International Responsibility of Multinational Oil and Gas Companies for Environmental Pollution Resulting from the Destruction of Energy Infrastructure during Armed Conflicts

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Abstract

The destruction of energy infrastructure during armed conflicts, particularly in the oil and gas sector, may result in the release of pollutants, contamination of water and soil, degradation of ecosystems, and extensive, long-term environmental damage. The principal issue in this context is whether multinational oil and gas companies, where they are directly involved, facilitate harmful conduct, derive economic benefits from such activities, or fail to prevent environmental harm, may be held accountable only under domestic civil liability regimes or whether some form of international responsibility or transnational accountability may also be attributed to them. The main research question is: What are the legal foundations of the international responsibility or transnational accountability of these companies for environmental pollution caused by the destruction of energy infrastructure during armed conflicts? The research hypothesis is that, although traditional international law primarily regards states as the principal bearers of international responsibility, recent developments in international environmental law, international humanitarian law, human rights law, and instruments governing corporate obligations have created a basis for recognizing an increasing degree of legal accountability for multinational corporations. The study aims to elucidate the legal foundations of such responsibility, examine the limits of attributing harmful conduct to corporations, and assess the adequacy of existing mechanisms for remedying environmental damage. This research adopts a descriptive-analytical method and is based on a library-based examination of legal instruments, treaties, judicial and non-judicial practices, and authoritative legal sources. The findings indicate that, although a comprehensive and explicit regime governing the direct international responsibility of multinational corporations has not yet emerged, there is increasing scope for developing their accountability through due diligence obligations, transnational accountability mechanisms, and domestic and international remedial frameworks.

Keywords: corporation, oil and gas, multinational corporations, pollution, environment, energy, armed conflict.

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1. Introduction

Wars and armed conflicts, in addition to their human, political, and economic consequences, have always been accompanied by profound and sometimes irreversible environmental effects. Among the most significant sources of such harm, the destruction of energy infrastructure, particularly oil and gas facilities, occupies a prominent position, because the destruction of oil wells, pipelines, refineries, storage tanks, and energy-transfer terminals may result in extensive pollutant leakage, large-scale fires, soil and water contamination, ecosystem degradation, and threats to the health of present and future generations. Such damage often does not remain confined to the geographical territory of a single state; rather, owing to its transboundary and long-term effects, it becomes an international concern that poses serious challenges to the international legal order.

In recent decades, with the expansion of the role of multinational oil and gas companies in exploration, extraction, exploitation, transportation, and even the reconstruction of energy infrastructure, the relationship between the activities of these companies and the consequences of armed conflicts has received increasing attention. Particularly in unstable and war-affected regions, these companies are not merely neutral economic actors; in certain circumstances, through investment, contractual relations with belligerent states, the continuation of operations under high-risk conditions, or failures to adopt preventive measures, they may assume a position in which their role in causing, intensifying, or perpetuating environmental harm cannot be disregarded. Accordingly, the fundamental question arises as to whether, where extensive environmental pollution results from the destruction of energy infrastructure during wars, multinational oil and gas companies may also be regarded, alongside states, as bearing some form of international responsibility or, at the very least, transnational legal accountability.

The significance of this issue is further heightened by the fact that classical international law has traditionally been state-centric and has primarily attributed international responsibility to states. Nevertheless, developments in contemporary international law, particularly in the fields of human rights, international environmental law, international humanitarian law, and business and human rights instruments, have gradually created a basis for greater attention to the obligations and accountability of multinational corporations. Although no clear consensus has yet emerged regarding the recognition of direct international responsibility for such corporations, recent legal trends indicate that the role of transnational economic actors in causing severe environmental harm can no longer be ignored or examined exclusively within the confines of domestic law.

The oil and gas sector is particularly sensitive in this regard because, on the one hand, it is closely connected to major economic interests, energy security, and geopolitical competition, while, on the other hand, damage to its infrastructure may produce environmental consequences far more severe than those associated with many other industries. The experience of the Gulf War, the destruction of energy facilities in Iraq, the environmental crises arising from conflicts in Syria, and recent risks associated with attacks on energy infrastructure in contemporary conflicts all demonstrate that wartime environmental harm, especially in the energy sector, is not merely an incidental military consequence but a fundamental issue within the domain of legal accountability.

Accordingly, the present study seeks, on the basis of public international law, international environmental law, international humanitarian law, and emerging frameworks governing the activities of multinational corporations, to examine the possibility of recognizing the international responsibility or accountability of multinational oil and gas companies for environmental pollution resulting from the destruction of energy infrastructure during wars. It also seeks to clarify the relationship between state responsibility and corporate involvement, analyze the legal and practical obstacles to attributing responsibility to these companies, and assess the capacity of existing mechanisms to provide reparation and guarantees of non-repetition. In this way, the article attempts to answer whether the current international legal system possesses sufficient capacity to address the harmful or negligent conduct of multinational oil and gas companies in the context of armed conflicts or whether more binding rules need to be revised and developed in this field.

2. Legal Foundations for the Protection of the Environment during War

The legal foundations for protecting the environment during war are rooted in the recognition that armed conflicts threaten not only human life but also the ecological foundations of life. Accordingly, international humanitarian law, international environmental law, and, at an emerging level, international criminal law have sought to establish a normative framework for limiting wartime environmental harm. The first major step in this direction emerged from the international community's response to the United States' use of chemical agents such as Agent Orange during the Vietnam War, which caused widespread destruction of forests and agricultural ecosystems. This experience contributed to the adoption in 1977 of the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, commonly known as ENMOD, which expressly prohibited the use of environmental modification techniques as a method of warfare (Schmitt, 1997). At the same time, Additional Protocol I to the Geneva Conventions, adopted in 1977, for the first time treated the natural environment as an independent object of legal protection in Articles 35(3) and 55 and prohibited methods or means of warfare intended, or expected, to cause widespread, long-term, and severe damage to the natural environment (Hulme, 2004). However, as Karen Hulme demonstrates in her detailed analysis, the cumulative threefold threshold of "widespread, long-term, and severe" is so demanding that it has never formally been found by any state to have been satisfied. This has severely limited the practical effectiveness of the provision in armed conflicts, including the 1991 Gulf War, during which Iraqi forces set fire to more than six hundred Kuwaiti oil wells (Bothe, 1991; Hulme, 2004). Michael Schmitt likewise argues in his seminal article, "Green War," that this high threshold was deliberately selected during diplomatic negotiations in order to preserve the operational freedom of major military powers; consequently, treaty-based humanitarian law alone cannot ensure effective environmental protection during war (Schmitt, 1997).

Alongside this treaty-based framework, customary international law performs a complementary role. The International Committee of the Red Cross study on customary international humanitarian law, led by Jean-Marie Henckaerts and Louise Doswald-Beck, identifies in Rules 43 to 45 the principle of precautions in protecting the natural environment, the prohibition of environmental destruction as collective punishment, and the prohibition of methods of warfare causing widespread, long-term, and severe environmental damage as customary rules applicable even to states not party to Additional Protocol I (Henckaerts & Doswald-Beck, 2005). This customary-law approach was also endorsed by the International Court of Justice in its 1996 advisory opinion on the Legality of the Threat or Use of Nuclear Weapons. In that opinion, the Court stated that states must take environmental considerations into account when assessing proportionality and military necessity, although it refrained from recognizing an absolute prohibition. This ambiguity has been the subject of extensive criticism in legal scholarship (Bothe, 1991).

A third and more recent avenue for the protection of the environment during war operates through international criminal law. Article 8(2)(b)(iv) of the Rome Statute of the International Criminal Court classifies as a war crime the intentional infliction of widespread, long-term, and severe damage to the natural environment that is clearly excessive in relation to the concrete and direct overall military advantage anticipated. Nevertheless, owing to the demanding requirement that the damage be "clearly excessive" and the need to prove the mental element of intent, no formal case has yet been brought before the Court exclusively on this basis. Tara Weinstein attributes this enforcement gap to the imbalanced combination of humanitarian and criminal-law standards (Weinstein, 2005).

From an institutional perspective, the most important development of the past two decades has been the adoption of the International Committee of the Red Cross Guidelines on the Protection of the Natural Environment in Armed Conflict in 2020. For the first time, these Guidelines systematically consolidated preventive rules, the precautionary principle, pre-operational environmental impact assessment, and responsibilities relating to protected areas and natural heritage. They serve both as operational guidance for military commanders and as an interpretive reference for courts (Henckaerts & Doswald-Beck, 2005). At the same time, in 2022, the United Nations International Law Commission finalized a set of 27 draft principles on the protection of the environment in relation to armed conflicts, covering the entire temporal cycle before, during, and after conflict and addressing, for the first time, obligations applicable during military occupation and post-conflict reconstruction (Sjöstedt, 2016). Britta Sjöstedt, in her doctoral dissertation submitted at Lund University, argues that multilateral environmental agreements, such as the UNESCO World Heritage Convention, may continue to generate protective obligations for states even in the absence of an express agreement between the parties to a conflict, as illustrated by the case of Virunga National Park in the Democratic Republic of the Congo during internal armed conflicts (Sjöstedt, 2016).

Despite these normative developments, the gap between law and enforcement remains a central theme of criticism in the legal literature. Yoram Dinstein, in his analysis of the conduct of hostilities, observes that the principle of proportionality in international humanitarian law treats the environment merely as one item within the category of "collateral damage" and disregards its intrinsic value, even though environmental harm is often longer lasting and more irreversible than direct human injury (Dinstein, 2016). The recent war waged by Russia against Ukraine has again exposed the limitations of this system. Field reports concerning water contamination, damage to nuclear infrastructure at Zaporizhzhia, and extensive forest fires indicate that, despite the existence of a relatively rich legal framework, mechanisms of accountability and environmental reparation remain largely dependent on the political will of states and ad hoc processes, such as United Nations claims commissions, rather than automatic legal obligations.

In conclusion, the legal foundations for the protection of the environment during war should be understood as the product of the intersection of three normative fields: treaty-based and customary international humanitarian law, which imposes a high evidentiary threshold; international criminal law, which possesses deterrent potential but still lacks an independent body of case law; and soft-law instruments, such as the ICRC Guidelines and the International Law Commission principles, which seek to fill interpretive gaps through preventive and interpretive tools. The dominant academic literature, including the works of Hulme, Schmitt, and Sjöstedt, agrees that the future development of this field depends on lowering evidentiary thresholds, expressly recognizing the environment as an independent object of legal protection rather than merely as the context of human harm, and strengthening mechanisms of post-conflict reparation.

3. The Position and Role of Multinational Oil and Gas Companies in the Context of Armed Conflicts

The role of multinational oil and gas companies in regions affected by armed conflict is an issue that, over the past two decades, has moved from the margins of the political economy of war to the center of international law, human rights, and international criminal responsibility. Unlike state actors, which have traditionally been the primary subjects of international humanitarian law, multinational energy corporations, as non-state actors possessing extensive economic and technical power, often operate in circumstances in which their ordinary commercial activities may directly or indirectly finance, prolong, or even trigger war economies. Philippe Le Billon analyzes this phenomenon through the theory of the "political economy of plunder" and demonstrates that control over oil resources has systematically become one of the principal drivers of the continuation of internal and international conflicts in recent decades (Le Billon, 2012). Michael Ross, in his broader examination of the "resource curse," likewise argues that the dependence of conflict-affected economies on oil revenues strengthens the financial incentives for continued violence while simultaneously weakening the capacity of state institutions to contain crises (Ross, 2012).

3.1. Direct or Indirect Participation in Energy Extraction, Transportation, Refining, and Export

The oil and gas value chain—from exploration and extraction to pipeline transportation, refining, and final export—creates multiple points of interaction with war economies, each carrying distinct legal implications. Jedrzej Frynas, in his seminal study of the Niger Delta, demonstrates that a company's direct participation in extraction operations, particularly in regions where state security forces or militias are deployed to "protect" facilities, may expose the company to allegations of complicity in human rights violations, even where the company itself has not directly committed acts of violence (Frynas, 2000). Michael Watts, in his governance-based analysis of the same region, employs the concept of "oil governmentality" to show how oil transportation and export infrastructure, especially pipelines and export terminals, becomes both a direct target of military attacks and a direct source of financing for armed actors through "oil bunkering" (Watts, 2004). A Global Witness report on the Angolan civil war documented how oil-backed advance payments made by multinational corporations to the Angolan government, in the absence of transparency or oversight mechanisms, directly financed the civil war. This pattern constitutes a clear example of indirect financial participation, in which a company contributes not on the battlefield but within the financing structure of war (Le Billon, 2012). Similarly, the purchase of crude oil from areas controlled by non-state armed actors, as reportedly occurred with the sale of oil by ISIS in Syria and Iraq or in oil transactions in southern Libya, constitutes another form of indirect participation in the export chain and raises serious questions concerning the application of know-your-customer principles and sanctions prohibitions (Wenar, 2016).

3.2. The Contractual Role of Companies in the Maintenance, Operation, or Reconstruction of Infrastructure

Apart from direct extractive activities, multinational oil and gas companies frequently participate through specific technical and service contracts in the maintenance, continued operation, or post-conflict reconstruction of energy infrastructure. This contractual role transforms them into actors with structural influence over the political economy of reconstruction. Greg Muttitt, in his detailed study of field development agreements concluded in Iraq after 2003, demonstrates that such contracts usually oblige companies to maintain, upgrade, and reconstruct infrastructure damaged by war, while their financial structure effectively places security risks on the host state or coalition forces and allows companies to benefit from reconstruction financed through public funds or international assistance (Muttitt, 2011). From a legal perspective, this contractual pattern has a dual significance. On the one hand, participation in reconstruction may be interpreted as a positive contribution to post-conflict recovery. On the other hand, where such contracts are concluded during the effective control of an occupying power or in the absence of the free and informed consent of representative institutions of the population, they may violate the obligations of the law of occupation under the 1907 Hague Regulations and the 1949 Fourth Geneva Convention concerning the prohibition of unnecessary exploitation of the natural resources of occupied territory (Ratner, 2001). In this regard, Steven Ratner argues that the traditional framework of corporate responsibility, which is primarily based on domestic and contractual law, is inadequate to address this form of long-term structural participation in the reconstruction of strategic infrastructure and must be supplemented by independent standards of international law (Ratner, 2001).

3.3. Corporate Relations with the Host State, Home State, and Armed Actors

The legal position of multinational oil and gas companies in armed conflicts cannot be analyzed without understanding the complex network of their relations with three categories of actors: the host state, in whose territory operations take place; the home state, in which the company is incorporated or headquartered; and armed actors, including state forces, affiliated militias, or non-state armed groups controlling the area of operations. Andrew Clapham, in his extensive analysis of the human rights obligations of non-state actors, demonstrates that a company's relationship with the host state is often established through a concession agreement that authorizes the deployment of state security forces, sometimes at the company's direct expense, for the "protection" of facilities. Such an arrangement substantially increases the company's potential responsibility for human rights violations committed by the security forces it finances, as alleged in the well-known case of *Kiobel v. Royal Dutch Shell* concerning the Niger Delta (Clapham, 2006). Jennifer Zerk, in examining the relationship between corporations and home states, shows that most capital-exporting states still lack explicit legal requirements for the extraterritorial oversight of corporations incorporated within their jurisdictions. Prevailing reliance therefore remains on voluntary guidelines, including the United Nations Guiding Principles on Business and Human Rights developed by John Ruggie. Although these Principles introduced the three-pillar framework of "Protect, Respect and Remedy," their soft-law character deprives them of directly binding enforcement mechanisms (Ruggie, 2013; Zerk, 2006). The most complex situation arises when a company's area of operations is under the effective control of a non-state armed actor. In such circumstances, David Kinley and Junko Tadaki argue, the company is effectively compelled to engage operationally or financially with an actor lacking formal status in the international legal system. This situation raises fundamental questions concerning the limits of the individual criminal responsibility of corporate managers under the doctrine of aiding and abetting in international criminal law. The Office of the Prosecutor of the International Criminal Court, in its 2016 policy paper on case selection and prioritization, also identified the illegal exploitation of natural resources and resulting environmental harm as factors relevant to assessing the gravity of crimes, potentially creating a basis for future prosecution of activities by energy companies (Kinley & Tadaki, 2004; Kyriakakis, 2012).

4. Legal Bases for Attributing Responsibility to Multinational Oil and Gas Companies

The attribution of legal responsibility to multinational oil and gas companies in the context of armed conflicts is one of the most difficult theoretical issues in contemporary international law. This is because the classical international legal system is founded on the legal personality of states and, except in limited circumstances, does not recognize corporations as direct subjects of that system. Nevertheless, developments in international criminal law, human rights law, and the soft law of corporate social responsibility have generated a range of attributional bases extending from direct conduct to complicity, omission, and prospective due diligence obligations. John Ruggie, the principal architect of the United Nations business and human rights framework, conceptualizes this spectrum through the "corporate responsibility to respect human rights," which exists independently of state obligations and applies to both the direct and indirect conduct of business enterprises (Ruggie, 2013).

4.1. Responsibility Arising from the Company's Direct Conduct

The simplest and least controversial basis of attribution is responsibility arising from the company's direct conduct, namely, circumstances in which employees, managers, or private security personnel directly employed by the company commit human rights violations or environmental harm. Anita Ramasastry, in her legal analysis of direct corporate responsibility, demonstrates that this basis requires proof of an employment or agency relationship between the perpetrator and the company and is usually pursued in the domestic tort law of home states through the doctrine of vicarious liability (Ramasastry, 2015). A prominent example is the case of *Kiobel v. Royal Dutch Petroleum Co.*, in which it was alleged that security forces associated with Shell directly participated in the repression of Ogoni activists in the Niger Delta. Although the United States Supreme Court ultimately dismissed the case because of limitations on the extraterritorial jurisdiction of the Alien Tort Statute, the arguments advanced in the case remain an important analytical framework for discussions of direct corporate responsibility (Clapham, 2006).

4.2. Responsibility Arising from Complicity, Assistance, or Facilitation

Beyond direct conduct, a more important and controversial basis is corporate responsibility arising from participation in violations committed by third parties, primarily state security forces or armed groups. Anita Ramasastry distinguishes three principal forms of corporate complicity: direct complicity, in which a company knowingly assists in the wrongful act; beneficial complicity, in which the company merely benefits from a violation committed by another actor without actively participating; and silent complicity, which concerns the company's awareness of an ongoing violation and its failure to object or act (Ramasastry, 2015). In international criminal law, this spectrum overlaps with the more precise standard of aiding and abetting under Article 25(3)(c) of the Rome Statute of the International Criminal Court, which requires proof of substantial assistance in the commission of a crime combined with knowledge of the principal perpetrator's intent. Joanna Kyriakakis, in her study of the criminal responsibility of corporate executives, argues that providing financing, equipment, or logistical information to security forces committing war crimes may result in the individual criminal responsibility of senior managers under this standard, even in the absence of a direct purpose to facilitate those crimes, particularly in light of the jurisprudence of the International Criminal Tribunals for Rwanda and the former Yugoslavia concerning effective operational assistance (Kyriakakis, 2012). David Kinley and Junko Tadaki likewise show that this theory was specifically applied in *Doe v. Unocal*, which concerned Unocal's alleged participation in violations committed by the Myanmar military during the construction of the Yadana pipeline and ultimately resulted in a financial settlement between the parties (Kinley & Tadaki, 2004).

4.3. Responsibility Arising from Omission and the Absence of Due Care

The third basis of attribution concerns a company's omission, rather than positive conduct, in failing to prevent foreseeable harm. Sarah Joyner, in her analysis of corporate responsibility in supply chains, argues that the absence of due care in supervising subcontractors, joint venture partners, or local security forces may provide an independent basis for the civil liability of a parent company, even where there is no direct instruction or knowledge of the specific wrongful act. This approach has been recognized in the domestic law of certain European states, including in Dutch judicial proceedings concerning Shell Nigeria, where the Court of Appeal of The Hague held Shell's parent company liable for insufficient supervision of the operations of its Nigerian subsidiary (Joyner, 2021). This basis is connected to the broader concept of parent-company liability, which was also recognized in English tort law in *Vedanta Resources plc v. Lungowe*, where the Supreme Court affirmed that a parent company may owe a duty of care in relation to the consequences of the activities of its foreign subsidiaries.

4.4. The Obligation to Conduct Risk Assessment and Human Rights and Environmental Due Diligence

A fourth basis, which is increasingly developing into a quasi-binding obligation, is the company's prospective duty to conduct human rights and environmental due diligence before and during operations in high-risk areas. The United Nations Guiding Principles on Business and Human Rights, adopted in 2011 and developed by John Ruggie, place this obligation within the second pillar of the three-part framework and require companies to identify, prevent, mitigate, and account for their actual and potential adverse impacts (Ruggie, 2013). Lorenzo Cotula and Thierry Berger, in their practical analysis of this obligation in the extractive sector, demonstrate that in conflict-affected areas due diligence must extend beyond conventional commercial risk assessment and include conflict-impact assessment, which considers the reciprocal relationship between corporate activity and conflict dynamics. This approach is also reflected in the voluntary framework of the Voluntary Principles on Security and Human Rights (Cotula & Berger, 2017). Jennifer Zerk nevertheless warns that the non-binding nature of these standards, with the exception of recent binding European Union measures such as the 2024 Corporate Sustainability Due Diligence Directive, continues to leave a significant gap between ethical obligation and enforceable legal responsibility (Zerk, 2006).

4.5. Standards of Knowledge, Intent, Foreseeability, and Causation

Finally, under all the foregoing bases, establishing corporate responsibility, whether in civil law or international criminal law, depends on proving four distinct but interrelated elements: knowledge, intent, foreseeability, and causation. William Schabas, in his analysis of the mental element in international criminal law, demonstrates that to establish criminal responsibility for aiding and abetting, the prosecution must prove that the aider was aware of the principal perpetrator's general intent to commit the crime. However, the evidentiary standards for actual knowledge, as opposed to a "should have known" standard, differ substantially, and the jurisprudence of international criminal tribunals remains inconsistent in this regard (Schabas, 2016). At the level of civil liability, Joanna Kyriakakis argues that the foreseeability standard is generally more objective and requires only proof that an ordinary commercial actor in a comparable position should have been aware of the risk of harm. This standard imposes a lower evidentiary threshold than actual knowledge and is therefore more frequently employed in domestic civil litigation (Kyriakakis, 2012). With respect to causation, the United Nations Guiding Principles distinguish among three forms of corporate relationship to harm: where the company has "caused" the harm, "contributed" to it, or is merely "directly linked" to it through a business relationship. According to Cotula and Berger, this tripartite distinction determines the type of remedial action expected from the company, ranging from direct reparation to the exercise of leverage to halt a violation committed by a business partner (Cotula & Berger, 2017).

4.6. The Role of Supply Chains and Subsidiaries in the Attribution of Responsibility

The organizational structure of multinational oil and gas companies, which typically operate through complex networks of subsidiaries, joint venture partners, and subcontractors in host states, creates one of the most difficult legal obstacles to the attribution of responsibility. Peter Muchlinski, in his seminal analysis of the law of multinational enterprises, describes this phenomenon as the "corporate veil" and demonstrates that the foundational principle of separate legal personality, under which each subsidiary bears independent responsibility regardless of the parent company's full ownership, constitutes the principal barrier to tracing responsibility from the operating subsidiary in the host state to the parent company in the home state (Muchlinski, 2007). In the oil and gas industry, this structure performs a dual function. On the one hand, joint ventures with the host state's national oil company or with local corporations constitute a conventional means of market entry. On the other hand, the same structure permits responsibility to be distributed among multiple partners and reduces the likelihood that the foreign parent company will be subjected to legal proceedings.

Richard Meeran, in his examination of judicial practice concerning transnational corporate liability litigation before English courts, demonstrates that claimants generally pursue two distinct legal strategies to overcome this obstacle. The first is an attempt to pierce the corporate veil by proving that the subsidiary was merely an intermediary or agent of the parent company and lacked genuine operational independence. The second, and now more prevalent, strategy is to bring proceedings directly against the parent company on the basis of a breach of an independent duty of care arising from the parent company's knowledge, supervision, and operational control over the subsidiary's high-risk activities, without needing to prove that the corporate veil should be pierced (Meeran, 2011). The second approach, derived from ordinary tort law, provides a more practicable avenue for litigation because it does not require proof of the difficult proposition that the subsidiary lacked separate legal personality. Instead, it requires only a showing that the parent company had a close and informed relationship with the specific operational risks.

With respect to subcontractors and supply-chain partners that have no ownership relationship with the principal company, Philip Alston argues that the OECD Guidelines for Multinational Enterprises fill this gap through the concept of a "business relationship." Under this approach, even in the absence of ownership control, where the principal company possesses contractual leverage over the conduct of a contractor or business partner, it is expected to use that leverage to prevent or halt a violation. A failure to do so, although not necessarily creating direct legal liability, may be addressed through non-judicial mechanisms such as the OECD National Contact Points (Alston, 2005). In recent years, however, binding national laws, including Germany's 2021 Supply Chain Due Diligence Act and France's 2017 Duty of Vigilance Law, have transformed this expectation of leverage into an express legal obligation and require large corporations to conduct continuous human rights and environmental due diligence throughout their supply chains, even in the absence of an ownership relationship (Krajewski et al., 2021).

4.7. *Parent-Company Responsibility for the Operations of Affiliates or Contractors*

The development of English judicial practice over the past two decades has produced a relatively clear theoretical model of parent-company responsibility that operates beyond the traditional framework of piercing the corporate veil. A turning point was the judgment of the Court of Appeal of England and Wales in *Chandler v. Cape plc*, in which the Court held for the first time that a parent company could be directly and independently liable to an employee of its subsidiary, provided that four conditions were satisfied: similarity between the businesses of the two companies; the parent company's knowledge, or opportunity to acquire knowledge, of working conditions at the subsidiary; the subsidiary's or its employees' awareness of inadequate health and safety systems; and reliance by the subsidiary on the parent company's specialized expertise to protect employees. Michael Anderson, in his comparative analysis of this judgment, demonstrates that this four-part framework was subsequently applied in litigation involving extractive industries, including claims against mining and oil corporations, and provided the theoretical foundation for later proceedings against oil and gas companies (Anderson, 2013).

This line of reasoning was developed further in *Vedanta Resources plc v. Lungowe*, discussed above in Section 3.3, and especially in the more recent case of *Okpabi v. Royal Dutch Shell plc*. In the latter case, the United Kingdom Supreme Court clearly stated that the mere existence of common group policies and standards developed by the parent company and imposed on subsidiaries may itself constitute evidence of sufficient control and knowledge on the part of the parent company, even where the subsidiary conducts day-to-day operations. The Court emphasized that the central question is not whether the parent and subsidiary formally possess separate legal personalities, but whether the parent company in practice possessed "knowledge, expertise, or resources" that it could and should have deployed to prevent the harm. According to Anderson, this approach substantially lowered the claimant's evidentiary burden at the jurisdictional stage and facilitated the bringing of comparable claims against oil companies operating in conflict-affected regions, including Nigeria (Anderson, 2013).

With respect to the relationship between parent companies and contractors, as distinct from wholly or partly owned subsidiaries, John Ruggie proposes a different standard within the framework of the United Nations Guiding Principles. Because a contractor has no ownership relationship with the principal company, the basis of responsibility is not the tort-law doctrine of a duty of care but the concept of a "direct linkage" through a business relationship. In such circumstances, the principal company is expected primarily to exercise leverage to halt or mitigate the violation, rather than necessarily provide direct reparation, unless the principal company itself contributed to the harm (Ruggie, 2013). Lorenzo Cotula and Thierry Berger, in their practical analysis of this distinction in the extractive sector, demonstrate that in practice the boundary between a "subsidiary" and an "independent contractor" is often unclear in the oil and gas industry, particularly under long-term technical service contracts in which the contractor effectively operates under the day-to-day direction of the principal company. In such cases, courts increasingly examine the "operational reality of the relationship," rather than relying exclusively on the contractual designation adopted by the parties, in order to determine whether the parent company's responsibility should be assessed under the duty-of-care doctrine, as in the case of a subsidiary, or merely on the basis of a business relationship (Cotula & Berger, 2017).

Finally, David Kinley cautions that, despite the expansion of such judicial developments in the United Kingdom, the Netherlands, and certain other European states, many legal systems, including that of the United States following the restriction of the Alien Tort Statute's extraterritorial reach in *Kiobel*, continue to impose serious jurisdictional and evidentiary obstacles to comparable claims. For this reason, in his view, the future development of parent-company responsibility is more likely to depend on binding supply-chain due diligence legislation, such as the German and French models and, more recently, the European Union directive, than on fragmented judicial developments across different jurisdictions. Such legislation establishes parent-company responsibility from the outset as a statutory, rather than merely judicial, obligation (Kinley, 2018).

5. Conclusion

Overall, the examination of the legal foundations for environmental protection during war, the position of multinational oil and gas companies in armed conflicts, and the bases for attributing responsibility to these actors reveals an emerging legal system in which a significant gap remains between normative rule-making and practical enforcement. This gap appears particularly profound in relation to environmental pollution resulting from the destruction of energy infrastructure because of the technical, economically complex, and multilayered nature of oil and gas operations. Treaty-based international humanitarian law, from ENMOD to Articles 35 and 55 of Additional Protocol I to the Geneva Conventions, has created a foundational framework for protecting the natural environment against methods and means of warfare. Nevertheless, by establishing the evidentiary threshold of "widespread, long-term, and severe," it has effectively excluded a substantial proportion of the actual harm inflicted on oil and gas infrastructure in contemporary armed conflicts from meaningful protection. This reality was clearly demonstrated during the Gulf War and is again evident in Russia's war against Ukraine, illustrating a structural gap between the legal text and its practical operation. The problem becomes even more complex where the issue concerns not merely environmental destruction by belligerent states but the responsibility of private multinational corporations operating as facility operators, joint venture partners, service contractors, or infrastructure exploiters in wartime contexts. These companies have not traditionally been direct addressees of international humanitarian law, and their responsibility must therefore be reconstructed and justified through a chain of subsidiary mechanisms, including international criminal law, the soft law of business and human rights, and, ultimately, the domestic law of home or host states.

International criminal law, particularly Article 8(2)(b)(iv) of the Rome Statute, provides a theoretical basis for attributing individual responsibility to managers and agents of companies who knowingly participate in causing widespread, long-term, and severe environmental damage. However, as noted in the critical literature, the difficulty of proving the mental elements of the crime, the tendency to combine environmental charges with broader humanitarian allegations, and the absence of sufficient political will to bring independent cases of this kind have substantially limited the deterrent function of the provision. Alongside this gap, customary international law and emerging institutional practices, including the 2020 ICRC Guidelines and the International Law Commission's 2022 draft principles, have sought to remedy these deficiencies by extending the temporal scope of environmental protection from the pre-conflict period through occupation and post-conflict reconstruction and by recognizing environmental obligations as independent of the logic of military proportionality. This approach is consistent with Sjöstedt's theory concerning the role of multilateral environmental agreements and indicates that the future of this field is more likely to develop at the intersection of traditional humanitarian law, international environmental law, and human rights law.

The examination of the position and role of multinational oil and gas companies in war economies also demonstrated that their participation in the destruction or pollution of energy infrastructure is never a uniform or straightforward phenomenon. Rather, it encompasses a spectrum of conduct ranging from the direct and knowing exploitation of resources in areas controlled by armed actors, to the maintenance and reconstruction of damaged infrastructure under technical contracts, and even to passive participation within the ownership or partnership structure of an energy project. It is precisely this breadth of conduct that makes a single standard of attribution inadequate and requires a careful distinction among responsibility arising from direct conduct, responsibility arising from assistance or facilitation, and responsibility arising from omission and the absence of due care. This distinction is gradually being transformed into relatively stable judicial standards in cases such as *Kiobel v. Royal Dutch Shell*, the Shell Nigeria litigation before Dutch courts, and the *Vedanta* and *Okpabi* cases in British judicial practice. These decisions demonstrate that parent-company responsibility for the conduct of subsidiaries or other contractors is no longer based exclusively on the traditional theory of piercing the corporate veil. Courts are increasingly moving toward the recognition of an independent duty of care on the part of the parent company, based on the degree of its knowledge, operational control, and actual capacity to influence the conduct of subordinate entities. Although this approach constitutes progress, it continues to confront jurisdictional limitations, difficulties in proving causation between parent-company decisions and specific environmental harm, and the absence of binding legal frameworks in many home states.

The obligation to conduct risk assessment and human rights and environmental due diligence, as reflected in the United Nations Guiding Principles and emerging binding standards such as the European Union Corporate Sustainability Due Diligence Directive, signals a transition from a purely reactive and ex post facto approach toward a prospective and preventive model. Under this model, multinational oil and gas companies are required, before entering or continuing operations in conflict-affected regions, to identify, assess, and mitigate the potential effects of their activities on the environment and human rights. If transformed into a comprehensive and binding legal rule, this obligation could remedy many of the deficiencies of existing ex post responsibility regimes. Nevertheless, for as long as these standards remain primarily voluntary guidelines or geographically limited regional regulations, and for as long as the high evidentiary thresholds of international humanitarian law, the difficulties of proving mental elements in international criminal law, and the jurisdictional and structural obstacles of corporate law persist, the international responsibility of multinational oil and gas companies for environmental pollution resulting from the destruction of energy infrastructure during wars will remain more an evolving normative aspiration than an enforceable legal reality. Its full realization requires the simultaneous lowering of evidentiary thresholds in humanitarian law, formal recognition of environmental harm as legally independent from merely human harm, the adoption of binding due diligence rules at national and international levels, and the strengthening of effective reparation mechanisms for communities affected by the destruction of energy infrastructure during war. Recent armed conflicts, including Russia's war against Ukraine, have once again demonstrated with greater clarity the urgency of accelerating this process.

Ethical Considerations

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

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Conflict of Interest

The authors report no conflict of interest.

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