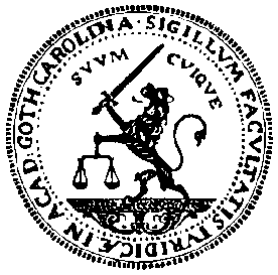

FACULTY OF LAW
Lund University

Sonja Román

Fractured Earth

International State Responsibility and Climate Injustice in the Context of Fracking

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Abstract

As the world is running out on conventional fossil fuel reserves the extraction of fossil gas through hydraulic fracturing, commonly known as fracking, has gained further ground internationally. In parallel, the escalating and disastrous effects of climate change are evident and time is running out to adjust energy production systems in order to avoid tipping points of global temperature levels. The purpose of this thesis is to explore international state responsibility in relation to fracking, whose large emissions of methane delay any significant climate progress from being made. A doctrinal methodology is used to account for the applicable norms under international environmental law and international human rights law in light of this extractive activity. Further, the theoretical perspectives of Third World Approaches to International Law (TWAIL) and Legal Subjectivity are applied, and also form the basis for a presentation of contemporary strategies to legally oppose fracking. The findings show that the climate regime is dependent on best-efforts by contracting states and lacks binding enforcement mechanisms. Additionally, other norms under international environmental law are unfit to tackle climate change due to difficulties of tracing the harm to a single action of a specific state. International human rights law is in practice largely obsolete due to merely centering host states, who often in various ways are prevented from regulating fracking. Further, the global dominance of corporate power is reflected in how the corporation in reality is the ultimate legal subject within international law. Based on these failures, as well as its colonial origins, international law is oppressive to the Third World, all the more when little attention is paid to root causes behind environmental exploitation including fracking. Thus, international law must be compelled to profound change by influence of the Third World. From a shorter term perspective, the severity of the climate crisis urges the use of existing legal tools to make fossil fuels stay in the ground.

Sammanfattning

Medans världens fossila bränslereserver sinar har utvinningen av fossilgas genom hydraulisk spräckning, allmänt känt som fracking, vunnit mark internationellt. Parallellt med detta uppenbarar sig klimatförändringarnas katastrofala effekter och tiden är knapp för att ställa om global energiproduktion innan medeltemperaturen når så kallade ”tipping points”. Syftet med denna uppsats är att utforska det internationella statliga ansvaret i förhållande till fracking, vars stora metanutsläpp bromsar alla klimatframsteg av betydelse. En rättsdogmatisk metod används för att redovisa gällande normer under internationell miljölagstiftning och internationella mänskliga rättigheter i förhållande till fracking. Vidare tillämpas teoretiska perspektiv från Third World Approaches to International Law (TWAIL) och Legal Subjectivity. Dessa utgör även grunden för en redogörelse av samtida strategier för att rättsligt motverka fracking. Studiens resultat visar att klimatregimen är beroende av best-efforts bland avtalsslutande stater och saknar bindande verkställighetsmekanismer. Dessutom är andra normer under internationell miljölagstiftning dåligt utrustade för att ta itu med klimatförändringarna, detta på grund av svårigheten med att påvisa kausalitet mellan en viss handling och en särskild skada. Mänskliga rättigheter är i praktiken utan större verkan eftersom den enbart centrerar värdstater, som i realiteten ofta är förhindrade, av olika skäl, att reglera fracking på sitt territorium. Vidare återspeglas företagens makt över den globala ordningen i hur det kommersiella företaget i realiteten är det absoluta rättsliga subjektet inom internationell rätt. Baserat på dessa misslyckanden, liksom den internationella rättens koloniala ursprung, fortsätter internationell rätt att förtrycka tredje världen. Framför allt med tanke på hur lite uppmärksamhet som ägnas åt de bakomliggande orsakerna till miljöförstörande verksamheter, bland vilka fracking inte är ett undantag. Således måste internationell rätt manas till djupgående förändringar genom inflytande från tredje världen. Klimatkrisens allvar och kampen mot klockan kräver dock att alla befintliga rättsliga vägar används för att fossila bränslen ska stanna i marken.

Abbreviations

ARSIWA – Draft Articles on the State Responsibility for Internationally Wrongful Acts

CBDR – Common but Differentiated Responsibility

CESCR – UN Committee on Economic, Social and Cultural Rights

CO_2 – carbon dioxide

ECHR – European Convention on Human Rights

EIA – Energy Information Administration (USA)

IACHR – Inter-American Court of Human Rights

IEA – International Energy Agency

ILC – International Law Commission

IMF – International Monetary Fund

ICCPR – International Covenant on Civil and Political Rights

ICESCR – International Covenant on Economic, Social and Cultural Rights

ICJ – International Court of Justice

IPCC – Intergovernmental Panel on Climate Change

NDC – Nationally Determined Contribution

OECD – Organisation for Economic Cooperation and Development

OHCHR - Office of the United Nations High Commissioner for Human Rights

PSNR – Permanent Sovereignty over Natural Resources

TWAIL – Third World Approaches to International Law

UN – United Nations

UNEP – United Nations Environment Programme

UNFCCC – United Nations Framework Convention on Climate Change

UNGP – United Nations Guiding Principles on Business and Human Rights

Contents

1. Introduction

The average global temperature has in two centuries risen by more than 1°C compared to pre-industrial temperatures.[1] This is due to an increased amount of greenhouse gas in the atmosphere caused by the burning of fossil fuels. Climate change has pushed the planet out of a relatively stable Holocene,[2] into a new unstable geological epoch most commonly referred to as the "Anthropocene", characterized by sea-level rise, biodiversity loss and more frequent extreme weather.[3] According to a recent report by the Intergovernmental Panel on Climate Change (IPCC), whole ecosystems are put at risks at the reach of a 1.5°C warming, and the impacts are already starting to show. As of today, the most affected zones of climate change are small island states and coastal regions, high mountain ranges and societies where food production is already fragile.[4] Further, the people most affected by these changes are indigenous people and poor people within low- and middle-income states who already struggle for a decent livelihood.[5] Although the grave impacts of greenhouse gas emissions are known, the global economy remains around 80% dependent on fossil fuels.[6] Paradoxically enough, since the adoption of the Paris Agreement in which contracting states agreed to keep global warming below 2°C compared to pre-industrial levels and aim for a 1.5°C limit,[7] the funding from the world's major banks to the fossil fuel industry has increased each year.[8] A prominent part of this increase is the fast expansion of fracking,[9] a multistage process to extract fossil gas or oil trapped inside shale rock formations. Fracking has since the 2000's become a turning point for the rising costs of coal and oil production globally, and to some extent even a reversing factor in that it reduced fossil fuel prices.[10] Crucially, however, by extending the depot for the fossil fuel industry, the "fracking boom" has postponed what would be a definitive deadline for energy transition. Thereby, environmental organizations are referring to fracking as maybe the largest threat to climate progress today.[11] In addition, the message by

[1] Intergovernmental Panel on Climate Change (IPCC), Special Report 2018, "Global Warming of 1.5°C", (2018), p. 54.
[2] As described in the IPCC Special Report 2018, p. 54: "[t]he Holocene period, which itself was formally adopted in 1885 by geological science community, began 11,700 years ago with a more stable warm climate providing for emergence of human civilisation and growing human-nature interactions that have expanded to give rise to the Anthropocene".
[3] IPCC (2018), p. 53. For a discussion about the term "Anthropocene" see Chapter (1.5) below.
[4] Ibid, p. 53.
[5] Ibid, pp. 53, 55.
[6] U.S Energy Information Administration (EIA), "International Energy Outlook 2019, with projections to 2050", (2019), p. 32.
[7] Paris Agreement, UN Doc. fccc/CP/2015/L.9/Rev.1, 2015, Article 2.1(a).
[8] Rainforest Action Network, "Banking on Climate Change, Fossil Fuel Finance Report Card 2019", (2019), p. 7.
[9] Ibid, p. 5, for further elaboration on the subject, see Chapter 2 in this thesis.
[10] Pirani, Simon, *Burning up, a Global History of Fossil Fuel Consumption*, Pluto Press, (2018), p. 28.
[11] Rainforest Action Network (2019), p. 52; Oil Change International, "Burning the Gas 'Bridge Fuel' Myth: Why Gas is not Clean, Cheap, or Necessary", (2019), p. 3.

scientists in light of the current climate crisis and global commitments to decarbonisation is clear: two thirds of existing fossil reserves need to remain in the ground in order to at least have a chance of meeting the agreed warming targets in the Paris Agreement.[12] In light of this, in the words of Anderson and Broderich, "there is categorically no role for bringing additional fossil fuel reserves, including gas, into production."[13] Simultaneously, the public resistance against the industry grows. In September 2019, an open letter was sent to U.N. Secretary General António Guterres, signed by 450 activist groups and individuals who call for a global ban on fracking.[14]

Against this backdrop, this thesis seeks to examine the legal obligations vested upon states in relation to fracking under international environmental law and international human rights law. More precisely, it aims at determining whether there are legal implications for the state engendered by the development and maintenance of a fracking industry on its own territory as well as abroad. The results will be analysed through a Third World Approach to International Law (TWAIL) along with a theoretical concept of legal subjectivity. In order to contextualize the challenges that fracking brings, as well as to discuss on-the-ground-impacts of international law on a Third World country, the case of Argentina will function as a specific geopolitical lens throughout the thesis. While one part will adopt a classical approach in relation to state responsibility, the TWAIL analysis will adopt a contemporary approach with regard to the possibilities and limitations of international law as a tool to resist fracking today, as well as in the future.

1.1 Aim and Research Question

The aim of this thesis is to explore the international legal state responsibility arising from fracking with regard to climate change. Further, the aim is to examine the relationship between international law and the extractive process that is fracking, as well as investigate if and how so these affect the Third World in particular ways. In order to reach the aim of the thesis, the following research questions will be answered:

The central question of this thesis is the following:

- In international law, what are the implications of the presence and maintenance of the fracking industry in terms of international legal state responsibility?

[12] McGlade, Christophe and Ekins, Paul, "The Geographical Distribution of Fossil Fuels Unused when Limiting Global Warming to 2°C", in *Nature*, (2015), Vol. 517, pp. 187-190.
[13] Anderson, Kevin and Broderich, John, "Natural Gas and Climate Change", Tyndall Manchester, (2017), p. 19.
[14] Supporters/Co-Signatories, "An open letter to António Guterres, Secretary General of the United Nations: Request to the United Nations to call for a global ban on fracking", 18 September 2019.

I intend to answer this central question by answering the following sub-question:

- What is the international state responsibility of host states and home states in relation to national and transnational fracking companies?

1.2 Disposition

The structure of this thesis is as follows: In the remaining part of the introductory chapter, section 1.3 will cover the limitations of this research and 1.4 presents certain terminology. Section 1.5 will account for a literature review which is divided into two categories; state responsibility and fracking. The theoretical framework of TWAIL and Legal Subjectivity will be presented in section 1.6, and the methodology of this research in 1.7. Chapter 2 will comprise an overview of the fracking industry, including a description of the process in section 2.1, its climate impacts in 2.2, and the actors involved in 2.3. A more detailed description of the situation in Argentina will be made in subsection 2.3.1, starting with the economic crisis and followed by an account of the recent developments within national energy politics. Chapter 3 is devoted to the doctrinal legal assessment of this thesis, with a broader focus on international state responsibility in 3.1. Further, section 3.2 will seek to answer the research questions under International Environmental Law and section 3.3 under International Human Rights Law. Chapter 4 will continue where the findings from the previous chapter left off, by analysing the climate regime and human rights from TWAIL perspectives and through the lens of Legal Subjectivity. The chapter will also present alternative paths towards an international law inclusive of The Third World. Lastly, the research questions will be restated and answered concisely in Chapter 5 in connection with concluding, final reflections.

1.3 Limitations of this Research

Fracking presents a multitude of issues and concerns, from the technical extraction of unconventional fossil oil and gas and the burning of fossil fuels, to land rights and access to justice.[15] For this reason, it has been

[15] Besides the climate impacts there has been documented impacts on water resources, see Buono et al.(eds), *Regulating water security in unconventional oil and gas*, Springer, (2020); documented seismic activities, see British Geological Society, "Seismic Activity at Preston New Road: FAQs", (bgs.ac.uk), available at: https://earthquakes.bgs.ac.uk/research/PrestonNewRoadFAQ.html, visited 17 April 2020; Express, "Blackpool earthquake: Panic at record 2.9 tremor – ' House shook for 2-3 seconds!'" published 26 August 2019, https://www.express.co.uk/news/uk/1170146/Blackpool-earthquake-huge-tremor-fylde-lancashire-twitter, visited 18 April 2020; documented air pollution, see The Center for Human Rights and the Environment (CHRE), "Human Rights and the Business of Fracking, Applying the UN Guiding Principles on Business and Human Rights to Hydraulic Fracturing," Draft 2, September (2015) p. 6.

necessary to identify clear limitations for this thesis, why it focuses on the implications on environmental and human rights caused by fracking. Without downplaying the importance of other areas of impact, the climate threat which fracking poses is the main environmental harm of focus in this particular research. This limitation has clear consequences in terms of the relevance of specific applicable human rights standards. This is because, as will be presented in chapter 2, a study of fracking from the perspective of climate change inevitably brings to the fore the impact that the industry has on the environment, and consequently, on the enjoyment of economic, social and cultural rights. Due to these realities, the investigation based on international human rights will be limited to economic, social and cultural rights. More precisely, focus on the international level will lay on the UN International Covenant on Economic, Social and Cultural Rights. On a regional level, the attention is limited to the American Convention on Human Rights.

Further, because of the main interest is international law, domestic legislation and case law, as a matter of principle, will not be accounted for unless for exemplifying purposes or for their international legal relevance. Given the constant development of the field of energy production, the data collected for this thesis has aimed to stay up-to-date during the process. Due to the emergence of the Coronavirus (Covid-19) pandemic in the spring of 2020, the uncertain future of fracking has been revealed, not least in Argentina where the fracking industry was put on a temporary hold.[16] The attempts to capture a critical moment in history with regard to the phase out of fossil fuels has indeed proven difficult due to the fast evolving subject.

1.4 Terminology

Throughout this thesis, there are recurrent particular terms which will be clarified for ease of reference.

Anthropocene / Anthropogenic climate change: Anthropocene is the most commonly used term for the new geological phase we have entered.[17] However, the term has been subject to critique which the most frequently directed will be mentioned shortly.[18] One critique is problematizing the

[16] Watts, Jonathan, "Coronavirus pandemic threatens controversial fracking project in Argentina", The Guardian, published 29 April 2020, https://www.theguardian.com/environment/2020/apr/29/fate-of-vaca-muerta-oil-and-gas-fields-may-point-way-forward-on-fossil-fuels-after-coronavirus

[17] For a scientific report of the new geological face, see IPCC Special Report (2018), p. 53.

[18] Although the term probably dates to the 1980s, "Anthropocene" was established in popular language during the globalizing discourses in the 2000s, as a term for a new geological epoch characterized by the significant increase in greenhouse gas in the airs, water and rocks, which was caused by human activity. Haraway, although recognizing these impacts, does not consider Anthropocene an époque but more of a "boundary event that we should not make last." Further, rather than to have one word to cover every combined processes of our time, she proposes more, such as Plantationocene, Capitalocene and the Chthulucene. See Haraway, Donna J., *Staying with the Trouble: Making Kin in the Chthulucene*, Duke University Press, (2016), pp. 44-45, 100.

convenient timing of when the term was first mainstreamed; at the emergence of the Globalization discourse in the 2000's, and points out agendas of directing the focus elsewhere than the global economy.[19] A second critique is that "Anthropocene" has inherent frames associated to it. Language can indeed limit our though, practice and action. In context of climate change this is especially important, for instance if one wants, as Kathryn Yusoff puts it, "to alter how we think and imagine geological relations in non-extractive modes, to think about encountering the coming storm in ways that do not facilitate its permanent renewal."[20] Bearing this in mind, the term "Anthropocene" should in this thesis not be seen as a denial of complexities in fitting all of humanity under one label, nor as an exclusion of other contributing processes than hegemonic anthropocentrism, such as an extractive mode of production.[21] It is, simply put, not the purpose by the use of the term "Anthropocene" to exclude, but to be able to connect the discourse of an extractive process that is fracking with the common debate on intra-industrial temperature rise without having to use multiple or unestablished terms.

Fossil gas: Commonly known as "natural gas", the gas is made up by mostly methane and is the result of millions of years long decomposing of organic material in the ground layers. Since it takes such long time to be produced, it is considered a non-renewable resource and a fossil fuel. Although "natural gas" is the common term, it pertains to the fossil fuel industry itself for which the positive associations of "nature" is closely connected to corporal profit interests. The term "fossil gas" on the other hand is established by the environmental movement to oppose the deceptive resonance of "natural gas".[22] In this thesis, "fossil gas" is used to highlight the negative impact on the atmosphere in terms of contributing to climate change.

Fracking: The term will here be used to cover the whole process of unconventional fossil gas extraction, something that by the industry is often

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[19] Donna J Haraway elaborates on how the term represents a species instead of certain acts by a certain group within that species. "Perhaps" she suggests, "instead of the fiery forest, the icon for the Anthropocene should be Burning Man!" in Haraway (2016), pp. 44-46.
[20] Yusoff, Kathryn, *A Billion Black Anthropocenes*, University of Minnesota Press, (2019), p. 104.
[21] Human ecologist Andreas Malm, has through his research on climate change centred the capitalist mode of production, what he calls the "Capitalocene", rather than the "Anthropocene". To claims that anti-capitalism is creating an ideological divide on climate change he responds: "history has closed the parenthesis around the Soviet system, and so we are back at the beginning, where the fossil economy is coextensive with the capitalist mode of production – only now on a global scale." Quote by Malm in "The Anthropocene Myth", in Jacobin, published 30 March 2015, https://www.jacobinmag.com/2015/03/anthropocene-capitalism-climate-change/. For academic work by Malm, see *Fossil Capital: the Rise of Steam-Power in the British Cotton Industry, c.1825-1848, and the Roots of Global Warming*, Human Ecology Division, Lund University (2014); Malm, Andreas, "Who Lit this Fire? Approaching the History of the Fossil Economy", *Critical Historical Studies*, University of Chicago, (2016), pp. 215-248.
[22] Fossilgasfällan [Fossil Gas Trap], "Gasguide", https://fossilgasfallan.se/kunskap-och-forskning/gasguide/, accessed 27 March 2020.

referred to as “hydraulic fracturing” or “slick-water hydraulic fracturing”.[23] The latter terms are technique-focused on only one step of a much larger extractive process which can confuse the public debate. “Fracking” is the term most commonly known outside the industry and usually refers to all of the steps in unconventional gas extraction.[24] Owing to comprehensive purposes, this thesis adopts the latter term.

1.5 Literature Review

With regards to the subject of this thesis, two categories have been detected under which the literature review is presented. First, section 1.6.1 covers writings on international state responsibility. Here, prominent work on extraterritorial responsibility is also included.
Secondly, section 1.6.2 covers writings on fracking in relation to transitional energy purposes and environmental challenges, with an in-depth focus on legal research.

1.5.1 International State Responsibility

In relation to the law of state responsibility, the work of the International Law Commission (ILC) is a primary point of reference, especially the Draft Articles on State Responsibility for Internationally Wrongful Acts (ARSIWA) adopted in 2001. ARSIWA is a product of ILC’s attempts to codify and progressively develop the law in this area.
This thesis also relies on the work of one of the most prominent scholars on state responsibility, James Crawford. Appointed as a Special Rapporteur on state responsibility in 1996, Crawford was highly involved in the drafting of ARSIWA and has been an influencing voice in the field ever since. As explained by Chinkin and Beatens, he is not associated with a specific school of international law; “rather, his commitment is to international law as an open system, a practical tool for the resolution of often apparently intractable international problems.” [25] This “openness” becomes apparent in the range of material which he has co-edited, whether it is a positivist, historical, interdisciplinary or critical approach, a wide representation can be found.[26] Significant and well-referred work of his is *The Law of State Responsibility* (Oxford, 2010), *State Responsibility: the General Part*

[23] Short et al, “Fracking’ and human rights: a new field for human rights impact assessment?”, in *the International Journal of Human Rights*, 19:6, Routledge, 2015, p. 702.
[24] Hawkins, Joanne, “Fracking: minding the gaps”, *Environmental Law Review*, Vol. 17, No. 1, 2015, Sage Publications, pp. 9-10.
[25] Chinkin, Christine and Baetens, Freya, “Editor’s preface”, in *Sovereignty, Statehood and State Responsibility, essays in Honor of James Crawford*, Cambridge University Press, 2015, p. xi.
[26] Chinkin and Baetens (2015); see Crawford, James et al (eds.), *The Law of State Responsibility*, Oxford University Press, 2010; which partly serves as a critique against the draft articles.

(Cambridge, 2013) and *The Cambridge Companion to International Law* (Cambridge, 2015).[27]
The Law of State Responsibility is an extensive volume of scholarly articles that both serve as a critique against the draft articles as well as an exploration of other aspects of the law of state responsibility.[28] In *State Responsibility: the General Part*, Crawford unfolds his own expertise in a thorough step-by-step guide of the different elements of state responsibility. Lastly, this thesis also relies on Crawford and Koskenniemi's *The Cambridge Companion to International Law*, and in particular the contribution by Susan Marks, who provides a critical perspective in the context of the human rights regime.[29] In her contribution, Marks argues that the failure to grasp root causes to human rights violations might portray them as naturally occurring and calls for another human rights narrative "for our disastrous times".[30] In the specific context of climate change and fracking, which are both "man-made" phenomenon, this thesis will try and identify such an alternative human rights narrative as formulated by Marks.

The extraterritorial scope of the duty to protect against human rights abuses by third parties remains highly contested. In this thesis, the two contrasting views will be roughly categorized as the "classical" and the "contemporary" approach to international responsibility. The classical and more conservative reading of international law limits the scope of international responsibility to protect human rights of individuals within the territory or jurisdiction of the state. For this purpose, the concept of "jurisdiction" tends to be interpreted restrictively as only covering effective control over territory or people. Increasingly so, this limitation has been criticized by scholars who argue that globalisation calls for new legal interpretations of control, much based on the need to regulate transnational business activities.[31] Hence, the contemporary approach to extraterritoriality claims that there is a duty to protect against human rights violations throughout the whole cycle of transnational business activities. The discourse is perhaps mostly associated with human rights law, although scholars as Negré, Simons, and Seck have

[27] Crawford et al. 2010; Crawford, *State Responsibility: the General Part*, Cambridge University Press, 2013; Crawford, James & Koskenniemi, Martti (eds.), *The Cambridge Companion to International Law*, Cambridge University Press, 2015.
[28] Crawford, James et al., *The Law of State Responsibility*, Oxford University Press, 2013.
[29] Marks, Susan, "Human Rights in Disastrous Times", in Crawford & Koskenniemi (eds.) *The Cambridge Companion to International Law*, Cambridge University Press, 2015.
[30] Marks (2015), p. 326.
[31] See Chinkin, Christine, "A Critique of the Public/Private Dimension", *European Journal of International Law*, Vol.10, 1999, pp. 387-395; Skogly, Sigrun, and Gibny, Mark, "Transnational Human Rights Obligations", *Human Rights Quarterly* 24, The Johns Hopkins University Press, 2002, pp. 781–798; Skogly, Sigrun, and Gibny, Mark, "Economic Rights and Extraterritorial Obligations" in Hertel, Shareen and Minkler, Sareen (eds), *Economic Rights: Conceptual, Measurement, and Policy Issues,* Cambridge University Press, 2007); Seck, Sara, "Conceptualizing the Home State Duty to Protect Human Rights", in Buhmann, Karin et al. (eds.), *Corporate Social and Human Rights Responsibilities,* Palgrave Macmillan, 2011; Augenstein, Daniel, and Kinley, David, "Beyond the 100 acre wood: in which international human rights law finds new ways to tame global corporate power", *The International Journal of Human Rights*, Routledge, (2015), Vol. 19, No. 6, pp. 828–848.

done prominent research in the context of international environmental law, with strong leanings towards the contemporary approach.[32]

The issue of extraterritorial obligations is dealt with in this thesis with reference to Langford et al in *Global Justice, State Duties: the extraterritorial scope of economic, social and cultural rights in international law* (Cambridge, 2013).[33] The editors hold that the Westphalian territorial framing of rights needs to be broken, since the world is increasingly intertwined and the impacts on human rights can be done with ease from the complete opposite side of the world.[34] Thus, a common point of departure for a contemporary approach to international responsibility is that international law has to catch up with these new global "playfields" in different ways. There is accordingly a need to apply a critical gaze on interpret international law, especially when it comes to the study of fracking and its adverse environmental and human rights impacts.

1.5.2 Fracking

The amount of published impact investigations on fracking has increased the last years.[35] However, a majority of these reports focuses on the scientific impacts of fracking, either in the direct surrounding or on a global climatic scale. A human rights approach is still mostly apparent in reports by smaller NGO's,[36] along with independent documentary film makers,[37] and by journalists.[38]

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[32] Negré, Céline, "Responsibility and International Environmental Law", in Crawford et al (eds.) *The Law of International Responsibility*, Oxford University Press, 2010; Simons, Penelope, "Selectivity in Law-Making: regulating extraterritorial environmental harm and human rights violations by transnational extractive corporations", in *Research Handbook on Human Rights and the Environment*, Edward Elgar Publishing, 2015, at pp. 473-507; Seck, Sara, "Transnational Business and Environmental Harm: A TWAIL Analysis of Home State Obligations," *Trade, Law and Development*, Vol. 3, No. 1, 2011, pp. 164-202.
[33] Langford, Malcolm, et al (eds.), *Global Justice, State Duties: the extraterritorial scope of economic, social and cultural rights in international law*, Cambridge University Press, 2013.
[34] Langford et al. (2013), p. 3.
[35] See Global Network for the Study of Human Rights and the Environment, et al., (Global Network), "A Human Rights Assessment of Hydraulic Fracturing and Other Unconventional Gas Development in the United Kingdom", (2014); CHRE (2015); Oil Change International, "Debunked: the G20 Clean Gas Myth", (2018) Greenpeace, "Debunked: the Promise of Argentina's Vaca Muerta Shale Play", (2018); Oil Change International (2019); Concerned Health Professionals of NY and Physicians for Social Responsibility, "Compendium of Scientific, Medical and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction)", Sixth Edition, (2019); Permanent Peoples' Tribunal (PPT), "Session on Human Rights, Fracking and Climate Change 14-18 May 2018", Advisory Opinion, 12 April 2019.
[36] See for example Global Network (2014); CHRE (2015); PPT (2019).
[37] See for example "Gasland", Fox, Josh, (2010), film; "Gasland Part II", Fox, Josh, (2013) film, "FrackNation", McAleer, Phelim & McElhinney, Ann, (2013), film; "Fractured Land", Gills, Damien, Rayher, Fiona, (2015), film; "Frackman", Todd, Richard, Stack, Jonathan, (2015), film.
[38] The Guardian has an ongoing thematic focus on fracking: "News and analysis from The Guardian on drilling for shale and coal seam gas using the technique known as hydraulic

This increasing trend is also reflected in academic papers. Fracking is mostly discussed on a societal level, often circling around the debate on fossil gas as a bridge-fuel.[39] There is also a field of research which provides a sociological and anthropological perspective on fracking.[40] For example, in *Dash for Gas: Climate Change, Hegemony and the Scalar Politics of fracking in the UK*, Nyberg et al develop on how contradictory positions on fracking are pushed through by the social construction of "scaling", where values are up- or downscaled in relation to one another in the public debate.[41]

Among legal scholars, however, fracking remains an under-researched subject. On the international level, legal research on fracking has mostly centred around international investment law,[42] and water rights.[43] Among more geographically-focused legal scholars, Hawkins has done a thorough examination of the regulatory situation in the UK and the EU in connection to environmental and public health damages,[44] Mumby has connected the obligation among American federal states to protect water with local efforts to restrict fracking,[45] and Rijke has carried out valuable research on the regulatory situation in Australia.[46] Short et al examine the fracking development in the US, UK and Australia through a human rights impact assessment lens.[47] Although such studies, often referred to as "soft law", are not a particular focus for this thesis, Short et al make an important contribution regarding state-corporate dependent relations and identify the lack of a broader academic attention to the subject.

Research on fracking in general is geographically centred to the US, UK, and Australia. This may have various explanations, but the most obvious

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fracturing or 'fracking'", https://www.theguardian.com/environment/fracking accessed 27 March 2020.

[39] Howarth, Robert W., "Methane Emissions and climatic warming risk from hydraulic fracturing and shale gas development: implications for policy", *Energy and Emission Control Technologies*, (2015), Vol. 3, No. 45, pp. 45–54.

[40] Malin, Stephanie, "There's no real choice but to sign: neoliberalization and normalization of hydraulic fracturing on Pennsylvania farmland", *J Environ Stud Sci*, (2014), Vol. 4, pp. 17–27; Mercer, Alexandra, et al., "Silences in the Boom: coal seam gas, neoliberalizing discourse, and the future of regional Australia", *Journal of Political Ecology*, Vol.21, (2014), pp. 279-302; Nyberg, et al., (2018), pp. 235-251.

[41] Nyberg, et al., (2018), p. 236.

[42] See Reins, Leonie, et al., "Fracking, Sovereignty over national resources and IIL", *European Yearbook of International Economic Law*, Springer, 2018; Rimmer, Matthew, "The Emipire Strikes Back: Fossil Fuel Companies, Investor-State dispute settlements, international trade, and accountable climate governance", in B. Edmondson and S. Levy (eds.), *Transformative Climates and Accountable Governance,* Palgrave, 2019, pp. 75-117.

[43] See Buono, Regina M, et al., *Regulating Water Security in Unconventional Oil and Gas*, Springer International Publishing, 2020.

[44] Hawkins (2015).

[45] Mumby, William C, "Local Government: How States' Legal Obligations to protect Water Resources can Support Local Efforts to Restrict Fracking", *Ecology Law Quarterly Vol*. 44, p. 195.

[46] De Rijke, Kim, "Hydraulically Fractured, Unconventional Gas and Anthropology", *Anthropology Today*, John Wiley & Sons, Vol. 20, No. 2, 2013.

[47] Short et al. (2015).

contributing fact is that the US and Australia are leading countries on fracking, and a particularly large public debate on fracking has been played out in UK over the past decade. Another potential factor to the screening results is that language for gathered material has been limited to English, with the exception of a few hand-picked Argentine sources in Castellano.

The observation made in relation to previous research, therefore, is that whilst the relationship between fracking and climate change has been established in existing literature, research on international state responsibility is still underdeveloped and limited. Moreover, there is a tendency of selective attention to fracking activities in Western spaces why a partly shift of the geographical focus will hopefully be beneficial. This is relevant not just in terms of broadening of the field and legal thought on state responsibility, but also in order to engage in a larger strive for "climate justice" that does not exclude the Third World by falling into colonial patterns.[48] In connection to the latter, the choice of theoretical framework will enable such contributions.

1.6 Theoretical Framework

1.6.1 Third World Approaches to International Law

In the 1990's, international scholars began gathering under the name Third World Approaches to International Law (TWAIL). The creation of TWAIL was a joint attempt to investigate the international law discipline as a "legal intelligentsia with its own cultural politics and will to power."[49] However, TWAIL has its roots in a much bigger movement which traces back to the anti-colonial struggle and Third World nationalism in the second half of the twentieth century.[50] But then, what it is meant by the term "Third World"? Most commonly, it is a term of non-European countries (of Africa, Asia and Latin America) that are often considered or referred to as "underdeveloped" compared to Western countries.[51] Thus, the term Third World has an economic and geographical scope, but also a political dimension. Third World countries generally share a history and contemporary reality of being marginalized within the international community, which in turn leads to a lack of influence and agency in international decision-making.[52]

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[48] "Climate justice" will in this thesis refer to, with the words of Anna Grear "a future-facing, adaptive politics of action" which addresses both social and legal aspects of climate change, securing a just and sustainable future, empowering those most affected by climate change and enforcing accountability, see Grear (2014), p. 104.

[49] Kennedy, David, "When Renewal Repeats: Thinking Against the Box", 32 *N.Y.U. J. INT'L L. & POL.* 335, p. 489 (2000), cited in Natarajan, Usha, "TWAIL and the environment: the state of nature, nature of the state, and the Arab Spring", *Oregon Review Of International Law*, Vol.14, (2012), pp. 178-179.

[50] Marks, Susan, *International Law on the Left: Re-Examining Marxist Legacies*, Cambridge University Press, 2008, p. 25.

[51] Mickelson, Karin, "Rhetoric and Rage: Third World Voices in International Legal Discourse", *Wisconsin International Law Journal*, (1997), Vol. 16, No. 2, p. 356.

[52] Mickelson (1997), p. 356.

Today, the TWAIL movement as described by Okafor is a "broad dialectic (or large umbrella) of opposition to the generally unequal, unfair, and unjust character of an international legal regime that all too often (but not always) helps to subject the Third World to domination, subordination, and serious disadvantage."[53] Under this large umbrella many different voices are located, some more oppositional than reconstructive; some are dedicated to a specific issue; some are openly tied to a certain political ideology; while others with or without perceived leanings would not necessarily self-identify on such scales.[54] In conclusion, just as other theoretical schools, TWAIL holds not one but many theories.[55]

Yet, the relevance of TWAIL today is questioned. For instance, critique has been raised against the term "Third World" for being outdated, that TWAIL is blunt to the variation of power among Third World states (which certainly has changed over the last decades), that the word is not as strictly divided into categories today because of globalisation, or that a focus on power relations *among* states devalue non-state actors or similar processes of subordination *within* states.[56] These are all fair objections, but not necessarily incompatible with TWAIL. Indeed, the term is a narrow labelling of what in reality is a very diverse group of states, and it would be incorrect to claim that there are not communities within states who suffer Third World-like treatment. Okafor pinpoint that the relevance of TWAIL lays in an expressed shared experience of global subordination, not a denial of complexities on other areas.[57] As for the term "Third World", Mickelson states that it "may appear out-of-date, but its very contingency, involving an

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[52] Mickelson (1997), p. 356.

[53] Okafor, Obiora Chinedu, "Newness, Imperialism, and International Legal Reform in Our Time: A TWAIL Perspective", *Osgoode Hall Law Journal*, 43, 2005, p. 176.

[54] For TWAILers with focus on I) colonialism, see Anghie, Anthony, *Imperialism, Sovereignty and the Making of International Law*, (2004); II) environmental law, see Mickelson, Karin, "South, North, International Environmental Law, and International Environmental Lawyers", *Yearbook of International Environmental Law*, 11 (2000) and; Natarajan, Usha and Khoday, Khoday, "Locating nature, making and unmaking international law", *Leiden Journal of International Law* (2014), Vol. 27, III) feminism, see Frisso, Maria Giovanna, "Third World Approaches to International Law: Feminists' Engagement with International Law and Decolonial Theory", in *Research Handbook on Feminist Engagement in International Law*, Edward Elgar Publishing, (2019) pp. 479-498, and IV) socialism, see Chimni, Bhupinder S., "International Institutions Today: An Imperial Global State in the Making", 15 *European Journal of International Law* (2004), V) on specifically human rights: M. Mutua, "Savages, Victims and Saviors: the Metaphor of Human Rights", 42 *Harvard International Law Journal* (2001) and Baxi, Upendra, *The Future of Human Rights*, Oxford University Press, (2002).

[55] Okafor, Obiora Chinedu, "Critical Third World Approaches to International Law (TWAIL): Theory, Methodology or both?" *International Community Law Review 10* (2008), p. 375.

[56] For a reference to these debates, see Okafor, "Newness, Imperialism, and International Legal Reform in our Time: a TWAIL perspective", *Osgoode Hall Law Journal*, Vol. 43, No. 1 & 2, p. 174; Mickelson, Karin, "Rhetoric and Rage: Third World Voices in International Legal Discourse", *Wisconsin International Law Journal*, 1997, Vol. 16, No. 2, at pp. 353-362.

[57] Okafor, Obiora Chinedu, "Newness, Imperialism and International Legal Reform in our Time", p. 174.

insistence on history and continuity, may in fact be one of its strengths."[58] Further, Mickelson describes the Third World not as a definitive and unison bloc, but as a heterogeneous "chorus of voices" that strive for a fundamental rethinking of international relations.[59]
The necessity of nuance in understanding the Third World *state* is much discussed by Chimni.[60] While highlighting the violent history of Western interventionist practices against not-wanted Third World regimes and movements, he holds that the Third World is not to be mistaken for its top layer of society, especially in an era of Globalisation where national interests often figure as a cover for transnational capital interests.[61] In this context, Chimni practices a critical understanding of the state, yet recognizing its importance for Third World movements:

> "…there is an obvious dialectic between struggles inside third world countries and in external fora. There can be little progress on one front without some progress in the other. At the same time, a global coalition of the poor countries remains a viable model of collective resistance. For the aspirations of the people, despite the emergence of the non-governmental organizations, is still most effectively represented by the State in international fora. But the third world State has to be compelled through peoples struggles to engage in collective action."[62]

While recognizing the different branches and multitude of voices that is TWAIL, this thesis, given its attention to fracking, will lean more towards theoretical frameworks devoted to the power dynamics between corporate power and states. Important to note is that contributors to TWAIL without roots in the Third World do not necessarily claim to speak with a Third World voice, but as Mickelson describes it, TWAIL can be used as a commitment to the anti-colonial and post-colonial struggle.[63]
In order to analyse my findings in a distinct way, I have delimited my choice to a set of theoretical frameworks on the environment and climate change. Although various work by different scholars will be used for the purpose of analysing socioeconomic relations on an international level, the theoretical concept of Legal Subjectivity will be applied to enable a discussion "at the seams" of international law and if so, how such constructions determine the future for fracking.

1.6.2 Legal Subjectivity

Although not necessarily self-identifying as TWAILer, I locate the work of Anna Grear, professor of law, at the least as a contributor to causes shared by many TWAILers. Independently and together with other scholars, she

[58] Mickelson (1997), p. 360.
[59] Ibid.
[60] Chimni, Bhupinder S.,"Third World Approaches to International Law: A Manifesto", *International Community Law* Review 8 (2006), pp. 6-7.
[61] Chimni (2006), pp. 6-7.
[62] Ibid, p. 7.
[63] Mickelson (1997), p. 362.

engages with the critical discourse of how international law obstructs movements for climate, social and economic justice. Her contemporary work also represents what can be considered constructive approaches in relation to international law, with contributions on solutions and strategies for international law as a discipline as well as in an interdisciplinary manner. More specifically, the theoretical concept which will be used is Grear's work on legal subjectivity and climate injustice. The main points and basis of this theoretical concept is explained in the remainder of this chapter.

In the article *Towards 'Climate Justice?' A Critical reflection on legal subjectivity and climate injustice: warning signals, patterned hierarchies, directions for future law and policy,* Grear engages, as in much of her work, with the "climate justice" discourse and practice. A centre to Grear's arguments, is the application of Legal Subjectivity on international law in order to better understand power dynamics within liberal law. The concept is far from new, and is shared among several –isms who have figured within social movements in the past and present. For instance feminist, indigenous, post-colonial and anti-capitalist critique share the basic understanding that most legal systems uphold the domination by certain groups over other.[64] Further, Grear urges for a meaning of "climate justice" that is critically informed and reflexive, wherefore the understanding of climate *in*justice is crucial.[65] By pointing to the historical and contemporary development of neoliberal globalization, Grear makes the connection between corporate juridical privilege and climate change as a crisis of human hierarchy.[66] However, Grear does not only argue that legal subjectivity explains the dominance of corporations, but also climate injustice more broadly.[67] Basically, this specific theoretical discourse problematizes who is given subjectivity and who is not, who is referred to through the term "us", or "them"/"the others"/"that"? What assumptions are made in relation to certain groups? Grear develops on how these subject-object relations are evident in the liberal way of thought of the human rational mind as superior to everything else, especially above people who are considered un-rational/uncivilized and definitely over the environment which is highly objectified. Accordingly, Grear states that it is through the subjectivity of the corporation which liberal ideology is completed because there is no distraction of a human body, but only pure and personified capital.[68]

To this discussion Grear presents three "signals" that substantiate climate injustice, namely the legal subjectivity of liberal law, the ideological implications that this has for policy making, and the dominance of the

[64] Grear, Anna, "Towards 'Climate Justice?' A Critical reflection on legal subjectivity and climate injustice: warning signals, patterned hierarchies, directions for future law and policy", *Journal of Human Rights and the Environment*, Vol. 5, Special Issue, 2014, pp. 111-112.
[65] Ibid.
[66] Grear (2014), p. 126.
[67] Ibid, p. 110.
[68] Ibid, p. 118.

corporation.[69] As Grear describes it, international law has simplistic boundaries which makes it unfit to deal with the many complexities of climate change. This goes both for the legal regime as a discipline and legal thought, which tend to reproduce "conceptual structures" and binaries, such as territorial jurisdiction and linear causation.[70]
A basis for Grear's analysis is the interlink between climate change and capitalism, a reason for which she is critical of market-based solutions to the former.[71] While such solutions do not grasp "ideological limits on the horizons of possibility", it leaves the only issues to be felt within the system strictly economical. This explains much of Grear's scepticism to the "greening" of the market, which she argues only commodifies nature more.

1.7 Methodology

With the aim to investigate the international legal responsibility of states in relation to climate damage caused by fracking, a doctrinal legal method will be used to cover *de lege lata* in Chapter 3,[72] and critical legal theory with ties to TWAIL in order to explore *de lege ferenda* in Chapter 4.[73]

Method is hereby understood as the Oxford definition: "a special form of procedure or characteristic set of procedures employed (more or less systematically) in an intellectual discipline or field of study as a model of investigation and inquiry, or of teaching and exposition."[74] Chapter 2 will be based on a literature review of existing scientific reports and research. In Chapter 3, I will use the doctrinal method,[75] but apply a TWAIL approach along with an analysis in relation to Legal Subjectivity in Chapter 4. To assemble relevant facts, I have used established academic research gates and databases to screen the material through certain terms relating to fracking and state responsibility.[76] The background material is mainly of an interdisciplinary nature since a clear identification of the scientific, social and environmental impacts of fracking is crucial for the legal examination that follows in chapter 3 and 4.

Doctrinal research or "black letter law" is "research which provides a systematic exposition of the rules governing a particular legal category, analysis the relationship between rules, explains areas of difficulty and,

[69] Grear (2014), p. 104.
[70] Ibid, pp. 104-105.
[71] Ibid, p. 109.
[72] *De lege lata* is through a doctrinal understanding "the existing law", see Fellmeth, A and Horwitz, M, *Guide to Latin in International Law*, Oxford University Press (2011), [electronic resource].
[73] *De lege ferenda* is understood as "of the law [that is] to be proposed." Fellmeth, A and Horwitz, M, *Guide to Latin in International Law*, Oxford University Press 2011.
[74] *method*, n., 3(a), Oxford English Dictionary [www.oed.com/] visited 11 March 2020.
[75] Hutchinson, Terry and Duncan, Nigel, "Defining and Describing What We Do: Doctrinal Legal Research" (2012), *Deakin Law Review*, Vol. 17, p. 85.
[76] A list of screening words: fracking, hydraulic fracturing, unconventional gas, unconventional oil, natural gas, shale gas, extreme energy extraction, extreme energy etc.

perhaps, predicts future developments."[77] It aims at locating the established law, by comprising an in-depth analysis of the international legal doctrine with its recognized sources.[78] The recognized sources of international law are identified in Article 38 of the Statute of the International Court of Justice (ICJ), namely the treaties between states, customary international law, general principles of law recognized by states and judicial decisions and writings of "the most highly qualified publicists."[79] However, the list is arguably incomplete. As Judge Greenwood writes, the work of U.N. organs has a prominent role in the shaping of international law.[80] Although resolutions by the U.N. General Assembly are not legally binding, some of them are part of the treaty making process.[81] Further, how states act and position themselves within different U.N. organs may contribute to the emergence of customary international law.

The doctrinal method is seldom explained as thoroughly in legal research compared to other fields and methods. A frequent understanding is that doctrinal research is an analytic tool, rather than a data collection process.[82] In contrast, Hutchinson and Duncan pinpoint the varying degrees of complexity within doctrinal legal research, from practical problem-solving, plain descriptive work or more innovative theory building.[83] This specific research identifies more with the former, using a practical problem-solving nish of doctrinal methodology in Chapter 3. This, indeed, has its drawbacks. For instance, the step of locating the legal sources is sometimes perceived as attempts to determine an "objective reality". As Hutchinson and Duncan point out, the existence of such a reality can be strongly contested and perceived only as a product of a liberal theoretical framework.[84] A positivist approach to the law facilitates the doctrinal method, but even so, in the words of McCudden, most legal academic work shows "that an applicable legal norm on anything but the most banal question is likely to be complex, nuanced and contested."[85]

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[77] D. Pearce, E. Campbell and D. Harding ('Pearce Committee'), "Australian Law Schools: A Discipline Assessment for the Commonwealth Tertiary Education Commission", *Australian Government Publishing Service* (1987), cited in Hutchinson and Duncan, (2012), p. 101.

[78] Gawas V., "Doctrinal Legal Research Method: a Guiding Principle in Reforming the Law and Legal System towards the Research Development", *International Journal of Law*, Volume 3; Issue 5; September 2017, p. 128.

[79] Statute of the International Court of Justice, Article 38(1).

[80] Greenwood, Christopher, "Sources of International Law: an Introduction", on legal.un.org, 2008, https://legal.un.org/avl/pdf/ls/greenwood_outline.pdf accessed 31 March 2020.

[81] Greenwood (2008), p. 4.

[82] Chynoweth, Paul, "Legal Research", in Andrew Knight and Les Ruddock (eds). *Advanced Research Methods in the Built Environment*, Wiley-Blackwell, (2008), p. 37.

[83] Hutchinson and Duncan (2012), p. 106.

[84] Ibid, p. 110.

[85] McCrudden, Christopher, "Legal Research and the Social Sciences", *Law Quarterly Review* 632, 2006, p. 648, referred to in Hutchinson and Duncan (2012), p. 110.

Another critique which has been increasingly raised over the last two decades is against single doctrinal approaches to human rights, and for a broadening of methods in order to fully grasp injustices.[86]
This is where the choice of TWAIL in Chapter 4 might stand out to the reader, since the critical theory more or less rejects the notion of a universal, dogmatic legal system. The choice is based on the dependency between a classical and contemporary approach to state responsibility, since if the former did not exist, the latter would not be necessary. Doctrinal research is useful in order to discuss the legal framework as it is commonly understood, and in particular I will build on the call for further studies on fracking in *all* fields made by Rijke in 2013.[87] However, it is my intention, as Gonzalez-Salzberg and Hodson suggest, to contribute to a much needed "broadening" of the field by interpreting the implications of the law through a TWAIL perspective.[88]

I have chosen Argentina as a specific example in my thesis because the country, as of today, is one of four countries where unconventional fossil gas is extracted on a commercial level. Argentina is also, along with China, a country where fracking is expanding at full speed (at least up until the COVID-19 pandemic). In my view, Argentina is also a particularly interesting example because it is a Third World country which experiences a prolonged economic crisis with an assessed "unsustainable debt" to the International Monetary Fund (IMF).[89] Lastly, my personal ties to Latin America, including Argentina, also had an impact on the choice. I spent two months of my writing process in Buenos Aires and was able to get several insights in the history of the country, its law-making process relating to, and public resistance against, fracking.

[86] Gonzalez-Salzberg, Damian and Hodson, Loveday, "Human right Research beyond the doctrinal approach", *Research Methods for International Human Rights Law*, Routledge, (2020), p. 3.
[87] De Rijke, Kim, "Hydraulically fractured, unconventional gas and anthropology", *Anthropology Today*, Vol. 29, No. 2, 2013, p. 17.
[88] Gonzalez-Salzberg and Hodson (2020), p. 4.
[89] "IMF staff emphasized the importance of continuing a collaborative process of engagement with private creditors to maximize their participation in the debt operation" IMF, "IMF staff statement on Argentina", 19 February 2020, https://www.imf.org/en/News/Articles/2020/02/19/pr2057-argentina-imf-staff-statement-on-argentina, visited 17 March 2020.

2. Fracking: a Background

This chapter provides some necessary background knowledge on the fracking process, what it entails and what its implications are in terms of the scientifically known consequences it has on its surroundings. The chapter also details who are the main actors (state and non-state actors) involved in fracking. Lastly, a background is provided for of Argentina's financial situation, and the current setting for fracking activities in the country.

Nevertheless, state action with regards to fracking is either too slow in reaction, or completely oppositional to this alarming message.[90] Additionally, despite the clear environmental and public health risks associated with fracking, the due diligence by fracking investors is basically non-existent.[91] The capacity to frack commercially is relatively concentrated in the world. Only six out of 42 countries possess two thirds of the accessible global unconventional fossil gas reserves: United States, China, Argentina, Algeria, Canada and Mexico.[92]

2.1 The Extraction Process

There are various terms surrounding this particular field of fossil fuel extraction. To name the most frequently used: hydraulic fracturing, fraccing, fracking, slick-water fracking, unconventional-, shale-, or tight gas and oil extraction. As pointed out by various researchers, the varying terminology can be confusing and give rise to miscommunication or a fragmented public debate.[93] To break down the different terms, *fracking* derives from "fraccing", which in turn refers to hydraulic fracturing.[94] Hydraulic fracturing is a very particular step of the *unconventional* oil- and gas extraction process where chemical infused fluids are injected at extraordinary depth under the ground in order to crack open the rock which contains the gas. Along with high-precision horizontal drilling, hydraulic fracturing makes up the very advanced technologies needed in order to commercially extract fossil gas (meaning in larger quantities).[95]
Thus, an easy way to tell the difference between conventional and unconventional energy sources is their accessibility. Fossil gas, trapped inside the shale formations of the rock is simply less accessible than conventional oil and fossil gas. Even though geologists already knew about unconventional sources of fossil gas a long time ago, it was considered too complicated and not economically defensible to extract such sources until

[90] Oil Change International (2019), p. 3.
[91] Rainforest Action Network (2019), p. 5.
[92] U.S. Energy Information Administration (EIA), "Technically Recoverable Shale Oil and Shale Gas Resources: An Assesment of 137 Shale Formations in 41 Countries Outside the United States", 2013.
[93] Short et al (2015), pp. 701-702; Hawkins (2015), p. 9.
[94] Short et al (2015), p. 702.
[95] Howarth (2015), p. 45. For a more thorough description of the technical steps of fracking, see UNEP (2012), at p. 2.

the 1970s.[96] The energy crisis which then emerged led to the joint investment by private and public actors into advancing the extraction techniques in the US. The method has since then been exported globally.[97] In the 2000s, fracking became a turning point for the rising costs of coal and oil production, and to some extent even a reversing factor in that it reduced fossil fuel prices.[98] However, the industry has around the world been subject to public opposition.[99] In the European Union, for instance, fracking is said to have "no social license to operate".[100]

2.2 Climate Impacts

In 2012, the United Nations Environmental Program (UNEP) released a global alert where it warned for the negative environmental impacts posed by fracking.[101] UNEP called upon authorities to carefully assess whether to impose a fracking ban, and pointed towards several environmental risks, stating that "[t]he potential climate benefits of coal- to-gas substitution are both less clear and more limited than initially claimed."[102]
The promotion of fossil gas, including fracked gas, has for long been presented as a bridge fuel which will reduce society's carbon footprint until fossils are replaced by renewable energy sources.[103] Treating unconventional fossil gas as a bridge fuel is proven misleading by Robert W. Howarth, as such narrative is based on only one fact of the industry, but not as a whole: "[f]or a given unit of energy consumed, the emissions of carbon dioxide from natural gas are substantially lower than from oil or coal, which is the basis for the bridge fuel concept."[104] All the same is fossil gas, Howarth shows, mainly made up by methane which is a three times more potent greenhouse gas than carbon dioxide.[105] Although methane has a shorter atmospheric lifetime than CO_2, a decade rather than centuries, when methane oxidises it turns to CO_2, which ultimately makes even the long term emissions of methane greater than the same amount released of CO_2.[106] This basically means that methane causes a short term warming which is three times as large as CO_2.

[96] Whitton, John et al., "Shale gas governance in the United Kingdom and the United States: Opportunities for public participation and the implications for social justice" Energy Research & Social Science, Vol. 26, 2017, p. 12.
[97] Ibid, p. 12.
[98] Pirani (2018), p. 28.
[99] Supporters/Co-Signatories, "An open letter to António Guterres, Secretary General of the United Nations: Request to the United Nations to call for a global ban on fracking", 18 September 2019.
[100] Reins, Leonie et al, "Fracking, Sovereignty over national resources and IIL", *European Yearbook of International Economic Law*, Springer, (2018), p. 177. Although, the fossil gas industry is highly active in Europe, for example through the construction of pipelines, Oil Change International (2019) p. 9.
[101] UNEP (2012).
[102] Ibid, p. 1.
[103] Howarth, (2015), p. 46.
[104] Ibid, p. 46.
[105] Ibid, p. 46.
[106] Andersson and Broderich (2017), p. 20; IPCC (2018), p. 64.

Because of the methane leakages, fracking has been accused for contributing more to anthropogenic climate change than coal or oil, energy sources which it is promoted as the "greener" replacement for.[107] Accordingly, what in 2012 was uncertainties in relation to increased methane levels in the atmosphere, more recent studies have connected the global rise in methane emissions with the oil- and gas industry.[108] A recent UNEP report from 2021 reveals that methane emissions caused by human activity can be reduced by up to 45 % this decade, which would spare close to 0.3°C in global temperature rise by 2045.[109] Nevertheless, if the methane leakage were to be contained (although the possibility of this is contested), it does not mean that fossil gas production and consumption can continue to grow. Studies suggest that, even in the hypothetical case of zero-methane leakage of the industry, in light of current climate catastrophe, there is no time to commit to fossil fuels in any form.[110] If the targets set in the Paris Agreement are to be met, global emission reduction has to begin immediately, reaching net zero of greenhouse gas emissions in three to four decades.[111]

Not only does fossil gas slow down the energy transition, the promotion of it might even increase the overall global consumption of fossil fuels. Anderson and Broderich points out the paradox of promoting shale gas as a bridge fuel in our energy hungry world, where fracked fossil gas will never be burnt as a substitution to coal – but only in addition to it.[112] For instance, fracking was said to replace coal in the US and thus reduce national emissions, but instead it lowered the price of coal which drove up coal exports and consumption.[113] Thus, fracking poses a threat to the climate in two ways: because of methane leakages along the extraction line and because of the system within which it operates. Leading climate scientists

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[107] De Rijke (2013), p. 13.

[108] Satellite pictures suggest that 30-60% of the global methane emissions that took place between 2005-2010 steamed from the US, the leading country on fracking. See UNFCCC. "NASA confirms methane spiek is tied to oil and gas", published 19 January 2018, https://unfccc.int/news/nasa-confirms-methane-spike-is-tied-to-oil-and-gas accessed 20 March 2020; Oil Change International (2019), p.4; Anderson & Broderich (2017), p. 21.

[109] UNEP, "Global Methane Assessment – Benefits and costs of mitigating methane emissions", 2021, p. 8. Accessible at https://www.unep.org/resources/report/global-methane-assessment-benefits-and-costs-mitigating-methane-emissions.

[110] Oil Change International (2019), p. 4.

[111] Paris Agreement if global emission reduction begin immediately, reaching net zero in 2055. IPCC (2018), p. 82.

[112] Statement by Kevin Anderson in Yale Environment 360, "Forum: Just how Safe is 'Fracking' of Natural Gas?" published 20 June 2011, https://e360.yale.edu/features/forum_just_how_safe__is_fracking_of_natural_gas visited 17 April 2020.

[113] Carrington, Damian, "Fracking Boom Will Not Tackle Global Warming, Analysis Warns", The Guardian, 15 October 2014. http://www.theguardian.com/environment/2014/oct/15/gas-boom-from-unrestrained-fracking-linked-to-emissions-rise; Grose, Thomas K, "As U.S. Cleans Its Energy Mix, It Ships Coal Problems Abroad", National Geographic: News, 15 March 2013, http://news.nationalgeographic.com/news/energy/2013/03/130315-us-coal-exports/.

stress that in order to phase out coal emissions, unconventional fossil fuels must not be extracted.[114]

In the beginning of the COVID-19 pandemic, there was massive withdrawal of investments on the global market where around USD 90 billion were pulled out of emerging markets, which is the largest ever recorded outflow.[115] As a consequence, companies were granted state funded bailouts, including the fossil fuel sector. At the same time, companies could claim compensation for damage caused by the emergency measures taken as a response to COVID-19.[116] Global emissions fell drastically and was on a daily rate at the most down to 2006 year's levels.[117] At the peak of the national restrictions, the decrease was 26 % on average and it was estimated that the annual emissions by the end of the year will be impacted by around -7 %. However, these decreases were by many seen as likely to be temporary as they did not coincide with structural changes in the economic, transport and energy sectors.[118] In 2021, demand for fossil fuels is once again expected to increase substantially which would erase the slight drop in global emission levels the previous year.[119] As a spokesperson for a US based fracking company put it when asked if the pandemic was the end of the industry:

"The oil and gas isn't going anywhere. We know where it is."[120]

2.3 Actors

The actors involved in the fracking industry are numerous since they include investors, international and national policy makers and the whole chain of production. However, the actors of direct interest for this thesis are:
(a) host states (where the fracking takes place),
(b) home states (in which a transnational corporation has its registered seat),
(c) transnational and/or national corporations (who carry out the fracking, either state-owned, private or public)

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[114] Hansen, James, *The Storms of my Grandchildren: the Truth About the Coming Climate Catastrophe and Our Last Chance to Save Humanity*, Bloomsbury, London, 2009, p. 289.
[115] Inter-Energy Task Force on Financing for Development, 2020 Financing for Sustainable Development Report, United Nations 2020, p. 149.
[116] Davitti, Daria, et al, "COVID-19 and the Precarity of International Investment Law", The IEL Collective, 6 May 2020, https://medium.com/iel-collective/covid-19-and-the-precarity-of-international-investment-law-c9fc254b3878 visited 12 May 2020.
[117] Le Quéré, Corinne, et al, "Temporary reduction in daily global CO_2 emissions during the COVID-19 forced confinement", Nature Climate Change, published 19 May 2020, p. 3.
[118] Ibid, p. 6.
[119] International Energy Agency, "Global Energy Review 2021, Flagship Report – April 2021", Overview, https://www.iea.org/reports/global-energy-review-2021?mode=overview, visited 14 May 2021.
[120] Quote by Spencer Cutter, credit analyst at Bloomberg Intelligence, in "The Oil Industry Doesn't Want to be Bailed out by Trump", CNN, published 11 March 2020, https://edition.cnn.com/2020/03/11/business/oil-bailout-trump-shale/index.html.

These actors are of interest because of their predominant responsibility for global greenhouse gas emissions. Only a few corporations (59 % of them being state-owned, 32 % owned by public-investors and 9 % privately owned) accounted for a clear majority of global emissions between 1988-2015.[121] In context of fracking, a similar mix of companies can be found.[122]

The expansion of fracking is interlinked to the downward global trend on conventional fossil fuels, of which discoveries of completely new and easily accessed reserves are considered unlikely.[123] There is consequently a prediction that these fields will eventually run out.[124] While this is the case, the global economy is still heavily dependent on fossil fuels and is increasingly turns to the unconventional sector. Large investment banks have increased available finance for fracking since the Paris agreement, particularly directed to the Permian Basin in USA, the "epicentre" of gas and oil extraction increase.[125] Estimates from 2013 identify the top ten countries with estimated technically recoverable reserves of unconventional fossil gas to be China, Argentina, Algeria, United States, Indonesia, Canada, Mexico, South Africa, Australia, Russia and Brazil. To date, unconventional fossil gas is commercially extracted in four countries; the United States, Canada, China and Argentina.[126]

Then, who is carrying out the fracking? The United Nations Environmental Programme (UNEP) confirmed that the actors behind fracking are the same as those involved in the broader fossil fuel industry.[127] In 2012, UNEP also stated that "[t]he debate on UG [unconventional gas] exploitation cannot be disassociated from a 'comeback' of fossil fuels."[128] Thus, state owned oil companies either figure de facto as producers, or as so called "gatekeepers" for exploitation by private oil companies.[129] While the US market is exclusively made up by private companies, Latin American oil and gas companies tend to be partly or totally owned by the state.[130]

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[121] The Carbon Majors Database, "CDP Carbon Majors Report 2017", (2019), p. 8. Retrieved from https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/002/327/original/Carbon-Majors-Report-2017.pdf?1501833772

[122] See section 2.2.2 on Argentina and the fracking businesses in Vaca Muerta.

[123] Whitton, John. et al, "Shale gas governance in the United Kingdom and the United States: Opportunities for public participation and the implications for social justice" *Energy Research & Social Science*, (2017), Vol. 26, p. 12.

[124] Short, Damian, et al, "Extreme energy, 'fracking' and human rights: a new field for human rights impact assessment?", *The International Journal of Human Rights*, Vol. 19, No. 6, (2015), p. 698.

[125] Rainforest Action Network (2019), p. 52.

[126] Reins, Leonie et al, "Fracking, Sovereignty over national resources and IIL", *European Yearbook of International Economic Law*, Springer, 2018, p. 177.

[127] UNEP (2012), p. 11.

[128] Ibid.

[129] Tordo, Silvana, Tracy, Brandon S., Arfaa, Noora, *National Oil Companies and Value Creation*, World Bank Working Paper No. 218, 2011, p. xi.

[130] This is the case for Argentina (YPF), Brazil (Petrobras), Colombia (Ecopetrol), Mexico (Pemex), Venezuela (PDVSA) and Ecuador (Petroecuador), list cited from A.F.S. Peña, "Hydraulic Fracturing in Latin America: Prospects and Possibilities?" in Buono et al. (eds.) *Regulating Water Security in Unconventional Oil and Gas*, Springer, (2020), pp. 333-334.

However, state ownership does not necessary imply a small influence by private oil companies. The case could rather be the opposite, when acknowledging that some private transnational companies involved in fracking like Exxon Mobil and ConocoPhilips have larger economies than many states.[131] De Rijke has warned about the close relationship between these large corporations and government authorities in Australia, holding that this has significantly influenced fracking policies.[132] Similar ties have been exposed in the US which, it has been argued, has a "corporate-backed denial machine" on climate change and had until recently a government which was committed to federal inaction on climate change.[133] In January 2021 the US re-joined the Paris Agreement.[134]

2.3.1 Argentina: a State Brought to its Knees

Argentina has a turbulent modern history. The country was one of many to run up billions of dollar worth of debts as oil prices skyrocketed during the 70's Energy Crisis, in order to secure oil supplies on which they were dependent.[135] The decade was also characterized by the takeover of the last military dictatorship. Under its rule between 1976 and 1983 the Argentine debt to the International Monetary Fund ran up from USD 7,9 billion to 45 billion.[136]

In the 1990's the economic crisis was gradually deepened at the same time as the neoliberal economic model under the "Washington Consensus"[137] was implemented in the country.[138] Socio-economic consequences such as unemployment and poverty were simmering, although, as Levey et al describe, "a superficial glance at the country would perhaps have suggested otherwise."[139] It would, however, take up until the brink of economic

[131] Business Insider, 25 July 2018, 25 giant companies that are bigger than entire countries, https://www.businessinsider.com/25-giant-companies-that-earn-more-than-entire-countries-2018-7#spotifys-revenues-in-2017-exceeded-mauritanias-gdp-1

[132] De Rijke (2013), p. 17.

[133] Selby, J., "The Trump presidency, climate change and the prospect of disorderly energy transition", *Review of International Studies* (2019), Vol. 45, No. 3, pp. 483, 472.

[134] The White House, "Paris Climate Agreement", 20 January 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/20/paris-climate-agreement/, visited 14 May 2021.

[135] Pironi, Simon, *Burning Up: A Global History in Fossil Fuel Consumption*, Pluto Press, 2018, p. 93.

[136] Klein, Naomi, *The Shock Doctrine: the Rise of Disaster Capitalism*, Metropolitan Books Henry Holt & Company, 2007, p. 156. Klein describes how much of it went to funding of the military, but it was later found that 10 billion out of these loans were subject to embezzlement and put into foreign accounts.

[137] "Washington Consensus" is the phrase, first coined by John Williams in 1989, for a set of free-market economic policies supported by international financial institutions (mainly the World Bank and IMF), US economic institutions and think-tanks. See Christopher Wylde (2012) pp. 33-34; Klein (2007), pp. 208-209.

[138] Levey, Cara, Ozarow, Daniel, Wylde, Christopher, *Argentina since the 2001 crisis: Recovering the past, Reclaiming the future*, Palgrave MacMillan (2014), p. 2.

[139] Ibid, pp. 2-3. The authors describe how "[e]ven as late as the beginning of 2000, despite a recession, there was a general consensus among economists, investment banks, and international organizations such as the International Monetary Fund (IMF) that the Argentine economy was in a healthy state."

collapse in late 2001 before large scale social protests erupted under the parole: ¡*Que se vayan todos!* (They all must go!).[140] By the end of the year, the country was faced with default of the largest debt in international history,[141] witnessed five different presidencies in one month and experienced several economic rescue-efforts amongst which the currency exchange regime was completely abandoned.[142] This exchange regime had been the base for foreign investments the past 10 years, and as a consequence of the economic emergency measures adopted in the 2001-2002 crisis, multi-million dollar arbitral claims would later be brought against Argentina by foreign investors.[143] The most severe effects of the crisis lasted until 2003, but by then, as Levey et al describes, the country had been "brought to its knees economically, financially, politically and socially".[144] Hitting another financial crisis in 2018, IMF agreed to lend Argentina the massive amount of USD 57 billion in the largest bailout program in the history of the institution.[145]

These realities continue to constrain Argentine society and politics up until today, where the possibility of implementing new policies and reforms is in constant dependency of the conditioned loans.[146] In the tracks of the COVID-19 pandemic in the spring of 2020, halt in international finance and national security measures gutted Argentina's already vulnerable economy.[147] The government-imposed preventive lockdown of the country with its population of 45 million struck hard on small businesses and employment, as well as haltered pay plans of USD 66 billion to, mostly foreign, investors that have been lingering since 2001. Once again, the country is risking default on international loans.[148]

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[140] Levey et al (2014), pp. 2-6.
[141] "Default" refers to "external sovereign default". It is an economic term for a certain debt crisis with debt-servicing difficulties, typically the failure of an obligor to meet a principal or interest payment on the due date, see Andrea Pescatori and Amadou N.R . Sy, "Are Debt Crises Adequately Defined?", IMF Staff Papers, Vol. 54, No. 2, pp. 309-311.
[142] Wylde (2012), p. 86.
[143] Di Rosa Paolo, "The Recent Wave of Arbitrations against Argentina under Bilateral Investment Treaties: Background and Principal Legal Issues" *The University of Miami Inter-American Law Review*, Vol. 36, No. 1, 2004, p. 42.
[144] Levey et al (2014) p. 7; Wylde (2012), p. 87.
[145] NACLA, "Argentina's Failing Fracking Experiment", 29 April 2020, https://nacla.org/news/2020/04/29/vaca-muerta-argentina-fracking Visited 22 May 2020.
[146] The authors refer to David Graeber's description on how IMF-conditioned loans can limit democratic processes in countries experiencing sovereign debt, in John Linarelli, Margot E Salomon and Muthucumaraswamy Sornarajah, *The Misery of International Law: Confrontations with Injustice in the Global Economy*, Oxford University Press, (2018), p. 180.
[147] The New York Times, "Argentina Teeters on Default, Again, as Pandemic Guts Economy", Published 8 May 2020, https://www.nytimes.com/2020/05/08/world/americas/argentina-coronavirus-default.html, Visited 12 May 2020.
[148] Ibid.

2.3.1.1 Fracking on the Rise

In the time of three precedencies, including the current sitting presidency of Alberto Fernandez, fracking has been presented as Argentina's key source of economic growth, providing energy security, work opportunities, income from exports and a hard currency for the instable economy.[149] In order to better grasp this political position, a brief history of Argentina's energy production will here be accounted for.

The Argentine energy company Yacimientos Petrolíferos Fiscales S.A. (YPF) was created in 1929 as a state owned company, and it basically came to monopolize the national oil and gas market until its privatization in 1990, under the presidency of Carlos Menem.[150] Due to his implementation of the Washington Consensus, "free-market" reforms opened up to private actors (mostly foreign) who took over the energy sector.[151]
In 1998, YPF was bought over to 99% by Spanish company Repsol, but was partly re-nationalized in 2012 under the presidency of Christina Fernández de Kirchner.[152] The state then regained 51 % of the ownership while the rest was left to local provinces with fossil deposits.[153] As a reason to the re-nationalization, president Kirchner stated in her announcement that for the first time in 17 years, Argentina had to import oil and gas.[154] The fact that Argentina did not manage its own natural resources, Kirchner said, made it stand out on the continent and perhaps the whole world. Instead, she held, with this new law Argentina would finally "recover its hydrocarbon sovereignty."[155]

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[149] For positions on fracking by Cristina Fernández de Kirchner, see Casa Rosada Presidencia, "Anunció del proyecto le ley de expropriación de YPF: Discurso de la Presidenta de la Nación", 16 April 2012, https://www.casarosada.gob.ar/informacion/archivo/25810-anuncio-del-proyecto-de-ley-de-expropiacion-de-ypf-discurso-de-la-presidenta-de-la-nacion ; by Mauricio Macri, see 'Este es el camino para tener energía y poder crecer,'" 1 February 2017, https://www.casarosada.gob.ar/slider-principal/38520-mauricio-macri-este-es- el-camino-para-tener-energia-y-poder-crecer; Current president Alberto Fernández see 'Vaca Muerta: Alberto Fernández prometió una ley para generar inversiones de fracking', in Análisis, published 1 November 2019, https://www.analisisdigital.com.ar/nacionales/2019/11/01/vaca-muerta-alberto-fernandez-prometio-una-ley-para-generar-inversiones-de accessed 3 April 2020.
[150] Amigos de la Tierra Europa [Friends of the Earth Europe], *Fracturando Límites, Argentina: el Desembarco del Fracking en Latinamerica*, May 2014, p. 6; Smith W.C, "State, Market and Neoliberalism in Post-transition Argentina: the Menem Experiment", *Journal of Interamerican Studies and World Affairs*, (1991) Vol. 33, No. 4, p. 61.
[151] Amigos de la Tierra Europa (2014), p. 8; W.C. Smith.
[152] Casa Rosada Presidencia, "Anunció del proyecto le ley de expropriación de YPF: Discurso de la Presidenta de la Nación", 16 April 2012, https://www.casarosada.gob.ar/informacion/archivo/25810-anuncio-del-proyecto-de-ley-de-expropiacion-de-ypf-discurso-de-la-presidenta-de-la-nacion
[153] Delgado, Elvin, "Fracking Vaca Muerta: Socioeconomic Implications of Shale Gas Extraction in Northern Patagonia, Argentina", *Journal of Latin American Geography*, Vol. 17, No. 3, October 2018, pp. 102-131.
[154] Casa Rosada Presidencia (2012).
[155] Ibid.

Since the semi-nationalization of YPF numerous transnational companies have continued to be involved in the extraction of gas and oil in the country. In 2013, a major contract was signed between YPF and Chevron (US) to frack for unconventional gas and oil in the Vaca Muerta basin.[156] Vaca Muerta is a 30 000 km^2, geological formation with one of the largest unconventional oil and gas reserves in the world,[157] and it accounts for 97 % of Argentine fracking.[158] In 2014, two Argentine private companies; Pan American Energy (in which British BP is a majority owner) and Pluspetrol y Tecpetrol, arrived to Vaca Muerta alongside additional transnational companies such as Total (Fr), Exxon Mobil (US), Shell (Ne) and the Americas Petrogas y Madalena Energy (Ca).[159] In 2018, in an attempt to stimulate the economic growth and energy security, the government of Mauricio Macri adopted resolution 46E/2017 with the intention to further boost the fracking industry and attract companies with little or no investments in fracking. With the resolution, subsidies were granted to cover the difference in costs between conventional and unconventional gas production. Consequently, an amount of roughly USD 3,6 billion was subsidized by the state to fracking businesses between the years of 2016 and 2018.[160] The biggest receivers of the subsidies were YPF and Pan American Energy whose total investments in Vaca Muerta were paid for by 65 % versus 86 % by the state.[161] Today, more than thirty national and transnational companies are now present in the region.[162]

YPF claims that the size of the unconventional reserves are significant that they could cover the whole country's energy deficit in the future,[163] but still, the project has met fierce, mostly local opposition.[164] A representative for the Mapuche indigenous community in Vaca Muerta claim that their territory has been "stolen and contaminated for the benefit of foreigners".[165]

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[156] La Nación, "YPF firmó el acuerdo final con Chevron para explotar Vaca Muerta". 16 July 2013. Retrieved from https://www.lanacion.com.ar/1601568-ypf-firmo-el-acuerdo-final-con- chevron-para-explotar-vaca-muerta

[157] Bellorio Clavot, Dino and Cavalli, Luis, *Vaca Muerta: Petróleo, Gas y Ambiente*. Editorial Lajouane, 2019, p. 19.

[158] Ibid, comparison of numbers of per produced million cubic metre of unconventional fuels in Vaca Muerta in 2019 (19,89) compared to national levels of total unconventional production in 2019 (20,44).

[159] Bellorio Clavot and Cavalli (2019), p. 21.

[160] Fundación Ambiente y Recursos Naturales (FARN), "Los subsidios a los combustibles fósiles en Argentina 2018-2019", June 2019, p. 29. Available at https://farn.org.ar/el-futuro-energetico-argentino-depende-de-una-matriz-baja-en-emisiones-diversificada-que-favorezca-el-acceso-a-la-energia-y-el-cuidado-del-ambiente/.

[161] FARN (2019). Further companies to receive subsidies include Total, Wintershall and ExxonMobil.

[162] Gobierno Argentina [Website of the Argentine Government], "Vaca Muerta in Números" https://www.argentina.gob.ar/energia/vaca-muerta Visited 12 May 2020.

[163] YPF (2014), The Energy Challenge, retrieved from http://www.ypf.com/Vacamuertachallenge/Paginas/index.html, 19 May 2020.

[164] For instance, the YPF/Chevron agreement in 2013 lead to the drilling of 1562 wells without consulting with the local community. Amigos de la Tierra Europa (2014), p. 5.

[165] The Guardian, "Coronavirus pandemic threatens controversial fracking project in Argentina", published 29 April 2020.

3. Applicable Law

3.1 Bases of State Responsibility

International law is to a large extent based on the sovereign state as a centre for organization. Accordingly, today's international legal issues come to circulate closely around concepts such as territoriality, nationality and jurisdiction.[166] The state as centred is also reflected in the international law of responsibility, as enshrined in the Draft Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA). Adopted in 2001, the articles comprise a codification of customary international law and are along with the commentaries of the ILC considered the main sources of state responsibility.[167] Although there are times when treaty law and the law of international responsibility overlap, they are distinct in that manner that treaty law tells us what an obligation is and how it is to be interpreted, while rules of state responsibility tell us what the legal consequence of a broken obligation is.[168] However, certain treaties may establish its own consequences for a breach wherefore ARSIWA, as declared by the ILC in its commentary to the draft articles, only reflects secondary rules of international law.[169] Further, ARSIWA recognizes the situation when a treaty obligation conditions the relationship between treaty law and state responsibility by excluding or "trumping" the latter general norms, so called lex specialis.[170]

Article 1, ARSIWA states:

> Every internationally wrongful act of a State entails the international responsibility of that State.

Thus, in order for international responsibility to be invoked, an internationally wrongful act must occur.[171] As follows from Article 2 ARSIWA, a conduct is considered an internationally wrongful act if two elements are met; the first being *attribution* to the state under international law,[172] and the second, a *breach* of an international obligation.[173] A breach exists when an act of the state is not in conformity with what is required by an international obligation which at time is binding for the state.[174] This is

[166] Crawford and Koskenniemi (2012), p. 4.
[167] Crawford (2013), p. 43.
[168] The rules laid down in the Vienna Convention on the Law of Treaties (VCLT) and the law of state responsibility as reflected in ARSIWA coexist, see *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, judgement, ICJ Reports 1997, pp. 7, 38–39, paras 46–8; *Rainbow Warrior* arbitration *(France/New Zealand)*, 1990, 82 I.L.R. 500, para 75; Crawford, (2010), pp. 21-22.
[169] ILC General Commentary to the Draft articles on responsibility of states for internationally wrongful acts, with commentaries (ARSIWA), United Nations, 2001, para 1.
[170] ARSIWA, Article 55 and Commentary to Article 55, para 1, 2, 3, p. 140.
[171] Ibid, Article 1.
[172] Ibid, Article 2(a).
[173] Ibid, Article 2(b).
[174] Ibid, Article 12, read together with Article 13.

the case no matter the origin of the international obligation,[175] and regardless if the act is considered lawful under domestic law.[176] In the case *Tehran Hostages*, the International Court of Justice held that the elements in Article 2 are to be assessed in the order in which they figure.[177] Accordingly, before assessing the lawfulness of fracking, the test of attribution needs to be applied. Based on that outcome through a classical approach, different secondary rules apply if the damage caused by fracking is attributable to the state or a third party.

The commentary to ARSIWA notes that although the state is a "real organized entity", it must act through human beings or groups.[178] Further, a state conduct can either be an act or an omission (the failure to act),[179] carried out by a state organ or an agent of the state.[180] The general principle under international law is that actions carried out by private entities are not attributable to the state.[181] This is because the scope of international responsibility is limited to conduct which engages the state as an organization, simultaneously recognizing the autonomy of non-state actors operating on their own behalf.[182] Conducts committed by private entities might still be attributable under certain circumstances, either when empowered by the state to carry out governmental authority,[183] or, if a real link can be established between the private entity and the state in two situations.[184] Firstly, cases where the private entity acts on the instruction of the state in carrying out the wrongful conduct. Secondly, if there is a more general situation where private entities act under the direction or control of the state.[185] Consequently, in terms of private or public fracking companies, attribution to the state is not actualized. State-owned or semi-state-owned businesses however, as the case with YPF in Argentina, might come across as blurred actors. Does the 51% ownership of the Argentine state make count as YPF acting under the control of the state? As for ARSIWA in general, there is no such direct attribution by the sole existence of state-ownership, whether it is partly or complete.[186] This is not considered a

[175] *Rainbow Warrior,* New Zealand v. France*,* UNRIAA, vol. XX (Sales No. E/F.93.V.3), p. 215 (1990).
[176] ARSIWA, Article 3.
[177] United States Diplomatic and Consular Staff in Tehran, Judgment, ICJ Reports 1980, p 3, 29. Para 56.
[178] An agent of the state, is a group or a person acting on behalf of the state. Although the term "agent" is not figuring in the draft articles, it derives from international case law. *German Settlers in Poland, Advisory Opinion, 1923, P.C.I.J., Series B, No. 6*, p. 22; Commentary to Article 2, ARSIWA, para 5, p. 35.
[179] Ibid, para 6.
[180] Ibid, para 3.
[181] Commentary to Article 8, ARSIWA, para 1, p. 47.
[182] Commentary to Chapter II, Attribution of Conduct to the State, para 2, p. 38.
[183] ARSIWA, Article 7.
[184] Commentary to Article 8, ARSIWA, para 1.
[185] Ibid. The state either needs to have general effective control over the person/group, and also give a precise order to commit the acts in question, see *Military and Paramilitary Activities in and against Nicaragua* (Nicaragua v United States of America), Merits, ICJ Reports 1986, p 14. Or, there is an overall control over the person/group ICTY, *Prosecutor v Tadić*, Case No IT-94-1-A, Judgment, Appeals Chamber, 15 July 1999, 124 ILR 61.
[186] Crawford, James, State Responsibility: the General Part, p. 161.

controversial question through a classical reading of international law, but rather an accepted principle that a state and a company in which it has shares are separated by a "corporate veil".[187] In the *Barcelona Traction* case the International Court of Justice held that disregarding the legal entity of a corporation, thus "lifting the corporate veil", as only justified under certain limited circumstances such as fraud.[188] Accordingly, the mere state-ownership does not change the personality of the company as long as its activities are limited to commercial transactions, so called *jure gestionis*.[189] However, as an example, if Argentine YPF was to engage in activities with elements of governmental authority, *jure imperii,* its conduct would be attributable to the Argentine state in accordance with Article 5 ARSIWA. Albeit, there is nothing that suggests that YPF's activities are other than strictly commercial, wherefore the corporate veil remains.

Consequently, from this approach, there is no direct attribution between the state and, in our case, acts carried out by fracking companies weather they are private, public or state-owned. Importantly, the assessment of attribution needs to be distinguished from characterization of internationally wrongful conducts.[190] A lack of direct attribution between a fracking company and a state does not mean that fracking and its consequences is beyond the responsibility of the state. A breach may well be determined in international treaty law or customary international law, making certain activities unlawful which gives rise to state responsibility through a primary rule.
Additionally, as the ILC underscores, "the state may be responsible for the effects of the conduct of private parties, if it failed to take necessary measures to prevent those effects."[191]
Such primary obligations will be explored in the following sub-chapters.

3.2 International Environmental Law

International law on climate change is very much anchored in International environmental law (IEL), as well as in general international law such as the law of state sovereignty and state responsibility.[192] IEL is compared to other legal branches much based on principles, such as the principle of sustainable development, polluter pays principle, the precautionary principle, principle of common but differentiated responsibility, and equity. As Negré puts it, the challenge of distinguishing principles and obligations makes the issue of responsibility under international environmental law difficult to grasp.[193] Further, the principles are disputed to their content. Eloise Scotford explores

[187] Stern, Birgitte, "The Elements of an Internationally Wrongful Act", in Crawford (et al), The Law of International Responsibility, Oxford University Press, 2010, p. 208.
[188] Barcelona Traction, Light & Power Company, Limited (Belgium v. Spain), Second Phase, ICJ Rep. 1970 p. 39.
[189] Stern (2010), p. 208.
[190] Commentary to ARSIWA, Chapter II, p. 39.
[191] Ibid.
[192] Bodansky, Daniel et al, *International Climate Change Law*, Oxford University Press, 2017, p. 35.
[193] Negré (2010), p. 805.

how the principles have some of a diffuse status in international environmental law, since there is no precise catalogue or unison definition of them.[194]

An important principle now inherent in state sovereignty, is the right of the state to freely decide over its natural resources as articulated by the UN General Assembly in 1962.[195] The principle known as Permanent Sovereignty over Natural Resources (PSNR) was fought for and made possible by new states during their decolonization in the early 50s. Closely linked to self-determination, PSNR was seen by Third World states as an important shield against former colonizers and foreign exploitation.[196] The former colonial powers, on the other hand, were critical to this development and argued that resources located in mandate territories belonged to humanity as a whole.[197] Nevertheless, just as rules on state responsibility in general, international environmental law contains limitations to the sovereign right of the state to freely decide over its natural resources, in our case; unconventional fossil gas. Thus, this chapter will present to what extent international law on climate change, here called the climate regime, may give rise to state responsibility for climate damaging fracking activities either on the territory of the state (the responsibility of the host state), as well as for states in which transnational fracking corporations have their seats (the responsibility of the home state). Firstly, the climate regime as based in treaty law will be presented. Secondly, the No-Harm Rule will be presented, and lastly the role of a certain ground-breaking national case will be mentioned.

3.2.1 The Climate Regime

Within treaty law, the United Nations Framework Convention on Climate Change (UNFCCC) is of central character. Adopted in 1992 and entered into force in 1994, the convention obliges state parties to prevent

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[194] Scotford, Eloise, *Environmental Principles and the Evolution of Environmental Law*. Hart Publishing Limited, 2017, pp. 5-6.

[195] General Assembly Resolution 1803 (XVII) of 14 December 1962, ”Permanent Sovereignty over Natural Resources”.

[196] Anghie, Antony, ”Sovereignty and the post-colonial state”, *Imperialism, Sovereignty and the Making of International Law*, Cambridge university Press, 2015, p. 211. The principle is also linked to self-determination and reflected in international human rights law, which will be presented in the following chapter.

[197] Anghie (2015), p. 212. The positioning of the former colonial states and the idea of universal ownership over natural resources can be traced to the later emergence of transnational law, which foremost through arbitration has come to set binding standards upon states in relation to private investors. Although transnational law was not initially regarded as part of international law because of its regulatory focus on non-state actors, it has come to be interpreted as containing general principles of international law. Thus, this particular branch of international law has in several ways impacted the range of PSNR (as well as Third World states’ ability to implement environmental policies) but will not be further explored here due to the focus on international environmental law and human rights law. For reference to this legal field and historical development, see Angie (2015), from page 223.

"dangerous climate change" and to reduce unstable greenhouse gas emissions.[198] There is no general definition on "dangerous climate change" in the climate regime, however, the UNFCCC define "adverse effects of climate change" as "which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystems or on the operation of socio-economic systems or on human health and welfare."[199] UNFCCC also importantly binds member states to act in the interest of human safety even in the face of scientific uncertainty.[200]
Through the Kyoto Protocol, adopted 1997 and entered into force in 2005, the UNFCCC was given more of an practical force by, for instance, setting legal targets of emission reductions for industrialized countries. Building further on the UNFCCC, the Paris Agreement adopted in 2015 was the first document to collectively bind all contracting parties to the same main objective; keeping global temperature rise well below 2°C compared to pre-industrial levels, while pursuing efforts to limit temperature increase to 1.5°C.[201] In order to reach the long-term temperature goal, the parties agreed on the aim "to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country parties(…)."[202]

Compared to the Kyoto Protocol, which is characterized by a "top down approach", the Paris Agreement represents more of a "bottom up approach", preserving the autonomy of the state to set the bar for its own national contribution.[203] The agreement has been described as unique in its way to encapsulate voluntary commitments in a binding treaty.[204] According to Article 4(2) of the Paris Agreement, state parties commit to regularly present "nationally determined contributions" (NDC's) of what measures to take in order to pursue domestic climate mitigation. Although, the NDC's are not legally binding by their content, they must be undertaken I) with the view to achieve the main purpose of the agreement, II) so to represent a progression over time, and III) while recognizing the need to support developing countries for the effective implementation of the agreement. The latter encapsulates the so-called principle of Common But Differentiated Responsibility (CBDR).[205]
Although setting ambitious objectives, the effectiveness of the tools provided in the Paris Agreement to tackle climate change has been widely

[198] UNFCCC, Article 2 read together with Article 4.2.
[199] Ibid, Article 1.1.
[200] Ibid, Article 3.3, noting that "[w]here there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures (…)".
[201] Paris Agreement, Article 2.1(a). Note that the temperature target was a result of political compromises and not a reflection of scientifically proven danger. Many small island states that are rapidly affected by rising sea levels asked for the aim to be *well below 1,5°C*. For reference to the negotiations leading up to the agreement, see Sumudu Atapattu, "Weaknesses of the Paris Agreement", Georgetown Journal of International Affairs, Climate Change, Human Rights and COP 21, 2016, pp. 49-50.
[202] Paris Agreement, Article 4(1).
[203] Atapattu (2016), p. 48.
[204] Ibid.
[205] Paris Agreement, Article 3.

questioned.[206] Paradoxically enough, analysis show that the combined efforts laid down in all NDC's are not enough to keep in line with the Paris Agreement.[207] In fact, if all NDC's were fulfilled, it would lead to an estimated global warming of 3,3°C compared to pre-industrial temperatures. Alexander Zahar describes how this failure is a result of the individual targets not needing to represent a *fair effort* in a global context, but are floating free in relation to the treaty target of 2°C.[208] This has arguably left the Paris Agreement with an unclear situation of liability if all states are bound collectively, but also fail collectively.[209] Stipulated in Article 1 ARSIWA, a general principle is that states are individually and independently responsible for their own conduct. Thus, each state is responsible for its own breach of an obligation, even when acting collectively.[210] Such responsibility may later be invoked by an injured state separately.[211] The issue with regard to fracking is here twofold: can a causation be shown between emissions caused by fracking and a suffered injury, and can a distinction be made between states as perpetrators and states as victims when climate change is a global phenomenon?[212]

3.2.1.1 Fracking and Nationally Determined Contributions

Argentina submitted its first Nationally Determined Contribution (NDC) under the Paris Agreement in 2016.[213] The country unconditionally committed to emit no more than 483 million tons of CO_2 equivalent by 2030. To ensure coherence with their climate commitments, measures have for example involved the construction of renewable energy power plants and smaller renewable energy systems across the country.[214] Nevertheless, the implementation of these measures are behind schedule, mostly due to the

[206] For example, journalist George Monbiot's instant words after the adoption of the Paris Agreement was: "[b]y comparison to what it could have been, it's a miracle. By comparison to what it should have been, it's a disaster." COP21 Reactions, published 14 December 2015, visited 15 May 2020, https://blog.ramboll.com/cop21-reactions/ ; For a more thorough reference on the different critiques, see Julia Dehm (2016), from p. 130.
[207] Climate Action Tracker, (2018). *Some progress since Paris, but not enough, as governments amble towards 3°C of warming*. Retrieved from https://climateactiontracker.org/documents/507/C AT_2018-12-11_Briefing_WarmingProjectionsGlobalUpdate_Dec 2018.pdf
[208] Zahar, Alexander, "Collective Obligation and Individual Ambition in the Paris Agreement", *Transnational Environmental Law*, (2020), Vol. 9, Issue 1, pp. 167–168.
[209] Zahar (2020), p. 175.
[210] ARSIWA, Article 47(1).
[211] Commentary to ARSIWA, Article 47, para 7.
[212] Crawford, "Responsibility in cases of Joint or collective conduct", State Responsibility – The general part, Cambridge University Press 2013, p. 335.
[213] República Argentina, Primera Revisión de su Contribución Determinada a Nivel Nacional, [originally presented in 2015, revised version of 2016], extracted from NDC Registry: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Argentina%20First/1711201 6%20NDC%20Revisada%202016.pdf
[214] United Nations Environmental Programme (UNEP), *Emissions Gap Report 2019*, p. 13.

lack of financial resources and inadequate infrastructure for electricity transportation.[215] The current plans to expand the fracking industry in order to make fossil gas the main source of the national energy supply as well as to enable export, is by UNEP and several environmental organisations considered a fossil lock-in for Argentina inconsistent with the Paris Agreement.[216] In order to stay in line with its climate commitments, UNEP is recommending Argentina to relocate current subsidies of the fracking sector to the renewable sector.[217]

However, while the inconsistency of current fracking plans with regard to the Paris Agreement is one factor, the question of its unlawfulness is another. Article 18 of the Vienna Convention on the Law of Treaties, 1967 (VCLT), stipulates that treaty parties are not to defeat the object and purpose of a treaty, and Article 26 establishes the principle of *pacta sunt servanda*, agreements are to be kept, as well as the principle of good faith implementation. As previously underscored, the NDC's of the Paris Agreement are not legally binding per se, but should be implemented with a view to achieve the purpose of the Paris Agreement (mainly the agreed limits in temperature rise), and the need for the NDC to represent a progression over time.[218]
In this context it indeed seems to be against the object and purpose in Article 2.1(a) of the Paris Agreement to fully exploit Vaca Muerta as planned, since it holds the second biggest reserve of unconventional fossil fuels in the world and if fully exploited would release catastrophic amounts of methane into the atmosphere.[219] As could it be a potential breach of the good faith principle.[220] Nonetheless, another "binding" part of the agreement is the recognition of CBDR. It is here possible to highlight the limited financial options for Argentina to fulfil its NDC in the midst of an economic crisis, and point to the agreed role of developed countries to take the lead into a fossil free world.[221]

Under state responsibility, a state or a small group of states *who are particularly affected* by the wrongful conduct can invoke the international responsibility of another state, if the breached obligation is owed to a group of states including the particularly affected state, or to the international community as a whole.[222] Several complexities are detected in approaching fracking under a classical reading of state responsibility. Firstly, while environmental state responsibility is highly centred around territory, fracking puts a threat to the climate system, a category of environmental

[215] United Nations Environmental Programme (UNEP), *Emissions Gap Report 2019*, p. 13.
[216] UNEP (2019); Climate Action Tracker (2019); Green Peace, "Debunked: the promise of Argentina's Vaca Muerta Shale Play", (2018) p. 4.
[217] UNEP (2019), p. 36.
[218] Paris Agreement, Article 3.
[219] A violation of treaty law based on Article 18 VCLT.
[220] Article 26 VCLT.
[221] Paris Agreement, Article 2.2 and Article 3 en fine.
[222] Article 42(b) ARSIWA read together with Article 60(b) VCLT.

harm which is more of a temporal than a territorial dimension.[223] Thus, the focus within the UNFCCC regime is rather the prevention of a harm which is ongoing. Secondly, there is currently no general international legal rule which *bans* fossil fuel extraction, greenhouse gas emissions or fracking specifically.
Instead, based on a classical interpretation of international responsibility, the damage fracking causes is a product of a lawful activity.[224] This type of damage is not included in the scope of state responsibility.[225]
Further, fracking raises issues of which state to hold responsible when no state is shielded from anthropogenic climate change in the long run. Frankly, all states are more or less victims when the premise of life is threatened on a global scale. Lastly, the climate regime is not structured around sanctions for states who breach their obligations, but rather on the value of international cooperation. As a consequence, there is a lack of enforcement mechanisms how to legally address a breach of the obligation to prevent dangerous climate change by letting fracking go on.

3.2.2 The No-harm rule

While there is a lack of binding rules that limit fracking in treaty law, rules deriving from customary international environmental law tends to be more forceful. The no-harm rule is considered a cornerstone within customary IEL, and was first introduced in the arbitral case of *Trail Smelter*.[226] In the case, the arbitral tribunal stipulated that a state cannot allow environmentally harmful activities on its territory which affects the territory of a neighbouring state.[227] The state guilty of inflicting transboundary environmental harm was not only required to compensate the affected state, but also to take preventive action against future damage.[228]
This principle was later confirmed by the ICJ, who held that:

"…the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment."[229]

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[223] It constitutes part of damage in the making, or future damage, to separate from damage which has already occurred. See Negré (2010), pp. 808-809.
[224] General Commentary to ARSIWA, para 4(c).
[225] Article 1, ARSIWA. However, damage caused by lawful activity is covered by the ILC in the not as influential Draft Articles on Transboundary Harm from Hazardous Activities and the Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities. These legal frameworks are primary built on liability and risk assessments, thus, falling outside the scope of this thesis. ILCs *Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities*, with commentaries, U.N. Doc. A/56/10 (2001), in *Yearbook of the International Law Commission, 2001*, vol. II, Part Two and ILCs, *Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities*, U.N. Doc. A/61/10 (2006) in *Yearbook of the International Law Commission, 2006*, vol. II, Part Two.
[226] Trail Smelter (United States/Canada), 11 March 1941, 3 RIAA 1938.
[227] Ibid, p. 1965.
[228] Trail Smelter, pp. 1974-1978, 1980-1981.
[229] Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, ICJ Reports 1996, pp. 226, 241–242 (para 29); Case of *Gabcíkovo-Nagymaros Project* (1997), para 53.

Accordingly, the No-harm rule includes the obligation not to cause harm on other states, to prevent foreseeable risks of damage and to minimize risk thereof. Compared to other general frameworks on state responsibility and environmental law, the No-harm rule contains state obligations based on jurisdiction and control so to cover third parties. Such obligations are often referred to as *due diligence obligations*. How far due diligence exactly reaches remains contested, but Négre holds that they include the need to supervise third parties within its territory and jurisdiction and the prohibition from causing voluntarily *significant ecologic harm* to the environment of another state.[230] Significant ecological harm has in turn been defined by the ILC as a high probability of causing significant transboundary harm, or a low probability of causing disastrous transboundary harm.[231]

As accounted for above, the expansion and promotion of fracking at this hour of climate change puts a significant ecological threat to the entire planet. The risk connected to continued methane emissions and an expansion of fossil fuels seems to fall under the more serious degree of foreseeability; a high probability of causing significant transboundary harm. At least, it would be reasonable to consider parties to the UNFCCC well aware of the imminent and significant risks of irreversible climate change. Thus, there could be a state obligation to regulate and/or prohibit fracking with the support of the No-harm principle. Even a position of the kind which leans on future techniques to stabilize the levels of greenhouse gas emissions on the atmosphere could be covered, since hope is put to solutions not even invented yet.
What complicates the matter, just as under treaty obligations, is that the classical interpretation of international environmental responsibility is based on the occurrence of harm.[232] To invoke the principle, transboundary damage of fracking specifically would have to be shown as well as the risks associated with the particular fracking operation. For instance, if it was possible to measure the methane leakage from a particular fracking site, it would have to be established what harm that specific leakage generates on another state. Given the complexity of climate change, its multiple contributing factors and varying consequences on a global scale, that would be next to impossible. Relating to this legal difficulty of connecting damage to the climate with a specifically injured state, there has been a significant development in case law by the ICJ, set off by the case *Whaling in Antarctica*. In the case, the ICJ opened up for the possibility of holding states responsible for environmental damage without the claimant being an injured state.[233] Instead, the harm was considered a global matter.

[230] See Negré, (2010), p. 805.
[231] Article 2(a), Draft Articles on Transboundary Harm from Hazardous Activities
[232] Negré, (2010), p. 807.
[233] *Whaling in the Antarctic (Australia v. Japan: New Zealand intervening)*, Merits, Judgment of 31 March 2014, [1994] ICJ Rep. 226. Similar points were made in other cases such as *Questions Relating to the Obligation to Prosecute or Extradite (Belgium v. Senegal)*, Judgment of 20 July 2012, [2012] ICJ Rep. 422.

It is argued that the case has opened up a new legal discourse in ICJ, in which environmental concerns are increasingly addressed as obligations owed to all - *erga omnes*.[234] However, due to these recent tendencies, the extent of erga omnes obligations under international environmental law is still unclear.

3.3 International Human Rights Law

International human rights norms are based on international as well as regional human rights treaties and customary international law. The central duty bearers under the regime are states, whose international human rights law obligations require them to respect, protect and fulfil the human rights of individuals within their territory and/or jurisdiction.[235] This arrangement of state responsibility is reflected in The International Covenant on Economic, Social and Cultural Rights (ICESCR).

It is commonly understood in international human rights law that the duty of the state to protect against human rights violations is absolute on the territory of the state.[236] As Augenstein and Kinley explain, an important rationale behind this structure is that states are capable to commit to their positive obligations on their own territories, but not beyond its borders.[237] The UN Committee on Economic, Social and Cultural Rights (CESCR) is regularly interpreting the covenant articles in its general comments. Although the interpretations by the CESCR are not legally binding per se, they are considered highly authoritative.[238] In its General Comment 24, the CESCR developed on how globalization of capital has strengthened third party actors and changed the landscape for human rights law, both in relation to actors and in terms of geographic settings.[239] Thus, the CESCR held that the obligation to protect includes legislative, administrative, educational and other appropriate measures to ensure effective protection against harm linked to business activities.[240] Hence, the duty of the state to protect against human rights violations also applies to violations committed by third parties.

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[234] Meguro, Maiko, "Litigating Climate Change through international law: obligations strategy and rights strategy", *Leiden Journal of International Law*, (2020), Vol. 33, Issue 4.
[235] See for example, the International Covenant on Civil and Political Rights, 999 UNTS 171, Article 2(1); the American Convention on Human Rights, OAS Treaty Series No 36 (1969) article 1(1); and the Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights) article 1.
[236] See Article 2(1) International Covenant on Civil and Political Rights, " Each State Party to the present Covenant undertakes to respect and to ensure to all individuals within its territory and subject to its jurisdiction the rights recognized in the present Covenant"; see Preamble to the Universal Declaration of Human Rights, which underlines peoples of territories under the state's jurisdiction.
[237] Augenstein and Kinley (2015), p. 834.
[238] This derives from ICJ case law, which has held that interpretations by UN treaty bodies should be ascribed "great weight", see Ahmadou Sadio Diallo (Guinea v. Dem. Rep. Congo), Judgement, 2010 ICJ Rep. 369, para 66.
[239] GC No. 24, para 25-37.
[240] General Comment No. 24, para 14.

Further, according to Article 2(1) of the ICESCR, states are obliged to take steps individually and through international assistance and co-operation to the maximum of its available resources, with a view to achieve progressively the full realization of the rights in the covenant by all appropriate means, including particularly the adoption of legislative measures.[241] In this regard, the CESCR suggests that the covenant rights do apply extraterritorially in instances when the state *exercises control* over third parties.[242] Furthermore, no distinction is made based on the type of business activity: whether the business is transnational or purely domestic, if it is privately owned or a state-owned business.[243] The notion of "control" includes corporations that are subject to the laws of the state or which have their seating in that country, central administration or principle place of business.[244]
Further, it is by the committee considered as contrary to the covenant's obligation of international co-operation and assistance if state parties were allowed to stay passive in situations when *foreseeable harm* is caused abroad by businesses under its own jurisdiction and/or control.[245] This is argued as in line with customary international law and recent developments in rulings by the International Court of Justice. The concept of control within the extraterritorial obligation to protect is by the committee linked to international law, such as the UN Charter, and held especially to respect and redress infringement with covenant rights when roads to remedy are unavailable or deemed inefficient within the host state where the business activity takes place.[246]

It is not the case that violations of social, economic or cultural rights caused by third parties actualize direct responsibility of the state (for such interpretation would pierce the corporate veil) but only if "the violation reveals a failure by the State to take reasonable measures that could have prevented the occurrence of the event."[247] In accordance with international law of state responsibility, the committee underlines that responsibility can

[241] Article 2(1), ICESCR.
[242] See interpretations made in General Comment No. 14: The Right to the highest attainable standard of health (article 12 of the ICESCR). UN Doc. E/C.12/2000/4, August 11, 2000, para. 39: "To comply with their international obligations in relation to article 12, States parties have to respect the enjoyment of the right to health in other countries, and to prevent third parties from violating the right in other countries, if they are able to influence these third parties by way of legal or political means, in accordance with the Charter of the United Nations and applicable international law." Similar takes were made in ESCR Committee, General Comment No. 15: The right to water (articles 11 and 12 of the ICESCR), UN Doc. E/C.12/2002/11, January 20, 2003, para. 33; General Comment No. 24 on State obligations under the International Covenant on Economic, Social and Cultural Rights in the context of business activities, E/C.12/GC/24, 10 August 2017, para 10; See also CESCR, Climate Change and the International Covenant on Economic, Social and Cultural Rights, E/C.12/2018/1, 31 October 2018, para 10.
[243] CESCR, General Comment no.24, para 3, 27. The interpretation is partly based on the fact that except for Article 14, none of the obligations in the ICESCR are expressively linked to territory or jurisdiction.
[244] Ibid, para 31.
[245] Ibid, para 27.
[246] Ibid, para 30.
[247] Ibid, para 32.

be engaged even if multiple factors contributed to the violation, and it is not determined by what had been foreseen by the particular state – but what could have been *reasonably* foreseeable. Of extra interest for our focus on fracking, the committee also states that "particular due diligence" is required by states in relation to the mining and oil industry.[248]

3.3.1 Climate Change

As for to date, there is no provision under IHRL on specifically the environment. Instead, state obligations to protect the environment is commonly interpreted as elemental for the fulfilment of already established human rights. Climate change is thus known to threaten the enjoyment of a range of human rights such as the right to life, water, food, health, housing, self-determination, culture and development.[249] The relationship has gotten more attention on an international level the past decade, for instance in resolutions adopted by the Human Rights Council.[250] Through the Paris Agreement, state parties acknowledged that:

"[C]limate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity(…)."[251]

But while the threats to the enjoyment of human rights that climate change poses are acknowledged on an international level, whether it has a substantial significance within international human rights law (IHRL) is a separate matter. The issue for this section is rather to explore how international human rights law can be "brought to bear on" the climate threatening activity that is fracking.[252] More precisely, are there existing international human rights obligations that limit climate threatening activities, thus also the maintenance and expansion of fracking?

The obligation of progressive realisation as stipulated in Article 2(1) has in fact been interpreted by the CESCR to cover state action on climate change, holding that a failure to prevent *foreseeable harm* to human rights caused by climate change, or a failure to mobilize the maximum available resources in an effort to do so, could constitute a breach of Article 2(1) of the

[248] CESCR, General Comment no.24, para 32.
[249] Office of the United Nations High Commissioner for Human Rights, "Analytical Study on the Relationship between climate change and the human right of everyone to the enjoyment of the highest attainable standard of physical and mental health", A/HRC/32/23, para 4.
[250] RES/7/23 (2008), RES/10/4 (2009), RES/18/22 (2011), RES/23/L27 (2013), RES/26/27 (2014), RES/29/15 (2015), RES/23/33 (2016), RES/35/20 (2017), RES/38/4 (2018).
[251] Paris Agreement, Preamble.
[252] The expression is used in J. H. Knox, "Bringing Human Rights to Bear on Climate Change?" *Climate Law*, Vol. 9, Issue 3 (2019), Brill Nijhoff, pp. 165-179.

ICESCR.[253] Further, in 2018, the committee released a statement where it made connections to the IPCC-report on the effects of 1,5°C global warming.[254] In the statement, the CESCR emphasized that "climate change constitutes a massive threat to the enjoyment of economic, social and cultural rights."[255] The committee emphasized that human rights obligations should guide states when addressing climate change, and reaffirmed the state obligation to respect, protect and fulfil "all human rights for all".[256] Accordingly, a highly authoritative international human rights body has indicated a connection between a failure to respond to climate change and substantive rights under the ICESCR.

Specifically on Argentina and fracking, the CESCR expressed concern in a 2018 report regarding the expansion of unconventional fossil fuel extraction in Vaca Muerta.[257] These concerns were twofold. Firstly, Argentina's fracking plans were considered as contrary to its commitments under the Paris Agreement. Secondly, based on Article 1(1), the right to self-determination, and Article 2(1) of the ICESCR, the committee upheld Argentina's extraterritorial obligations considering that a realization of the fracking plans would consume a significant percentage of the entire global carbon budget for achieving the 1.5°C target laid down in the Paris Agreement. This would, accordingly, impact the enjoyment of economic and social rights by the world's population and future generations.[258] Therefore, in light of the Paris Agreement, the Committee recommended Argentina to "reconsider" the exploitation of fossil fuels in Vaca Muerta in order to ensure compliance with its obligations under the ICESCR.[259] Apart from the international impact of fracking, the Committee also expressed concerns towards Argentina's domestic situation, namely the infringement of indigenous rights linked to the increased extractivism on indigenous land, whether the company behind it is state-owned or a third party.[260] It is difficult to comprehend the lawfulness of fracking per se in the statement. Considering the articles upon which the critique is based, it seems rather to be the case that the arguments are based on the *scale* of the national expansion plan in light of the collective temperature targets in the

[253] See, for example, E/C.12/FIN/CO/6, para. 9; E/C.12/CAN/CO/6, para. 53; and E/C.12/RUS/CO/6, para. 42. The term "maximum available resources" has earlier been defined by the CESCR to include both domestic resources and resources available from the international community, see CESCR, General Comment No 3: The nature of State parties' obligations (art. 2, para. 1), 14 December 1990, E/1991/23; 1-1 IHRR 6, (1994), para 13.
[254] CESCR, Climate Change and the International Covenant on Economic, Social and Cultural Rights, E/C.12/2018/1, 31 October 2018.
[255] Ibid, para 1.
[256] Ibid, para 5.
[257] Committee on Economic, Social and Cultural Rights (CESCR), Concluding Observations on the fourth periodic report of Argentina, E/C.12/ARG/CO/4, 1 November 2018, p. 3.
[258] Ibid, p. 3, para 13.
[259] Committee on Economic, Social and Cultural Rights (CESCR), Concluding Observations on the fourth periodic report of Argentina, E/C.12/ARG/CO/4, 1 November 2018, p. 3, para 14.
[260] The CESCR made references to the rights under Article 1(1) and Article 1(2) of the covenant. Ibid, para 20-21.

Paris Agreement, rather than the mere occurrence of fracking and its climate threat, or Argentina's individual NDC under the agreement.

Even if the work by the CESCR on extraterritorial obligations is clear, it should be noted that this is not something generally accepted within international human rights law.[261] Hence, there is still a large governance gap over activities when the host state for different reasons is incapable or unwilling to effectively govern foreign investors.[262]

3.3.2 Regional Human Rights Law

Similar to Article 2(1) of the ICESCR, Article 26 of the American Convention on Human Rights contains the state obligation of progressive development for the full realization of the convention rights. Something which differs much with IHRL, is the right to environment which is included in the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights (hereinafter "Protocol of San Salvador").[263] The human rights organ connected to the convention, Inter-American Court of Human Rights, has actively developed its case law on economic, social and cultural rights in relation to Article 26.[264] In its delivery of an Advisory Opinion in 2018, the court clarified the connection between Article 26 and the right to environment. In its ground breaking advisory opinion, the court recognized the autonomous right of the components of the environment:

"The Court considers it important to stress that, as an autonomous right, the right to a healthy environment, unlike other rights, protects the components of the environment, such as forests, rivers and seas, as legal interests in themselves, even in the absence of the certainty or evidence of a risk to individuals. This means that it protects nature and the environment, not only because of the benefits they provide to humanity or the effects that their degradation may have on other human rights, such as health, life or personal integrity, but because of their importance to the other living organisms with which we share the planet."[265]

Evidently, the right to environment under the American convention has both individual and collective, universal implications which is owed both to present and future generations.[266] It has also an extraterritorial scope, where

[261] UN HRC, "Business and Human Rights: Further Steps towards the Operationalisation of the "Protect, Respect and Remedy" Framework'", A/HRC/14/27 (9 April 2010), para 15,
[262] Simons (2015), pp. 479-481.
[263] Inter-American Court of Human Rights (IACHR), Advisory Opinion OC-23/17, 15 November 2017, requested by the Republic of Colombia, The environment and human rights; Additional Protocol on to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights "Protocol of San Salvador".
[264] This was first established in Lagos del Campo v. Perú, 31 Augusti 2017, in relation to the right to work. Similar interpretations were later done in relation to the right to health, see Poblete Vilches et al v. Chile, 8 March 2018; Cuscul Piraval et al v. Guatemala, 23 August 2018.
[265] IACHR, Advisory Opinion OC-23/17, 15 November 2017, requested by the Republic of Colombia, The environment and human rights, para 62.
[266] Advisory Opinion 23/17 p. 2.

states are obliged to avoid transboundary environmental damage that can affect the human rights of people outside of their territory. The Court has also expressly recognized that the enjoyment of human rights is affected by the "adverse effect of climate change".[267]
The duty to protect is within the American convention based on jurisdiction,[268] which by the court has been interpreted as individuals who are subject to the state's authority, responsibility or control.[269] Thus, the convention applies to business activities within the jurisdiction of the home state, and in situations when it is possible to establish a causal link between the act and the human rights violations.[270] Although, when such conduct should be regarded as within the jurisdiction of the state "should be interpreted restrictively".[271]
In a recent case, the Court analysed Article 26 for the first time the due diligence in relation to economic, social and cultural rights.[272] Among measures that states are required to in relation to third parties, to (I) regulate, (II) supervise, (III) require and approve environmental impact assessments, (IV) establish contingency plans, and (V) mitigate when environmental damage has taken place.[273]

3.3.3 Netherlands v. Urgenda

The extraterritorial scope of human rights has been elaborated on in regional law. On a domestic level with regard to climate change, judicial cases based on constitutional rights and human rights have increased in frequency.[274] In 2018, an important decision was delivered in terms of climate change and human rights through the Dutch case of *Netherlands v. Urgenda*.[275] By its ruling, the Dutch Court of Appeal found that the Netherlands was in violation of the European Convention of Human Rights (European Convention) for doing too little in terms of greenhouse gas emission reduction.[276]
The court held that the obligations under Article 2, the right to life, and 8, right to private life and family life, of the European Convention are both

[267] See judgement by IACHR in *Kawas Fernández v. Honduras*. Judgment of April 3, 2009, Series C No. 196. para. 148; IACHR, Advisory Opinion 23/17, Para 47.
[268] Article 1(1) American Convention of Human Rights.
[269] Advisory Opinion OC-21/14, supra, para 61, para 219; Advisory Opinion 23/17, para 72-78.
[270] Advisory Opinion OC-23/17, para 151.
[271] The IACHR makes references to the case law developed by the European Court of Human Rights where jurisdiction outside the state's territory has been found in exceptional circumstances, Advisory Opinion OC-23/17, para 81.
[272] IACtHR, *Indigenous Communities Members of the Lhaka Honhat Association vs. Argentina*, 6 February 2020 (Caso comunidades indígenas miembros de la asociación Lhaka Honhat [Nuestra Tierra] vs. Argentina).
[273] Ibid, para 208.
[274] See *Future Generations v. Ministry of the Environment* (Colombia S.Ct. 2018); *Asghar Leghari v. Federation of Pakistan*, no. 25501/2015, 2015; *Juliana v. United States*, 339 F. Supp. 3d 1062, 1105 (D. Or. 2018).
[275] *State of the Netherlands v. Urgenda Foundation* (Urgenda), No. 200.178.245/01, The Hague Court of Appeal, 2018.
[276] Ibid.

positive and negative, where the positive obligation includes taking concrete actions in preventing future violations of the provisions, which the court called ”a duty of care”.[277] However, the positive obligations cannot be impossible to fulfil or place too disproportionate of a burden on the state.[278]

> “(…) the Court believes that it is appropriate to speak of a real threat of dangerous climate change, resulting in the serious risk that the current generation of citizens will be confronted with loss of life and/or a disruption of family life.”[279]

In its ruling, the Dutch Court of Appeal considered the Netherland’s reliance on future techniques to enable so called ”negative emissions” - techniques not yet developed to reduce already emitted GHG from the atmosphere - as uncertain and not realistic considering current state of affairs.[280] Instead, the court found that a reduction needs to be at certain levels to stay in line with the targets under the Paris Agreement. What further distinguished the Court’s ruling is that the defence’s argument of being a minor emitter on a global scale was considered unacceptable and irrelevant for not meeting an individual responsibility. Thus, through its judgement, the Dutch Court of Appeal can be seen as have found a loophole in what often is called “the tragedy of the commons”, rejecting the famous saying: “if everyone is responsible, no one is”.[281]

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[277] *Urgenda*, para 41.

[278] The state needs to take concrete actions only when they are reasonable and authorised due to a real and imminent threat, which the government knew or ought to have known, this was established through case law on Article 2 of the European Convention, see *Mastromatteo v. Italy*, no. 37703/97, para 68; *Paul and Audrey Edwards v. The United Kingdom*, no. 46477/99, para 55. These principles also apply to Article 8, see *İbrahim Keskin v. Turkey*, no. 10491/12, para 61.

[279] *Urgenda*, para 45.

[280] Ibid, para 49.

[281] Climate change tends to be regarded as a ”tragedy of the commons” brought by a market failure. See Sinden, Amy, ”Climate Change and Human Rights”, *Journal of Land, Resources & Environmental Law*, Temple University Legal Studies Research Paper No. 2008-49, 2007, p. 259.

4. A Third World Approach to state responsibility on fracking

4.1 The Right Climate to Frack - Host and Home State Dynamics

Third World societies are currently facing the worst consequences of anthropogenic climate change, and are simultaneously the least responsible for greenhouse gas emissions.[282] All the same, the driving actors behind climate change are only a handful of major fossil fuel companies.[283] The fracking industry is no exception to this unequal dynamic where a few investment banks and transnational Big Oil companies, a couple of international financial institutions and a handful of states are upholding fracking to date, leaving behind an environmental bill that future generations and already vulnerable communities, on a local as well as global level, are forced to pay. However, an essential point of departure in context of these inequalities is that the burden upon he Third World should be lifted. Instead, based on the enormous ecological debt which the West owes the Third World, a historic, moral and legal responsibility to pay is resting upon Western states.[284]

Besides the obvious factor of where unconventional fossil gas is geographically located in the world, there are signs of a dependency on a certain political and financial climate for fracking companies to operate. Hence, there are many contributing factors that may determine where it is possible to frack. The UK used to be a host state for fracking until public pressure and domestic courts made politicians pull the break, pointing towards the environmental and social risks with the industry.[285] Meanwhile, British BP is present on fracking sites in Vaca Muerta, Argentina, through its subsidiary Pan American Energy. In light of the scale of the country's fossil gas reserves, Argentina is told by UNEP and the CESCR not to go through with the exploitation but relocate subsidies into the renewable sector.[286] As fracking happens to be the main outspoken plan for the Argentinian state to recover from an economic crisis, there seems to be an

[282] IPCC holds that much of the negative impacts of climate change and mitigations required under Paris Agreement fall disproportionately on the poor and already vulnerable, wherefore a push for "equity" requires fairness in burden sharing between nations and generations. See IPCC (2018), pp. 51, 53.
[283] 100 fossil fuel companies stood for 71% of global greenhouse gas emissions between 1988-2015. They emitted in that time *more* than the combined emissions of 273 years prior to 1988. The Carbon Majors Database, *CDP Carbon Majors Report 2017*, p. 8. Retrieved from https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/002/327/original/Carbon-Majors-Report-2017.pdf?1501833772
[284] Guha and Martinez-Alier, *supra* note 61, at 44-5, referred to in Mickelson (2000), p. 75.
[285] The Guardian, "Fracking halted in England in major government U-turn". 2 November 2019. https://www.theguardian.com/environment/2019/nov/02/fracking-banned-in-uk-as-government-makes-major-u-turn
[286] UNEP (2019), p. 36; CESCR, E/C.12/ARG/CO/4, (2018), p. 3.

exposed tension in international law between the exploitation and the conservation of the Earth; the national interest of economic growth through fracking on the one hand, versus (internationally-proclaimed) environmental protection on the other.[287] This dichotomy is a mere consequence of the colonial history of international law, when the colonial powers labelled societies as uncivilized through terra nullius, "no man's land" in order to divide and conquer in the Third World.[288] Fundamental attributes of state sovereignty was rooted in ideas from the Enlightenment, which premiered the exploitation of nature by the adoption of property laws. [289] As a result, there were little options provided for former colonies on how to "become civilized" but to adapt to an environmentally hazardous model of statehood.[290] A continued dichotomy between development and environmental protection today, when played out around fracking, is therefore a mere consequence of state centrism.[291]

Furthermore, international law does not only stem from an unjust past, but still resembles Western ideas. By influencing international law, Western states are contributing to, as Pahuja calls it, the making of "West as world", where western states on one hand are portrayed as cooperative and the embodiment of "international" while Third World states on the other hand are perceived as selfishly driven and non-cooperative with their focus on development.[292] Thus, when international law tends to spotlights the state without going deeper into why environmental degradation or human rights violations occur, the legal system produces the stereotypical roles of Third World states as laggards and Western states as progressives. This, as Natarajan holds, does not benefit international co-operation but deepens divide between states, it also neglects "the progress that many Third World communities have made on sustainability issues, increasingly necessitated by being on the front lines of climate change, deforestation, desertification, drought and other environmental crises."[293] For example, the fracking in Vaca Muerta has met fierce local resistance that highlights the wrongdoings by the state, but *also* the wide and problematic presence of transnational corporations.[294] Still, when the climate regime is not focused on developing

[287] Pahuja, Sunhya, "Conserving the World's Resources?" in Crawford, James and Koskeniemmi, Martti (eds.), *Cambridge Companion to International Law*, Cambridge University Press, 2012, p. 405.
[288] Mickelson (2000), pp. 57–58.
[289] Natarajan (2012), p. 193.
[290] Ibid, pp. 194-195.
[291] Pahuja (2012), p. 399.
[292] Pahuja, Sundhya, *Decolonising International Law – Development, Economic Growth and the Politics of Universality*, Cambridge University Press, 2011, p. 137.
[293] Natarajan (2012), p. 189.
[294] An example is the agreement between YPF and Chevron 2013 of the drilling of 1562 wells without local consultancy resulted in large protests, see Amigos de la Tierra Europa [Friends of the Earth Europe], *Fracturando Límites, Argentina: el Desembarco del Fracking en Latinamerica*, May 2014, p. 5; The Guardian, "Coronavirus pandemic threatens controversial fracking project in Argentina", published 29 April 2020 https://www.theguardian.com/environment/2020/apr/29/fate-of-vaca-muerta-oil-and-gas-fields-may-point-way-forward-on-fossil-fuels-after-coronavirus Visited 14 May 2020.

common solutions or working actively for equity, it can manifest itself as utterly oppressive, imposing environmental laws upon the Third World.[295]

Over a short period of time, property rights have been further internationalized, not just by international law, but to a high degree by international institutions.[296] Consequently, Third World states are to a larger extent restrained and held back economically by international institutions, such as the IMF and the World Bank. Chimni calls this a "modern day imperialism", working much more through financial actors than states directly and is therefore hard for international law to grasp.[297] In this manner, transnational fracking companies operating in Third World states can be seen as practicing a modern-day imperialism. They represent the imbalance of a small group of foreign actors that are extremely difficult to hold accountable under international law for their environmental damage, while the host state is far too often restrained to limit foreign investment through its own legal system. Moreover, the prospects are low of any host state who has actively invited or even subsidized fracking on its own territory, to regulate the business willingly. The weakness of the climate regime's base on voluntariness, as well as the "good will" of home states' responsibility in relation to the extraterritorial protection of human rights violations caused by businesses, becomes apparent when faced with the strong corporate interests who keeps lobbying for fracking.

In light of the Paris Agreement, the CESCR recommended Argentina to "reconsider" the exploitation of fossil fuels in Vaca Muerta in order to ensure compliance with its obligations under the ICESCR.[298] If the understanding of fracking was to stay here, fracking is reduced to an individual "bad state" phenomenon and disconnected from perhaps the strongest driving force; the fossil fuel industry. As a Third World state, Argentina is left with little options in terms of monitoring financial sovereign debts, but to open up to transnational corporations and enable environmental degradation. This does not necessarily imply that Third World states ought not to be criticized for their inaction or maintenance of climate threatening activities, but without grasping the apparatus enabling and justifying fossil fuel emissions, human rights discourse will fall short.[299] When the industry encounters patrol in one part of the world without legal attention to the flexible, corporate interest to frack, home states will be

[295] Mickelson (1997), p. 388.
[296] Chimni, Bhupinder S., "Capitalism, Imperialism and International Law in the Twenty-First Century", *Oregon Review*, Vol. 14, No. 1, 2012, p. 29.
[297] Chimni (2012), p. 20.
[298] Based on Article 1(1), the right to self-determination, and Article 2(1), progressive realisation, ICESCR, the committee upheld Argentina's extraterritorial obligations considering that a realization of the fracking plans would consume a significant percentage of the entire global carbon budget for achieving the 1.5°C target laid down in the Paris Agreement. Committee on Economic, Social and Cultural Rights (CESCR), Concluding Observations on the fourth periodic report of Argentina, E/C.12/ARG/CO/4, 1 November 2018, p. 3, para 14.
[299] Susan Marks discusses how not grasping root causes behind disastrous activities might portray them as naturally occurring. Marks (2015), p. 326.

applauded for not fracking in their own backyard. Obviously, no real climate progress can be made when restricted corporations in one state can move to a state with weaker environmental laws, or put their investment in a subsidiary abroad. Nevertheless, these realities also make North-South relations more blurred, due to the interdependency which only has become stronger under globalization.[300] Chains of production are complex and intertwined across the world, and on a general level it is the resources of the South which enable the unsustainability of the North.

But since Third World states are part of the international community, has it not influenced International Law? For instance, the importance of common but differentiated responsibility and equity in climate mitigation is indeed declared in the Paris Agreement. However, as Michelson underscores, "there is a difference between paying attention and paying heed."[301] A platform on which Third World voices can speak up against climate change is one thing, another to let those voices trigger real change. Indeed, scholars argue that what once were victories pushed for by Third World states such as CBDR, has been subject to legal fragmentation from a *responsibility* to pay into the *ability* to pay.[302] This strips the historic and moral context from climate change discourse, and tends to look at states achievements in isolation of surrounding impacts or different actors with different responsibilities.[303] The tendency can be found in how Argentina is criticized for its fracking plan by UNEP and the CESCR as if it is solely a product of bad faith. Thus, Argentina risks to be perceived as a laggard state who holds back international climate co-operation.[304] Through the critique, the described situation playing out in Argentina resembles the process in which Third World states are absorbed into international environmental law instead of letting Third World interests and perspectives be included and ascribed real subjectivity within the regime.[305]

4.2 The Corporate Veil and Legal Subjectivity

According to Chimni, the interest of transnational corporations are often framed as national interest of the Third World state.[306] For instance, it has been highlighted that Argentina has good conditions for renewable energy production, but lacks investments. Yet, the state is devoted to fossil fuel extraction through YPF, and actively subsidized the establishment of national and transnational fracking corporations in Vaca Muerta.[307]

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[300] Natarajan (2014), p. 581.
[301] Mickelson, (2000), p. 60.
[302] Dehm, Julia (2016), p. 141; Michelson (2000), p. 70.
[303] Dehm, Julia (2016) with reference to Anghie Antony, *Imperialism, Sovereignty and the Making of International Law*, Cambridge University Press, 2007.
[304] Mickelson (2000), p. 69.
[305] Ibid, p. 60.
[306] Chimni speaks of how pronounced national interests can be the interest of transnational capital in disguise and is not to be mistaken for the interest of the Third World, see Chimni (2006), pp. 6-7.
[307] UNEP, *Emissions Gap Report 2019*, p. 13.

As have been detected in the previous chapter, the corporate veil maintains the autonomous status of a company regardless of its ownership structure, and stays put as long as the company's actions fall within the commercial spectrum. Thus, classically interpreted, rules of international state responsibility do not apply to situations of business activities, not even when a fracking company is entirely or partly state-owned. This separation between state and corporation, given the fact that the latter was once created by the laws of the former, can be perceived as contradictory.[308] Such legal relationship might also be, as Simons pinpoint, be an important tool for states to enable free corporate activity.[309] For the Third World, the international legal system which protects corporate interest was never negotiable. Along with tilted concepts of statehood this continues to uphold domination over the Third World states.[310]

It is possible to stop at this point by stating that corporate interest is a root cause to fracking. However, by exposing the status of the corporation within law, takes us further in order to understand *how* corporate dominance is upheld and reproduced legally.[311] To refer to Anna Grear, this is important in order to understand climate change "as a crisis of human hierarchy".[312] Legal subjectivity is how state/corporate/human/non-human/environmental relations are understood and valued, and the way they are assigned certain assumptions in legal contexts is what results in various injustices.[313] In the current international legal order, the liberal vision of a rational human legal subject is superior everything else, even the human body or the environment.[314] Thus, it is rather the rational *mind* in centre of international law, while the un-rational and uncivilized is rejected. How fracking can be environmentally, even existentially disastrous, and still be considered a lawful activity may be understood from legal subjectivity as it is the corporations, without a human body, who complete liberal ideology.[315] In the end, what is *felt* within the system and thus with any prospect of generating change on a global scale, remains locked to strictly economic matters. This highlights why corporations within the current system is not affected by nor concerned with socio-economic injustice, including, as Grear holds, climate injustice.[316]
The passivity of international law when faced with raging climate change is often described as unreasonable, but is in this sense a logical result of a system where the ultimate legal subject is not (and never was) a living human being on the front line of climate change, whether living in Tuvalu, Bangladesh or Argentina. It is not the delicate ecosystems, the bees or the

[308] Wood, Ellen Meiksins, *Empire of Capital*. Verso Books, London, 2005, at 139, referred to in Grear (2014), p. 108.
[309] See Simons (2015), p. 477.
[310] Natarajan (2012), pp. 194-195.
[311] Grear (2014), p. 110.
[312] Ibid, p. 126.
[313] Ibid, p. 114.
[314] Ibid, pp. 111-112.
[315] Ibid, p. 118.
[316] Ibid, p. 111.

coral reefs. And it is definitely not the ocean, the forests or the glaciers. If the ultimate legal subject is embodied in the corporation, its interests are unlikely to lead the way into any type of sustainable future.[317] On the contrary, fossil fuel companies continue to justify their own existence. One result of its many benefits as a legal subject, Grear describes how corporate power has come to embrace discourse strategy in order to gain social acceptance for damaging activities.[318] This is strikingly accurate in relation to the fracking industry. Fracking is partly promoted based on the idea of using fossil gas as a bridge fuel, by emphasising the natural in "natural gas", or by avoiding associations to the environmental threats increasingly tied to the term fracking by using other neutral ringing terms to emphasize technical advancement and modernity.

Besides the autonomous status of the corporation, another complicating factor with fitting fracking under state responsibility is the incompatibility between climate change and how classical legal thought tends to be square and linear.[319] Firstly, the structuring of international law into branches, for instance the separation between International Environmental Law and International Human Rights Law, is unfit for coping with complex, cross-boundary matters.[320] The structure of rights *on* the environment and rights *of* the human is implying that the environment is something dead or mechanic, while the human being is an alive subject, separated from nature.[321] Secondly, although the invocation of international responsibility is in general not dependent on the existence of damage, it is of central relevance for the assessment of responsibility within international environmental law.[322] This makes the regime inadequate to tackle climate change which is gradual, irregular, multi-caused and hits differently around the Earth. Thirdly, since the climate is something common and not territorially bound, the geological shift into Anthropocene is a joint existential problem for all life. A shift like this has so far only been reflected in regional and national levels, although international arguably is showing tendencies to increasingly address erga omnes obligations.

Finally, in light of climate change, fracking plays out the conflict of interests between those who risk losing something from climate action, and those who inevitably will gain from it.[323] These dynamics can be traced on a global level between states, as well as within them. Argentina is a playfield of conflicting interests with its internal battles of who is in the position to regulate fracking related issues. While YPF is defending the sovereign right of the state to control its natural resources, small environmental

[317] Grear (2014), p. 118.
[318] Ibid, p. 121.
[319] Ibid, p. 105.
[320] Ibid, p. 105.
[321] Weber, Andreas, "Enlivenment: Towards a Fundamental Shift in the Concepts of Culture and Politics", Heinrich Boll Foundation, Berlin, 2012, at 14, referred to by Grear, p. 112.
[322] Such conditions are only necessary if it follows from the content of a primary obligation. Commentary to Article 2 ARSIWA, para 9.
[323] Sinden (2007), p. 268.

organisations and indigenous groups are protesting fracking and call for local participation in decision making, much like the claims of Third World states to be heard on the international arena. As Natarajan holds, TWAIL does not only aim at subordinate states, but societies and peoples which are experiencing similar marginalisation and emphasizes the importance of working together. Thus, international co-operation between states and peoples in similar positions is essential to resist fracking anywhere and in order to counter climate change.[324]

4.3 A Contemporary Law on State Responsibility

The issue of climate change is unprecedented of its kind in terms of burning time frames. In accordance with Chimni's claim that TWAIL is necessary "to articulate balanced and imaginative solutions,"[325] the urgency of combating what is being called as maybe the largest threat to climate progress,[326] calls for a need to be imaginative with already existing international norms. Still, one of many focuses within TWAIL is to influence the international legal system in different ways.[327]
In order to bridge the governance gap within international environmental law, there has on an international level been a recognition of the relevance of the precautionary principle.[328] Being a principle and not a rule, it does not have a uniform definition, and it is particularly within general international environmental law contested to its content, while being more widely accepted in, for example, European Environmental law.[329] The principle has also recently come to surface as a strategy to legally oppose greenhouse gas emissions.[330] Being more forceful compared to other principles, it obliges states to take preventive measures towards certain activities when the risks are uncertain. This is crucial with regard to fracking where emissions are

[324] Natarajan (2012), p. 180.
[325] Chimni (2012), pp. 43-44.
[326] Rainforest Action Network (2019), p. 52; Oil Change International, "Burning the Gas 'Bridge Fuel' Myth: Why Gas is not Clean, Cheap, or Necessary", (2019), p. 3.
[327] Okafor (2008), p. 376.
[328] First established in Principle 15 of the Rio Declaration, the principle reads " In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation", General Assembly, Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, A/CONF.151/26 (Vol. I); The principle is raised in the case Seabed Disputes Chamber of the International Tribunal for the Law of the Sea Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area: Advisory Opinion (1 February 2011) at [135].
[329] Kegge, Rogier, "The Precautionary Principle and the Burden and Standard of Proof in European and Dutch Law", *Review of European Administrative Law*, Vol 13, No. 2, Paris Legal Publishers (2020), p. 114.
[330] In 2015 a group of experts adopted the Oslo Principles on Global Climate Change Obligations, which is an attempt to hold states legally responsible for extraterritorial effects of greenhouse gas emissions based on the precautionary principle. The standard of wrongfulness is based on "any credible and realistic worst-case scenario" with reference to 2 °C warming compared to pre-industrial temperatures. The Oslo Principles are available at globaljustice.yale.ed/ite/efaul/ile/ile/sloPrinciples.pdf.

hard (if even possible) to undone. Further, it includes the duty to protect the rights of future generations, thus widening the range of legal subjects in the present. However, what is the most central gain of the precautionary principle is how it provides a strong support for a switched burden of proof. As has been showed throughout this research, establishing a link between harm and a particular state action is up to the claimant, making it next to impossible to make use of secondary rules on environmental responsibility. As Judge Weeramantry affirms in a dissenting opinion of the ICJ: "the law cannot function in protection of the environment unless a legal principle is evolved to meet this evidentiary difficulty(…)"[331] Instead, through the precautionary principle, when claims are framed against possible environmental *damage of an irreversible nature*, it is up to the state to prove the opposite in order for the activity to continue. Dissenting opinions to the Pulp Mills Case and to the Advisory Opinion on Nuclear Weapons have pushed the weight of the principle to the forth.[332] Much because, the necessary information may be in the hands of the party causing or threatening the damage.[333] There are tendencies in the Urgenda case as well, where principle of precaution was underscored in relation to a dependency on future techniques for failing to meet emission reduction today. Even if it is a domestic case, it can be ascribed international relevance as well.[334]

Under international human rights law, the extraterritorial scope of human rights remains tied to control or jurisdiction. A contemporary approach to state responsibility and fracking is found in attempts to overbridge these detected governance gap in international law with already existing norms. The so called doctrine of positive obligations and corporate due diligence are examples that suggest that in fact, transnational business activities are covered by human rights obligations resting upon states.[335] More frequently, the base to these arguments is the UN "Protect, Respect and Remedy" framework, operationalized through the United Nations General Principles of Business and Human Rights (UNGP).[336] The principles make up the presently dominant international instrument of its kind, representing "the global standard of practice that is now expected of all States and businesses with regard to business and human rights." [337] The commentary notes that

[331] Dissenting opinion of Judge Weeramantry, Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case, ICJ Reports 1995, pp. 342-344.
[332] Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v France) Case, ICJ Reports 1995.
[333] Philippe Sands, *Principles of International Environmental Law*, Cambridge University Press, 2003, pp. 208-210.
[334] ICJ Statute, article 38.
[335] Krajewski, The State Duty to Protect against Human Rights Violations, 2018, p. 37.
[336] OHCHR, Guiding principles of Business and Human Rights, HR/PUB/11/04. The principles adopted by the UN Human Rights Council in 2011 are not binding per se and should not be read as creating new international legal obligations but elaborating on those already existing.
[337] United Nations Human Rights Office of the High Commissioner, "The Corporate Responsibility to Respect Human Rights – An Interpretive Guide", 2012, HR/PUB/12/02, p. 1.

although states are not per se responsible for human rights abuse by private actors, they may be in breach of human rights obligations where such abuse can be attributed to them, or where they fail to take appropriate steps to prevent, investigate, punish and redress such abuse.[338] Even though it is generally within the sovereignty of states to decide what is "appropriate" due diligence towards corporations, the commentary states that they should consider the full range of permissible preventative and remedial measures.[339] Established through Principle 3, states should consider a smart mix of measures - voluntary and mandatory, international and national - to regulate businesses' respect for human rights.[340] The commentary to Principle 2 reads: "[a]t present States are not generally required under international human rights law to regulate the extraterritorial activities of businesses domiciled in their territory and/or jurisdiction. Nor are they generally prohibited from doing so, provided there is a recognized jurisdictional basis." But if there is no strict requirement for states to regulate transnational business activities, how come the rest of Pillar I is presenting measures to take in relation to businesses based on jurisdiction? What seems to be a contradiction has been dismissed by the author of the UNGP, John G. Ruggie, who underscores the state's right to govern in the public interest.[341] Accordingly, states are expected under the UNGP to adopt regulating measures making sure that businesses respect human rights throughout their operations, and *may* also adopt measures in relation to extraterritorial business activities. There is therefore a legal opening space to push extraterritoriality further.

Further, principle 26 addresses transnational situations when human rights violations occur because of judicial barriers. The UNGP makes clear that if claimants face a denial of justice in the host state, and at the same time cannot access courts in the home state regardless of the merits of their claim, such barriers should be addressed by the state.[342] Thus, by representing a global standard of practice, an extraterritorial scope of corporate due diligence is in line with the UNGP. Further support for this statement is found in the 2019 ILC's set of draft articles on environmental responsibility in armed conflict.[343] Although the articles apply to states who are present in an area of armed conflict or post-armed conflict situation, they reflect the increased attentiveness of international law towards environmental protection. The human rights that are closely dependent on a stable and preserved climate cannot only be considered as relevant in wartime.

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[338] Commentary to Principle AI, Pillar I, p. 3.
[339] Ibid.
[340] Commentary to Article 3, p. 5.
[341] Letter from John Gerald Ruggie, Affiliated Profesor in International Legal Studies, Harvard Law School, to Saskia Wilks and Johannes Blankenbach, Business and Human Rights Resource Centre, 19 September 2019. Available through https://www.businesshumanrights.org/sites/default/files/documents/19092019_Letter_John_Ruggie.pdf.
[342] Commentary to Principle 26.
[343] Report of the International Law Commission, A/74/10, principles 10 and 11 is of particular interest, obliging states to practice corporate due diligence and to enable corporate liability.

Importantly, these legal suggestions to resist fracking today are not likely to be used without the pressure and impact of social and environmental movements.[344] As an example, Third World legal "gains" such as the principle of PSNR do not serve much purpose in international law if, when invoked, they do not reflect the interests and perspectives of the Third World. Further, a defiance against the "West as World" demands a shift of legal subjectivity, in which the recognition of social, economic and cultural rights have possibly been the strongest attempt to do so in international law. Assigning inherent and independent rights to the environment, no matter its "elemental" function for human beings, is an example of an essential introduction of *new* legal subjects. Even if such efforts are small in comparison or remain limited in their overall impact on an international level, they draw the attention from the corporation as the ultimate legal subject. To direct the most severe accountability and responsibility where it belongs is important not only from an environmental and socioeconomic point of view, but also with regard to expand the number of directions which international law can take and who it is *for*. Thus, a contemporary approach on state responsibility, besides targeting home states of transnational corporations, would also take into account other obviously driving actors behind fracking like international financial institutions.[345] As an example, Narula suggests a similar application of state responsibility for states who practices certain influence or control over IMF "when fashioning international financial agreements in other countries."[346] Possibly, this would strengthen the Third World state with large conditioned loans, and be a step away from the dependency of transnational corporations who will seek the very last drop of oil or gas before the door closes definitely on the era of fossil fuels.

[344] Chimni (2006), p. 7.
[345] Narula, Smita "International Financial Institutions, Transnational Corporations and State Duties", in Longford et al (eds.) *Global Justice, State Duties*, Cambridge University Press, 2013, p. 128.
[346] Narula (2013), p. 128. There is much that suggests that International Investment Law is a key player in the current climate crisis, however, that specific branch of international law is outside the scope of this thesis.

5. Conclusion

The research question to answer has been what the international state responsibility is, both host and home states included, with regard to the climate threatening activity that is fracking. The legal regimes of focus have been international environmental law and international human rights law. The findings from a classical approach to state responsibility show that no primary obligations under international environmental law ban severe emissions of greenhouse gases, and no norm obliges Western states that house transnational fracking companies to take greater responsibility than the host state of the exported activity in question. Instead, the climate regime as it has come to develop is focused on best efforts and voluntariness rather than real accountability for major emitter states. Further, the lack of enforcement mechanisms makes potential breaches hard to confront. Additionally, climate change is a very particular environmental damage which is hard to fit under secondary environmental rules. Although the invocation of international responsibility is in general not dependent on the existence of damage, it is of central relevance for the assessment of responsibility within international environmental law. This makes the regime inadequate to tackle climate change which is gradual, irregular, multi-caused and hits differently around the Earth.

Further, since the climate is something common and not territorially bound, the geological shift into Anthropocene is a joint existential threat for life as we know it. To direct blame within a global economy and a collective catastrophe at hand becomes, from a classical approach, legally problematic. Additionally, significant progress on holding states responsible for their inaction and contribution to climate change is so far only visible on national levels. Nevertheless, these developments are hopeful with regard to holding host states as well as home states of fracking corporations accountable under international environmental law. In terms of international human rights law, the main duty bearer to date is the host state, since the obligation to protect, respect and fulfil is absolute on the territory and within the control of the state. Fracking, due to its methane emissions, poses a threat to the climate system and is acknowledged as elemental in order to fulfil any social, economic or cultural rights. Thus, state responsibility to protect against human rights violations caused by fracking companies could possibly be established, when inaction on climate change is given a binding force through human rights claims. However, although the international human rights regime provides some initiatives to expand the understanding of "control" so to cover corporations outside the territory of the state, home states are still not prime subjects to binding obligations.

The important insights brought by Third World Approaches to International Law reveal an international law which is negatively biased against the Third World, who is the most affected by climate change. Because of the shortcomings in putting a halt to fossil fuel emissions there is a gaping hole between what is currently possible and what international law, perhaps most distinctively international environmental law, claims to guard. The world

has changed and new actors have gained ground in shape of transnational corporations and international institutions, who profoundly keep restraining the Third World's ability to shape its own destiny. Unless international law is attentive and reflexive to these changes, corporate power, just as rich nations, will fall under the radar of legal responsibility for their damages to the climate. The driving forces behind fracking, which are literally burning up any remaining chances of combating the ongoing and escalating climate change, must be identified and countered. Nevertheless, fracking cannot be kept at bay in one state without extraterritorial implications.

For now, it cannot be stressed enough how important it is for fossil fuels to remain in the ground and not let fossil corporate interest shape the public debate of what is, and what is not, sustainable. Further studies could attend to the exposure of extractive industries such as fracking, both locally and globally, and the amount of interdisciplinary research can never be too many. Nonetheless, once fracking and fossil fuels are a chapter of the past there is still a huge remaining job to do which craves academic attention. To repair what can be repaired of this fractured Earth.

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