE LIGHT OF LAIDLAW, 12 DUKE ENVTL. L. & POL'Y F. 119 (2001); Frank B. Cross, COMMON LAW CONCEITS: A COMMENT ON MEINERS & YANDLE, 8 GEO. MASON L. REV. 965 (1999).

⁴⁵ See, e.g., Roger E. Meiners & Andrew P. Morris eds., THE COMMON LAW AND THE ENVIRONMENT: RETHINKING THE STATUTORY BASIS FOR MODERN ENVIRONMENTAL LAW (2000). The Cuyahoga River burned prior to the enactment of federal regulations--indeed it burned several times. But this was not due to any purported failure of common law. Rather, common law nuisance suits against companies that polluted the river were explicitly precluded under state law. See Stacie THOMAS & MATT RYAN, BURNING RIVERS, IN THE MARKET MEETS THE ENVIRONMENT 1, 3 (Bruce Yandle ed., 1999). See also Roger E. Meiners et al., BURNING RIVERS, COMMON LAW, AND INSTITUTIONAL CHOICE, in THE MARKET MEETS THE ENVIRONMENT 54, 61 (describing how "the river burned, because common law rights that might have precluded its conversion to an industrial dump were blunted by the Ohio legislature").



strategies for addressing concerns about climate change.⁴⁶ Others urge that comprehensive regulation of greenhouse gases is the superior mitigation strategy and believe that “[t]he prospects for . . . common law suits are limited, owing in part to the unsuitability of private litigation for dealing with global problems like climate change.”⁴⁷

Outside of the regulatory context, courts have issued some decisions which contributed to this discussion.⁴⁸ While those decisions seem to have provided relatively definitive answers to some questions about the viability of common law causes of action, they have not provided the same definite answer to others.

This section discusses common law causes of action, which might be used to protect the environment. Specifically, I discuss nuisance, public trust, and trespass, which constitute the most promising potential causes of action.⁴⁹

⁴⁶ See Randall S. Abate, PUBLIC NUISANCE SUITS FOR THE CLIMATE JUSTICE MOVEMENT: THE RIGHT THING AND THE RIGHT TIME, 85 WASH. L. REV. 197 (2010).

⁴⁷ Robert Meltz, CONG. RESEARCH SERV., R 41496, COMMON-LAW CLIMATE CHANGE LITIGATION AFTER AMERICAN ELECTRIC POWER V. CONNECTION (2011).

⁴⁸ For a very helpful resource that maintains an up-to-date list of climate change cases, organized by type of issue involved, see Arnold & Porter, LLP, Climate Case Chart, <http://www.climatecasechart.com/>. For a review of domestic climate change cases filed through 2010, see Dave Markell & J.B. Ruhl, *An Empirical Assessment of Climate Change in the Courts: A New Jurisprudence or Business as Usual?*, 64 FLA. L. REV. 15 (2012).

⁴⁹ Litigants have also relied on civil conspiracy, intentional torts, and ordinary negligence claims in a few climate change suits. Products liability offers another common law possibility related to the claims discussed in the main text. However, such suits would face a number of difficulties similar to those encountered in ordinary negligence cases, and a few additional ones. Specifically, to the extent design defects claims require proof of a reasonable alternative design and warnings claims can be avoided on a showing of futility, products liability



Following this, I will highlight parallel Iraqi legal provisions that are contained in the Iraqi Civil Code.

1. *Public Nuisance Litigation*

As brief background, the Restatement defines a common law public nuisance as an activity that creates an “unreasonable” interference with a right common to the general public.⁵⁰

Determining whether interference is unreasonable requires weighing “the gravity of the harm against the utility of the conduct.”⁵¹ Courts have regularly held that interference with public health and safety are included in the concept of unreasonable interference.⁵² In a public nuisance case, typically, the government is the plaintiff, although private parties that have suffered “special injury” may bring such a case as well.⁵³ In addition to federal public nuisance claims, there has been a separate cause of action for “private nuisance” based on substantial and unreasonable invasion with a person’s private use and

claims may be even more difficult than ordinary negligence claims. See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2(b) (requiring reasonable alternative design for design defects), § 2(c) (requiring that omission of reasonable warning must render product not reasonably safe) (1998), *See generally* David L. Markell, and Emily Hammond, A PRIMER ON COMMON LAW & RELATED CAUSES OF ACTION IN CLIMATE CHANGE LITIGATION 11-12 (2012).

⁵⁰ RESTATEMENT (SECOND) TORTS § 821B (1979).

⁵¹ *Id.* § 821B cmt. e.

⁵² *Id.* § 821B cmt. b.

⁵³ *Id.* § 821C.



enjoyment of land.⁵⁴ There have been also state common law causes of action based in public nuisance.⁵⁵

There has been much recent activity in the area of public nuisance and environmental protection. Much of it has resulted in the constricted ability of parties to use the common law to make claims respecting pollution. The major case in this regard is the Supreme Court's 2007 decision in *Massachusetts v. EPA*⁵⁶. In this case, the EPA argued that the Clean Air Act (CAA) had not authorized the EPA to address global climate change and that, in any event, executive policy specifically addressing global warming warranted the EPA's refusal to regulate in such area. The Court first held that Petitioners had standing to challenge EPA's denial of their rulemaking petition since at least one petitioner state properly asserted a concrete injury from the potential further loss of its coastal land, much of which was owned by the state, from rising sea levels caused by climate change. Further, because greenhouse gases were clearly within the CAA's broad definition of an air pollutant, the EPA had the statutory authority to regulate the emission of such gases from new motor vehicles, and

⁵⁴ *Id.* § 822.

⁵⁵ *Id.* § 821B cmt. b. For an example in an environmental setting, see *State of New York v. Shore Realty Corp.*, 759 F.2d 1032 (2d Cir. 1985).

⁵⁶ *Massachusetts v. EPA*, 549 U.S. 497 (2007).



there was no showing of any congressional intent to bar the EPA from addressing global warming. Also, it was undisputed that global warming threatened serious harms, and policy considerations were irrelevant to the EPA's statutory mandate to determine whether the greenhouse gases contributed to global warming and whether motor vehicle emissions of such gases actually or potentially endangered public health or welfare.⁵⁷

Federal regulatory attention was galvanized by that decision to regulation of GHG emissions that are broadly considered to contribute to climate change and made it unlikely that at least some types of nuisance cases could prevail. Away from *Native Village of Kivalina v. ExxonMobil Corp.*,⁵⁸ filed in 2008, there has

⁵⁷ *Id.*

⁵⁸ Plaintiffs alleged defendants contributed to the global warming that was causing the erosion and destruction which would require relocation of plaintiffs' residents. The court agreed with defendants that plaintiffs' federal claim for nuisance was barred by the political question doctrine. While defendants showed that global warming issues might implicate foreign policy and related economic issues, the fact that the case touched foreign relations did not ipso facto place it beyond the reach of the judiciary. However, the court found the political question doctrine applicable because resolution of the question demanded that the court move beyond areas of judicial expertise as there were no judicially discoverable and manageable standards available to adjudicate the issues. Further, it would be impossible for the court to decide the case without an initial policy determination of a kind clearly for non-judicial discretion. The court also held that plaintiffs lacked U.S. Const. art. III standing to pursue their global warming claims under a nuisance theory because their injury was not fairly traceable to the conduct of defendants. Finally, the court granted defendants' motions to dismiss plaintiffs' federal claim for nuisance for lack of subject matter jurisdiction. The court declined to assert supplemental jurisdiction over the remaining state law claims which were dismissed without prejudice to their presentation in a state court action. *Kivalina v. ExxonMobil Corp.*, 663 F. Supp. 2d 863 (N.D. Cal. 2009).



been little new common law nuisance litigation since the Court's decision in *Massachusetts v. EPA*.⁵⁹

The problem is one of preemption. In *American Electric Power v. Connecticut*,⁶⁰ decided by the Supreme Court in 2011, the Court held that the EPA's authority under the Clean Air Act (CAA) to regulate greenhouse gases and GHG emissions "displaces" use of federal common law to address climate change.⁶¹ By preemption, the Court prohibited federal courts from using federal common law to fashion judge-made GHG emission standards. Instead, the Court ruled that EPA is taking charge of developing such standards by the authority that Congress had given to it, and this Congressional authorization to EPA to regulate emissions "displaced" courts' authority to do so on their own.

⁵⁹ Markell and Hammond, supra note 47, at 9; Emily Hammond and David L. Markell, *Civil Remedies*, in GLOBAL CLIMATE CHANGE AND U.S. LAW (2d ed., Michael B. Gerrard & Jody Freeman, eds.) (2014).

⁶⁰ Specifically, according to the Court, the Clean Air Act and the Environmental Protection Agency (EPA) actions it authorized displaced any federal common law right to seek the relief sought. The Act spoke directly to such emissions. 42 U.S.C.S. § 7411 directed the EPA to list categories of air pollution and establish emission standards. In fact, the EPA was doing so for greenhouse gas emissions from fossil-fuel fired power plants. The Act itself thus provided a means to seek limits on the emissions--the same relief respondents sought by invoking federal common law. The critical point was that Congress delegated to the EPA the decision whether and how to regulate carbon-dioxide emissions from power plants; the delegation was what displaced federal common law. The judgments respondents would commit to federal judges, in suits in any federal district, could not be reconciled with the decision-making scheme Congress enacted. It was error to find that federal judges could set limits on greenhouse gas emissions in face of a law empowering the EPA to set the same limits, subject to judicial review only to ensure against arbitrary, capricious, or unlawful action under 42 U.S.C.S. § 7607(d)(9). *Electric Power v. Connecticut*, 131 S. Ct. 2527 (2011).

⁶¹ The vote on this issue was 8-0. Justice Sotomayor did not participate in the Court's decision because she was on the Second Circuit panel that heard the argument in AEP, though she had been elevated to the Supreme Court by the time the Second Circuit rendered its decision. *Id.* at 2535.



Furthermore, the Court emphasized that it was this congressional act that displaced the courts' role, seemingly regardless of whether EPA actually followed through and developed GHG emission standards.⁶² The result of the case law is that for every pollutant over which the EPA exercises jurisdiction, there has been effective preemption. However, in theory, pollutants might be subject to common law control if the EPA has not sought to regulate them, nor does it have authority to. As a matter of practice, this greatly reduces the scope of the common law nuisance doctrine as a means to regulate.

The closest concept to common law nuisance doctrine in the Iraqi law is the abuse of the right theory. This is adopted in Article 7 of the Iraqi Civil Code, which states that:

- (1) He who impermissibly exercises his right shall be liable. (2) The exercise of right becomes impermissible in the following cases: (a) Where such exercise is intended to cause injury to a third party. (b) Where the benefits sought from such exercise are insignificant such as it will not at all be proportion to the injury caused thereby to a third party. (c) Where the benefits to be obtained are unlawful.

The Iraqi legislator, by this text, obviously intended to consider the abuse of the right a fault and render the person who caused the fault obligated to

⁶² *Id.* at 2538.



compensate the party who is injured because of it.⁶³ According to article 7, abuse of the right occurs in three cases. The first is if the intention of the exercise was just to harm the third party; for instance, when a person builds a wall in his property and the only purpose was to block of his neighbor's window.⁶⁴ However, as to the second instance, the existence of a lawful benefit to the holder of the right is not sufficient to exempt him of liability if there is an injury caused thereby to another, unless this benefit is more important than it. A court uses an objective standard to determine whether the benefit or the injury is the more important.⁶⁵ The objective standard used by the court considers the benefit is more important than the injury if it is a more valuable or significant right. One case in application is where the Iraqi Civil Code gave every owner the right to erect a fence around his property unless that bars the exercise of a right belonging to an adjacent immovable object.⁶⁶ The second application is what article 1092/2 of Iraqi Civil Code states. Specifically:

The owner of a wall may not however without a strong cause demolish it on his own initiative if the demolition injures his neighbor whose property is closed in (screened) by it.⁶⁷

⁶³ Abdul Majeed Alhakeem, THE BRIEF OF THE COMMITMENT THEORY IN THE IRAQI CIVIL LAW, 230 (1980).

⁶⁴ *Id.* at 231.

⁶⁵ *Id.* at 232.

⁶⁶ Article 1060 of Iraqi Civil Code.

⁶⁷ Translated by Nicola Karam.



Finally, however, even if the benefit is more important than the injury, it must be lawful. The exercise of right becomes unlawful when it violates a commanded provision of law.⁶⁸

It is therefore clear that there are many similarities between the nuisance doctrine as a common law cause of action and the abuse of right theory in the Iraqi Civil Code. But one key distinction is worth highlighting as well. This is that nuisance is clearly a broader concept because it covers all cases of interference with a right common to the general public or private rights unlike the abuse of right theory which covers just the interference resulting from abuse of the right.

2. Public Trust Litigation

The public trust doctrine is a historic common law doctrine that provides that, in trust for the use and benefit of the public, certain natural resources must directly be managed by the government.⁶⁹ Professor Joseph Sax has argued that states must protect certain natural resources, principally waters, for the benefit of the public through this doctrine.⁷⁰

⁶⁸ Abdul Majeed Alhakeem, *supra* note 61, at 232.

⁶⁹ Markell and Hammond, *supra* note 47, at 9.

⁷⁰ Joseph Sax, *The Public Trust Doctrine in Natural Resource Law: Effective judicial Intervention*, 68 MICH. L. REV. 471 (1970).



In the U.S., states have interpreted the public trust doctrine in different ways. Some states, such as California and Hawaii, have adopted a broad interpretation of the doctrine. For example, in *Mono Lake*, the California Supreme Court held that wildlife, scenic and other environmental values must be considered by the state, under the public trust doctrine, in making water allocation decisions in order to accomplish its responsibilities.⁷¹ Furthermore, an August 2012 Texas decision stated that the public trust doctrine “includes all natural resources of the State including the air and atmosphere.”⁷²

On the other hand, the range of the doctrine has been limited in other states.⁷³ For instance, many lawsuits which were instigated by an Oregon-based non-profit, Our Children’s Trust, in numerous states and in federal court under the common law public trust doctrine.⁷⁴ The organization alleged that government bodies had violated their fiduciary duty under the public trust doctrine when they had failed to reduce greenhouse gases (GHG) emissions that contribute to climate change.⁷⁵ In a separate federal lawsuit, *Alec L. v. Jackson*, the plaintiffs

⁷¹ *National Audubon Society v. Superior Court*, 658 P.2d 709, 33 Cal.3d 419 (Cal. 1983).

⁷² *Bonser-Lain v. Texas Comm’n on Env’tl. Quality*, No. D-1-GN-11-002194 (201st Dist. Ct. Travis Cnty. Tex. Aug. 2, 2012).

⁷³ For a review of the range of the public trust doctrine in several states, see Robin Kundis Craig, ADAPTING TO CLIMATE CHANGE: THE POTENTIAL ROLE OF STATE COMMON LAW PUBLIC TRUST DOCTRINES, 34 VT. L. REV. 781, 785, 810-850 (2009).

⁷⁴ For more information about these cases see Markell and Hammond, *supra* note 47 at 10.

⁷⁵ *Id.*



made the same allegation as in *Our Children's Trust*.⁷⁶ The district court decision in *Alec L.* was in favor of the defendants because the plaintiffs claim did not raise a federal question because it relied on state common law.

Furthermore, the court held that, "even if the public trust doctrine had been a federal common law claim at one time, it has subsequently been displaced by federal regulation, specifically the Clean Air Act."⁷⁷ The same result was reached in *Our Children's Trust*.

Moreover, regarding natural resources, the Iraqi Constitution adopted a theory similar to what the public trust doctrine offers:

The State undertakes the protection and preservation of the environment and biological diversity.

Article 33/2 Iraq Constitution.

This means that environmental protection is the responsibility of the federal Iraqi government.⁷⁸

Specifically, natural resources should directly be managed by the government, in trust for the use and benefit of the public. For example, according to the

⁷⁶ *Alec L. v. Jackson*, No. 1:121-cv-02235, 2012 WL 1951969 (D.D.C. May 31, 2012).

⁷⁷ 2012 WL 1951969, at *4.

⁷⁸ Technically speaking, formulation of environmental policy is one of the competencies that is shared between the federal authorities and regional authorities. (Article 114/ third of Iraqi Constitution). For our purposes, this distinction is not important. It suffices to note that environmental protection is a government responsibility.



Constitution, the federal government has exclusive authorities to make planning policies relating to water sources from outside Iraq and guaranteeing the rate of water.⁷⁹ In addition, oil and gas are owned by all the people of Iraq in all the regions and governorates,⁸⁰ and the federal government, with the producing regional and governorate governments, must formulate the necessary strategic policies to develop the oil and gas wealth, and they undertake the management of it.⁸¹ In other words, natural resources in Iraq are directly managed by the government in trust of the public. The question is, according to the Iraqi civil code number 40 in 1951, can an individual sue the government when it fails in its constitutional duty, referred to earlier, to protect the environment? The answer is, simply, no. There is not any article in the Iraqi civil code gives the individual this right, and the Iraqi courts have never created a private right of

⁷⁹ Article 110/ Eighth of Iraqi Constitution. But formulate and regulate the internal water resources policy is one of the competencies that shall be shared between the federal authorities and regional authorities. Article 114/ Seventh of Iraqi Constitution.

⁸⁰ Article 111 Iraqi Constitution.

⁸¹ Article 112 of Iraqi Constitution states the following:

First: The federal government, with the producing governorates and regional governments, shall undertake the management of oil and gas extracted from present fields, provided that it distributes its revenues in a fair manner in proportion to the population distribution in all parts of the country, specifying an allotment for a specified period for the damaged regions which were unjustly deprived of them by the former regime, and the regions that were damaged afterwards in a way that ensures balanced development in different areas of the country, and this shall be regulated by a law. Second: The federal government, with the producing regional and governorate governments, shall together formulate the necessary strategic policies to develop the oil and gas wealth in a way that achieves the highest benefit to the Iraqi people using the most advanced techniques of the market principles and encouraging investment.



action for a constitutional violation of this sort. The obstacle, as in the United States, is one of standing. Iraqi courts would not deem an Iraqi citizen to have the standing necessary to make a claim for the failure of the government to uphold its constitutional obligation to protect the environment. As such, claims arising under the relevant provisions of the Iraq Constitution relate to jurisdiction as between region and state rather than the obligation of the state to protect and preserve natural resources in the first place. This limits the power of the public trust doctrine to provide meaningful environmental protection within Iraq's legal system.

3. *Trespass*⁸²

Throughout the development of modern Anglo-American tort law, the term “trespass” has been utilized with different meanings. In the beginning, it identified any tortious act that is committed by the defendant that subjects him

⁸² As noted earlier, other Litigants have also relied on civil conspiracy, intentional torts, and ordinary negligence claims in a few climate change suits. Products liability offers another common law possibility related to the claims discussed in the main text. However, such suits would face a number of difficulties similar to those encountered in ordinary negligence cases, and a few additional ones. Specifically, to the extent design defects claims require proof of a reasonable alternative design, See RESTATEMENT (THIRD) OF TORTS: PRODUCTS LIABILITY § 2(b) (1998) (requiring reasonable alternative design for design defects) and warnings claims can be avoided on a showing of futility, See id. § 2(c) (requiring that omission of reasonable warning must render product not reasonably safe), products liability claims may be even more difficult than ordinary negligence claims. For more information, on these and the possibility of products liability environmental claim, see Markell and Hammond, *supra* note 44 at 11-12.



to liability.⁸³ “Therefore, the term came to be used to describe the kind of caption of or intrusion onto tangible property, real or personal, that would give rise to recovery under the common law action of trespass”.⁸⁴ Traditionally, under the common law action of trespass, the requirements for recovery for trespass were, first, an invasion, which conflicted with the right of exclusive possession of the land, and, second, injury, which was a direct consequence of defendant’s conduct.⁸⁵

There are three general theories for trespass that have developed more recently, primarily to protect interests in land, as well as all other property interests.

These are: (a) the defendant intended an invasion of a legally protected interest; (b) the defendant negligently or recklessly brought about an invasion of a legally protected interest; and (c) the defendant accidentally caused an invasion of legally protected interest in the course of engaging in some kind of activity, such as an abnormally dangerous activity, for which strict liability is imposed.⁸⁶

⁸³ W. Page Keeton, PROSSER AND KEETON ON THE LAW OF TORT, 67 (fifth ed. 1984).

⁸⁴ *Id.*

⁸⁵ *Star v. Rookesby*, 1711, 1 Salk. 335, 91 Eng.Rep. 295, 3 Bl. Comm. 209; *Brame v. Clark*, 1908, 148 N.C. 364, 62 S.E. 418.

⁸⁶ Keeton, *supra* note 83, at 69.



Infrequently, the term trespass has been utilized to mean any actionable entry to land.⁸⁷

There are some decisions finding a trespass constituted by pollution. For example, in *Martin v. Reynolds Metals Co.*,⁸⁸ the court stated that the projection of fluoride mixes with the form of gases and particulates onto the land of plaintiff was a trespass. In addition, in various cases the court found a trespass constituted by the entry of invisible gases and microscopic particles, but only in cases where harm resulted.⁸⁹

Though intentional torts claims such as trespass provide a possible theory of environmental protection cases, some believe that such a claim would face a number of difficulties.⁹⁰ This type of claim is based on very long procedures of causation that may encounter proof problems. Additionally, not only the intentional trespass is a possible cause of action, but also a negligent one, even though it has received little attention in environmental protection litigation. It probably would also encounter the same challenges mentioned above.

⁸⁷ See, Second Restatement of Tort, § 821D, Comment d.

⁸⁸ 1959, 221 Or. 86, 342 P.2d 790, certiorari denied, 1960, 362 U.S. 918, 80 S.Ct. 672, 4 L.Ed.2d 739.

⁸⁹ *Gregg v. Delhi-Taylor Oil Corp.*, 1961, 162 Tex. 26, 344 S.W.2d 411 (gas); *Martin v. Reynolds Metals Co.*, 1959, 221 Or. 86, 342 P.2d 790, certiorari denied, 1960, 362 U.S. 918, 80 S.Ct. 672, 4 L.Ed.2d 739 (gas and microscopic deposit); *Reynolds Metals Co. v. Martin*, 9 Cir. 1964, 337 F.2d 780 (same); *Hall v. De Weld Mica Corp.*, 1956, 244 N.C. 182, 93 S.E.2d 56 (dust); *Zimmer v. Stephenson*, 1965, 66 Wn.2d 477, 403 P.2d 343 (spark); *Martin v. Union Pacific railroad Co.*, 1970, 256 Or. 563, 474 P.2d 739 (fire).

⁹⁰ Markell and Hammond, supra note 47, at 12.



On the other side, the closest legal concept that may consist of some similarities to trespass in the Iraqi civil code is article 204, which comes under the title of “Provisions Common to Unlawful Acts”. This article states that: “every assault which causes injury, other than the injuries mentioned in the preceding articles, entails payment of compensation.”⁹¹ There are three elements should be found to enforce this article: injury, fault and causal link.⁹² Fault refers specifically to an intentional act of harm by a defendant, or the negligent causing of harm. Negligence is determined by the reasonable person standard. Additionally, article 186 of the Iraqi Civil Code is another analogy to trespass which states as follows:

(1) A person who wilfully or by trespassing has directly or indirectly caused damage to or decrease the value of property of another person shall be liable.

The Article imposes two conditions. First, it requires intent on the part of the person causing damage. Second, it requires an actual trespass on the property of another.⁹³ This text is general which means it could be a good way to protect the

⁹¹ The reference to previous articles of the Civil Code is primarily to Article 202, which deals with physical assaults to the person, such as a killing or wounding of another. Article 204 merely extends the principle of compensation beyond these limited parameters to encompass harm to property and reputation as well. The same standard for liability is used in all cases.

⁹² For more information, see, Alhakeem, supra note 61, at 212-229.

⁹³ Alhakeem, supra note 61, at 219.



environment in cases where the trespass occurs on the private property of another.

The larger problem occurs with respect to public property, which in Iraq is a significant percentage of the real property that exists. In such cases, private individuals have no right to sue a defendant because they have not been injured.

The only party who has standing in this case would be the public prosecutor.⁹⁴

The situation becomes rather complex and burdensome as different property owners, including the state, raise different claims. This complicates the use of the law as a means to regulate the conduct of pollutants. A further complication lies in the difficult issues of causation that inevitably arise, as it is not sufficient merely to show the harm of the pollution that the defendant has emitted, but also the harm it caused to the specific defendant making suit.

Beyond this, the civil law has not been an effective means to achieve environmental policing within Iraq, for a variety of reasons. First, there is the difficulty of proving that the pollution emitter acted negligently, in particular under circumstances where a polluter meets minimum regulatory requirements.

⁹⁴ Article 2/first, Prosecutors Law No. 159 for the year 1979.

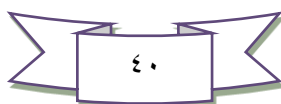


More broadly than this, however, Iraqi civil justice has largely been slow and ineffective. In contrast to criminal law, which has had much more robust enforcement, Iraqi civil courts have not developed capacity in a manner that renders them a useful means by which citizens obtain redress. In fact, in many parts of Iraq, as other research that I have coauthored has shown, Iraqi citizens use nonstate tribunals and nonstate forms of dispute resolution to obtain civil justice, partly because of the ineffectiveness of Iraqi courts.

4. *Challenges*

As has been shown, the common law doctrines, as well as the Iraqi Civil Code, offer some limited set of good solutions to some problems which face the environment. However, there have been many challenges encountered by the common law doctrines which limit their ability to protect the environment. First of all, their limitations seem apparent from the scholarship which asserts (correctly, in my view) that the rise of the regulatory regime as an instrument of environmental protection was a consequence of the failure of the common law to protect the environment.⁹⁵

⁹⁵ Page # of this research.





In other words, even in their classical form, the common law doctrines, as well as the Iraqi civil provisions, are not sufficient alone to protect the environment because they are limited in their scope. One of the most important limitations lies in the principle of causation. It is not easy to prove the relationship between the act of polluting and harm in many cases. While a particular pollutant might cause a rise in lung cancer, tobacco does the same. It is very difficult to provide which toxin contributed to which damage, and to what extent, in most cases. The situation is easier in the regulatory regime, which is less concerned about causation problems.

A related problem is that of standing. In common law suits, and private rights of action in Iraq, the citizen must show how he or she was specifically harmed. That is not likely to be easy to do in many environmental cases, where the harm is done not to an individual or her property, but rather to the public at large. Finally, there is the issue of preemption. Nuisance, public trust and trespass are displaced by some regulations such as the Clean Air Act. In other words, courts are prohibited from using the common law where it was displaced by regulations, and this limits its impact significantly.

C. Regulatory



While regulatory regimes have their advantages, there are problems that inhere to them, and that are particularly obvious in the U.S. example. To illustrate this, I review the regulatory regime as it existed in the United States with respect to offshore oil spills both before and after the Macondo Deepwater Horizon Oil Spill, which, as Acting Inspector General Mary Kendall noted, successfully “challenged 40 years of generally accepted belief that offshore operations could occur safely under existing regulation and oversight.”⁹⁶

Between 2004 and 2009, in United States waters, the number of victims in offshore oil and gas operations reached more than four times higher than in European waters.⁹⁷ Differing regulatory systems was the most likely reason for the gap, as observed by the National Commission Report on the BP-Deepwater Horizon oil spill.⁹⁸

⁹⁶ See OUTER CONT’L SHELF SAFETY OVERSIGHT BD., U.S. OF THE INTERIOR, REPORT TO SECRETARY OF THE INTERIOR KEN SALAZAR 1 (2010). The safety oversight board was comprised of Wilma Lewis, Ass’t Secretary for Land and Minerals Management, Chair; Mary L. Kendall, Interior Dep’t Acting Inspector General; and Rhea S. Suh, Ass’t Secretary for Policy, Management and Budget.

⁹⁷ NAT’L COMM’N ON THE BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING, DEEP WATER: THE GULF OIL DISASTER AND THE FUTURE OF OFFSHORE DRILLING 225, 251 (2011) [hereinafter NAT’L DWH COMM’N REPORT].

⁹⁸ *Id.*



1. *Before the Macondo Spill*

Two decades before the Macondo blowout, the Minerals Management Service (MMS) recognized that it had a serious problem enforcing safety offshore.

Therefore, it asked the National Research Council's Marine Board to evaluate how the MMS could be more effective.⁹⁹ The Marine Board's Report, in 1990, studied alternatives for effective inspection of OCS operations and bluntly concluded that more inspections using the current MMS checklist would yield no improvements in safety.¹⁰⁰ Compliance with hardware is what the checklist was focused on, yet operational procedures or human error were the events that caused the most accidents. The inspections had never provided a tool for evaluating an operator's attention to or attitude towards safety.¹⁰¹

The recommendations which were submitted by The Marine Board to the MMS are: first, develop its data collection and safety analyses. Second, improve a program to systematically upgrade safety requirements. Third, conduct risk-based inspections of selected facilities. Finally, provide training so that MMS

⁹⁹ COMM. ON ALTERNATIVES FOR INSPECTION OF OUTER CONT'L SHELF OPERATIONS, MARINE BD., NAT'L ACAD. OF SCIENCES, ALTERNATIVES FOR INSPECTING OUTER CONTINENTAL SHELF OPERATIONS 2 (1990).

¹⁰⁰ *Id.* at 80–83.

¹⁰¹ Jacqueline Lang Weaver, *Offshore Safety in the Wake of the Macondo Disaster: The Role of the Regulator*, 36 HOUSTON JOURNAL OF INTERNATIONAL LAW 379, 382 (2014).



inspectors could better assess safety procedures and behaviors rather than mere hardware compliance. Additionally, the report highly recommended to avoid two things, the first is third party inspection by private parties because it would raise the tendency of operators to abdicate safety liability to the regulator. The second is self-inspection by the operator which was not a defensible recommendation because the MMS would then be charged with having abdicated its responsibility. The Minerals Management Service (MMS) inspectors' presence was very significant to deliver "a sense of oversight" and to offer "impetus to marginal and inexperienced operators to meet federal safety standards."¹⁰²

In sum, the report concluded with no fit solution for an agency so under-resourced. A method of improved inspection of only certain facilities, including a "high visibility" program of frequent and broad inspections of drilling and work over operations where serious safety problems most often appeared was the best alternative. Finally, the report highly recommended that the focus must be on detecting potential accident events and collecting information on near misses.¹⁰³

¹⁰² COMM. ON ALTERNATIVES FOR INSPECTION OF OUTER CONT'L SHELF OPERATIONS, *supra* note 97, at 81.

¹⁰³ See *Id.* at 83.



2. *Post- Macondo*

Two decades later, and specifically in April of 2010, the United States suffered its worst offshore oil spill in its history, with the Deepwater Horizon spill in the Macondo prospect, operated by BP. Eleven lives were lost, nearly 5 million barrels of oil spilled into the Gulf of Mexico, and there was extensive damage to wildlife, fishing, and tourism generally along the Gulf Coast.¹⁰⁴

As a result of this environmental disaster, in 2010, Minerals Management Service (MMS) asked again the National Research Council to evaluate the effectiveness of the OCS safety regulatory system. In November 2010, an interim report released from the National Academy of Engineering found that the MMS did not regulate offshore safety in any meaningful way. For instance, the offshore regulations which the MMS had adopted were incorporated by reference in about 80 of the industry's 240 recommended standards, but the problem was the capacity of the MMS to independently assess the adequacy of these industry standards by their own expertise. This was, to say the least, unclear.¹⁰⁵ The technical arm of the American Petroleum Institute (API)

¹⁰⁴ *United States v. Kaluza*, 2013 U.S. Dist. LEXIS 173134, 2013 WL 6490341 (E.D. La. Dec. 10, 2013).

¹⁰⁵ see Donald C. Winter, NAT'L ACAD. OF ENG'G & RESEARCH COUNCIL OF THE NAT'L ACADEMIES, INTERIM REPORT ON THE CAUSES OF THE DEEPWATER HORIZON OIL RIG BLOWOUT AND WAYS TO PREVENT SUCH EVENTS 16, 17–18 (2010) (detailing MMS reliance on the API for standard development that took years to



developed the standards and recommended practices, and it is hardly an independent actor. As has been noted, the API is “an institution that plays a critical role in offshore safety, but is best known to Americans as a powerful lobbyist, whose media campaigns and spokesmen actively promote industry causes such as low taxes, less regulation, and continued oil industry subsidies.”¹⁰⁶

The National DWH Commission report bluntly noted that “API’s ability to serve as a reliable standard-setter for drilling safety is compromised by its role as the industry’s principal lobbyist.”¹⁰⁷ The API frequently fought agency rulemaking that the MMS believed would have led to greater safety, but which might cost more. Further worrying was that API’s technical standards progressively failed to match best practice. Rather, they reflected the lowest common denominator that almost all operators could achieve.¹⁰⁸ The API’s failings “undermined the entire federal regulatory system” because the MMS based its own regulations on the API standards.¹⁰⁹ As a result, the National

respond to the need for new technologies; the MMS had been working for nine years on a draft regulation for secondary control systems for deep water BOP stacks without result).

¹⁰⁶ Weaver, *supra* note 99 at 385.

¹⁰⁷ NAT’L DWH COMM’N REPORT, *supra* note 71 at 225.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*



DWH Commission determined that the industry as a whole had “systemic” failures beyond BP’s individual shortfalls.

3. Broader Lessons

As this narrative suggests, there is a problem illustrated by the Macondo example which is broader than merely a specific failure with respect to offshore extractions operations and regulation. Persistently, and in many areas, regulation appears insufficient and sporadically enforced. While there may be many specific reasons in the context in each case of regulatory failure, one general and common reason for regulatory failure is a concept known as “regulatory capture.” Regulatory capture was first raised by George Stigler in his famous 1971 piece, *The Theory of Economic Regulation*.¹¹⁰ Since then the issue has been discussed in a variety of different regulatory contexts. For example, according to Gerard Caprio, Jr., regulatory capture was one of the factors which played a role in the financial crisis that began in 2007.¹¹¹ Another example of a field which is affected by regulatory capture is retail gasoline price ceilings in Canada. From a broader perspective, the enactment of price ceilings

¹¹⁰ George J. Stigler, *A Theory of Economic Regulation*, 2 BELL J. ECON. MGMT. SCIENCE 3 (1971).

¹¹¹ Gerard Caprio Jr., *Regulatory Capture: Why It Occurs, How To Minimize It*, 18 N. CAR. B. INST. 39 (2013). See also Kevin L. Young, *Transnational Regulatory Capture? An Empirical Examination Of The Transnational Lobbying Of The Basel Committee On Banking Supervision*, 19 REV. OF INT’L POL. ECON. 663 (2012) (relating to international regulation of banks).



offers an opportunity to investigate the possibility of regulatory capture by firms. The “public interest” theory of regulation implies that the enactment of price ceilings is motivated by a policy objective to minimize inefficiencies from deadweight loss as well as to reduce the transfer of consumer surplus to producers (through higher prices). Yet in the regulation of such ceilings, the impression appears to be of regulators acting reluctantly, and with the interests of producers foremost in mind.¹¹²

Finally, there is the case of electricity competition in the European Union. Prompted by EU legislation, the EU member states are restructuring their electricity industry to allow for more competition which is widely believed to be welfare-enhancing. A major complication is that, at the outset, the electricity markets were almost completely controlled by large, Vertically Integrated Utilities (VIUs) that used to be regulated state monopolies. These VIUs typically still own almost all generators, as well as transmission and/or the distribution networks. To prevent VIUs from using their influence to reduce competition, the EU has required its member states to unbundle their generation and network activities. Many members, however, have been slow in

¹¹² Anindya Sen, Anthony Clemente, and Linda Jonker, 13 *Retail Gasoline Price Ceilings and Regulatory Capture: Evidence from Canada* AM. LAW ECON. REV. 532 (2011).



implementing these directives and many have chosen the weaker (but permitted) form of unbundling. These developments, and the fact that weaker forms of unbundling are allowed at all, are widely believed to be welfare-reducing. These observations suggest that the pertinent political, legislative, and regulatory processes might have unduly been influenced by the powerful VIU's themselves. In other words, there has been regulatory capture.¹¹³

Regulatory capture commonly evokes bad pictures of private interests exerting excessive impact on government action to advance their own agendas at the expense of the public interest.¹¹⁴ Traditionally, it refers to backroom dealing, appointment of individuals who are industry-friendly in key regulatory positions, and the breakdown of the regulatory process that grinds it to a proverbial halt.

In some areas, the problem of regulatory capture has been solved by replacing private sectors with public ones, such as when airport "rent-a-cops" replaced by Transportation Security Administration (TSA). However, according to (TSA) employee misconduct data that Government Accountability Office (GAO)

¹¹³ S. van Koten, A. Ortmann, *The Unbundling Regime For Electricity Utilities In The EU: A Case Of Legislative And Regulatory Capture?*, 30 ENERGY ECONOMICS 3128 (2008).

¹¹⁴ David Thaw, *Enlightened Regulatory Capture*, 89 WASH. L. REV. 329 (2014).



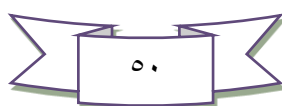
analyzed, TSA investigated and adjudicated approximately 9,600 cases of employee misconduct from fiscal years 2010 through 2012.¹¹⁵ For example, at Newark Airport in 2011, a transportation security officer pleaded guilty to stealing thousands of dollars in cash and other valuables from unsuspecting travelers.¹¹⁶

After the release of a GAO report that revealed widespread TSA employee misconduct, including screeners involved in theft and drug smuggling, public sentiment is squarely on the side of a top-to-bottom overhaul that could privatize or dismantle the agency assigned to protect America's transportation systems.¹¹⁷ Regardless of the limitations of the airport regulatory capture solution, the situation in the environmental field is deferent than it in the airport because the TSA agents are not in touch with people who should be regulating be them in the way that creates sympathies that regulators in environmental

¹¹⁵ U.S. Government Accountability Office, TRANSPORTATION SECURITY: TSA COULD STRENGTHEN MONITORING OF ALLEGATIONS OF EMPLOYEE MISCONDUCT, 1 (2013).

¹¹⁶ Furthermore, in March of this year, a wanted rape suspect made his way through a security checkpoint at JFK carrying a 3,800K volt stun gun, which is definitely on the list of banned items for airplane travel. In February of this year, TSA improperly detained a 3-year-old disabled wheelchair-bound girl suffering from spina bifida on her way to Disney World with her family. "Joint Hearing of the Oversight and Management Efficiency Subcommittee and the Transportation Security Subcommittee of the House Homeland Security Committee Subject: 'TSA Integrity Challenges: Examining Misconduct by Airport Security Personnel' Chaired by: Representative Jeffrey Duncan (R-SC) and Representative Richard Hudson (R-NC) Witnesses: John Halinski, Deputy Administrator, Transportation..." Congressional Hearing Transcript Database, 2 Aug. 2013.

¹¹⁷ Christopher Elliott, PATIENCE WITH TSA IS JUST ABOUT UP, USA Today, 9 Sept. 2013, p. 03B.





field have, or might develop with members of the oil and gas industry they are supposed to be regulating.

This is not to disparage entirely the idea of regulation as a method to protect the environment. It is only to point out that there are problems in the way that regulation is used to reach its goal. It often requires close and active coordination between regulatory agents as well as agents from private industry. Because of the natural affinities that arise from such close ties, regulators grow more sympathetic to the industry actors and less keen on protecting the public. This is to say nothing of the fact that those regulated are often powerful interests with an ability to affect public agents, particularly in democracies where much regulation is undertaken by the political branches.

Therefore, regulation is a potentially effective tool in the environmental protection toolkit, but it has its limitations. It cannot be the only approach to keep the environment clean. Other tools, more insulated from powerful interest groups, need to be involved as well.

V. Criminal Law

In response to environmental threats, the federal governments, in both the United States and Iraq, have adopted a broader panoply of criminal sanctions to



protect the environment.¹¹⁸ However, many of the penalties have proven inadequate. In particular, in the energy sector, punishments such as community service and fines are considered by oil and gas companies as the cost of doing business and do not seem to be effective deterrents.¹¹⁹ Instead, those companies see the criminal liability and sending one of its important employees to prison as a significant deterrent. The fear of course, is that this will result in over deterrence and underinvestment by the energy industry. This has led to its broad underutilization. At the same time, for the most egregious cases, it is the most effective instrument in sending the corporate world a message that pollution is a crime to be avoided.¹²⁰

Overdeterrence can be a problem, both in the United States and Iraq. In the United States, for example, a prosecutor may be uneasy in aggressively pursuing a criminal case where the prosecutor believes that the punishment is

¹¹⁸ About the situation in the U.S., see Berlin Kenneth, *Criminal Liability Of Corporate Officers, Directors, And Employees Under U.S. Environmental Laws*, in ENVIRONMENTAL CRIMINAL LIABILITY, AVOIDING AND DEFENDING ENFORCEMENT ACTIONS 112 (1995). About the Iraqi situation see, e.g., articles 34 and 35 of the Law for Protection and Improvement of the Environment, Number 27 of 2009.

¹¹⁹ I think one of the most useful instruments of criminal law toolkits to protect the environment is fines which are so low that they are just the cost of doing business, as I mentioned, but much larger fines -- in the billions -- can even get the attention of large business such as Deutsche Bank fines which may reach up to \$14 billion American regulatory fine. For more information see in general; UNMACK, N. (2016). With a fine looming, deutsche bank is still issuing debt. Another example is VW fines; The Brazilian environmental protection agency has ned Volkswagen \$13 million over the automaker's emissions-cheating scheme. The agency also is requiring Volkswagen to present a plan for recalling sold vehicles that contain software that turns on pollution controls during tests. The Vancouver Sun (British Columbia) November 13, 2015 Friday Final Edition.

¹²⁰ Seager, ECOLOGY BAR REAPS HARVEST OF ODD "TRICKS", S.F. Daily J., Feb. 18, 1991.



too severe. In Iraq's inquisitorial system, this occurs at the judicial level, and there are actual examples of this problem in other contexts. For example, in 1994 the Iraqi regime changed the penalty for theft from prison to the death penalty.¹²¹ Judges as a result proved extremely unwilling to convict anyone of theft, because they found the punishment grossly disproportionate to the crime. The result, ironically, was an increase in theft, precisely the opposite of what was intended.

Indeed, there is much potential benefit to deploying the criminal law more broadly. It can fill the gaps of the other approaches and be part of a broader comprehensive approach to protect the environment. First of all, as concerns the free market approach, a fundamental shortcoming to a tradeable permit system is that it only works to the extent that players are actually willing to follow the rules. To the extent that a party is willing to ignore whatever limits her permits provide and pollute more anyway, or to the extent that a party is willing to falsely claim she has more permits than she does, the market system will prove useless in reducing emissions. That such fraud has been witnessed in tradeable

¹²¹ Revolutionary Command Council's Order No. 59 in January 1st 1994 named "Severe Penalties for the Theft's Crimes Perpetrators" which was Canceled by the order No. 106 in April 26th 2001 from the same council.



permit regimes demonstrates that this problem is indeed potentially pervasive.

There are of course a variety of enforcement mechanisms that might be available to limit fraud and malicious misrepresentation, but criminal law is an obvious one not to be overlooked.

As concerns the problems of common law, the causation in criminal law is easier to prove than it is in the civil. The essential element of the causation in both the civil and criminal law is that there is a reasonable connection between the defendant's conduct and the damage.¹²² The difference is that the criminal liability is established when the defendant's conduct was a cause-in-fact of the prohibited result regardless who has suffered the damage whether the plaintiff or anyone else.¹²³ In contrary, the damage should be occurred proximately to the plaintiff to establish a civil liability.¹²⁴ Causation's burden of the proof in the civil case is on the plaintiff while it is on the prosecutors in the criminal.

Therefore, criminal liability for environmental crimes will offer better

¹²² Keeton, supra note 83, at 263. And see; Joshus Dressler and Stephen P. garvey, CASES AND MATERIALS ON CRIMINAL LAW, Sixth Edition, 213 ().

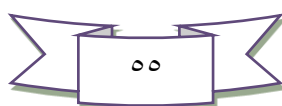
¹²³ Dressler, supra note 122, at 213.

¹²⁴ Keeton, supra note 83, at 263.



protection for the environment because the government with all its tools, which make its ability to prove the causation easier, will be the opponent against the energy companies when they attack the environment. Thus, to establish causation in environmental crimes, you just need to prove that there has been a damage to environment in general, and that is one of the factors that pushed BP to agree to a settlement wherein funds would be paid to injured parties independently by a neutral administrator without need to establish causation, In the Deepwater Horizon incident.¹²⁵ Of course, there are circumstances where causation may not necessarily be a problem. In the Deepwater Horizon incident, BP agreed to this settlement. It is important to note that this exceptional remedy was available only by virtue of a settlement which in all likelihood a conglomerate like BP was only willing to make because of sustained negative publicity attending to the incident. This is a promising development, to be sure, but in the overwhelming majority of cases, the problem of causation is likely to continue. As such, criminal law is an easier mechanism to achieve effective enforcement in many instances. Perhaps even more importantly, there is less potential for preemption in the criminal law field.

¹²⁵ Lindsay K. Scaiefd, UPPING THE ANTE IN THE OIL INDUSTRY: WHY UNLIMITED LIABILITY FOR OIL COMPANIES WILL DEAL AMERICA A BAD BEAT, 43 Tex. Tech L. Rev. 1319, 1338 (2011).





Federal *common law* might be preempted by federal statute and regulation, but it is hard to see how or why duly enacted federal environmental crimes would be.¹²⁶ Hence, criminal law can help to supplement regulatory frameworks in a manner that the common law, and Iraqi general civil law, set forth in its own Civil Code, has not been able to.

Finally, the problem of regulatory capture, and political influence on regulatory bodies generally, is virtually absent in the criminal law field. Prosecutorial authorities are usually kept shielded from the political branches in a manner that should limit the influence of private industry. In any event, unlike regulators, prosecutors certainly do not work closely in any fashion with those whom they regulate, thereby lessening the dangers of capture.

Of course, criminal law, in both the U.S. and Iraqi legal systems, is not a panacea. It instead offers good, if limited, solutions to fill the gaps which other approaches have had. In the dissertation itself, I will also explore the weak points of criminal law, as an approach to protect the environment, in both systems, and try to address them. For example, in the U.S. legal system, criminal law and civil law can overlap in important ways that complement each

¹²⁶ Within the United States or Iraq, there is always a question of preemption of a subnational law by a national one, or, in Iraq's unusual case, the reverse. This is beyond the scope of this dissertation, however.



other. An example of this would be the enforcement of United States Securities Laws. During a time that the federal Securities and Exchange Commission was perceived as particularly weak, aggressive threats of criminal action by then New York Attorney General Eliot Spitzer helped to bolster securities regulation.¹²⁷ However, in many cases the environmental statutes define the same offenses as civil and as criminal which causes difficulties of differentiate between civil and criminal violations because.¹²⁸ In other words, the environmental statutes do not determine the environmental crime's elements in an accurate approach which creates a sort of confusion between the concepts of the environmental crime and the conduct that results in civil liability. The punishments of Iraqi criminal law, on the other hand, are inappropriate because it, in some cases, punishes the person who violates the provisions of environmental law to prison for up to 15 years.¹²⁹ It is easy enough to reduce the potential sentence, but any approach that makes a more robust use of criminal law must give more careful and comprehensive thought to the concern of overdeterrence, on the one hand, and underutilization on the other. Of course,

¹²⁷ For more information see in general; Nishal Ray Ramphal, THE ROLE OF PUBLIC AND PRIVET LITIGATION IN THE ENFORCEMENT OF SECURITIES LAWS IN THE UNITED STATES (August 24, 2007) (unpublished Ph.D. dissertation, the Pardee RAND Graduate School).

¹²⁸ Kenneth, *supra* note 113, at 114.

¹²⁹ Articles 34 and 35 of the Iraqi Statute for Protection and Improvement the Environment number 27 in 2009.



some crimes will impose stiffer penalties because they require mens rea, while others will not, and the punishment there will be reduced. A complete criminal regime would require both types of crimes to be present. This will be a matter which the dissertation will address as well.

VI. Conclusion

In light of this overview, the dissertation will proceed in the following six chapters.

Chapter II will discuss rising pollution in the energy industry. It will show the rising trends of pollution and environmental damage caused by international energy companies, and the need for more robust regulation. Chapter III will discuss the legal and regulatory systems as they exist in the United States and Iraq (and other jurisdictions, as necessary) to more clearly lay out their shortcomings. Chapter IV will look at the balance between the public interest in protecting the environment and the desire to attract investment in energy sources with particular reference to the role of criminal law in the protection of the environment from the risks of pollution, as a kind of economic crime. Thus, this Chapter will show how the criminal law can achieve the public's right to a safe environment while also addressing the legitimate fears of the oil and gas



companies to avoid the possibility of severe criminal penalties. To do this, the Chapter will discuss the necessary mental state and physical acts that are the elements of environmental crime as a general conceptual matter. Chapter V will discuss the elements of the environmental crimes in the Iraqi legal system and in the U.S legal system. Finally, a concluding Section VI will then on the basis of this develop a series of propositions and recommendations on how to formulate criminal laws to stop environmental crimes resulting from the work of the oil and gas companies while still avoiding the problem of “over deterrence.”

Out of all of this, the dissertation will demonstrate that criminal law is an underutilized tool that can prove useful, and indeed essential, as part of an overall framework of addressing environmental protection while still enabling energy exploitation that the public demands. It is no panacea, but merely one approach among many, and indeed one that complements the leading approaches toward environmental regulation that exist. To that end, and for that reason, it must be more broadly deployed in the regulatory toolkit.



Commenter une décision de justice

professionnels de la fiscalité doivent non seulement demander à leurs clients s'ils ont des activités liées à la cryptographie cette année, mais ils doivent également être prêts à faire face à l'imposition d'une taxe cryptographique pour les clients.

(La décision du Conseil d'État français du 26/04/2018 d'imposer des taxes sur les opérations de Bitcoin (crypto-monnaie) malgré le fait que leur activité n'était pas légalement légalisée en France et les a considérées comme des bénéfices illégaux et sont taxées sur cette base)