

Litigation and regulatory governance in the age of the Anthropocene: the case of fracking in the Karoo

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ABSTRACT

The demand for fossil fuels, and most recently natural gas, has resulted in large-scale intervention with the Earth both from its extraction and its overwhelming contribution to global greenhouse gas emissions, and so climate change. Adopting a transnational legal methodology, this article assesses the role of non-state actors in the regulation of fracking in the ecologically and socially sensitive area of the Karoo, South Africa. The litigation discussed reveals a constellation of actors including the government and transnational fossil fuels promoting fracking on the one hand, and various non-state actors, such as civil society, domestic business as well as the global anti-fracking movement, opposing fracking on the other. The role and power of the state to regulate fracking is significantly impacted by these actors, including by refocussing the minds of transnational corporations and the state on the centrality of public participation, by challenging regulations introduced to govern fracking, and through delaying the operationalisation of fracking in the Karoo.

KEYWORDS: Transnational environmental law; fracking; climate change litigation; climate change cases; Karoo

1. Introduction

In the quest for energy security, humanity has spent centuries extracting fossil fuels from the Earth. Global energy demands continue to require cheap fuels, and natural gas has been touted as a fuel to 'bridge the gap' between coal and oil on the one hand, and clean energy on the other.¹ This has resulted in rapidly increasing consumption of this fuel; 'in 2018 gas accounted for almost half of the growth in total global energy demand' alone.² Hydraulic fracturing (fracking) is a process by which gas that is 'dispersed in the rock, rather than in a concentrated underground location' is extracted from shale rock through the injection of fluids that increase the pressure on the geological formations, fracturing them.³ There are a multitude of environmental and social externalities associated with this activity, including localised geological tremors and pollution and contributions to global concentrations of methane and carbon dioxide from its extraction and use, thereby exacerbating the climate crisis.⁴

This article adopts a transnational legal methodology⁵ to identify the actors, norms and processes involved in the response to fracking,⁶ and the environmental and social harms posed by this activity in the Karoo, South Africa. We engage with the contestations and

tensions amongst state and non-state actors that importantly, extend beyond the traditional territorial, jurisdictional, and regulatory boundaries of the state. By identifying who is involved in norm generation, how they are involved, and what the impact of their involvement is in practice, a new perspective on a legal development (in our case, the regulation of fracking in the Karoo) is revealed. This perspective allows us to acknowledge and engage with the crucial role that non-state actors can play in shaping legal and regulatory developments in response to the socio-ecological crisis of the Anthropocene.

We analyse litigation in South Africa related to fracking that has yielded, among others, the following judgments: *Normandien Farms (Pty) Limited v South African Agency for Promotion of Petroleum and Exploitation SOC Limited (Normandien Farms HC)* and *Minister of Mineral Resources v Stern (Stern SCA)*.⁷ Litigation pursued by private actors in response to the state's approach to the regulation of polluting operations is often resorted to as a way of limiting or preventing the negative environmental and social externalities associated with these activities.⁸ Adopting a transnational legal methodology when analysing such litigation can reveal a complex, cross-border context in which non-state actors play a key role in confronting environmentally and socially harmful activity. Further, such litigation can influence the development of more appropriate regulatory responses to environmental problems.⁹ Indeed, there has been a rise in the use of litigation specifically in the context of climate change,¹⁰ pursuant to which lawyers and litigants are increasingly reaching beyond the boundaries of the state, linking with those who have preceded them, and sharing scientific research, legal arguments and expertise.¹¹

The litigation discussed in this paper did not explicitly engage with the phenomenon of climate change, nor did it address arguments concerning climate change mitigation or adaptation. Accordingly, *Normandien HC* and *Stern SCA* would not, on narrow understandings, be viewed as 'climate change cases' or instances of 'climate litigation'.¹² Nonetheless, *Normandien HC* and *Stern SCA* are both concerned with better regulating fracking in the Karoo (an activity that will arguably exacerbate the global climate crisis), and in this sense, they impact upon the state's climate change mitigation efforts. *Normandien HC* and *Stern SCA* could therefore be construed as a sub-section of climate litigation.¹³ Setzer and Vanhala, reviewing the mass of literature concerned with 'climate litigation', have noted the paucity of literature concerned with litigation in the global South.¹⁴ A more inclusive understanding of 'climate change cases' serves to draw attention to efforts by litigants and the courts in the global South to respond to climate change, albeit not directly.

Before engaging with *Normandien HC* and *Stern SCA*, in part 2 of this article we discuss the relevance and value of the notion of the Anthropocene and we elaborate upon the transnational legal methodology that we adopt. In part 3 we discuss the Karoo as a site of contestation amongst state and non-state actors. Finally, in part 4, our analysis of *Normandien Farms HC* and *Stern SCA* invokes a transnational legal methodology and illustrates the role that non-state actors can play in responding to the conditions of the Anthropocene.

2. The Anthropocene, transnational law and litigation

The Anthropocene connotes a proposed geological epoch arising from 'the transformation of the Earth's surface environments by human activity'.¹⁵ Climate change is one of the consequences of the Anthropocene and one of its distinct markers.¹⁶ The imagery associated with this epoch is of 'planetary systems ... on the brink of human-induced ecological disaster that could change life on Earth as we know it'.¹⁷ Although the effects of this disaster will be

felt by all of humanity, impoverished people, principally in the global South, will be first and hardest hit.¹⁸ At the same time, economic growth, benefitting (primarily) the global North, and driven, to a great extent, by transnational corporations, is largely responsible for the collapse of the planet's ecosystems.¹⁹ The Anthropocene thus raises the spectre of a global socio-ecological crisis contributing towards grave injustices and profound patterns of differentially distributed vulnerability.²⁰ We adopt the perspective that regardless of whether or not the Earth is formally determined to have entered into this epoch, the concept of the Anthropocene is of 'heuristic value' as humans endeavour to understand our impact on the Earth, and 'contemplate ways to confront Anthropocene exigencies, and our own destructive behavior'.²¹

As demonstrated by the companion articles in this special issue, scholars have increasingly engaged with the concept of the Anthropocene to reconfigure our understanding of the law in the face of the recognition of humanity's impact upon the Earth,²² adopting, for instance, ecological law,²³ Earth system law,²⁴ Earth Trusteeship,²⁵ and socio-ecological justice,²⁶ as well as calls for the reconceptualisation of transnational law itself to account for the realities of the Anthropocene²⁷ in order to do so. We acknowledge the necessity of situating the law in the context of the Anthropocene. Indeed, as Viñuales argues in this issue, '[i]f we call 'law' the conscious or unconscious observance of certain prescriptions of conduct, then, law has never been as fundamental for the Earth system as it is today'.²⁸ He goes on to argue for the connection of narratives between the concepts of human self-regulation and biospheric self-regulation.²⁹ This perspective is apposite because how states utilise regulation to govern specific issues is grounded within the existing legal culture and traditions of the particular state, and environmental-economic paradigms expressed within contested concepts such as sustainable development.³⁰ The Anthropocene thus raises the spectre of a dichotomy between how law *should* be conceived, given the evidence of significant human impacts on the planet, and how it is currently deployed in practice within the existing legal order.³¹ A transnational legal methodology, as discussed next, takes into consideration the wider actors involved within the governance of particular issues, such as fracking, to understand what is happening in reality, while also providing the analytical space to view the socio-ecological problems posed by fracking and its regulation in the context of the Anthropocene.

Jessup, in his 1956 Storrs Lectures, adopted the concept of transnational law to account for developments in the global arena that were not sufficiently reflected in international law or the law of nations.³² He proposed this approach as a means to also take into account 'other rules which do not wholly fit into [the] categories' of public and private international law.³³ This early reconceptualisation of what constitutes 'law', has seen a burgeoning of literature dedicated to diverging perspectives of what this theoretical account could entail³⁴ while also applying this lens to analyse different fields of law.³⁵ For instance, transnational environmental law scholarship has adopted an approach that takes into account the plurality of state and non-state actors involved in environmental regulation and decision-making.³⁶ According to Lin, shifting from 'international law to transnational environmental law ... may provide us with a more nuanced approach as we consider how we should deal with the effects of global human-induced climate change, including how we promote sustainable energy use'.³⁷ She goes on to argue that transnational law offers a normative framework that moves beyond the state, and embraces the possibility of multi-level and multi-actor governance.³⁸ This transnational approach to environmental law is consonant with the Anthropocene imagery, and an appreciation that environmental problems and their solutions are increasingly complex, requiring multifaceted responses.³⁹

Precisely because of the diverging perspectives that have emerged regarding transnational law, the development and use of this conception of law is fraught with contestation.⁴⁰ This complexity invites us to clearly identify exactly how we are using it. Rather than viewing transnational law as an emerging field, Zumbansen has urged its use as a methodological lens that identifies the actors involved in norm generation—be they state or non-state—the processes by which they are generated, and the nature of the legal norms themselves.⁴¹ By doing so, he asserts, we shift perspective away from a state-centric view of the law to take account of the influence wielded by non-state actors.⁴² We adopt Zumbansen’s approach to transnational law for purposes of our analysis of *Normandien Farms HC* and *Stern SCA* to consider the actors, norms and processes involved in response to the socio-ecological risks of fracking in the Karoo. This approach allows us to trace the variety of actors involved either directly or indirectly in the regulation of fracking in South Africa. The analysis unveils the effect of non-state actors on the regulation of fracking within South Africa, the implications of the turn to litigation in South Africa for other jurisdictions, and contribution to the development of global climate governance. Furthermore, the analysis exposes the ways in which non-state actors can organise themselves in learning networks in order to reach common goals.

3. The Karoo, an ecologically significant site of contestation amongst state and non-state actors

There are believed to be vast shale gas reserves in the Karoo, a region that covers much of South Africa’s land area.⁴³ As ‘the only place in the world with an extended fossil record from 300 to 180 million years ago of the early evolution of tortoises, dinosaurs and mammals’,⁴⁴ the geology of the Karoo is internationally significant and unique.⁴⁵ Biogeographically, the Karoo comprises two biomes, the Succulent Karoo, which experiences winter-rainfall, and the Nama-Karoo, which experiences summer-rainfall.⁴⁶ The Succulent Karoo has ‘unparalleled’ plant biodiversity, and is an internationally recognised biodiversity hotspot.⁴⁷

The prospect of fracking in the Karoo is evocative of the Anthropocene imagery, not least because by increasing seismicity levels, fracking will disturb the geology of the Karoo, and leave behind a lasting human-induced geological imprint.⁴⁸ For instance:

The rocks of the Karoo Basin preserve one of the most remarkable and extended sequences of terrestrial tetrapod development from the Permian to the Jurassic and provide the most complete documentation of the evolutionary development of early mammals in the world. In addition they provide a record of the evolving palaeoenvironments in which these changes in biodiversity occurred, and record the devastating effects of the “mother of all mass extinctions” ... and the subsequent biotic recovery.⁴⁹

Seismic activity which might result from fracking could thus damage important fossil records.

Moreover, fracking is predicted to cause immense socio-ecological harm, and to intensify climate change, including by causing air and water pollution and destroying biodiversity.⁵⁰ In the Succulent Karoo, for example, succulent plants can withstand only a limited range of environmental conditions and are therefore limited to those particular conditions. Any environmental changes could therefore be severely detrimental to these plant species.⁵¹ Bird, mammal and reptile diversity is also high, with critically endangered, De Winton’s golden

mole and riverine rabbit particularly vulnerable to environmental changes such as those caused by fracking.⁵²

The Karoo is sparsely populated with around one million people living in the whole region. In the Succulent Karoo 90% of the land is used for sheep grazing,⁵³ while around 100,000 people work in agriculture across the whole of the Karoo.⁵⁴ Poverty is widespread in the Karoo. For instance, in 2011 Statistics South Africa reported that in the Prince Albert Local Municipality, an area located in the western part of the Karoo with a population of around 130,000 people, more than 19% were unemployed, only around 63% of households had a flush toilet connected to sewerage, and approximately 30% of the population did not have access to piped water inside their dwelling.⁵⁵ These figures are not likely to have improved in the last 10 years. A Statistics South Africa study on poverty trends in South Africa between 2006 and 2015 reveals that poverty was on the rise, with over 30.4 million South Africans (more than half of the population) living in poverty, mainly black Africans, women and people from rural areas.⁵⁶ Many of South Africa's poor are 'water poor', in that they 'regularly experience insufficient access to water [and] inevitably also suffer from myriad associated consequences, including problems relating to health, as well as pressures on finance and time'.⁵⁷ As Cooper pointed out in 2017, 'a significant proportion of South Africans still do not have access to sufficient water, 24 years after the formal end of apartheid'.⁵⁸ The nature and extent of poverty in South Africa is further inextricably linked to historical land alienation arising from conquest and past and current racial oppression, as Mkhize illustrates in the context of the town of Cradock in the Karoo and the tenure insecurity experienced by farm workers and farm dwellers.⁵⁹ As a result of South Africa's problematic history, around 71% of privately-owned farmland (roughly 26 million hectares) is still owned by white people, who make up less than 10% of the country's population.⁶⁰ Land ownership and security of tenure generally translates into wealth and better living conditions for white farmers.⁶¹

One of the biggest threats of fracking in the Karoo is to the extensive agricultural production, given that it is a water stressed area⁶² in which:

the dryer central and western parts of the [Karoo] farming communities rely exclusively on boreholes for the provisioning of water for humans and livestock consumption, elsewhere both surface and groundwater are used for livestock and irrigation purposes. [Fracking] poses potential risks to both the quantity and agricultural usability of surface and groundwater resources.⁶³

Fracking is an extremely water-intensive activity that can result in competition for access to water.⁶⁴ In addition, fracking can result in contamination of water resources.⁶⁵ The potential impacts of fracking on the already scarce water resources in the Karoo are of concern for wealthy farm-owners, whose operations could be threatened, but more particularly for 'water poor' communities, who fear that fracking could jeopardise their already limited access to water and their subsistence farming activities, and thus their water and food security.⁶⁶

Fracking as a means to generate energy from shale gas, a fossil fuel, is reported to result in high greenhouse gas (GHG) emissions, especially relative to the generation of solar and wind energy, and thus represents a climate change mitigation challenge with which the South African government ought to grapple, as discussed in more detail below.⁶⁷ According to the Report of the UN Special Rapporteur on Extreme Poverty and Human Rights, addressing climate change requires 'decoupling improvements in economic well-being from fossil fuel

emissions’.⁶⁸ The Report indicates that failing to adopt appropriate mitigation measures will not only have ‘devastating consequences for people in poverty’, but will also ‘pull vast numbers into poverty’.⁶⁹ This observation is apt in the context of fracking in the Karoo, since it is predicted that jobs created by fracking will likely be offset by job losses in other sectors such as agriculture and tourism.⁷⁰ Job losses and changes to the environment are also predicted to result in disruption of social cohesion as well as a loss of a sense of place, which are likely to intensify conditions of poverty for poor and vulnerable people in the Karoo.⁷¹ The impacts of climate change on the Karoo, including higher temperatures, longer and more frequent droughts, and general desertification,⁷² will also impact upon the poor first and hardest.

In spite of the socio-ecological risks associated with fracking in the Karoo, the South African government, acting through the Minister of Mineral Resources and the authority designated to perform various functions on his behalf, the South African Agency for Promotion of Petroleum and Exploitation SOC Ltd (also known as the Petroleum Agency of South Africa or PASA), is in favour of exploiting the shale gas reserves.⁷³ The government, while responsible for authorising and regulating fracking in the Karoo, must grapple with competing priorities. South Africa is a party to the Paris Agreement and its first National Determined Contribution (NDC) under that instrument sets out that it is trying to balance climate change mitigation with developmental needs ‘with overriding priorities to eliminate poverty and eradicate inequality’.⁷⁴ The NDC highlights that currently South Africa is dependent on coal, such that transitioning to natural gas may be consistent with its commitments.⁷⁵ South Africa as a ‘Developing State’ is yet to reach its peak GHG emissions, which it estimates will occur between 2020 and 2025.⁷⁶ However, the development of fracking does not seem consistent with this goal due to the release of methane from its extraction, and the carbon dioxide emissions associated with the extraction infrastructure and its combustion for energy.⁷⁷ This is especially so given the renewable energy resources—sunlight and wind in particular—that are at the disposal of the State.⁷⁸ Although the development of solar and wind farms would also require vast infrastructure development to transmit and store the energy produced, by developing the fracking industry in the Karoo, emissions associated with fracking may be ‘locked in’ for much longer than the NDC provides for emissions growth. Furthermore, the gas would need to replace coal domestically rather than be exported out of the South Africa. Balancing these competing priorities and controlling the actions of private companies once they have extracted the shale gas, therefore presents a highly complex and uncertain picture that may be inconsistent with international climate commitments.

Notwithstanding its international climate commitments, the state has regulated the extractive industry through the Minerals and Petroleum Resources Development Act 28 of 2000 (MPRDA), and granted exploration permits to various transnational corporations, thus allowing them to assess the viability of extracting shale gas. The corporations include Shell South Africa Upstream BV, a subsidiary of Royal Dutch Shell PLC (Shell), Bundu Gas and Oil Exploration (Pty) Ltd (Bundu), Falcon Oil and Gas Ltd (Falcon), Rhino Oil and Gas Exploration South Africa (Pty) Ltd (Rhino Oil and Gas), a subsidiary of Rhino Resources Ltd (Rhino Resources). The state and these transnational corporations are in favour of fracking on the grounds that it will facilitate economic development and energy security, including for the benefit of the poor.⁷⁹ Shell, for instance, has stated that the extraction of shale gas represents ‘a public good in the form of abundant supplies of clean energy and potential significant local job opportunities’.⁸⁰

Collectively, these transnational corporations hold a great deal of political and economic capital in South Africa. They offer significant development opportunities for the state, including by investing in South Africa and thereby providing jobs and other economic benefits to the country, among other things through income generated from the production of natural gas.⁸¹ They are in powerful positions to influence the state's energy policies by 'locking in' fossil fuels for decades to come. The energy security and the alleviation of poverty that these companies promise is often perceived to outweigh GHG reductions through the development of clean energy, especially given the costs involved with scaling up their use. Non-state actors are therefore potentially the 'David' to the transnational fossil fuel companies and South African government's 'Goliath', as we will illustrate with reference to *Normandien Farms HC* and *Stern SCA*. In this role, non-state actors can play a pivotal role in restraining environmentally and socially damaging activities in an area of particular vulnerability.

Local communities in the Karoo have expressed concerns that short-term economic benefits could be far outweighed by negative long-term socio-ecological impacts.⁸² Some community members have joined forces with international non-governmental organisations (NGOs), scientists and lawyers in an attempt to prevent, or at least improve the regulation of fracking, including, with some success, through the courts.⁸³ Alongside the activism of local communities, NGOs and lawyers, price decreases in the international market for gas have also played a part in slowing down transnational corporations, including Shell's, campaign to begin fracking in the Karoo.⁸⁴ As discussed above, the local communities opposing fracking represent a diverse range of interests and are by no means homogenous, as '[d]ivisions along the fault-lines of class, race and ethnicity are strongly evident, as are severe social challenges to human well-being'.⁸⁵ Further, the ability of some community members to participate in efforts to oppose fracking is no doubt hampered by, among other things, the area's 'aridity and sparse population' (of fewer than a million people), which 'have rendered it a politically and economically marginal region of South Africa, despite its spatial extent'.⁸⁶ For instance, although poor communities oppose fracking on the basis that it could jeopardise their already limited access to water and their subsistence farming activities, and thus their water and food security,⁸⁷ their interests and concerns do not emerge from the litigation we discuss. As we discuss below, instead the interests of wealthy white farmers who are land owners in the Karoo are represented, and seem to have driven the litigation that resulted in *Normandien Farms HC* and *Stern SCA*, largely to the exclusion of those of poor communities.

4. Climate litigation and the Karoo

In *Normandien Farms HC*, the owner of various farms in the Karoo instigated judicial review proceedings on administrative law grounds to challenge the acceptance of a permit to explore for shale gas by PASA. The exploration permit application was submitted by and for the benefit of Rhino Oil and Gas in terms of section 79 of the MPRDA, but without having given Normandien prior notice as required by the Act. On 3 May 2017, the High Court found that the failure by Rhino Oil and Gas to comply with the notice requirements of the MPRDA in the decision-making process rendered PASA's acceptance of the permit application invalid, and the court thus set the acceptance aside.⁸⁸

Rhino Oil and Gas is a subsidiary of Rhino Resources, a transnational corporation based in the British Virgin Islands, that claims to be 'one of the largest holders of both onshore and offshore oil and gas rights in South Africa with over twenty five million acres granted by [PASA]'.⁸⁹ In terms of the Corporate Social Responsibility Policy of Rhino Resources, it is

required to ‘strive to promote environmental stewardship’ in areas that they work, to ‘minimize environmental impacts’, and to ‘comply with all relevant local, national and international laws and regulations in countries where [they] operate’.

Normandien conducts timber farming on several of its properties, and had recently established a water bottling plant on another property, representing a R40 million capital investment.⁹⁰ Its litigation was thus motivated primarily by economic concerns, and the desire to protect its land ownership rights.⁹¹ The court was sympathetic to Normandien’s rights as land owner, and recognised that the MPRDA had ‘corroded the right of ownership of land’.⁹² For the court, these ownership rights rendered compliance with the MPRDA’s consultation process essential in the context of the application by Rhino Oil and Gas for an exploration permit.⁹³ The court noted that these procedures require ‘communities being informed and consulted on any mining activities applied for by mining companies (such as [Rhino Oil and Gas]) in their area’.⁹⁴ Consultation would enable good faith attempts to accommodate affected parties whose rights would be interfered with by mining activities.⁹⁵

Interestingly, the court and Normandien framed *Normandien Farms HC* as an administrative law case in which a procedural error committed by PASA had hampered public participation. There is no indication in the judgment that the court was scrutinising the validity of conduct that could ultimately lead to fracking, and there are no direct or indirect references to climate change. News coverage of the judgment revealed its broader environmental significance in the context of fracking in the Karoo.⁹⁶ The court made no more than a passing comment that obliquely links the granting of an exploration permit and harm to the environment by acknowledging Normandien’s fear that if the exploration right were to be granted, it could impact upon Normandien’s planned water bottling operation and ‘the water extracted from the earth’.⁹⁷ For these reasons, *Normandien Farms HC* would not fall within narrow understandings of climate litigation. Nonetheless, by setting aside the acceptance of the permit application of Rhino Oil and Gas, the court’s order in *Normandien Farms HC* had the effect of requiring the company to start the application process from scratch, and delayed the possibility of exploring for, and ultimately exploiting shale gas in the Karoo. Two years later, on 31 May 2019, the Supreme Court of Appeal upheld an appeal by Rhino Oil and Gas against the judgment and order of the High Court on the basis that Normandien could not review the mere acceptance by PASA of the application for an exploration right.⁹⁸ According to the Supreme Court of Appeal:

As a general rule, a challenge to the validity of an exercise of public power that is not final in effect is premature. An application to review the action will not be ripe, and cannot succeed on that account.⁹⁹

Subsequently, the Constitutional Court found that the litigation had become moot, as Rhino Oil and Gas withdrew its exploration right application on 24 July 2019, and no longer intends to pursue fracking in the Karoo.¹⁰⁰ Even though it dismissed Normandien’s appeal against the Supreme Court of Appeal’s judgment on the basis of mootness, the Constitutional Court emphasised that should Rhino Oil and Gas wish to apply for an exploration right in the future it would have to comply with the MPRDA’s procedural requirements.¹⁰¹ The Constitutional Court also found that the Supreme Court of Appeal’s reasoning should not be viewed as undermining ‘the fundamental importance of public participation in the process for an exploration right application’.¹⁰² The value of *Normandien Farms HC* is that it demonstrated to Rhino Oil and Gas and Rhino Resources (and by extension other fossil fuel companies) the importance of compliance with national laws regulating the approval process for fracking and

in particular, public participation. By emphasising the value of public participation, the court arguably protected the interests not only of Normandien as a land owner who wished to be given proper notice before PASA accepted the application of Rhino Oil and Gas to explore for shale gas, but also, in a theoretical or abstract sense, the interests of the broader community, including poor and vulnerable people who might wish to participate in the decision-making process from the outset. Rhino Resources was further arguably held to the standards of corporate social responsibility that it set for itself in its own policy. Should Rhino Resources wish to pursue fracking in the Karoo in the future, the court's approach in *Normandien* makes it plain that comprehensive public participation will be required, which could in turn ensure that the interests of all members of the community, including poor and vulnerable people, are heard and addressed.

Stern SCA involved a challenge by civil society actors against the promulgation of Regulations for Petroleum Exploration and Production, 2015 (the Petroleum Regulations). The Petroleum Regulations were promulgated by the Minister of Mineral Resources, who purported to exercise regulation-making powers conferred by section 107 of the MPRDA. The purpose of the Petroleum Regulations was to augment the regulatory regime governing fracking in South Africa. Extensive governmental studies had revealed significant gaps in the regulatory regime.¹⁰³ John Douglas Stern (on behalf of the Stern Family Trust), together with several other farm owners in the Karoo, instituted a review application to challenge the promulgation of the Petroleum Regulations in the High Court, Grahamstown.¹⁰⁴ Meanwhile, two civil society actors, Treasure the Karoo Action Group (TKAG) and Afriforum, instituted a similar application in the High Court, Pretoria.¹⁰⁵ Whilst the application launched by Stern and others was successful, the application launched by TKAG and Afriforum was unsuccessful. *Stern SCA* was a consolidated appeal to the Supreme Court of Appeal in respect of both matters.

At issue in *Stern SCA* was not whether fracking ought to proceed in South Africa, but the narrow question of whether the correct authority had promulgated the Petroleum Regulations. Therefore *Stern SCA* was, like *Normandien Farms HC*, framed as an administrative law case. However, in *Stern SCA* the environmental context of the litigation was far more apparent. For instance, the court noted that:

Hydraulic fracturing may have a variety of adverse effects on the environment ... Access roads and manoeuvring space for trucks would be required. This would generate dust and noise. Hydraulic fracturing may also have seismic effects. Large quantities of water would be used. Waste water containing chemicals or heavy or radioactive metals would have to be disposed of.

It is common cause, however, that the major potentially adverse impacts of hydraulic fracturing on the environment are the emission of pollutants and the contamination of surface water and groundwater. This may be caused by uncontrolled gas or fluid flows arising from blowouts or spills, linking of hydrogeological systems, well failures (corrosion of the casing or cementing failure), leaking of fracturing fluids and uncontrolled waste water discharge. The contamination of groundwater in a water-scarce area may, in particular, be disastrous.¹⁰⁶

Further, *Stern SCA* was aimed at improving the regulation of the impacts of fracking, including GHG emissions, so as to give effect to South Africa's constitutional right to an environment not harmful to health or well-being.¹⁰⁷ *Stern SCA* therefore potentially falls within at least some (broader) understandings of climate litigation. The Supreme Court of

Appeal reasoned that the Minister of Mineral Resources was not authorised by the MPRDA to promulgate the Petroleum Regulations, and that the Minister of Environmental Affairs was the proper authority to do so, acting in terms of powers conferred upon her by the National Environmental Management Act 107 of 1998.¹⁰⁸ Accordingly, the Supreme Court of Appeal found that the Minister of Mineral Resources had acted unlawfully, and set aside the Petroleum Regulations. Although not forming part of its order, the court remarked in conclusion that ‘the ... argument that exploration for petroleum by hydraulic fracturing should not take place at all before it is lawfully regulated, is compelling’.¹⁰⁹

Although *Stern SCA* was resolved with reference to a narrow administrative law issue, it has had significant implications for the development of fracking in South Africa. The proposed fracking activities of Shell, Bundu and Falcon were brought to a halt as a result of the uncertainty created by the litigation,¹¹⁰ and no fracking has taken place following the setting aside of the Petroleum Regulations.¹¹¹ Shell’s involvement is particularly intriguing, given its status as a one of a very small number of transnational fossil fuel companies that has (through investor action) made certain commitments to climate mitigation, which seem at first glance to be inconsistent with its efforts to frack in the Karoo.¹¹² Shell had lobbied for fracking in the Karoo for over a decade, and despite scaling down (in reaction to the fluctuating global gas market), the team dedicated to this mission is still active. However, Shell also committed to climate action as part of the Climate 100+,¹¹³ introduced climate risk disclosure, energy transition reports,¹¹⁴ and has expressed an ambition to reduce its net carbon emissions by 50% by 2050 with ‘executive pay linked, in part, to this target’¹¹⁵ and has publicised its ambition to reach net zero GHG emissions by 2050.¹¹⁶ While it is making these commitments on the one hand, on the other the company ‘believes’ that GHG emissions will not need to be eliminated until 2070, despite scientific consensus that this should be 2050 at the latest,¹¹⁷ is promoting natural gas as a ‘low carbon alternative’ to oil and coal, and has several shale gas assets around the world.¹¹⁸ Indeed, more recently, concerns have been raised regarding Shell’s climate ambition with asset manager Sarasin & Partners divesting around 20% of its shares in protest of a failure to meet the 2°C global temperature target of the Paris Agreement.¹¹⁹ Establishing new fracking sites, rather than only operating existing ones, seems inconsistent with both Shell’s (albeit rather weak) commitment to the Paris Agreement collective targets, and the position of several of its large investors who are concerned with both climate change and, more broadly, ethical investing including limiting the environmental impact of their investments.¹²⁰

By preventing Shell and others from fracking in South Africa, even if only temporarily, *Stern SCA* represents a significant victory on the part of civil society actors seeking to ensure improved environmental protection and governance in an era of climate change. Amongst the relevant actors, TKAG is an example of the way in which civil society has connected with the global anti-fracking movement.¹²¹ After forming TKAG, which consists of a partnership of scientists, lawyers and other actors, its founder, Jonathan Deal, reached out to American’s Against Fracking, a coalition of NGOs—including Greenpeace—business and other actors addressing fracking in the USA, thereby entering a global coalition of anti-fracking campaigners.¹²² In this way Deal was arguably able to establish a network of expertise to strengthen the approach taken in *Stern SCA* through sharing experiences. This approach could be especially valuable in climate litigation to draw on scientific evidence compiled elsewhere, the observable impacts of fracking in jurisdictions where it is already occurring, and legal expertise in those jurisdictions. However, the experiences of the different actors within such networks will invariably not be homogenous; locality, context and legal culture can materially influence success in litigation and, thus, must be taken into account.

Despite the victory, it is important to acknowledge that the perspectives and concerns of poor and vulnerable local communities were noticeably absent in *Stern SCA*. Apart from TKAG, the litigation was driven by Afriforum, ‘a civil rights organisation that mobilises Afrikaners, Afrikaans-speaking people and other minority groups in South Africa and protects their rights’.¹²³ Afriforum, controversially, thus primarily represents the interests of South Africa’s white Afrikaans minority, who were hugely privileged during apartheid. In addition, Stern and other farmers acted from the privileged position of landowners, rather than in the interests of poor and vulnerable communities in the Karoo, whose livelihoods and sense of place are likely to be most affected by fracking. Although litigation potentially offers affected people, environmental and human rights NGOs and other interested parties a significantly stronger voice—and as a result influence—on the state’s regulation of fracking in the Karoo, it is important that interests of marginalised communities be brought to the fore. Those interests could include justice-related concerns about water and food security, job losses in agriculture and tourism, and a loss of social cohesion. They could also include concerns about the impacts of fracking on climate change and the impacts of climate change, in turn, on livelihoods. While transnational (or global) litigation or advocacy networks represent a significant and recognisable phenomenon that may in turn impact upon transnational regulation concerned with the energy transition,¹²⁴ it remains important to question the extent to which their litigation strategies recognise and address the concerns of poor and marginalised people who stand to be directly, and most immediately impacted by the development of fracking in the Karoo.

5. Conclusion

Fracking represents a significant threat to the Karoo’s socio-ecological systems, among other things, due to its negative impact on biodiversity and resulting habitat loss and fragmentation, contamination of surface water and aquifers and air pollution.¹²⁵ The economic benefits and contribution towards energy security and South Africa’s energy transition proposed by transnational fossil fuel companies hoping to exploit the vast gas reserves of the Karoo, and the government, must therefore be balanced with the environmental and social costs of its extraction. Given the number of corporations that have either expressed interest in operating well sites in the Karoo and those who have already applied for permits, the damage could be significant. Furthermore, while it could be argued that this issue is a domestic one, both the contribution of methane emissions from fracking to global concentrations, the contribution of carbon dioxide from its extraction, transport and combustion as well as its likely export out of the country, makes this issue one of a global nature. The wide variety of actors involved—state, civil society and NGOs, transnational fossil fuel companies, domestic companies and the involvement of the global anti-fracking movement—truly reveals the transnational dimensions of what appears to be a purely domestic issue, as well as the impact that litigation has on the regulatory capacity of the state itself.

In this article we have illustrated, adopting a transnational legal methodology, that the power of the state to authorise fracking through domestic regulation may be weakened by non-state actors who engage in litigation in order to prioritise the protection of this area. By so doing, these non-state actors also act as a counterbalance to the powerful transnational corporations who have immense economic power and incentives to exploit untapped shale gas. While the Department of Mineral Resources had expected to issue the first permits to extract shale gas in the Karoo during 2019, this did not happen, and it remains unclear whether and when permits will be issued.¹²⁶ This is in large part due to the role of non-state actors, including civil society, who mobilised to influence the manner in which fracking is regulated and the

Karoo is developed. The turn to litigation, as illustrated by *Normandien HC* and more particularly *Stern SCA*, has resulted in much greater scrutiny and evaluation of the impacts of fracking in the area, and highlighted the need for proper public participation, which represent important and necessary regulatory shifts in the context of the Anthropocene's imagery of planetary destruction.

Environmental litigation—encompassing as it does the use of the court to pursue either directly or indirectly environmentally beneficial outcomes—has the capacity as a form of regulatory governance to address and attempt to limit humanity's impact upon the Earth. The turn to litigation both strategically and in pursuit of specific goals has burgeoned over the last decade and, especially with regard to climate change, plays a role in the governance of this problem.¹²⁷ Ultimately, the cases discussed in this article may serve to include more voices in this type of environmental decision-making on the local level as well as form the basis of stronger resistance to fracking in the Karoo and beyond. Indeed, the power of litigation to delay may become its best form of attack; as the global gas market fluctuates and the energy transition moves beyond the use of this fuel, the economic incentive for its exploitation may wane thereby preserving the Karoo and its people.

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Notes

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