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Private Climate Litigation

Enforcing Corporate Climate Responsibility through Dispute Resolution? A Taxonomy

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18.1 Introduction

Why would anyone file a legal action about climate change against a company?[1] Prima facie, the idea of holding a corporation (or any other individual actor) accountable for the 'super-wicked' collective problem of anthropogenic climate change may indeed seem rather surprising.[2] And yet, at closer inspection, it is not as farfetched as it might at first seem. The increasing trend of climate lawsuits against private actors is underpinned by two main considerations. First, collectively and in some cases individually, large corporations have caused vast quantities of greenhouse gas emissions since the Industrial Revolution.[3] The emissions attributable to the largest industrial greenhouse gas emitters (sometimes referred to as 'carbon majors') rival or even exceed those of entire States.[4] Corporate activities have historically contributed substantially to anthropogenic climate change and continue to do so. Second, the role of the business sector is essential in the global transition to a 'net-zero' global economy by around mid-century: having a fair chance of achieving the Paris Agreement's peak temperature goal entails 'deep emission reductions in *all* sectors, a wide portfolio of mitigation options and a significant scaling up of investments in those options'.[5] Accordingly, both looking backward and looking forward, the role of the business sector is essential. And yet, the crucial query is whether there is a *legal responsibility* (that is, liability in case of non-fulfilment of such responsibility) for corporations to take (or to refrain from taking) certain actions concerning climate change, and if so, what such responsibility would look like more specifically. Clear answers cannot always be found in black-letter law, and so interested groups increasingly resort to 'Private Climate Litigation' (PCL). These cases often explore uncharted waters.

[1] The terms 'corporation' and 'company' are used interchangeably in this chapter, referring to the dominant form of conducting business in all its variants across jurisdictions.

[2] See, for example, R. J. Lazarus, Super wicked problems and climate change: restraining the present to liberate the future. *Cornell Law Review* 2009, 94: 1153–1234.

[3] R. Heede, Carbon Majors: Accounting for Carbon and Methane Emissions 1854–2010, Methods and Results Report (Climate Accountability, 2014); R. Heede, Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010. *Climatic Change* 2014, 122: 229–241.

[4] For instance, in *Milieudefensie and Others v. Shell* (District Court of the Hague, C/09/571932/HA ZA 19–379, Judgment of 26 May 2021), the District Court of The Hague took note of the fact that the emissions of the Royal Dutch Shell group exceed those of the State of the Netherlands (paragraph 4.4.5). The reader should note that there are many methodological issues around measuring greenhouse gas emissions, which, for reasons of brevity, will not be discussed further in this chapter.

[5] IPCC, Global Warming of 1.5°C, Summary for Policymakers, p. 15 (emphasis added).

Throughout the three decades since the adoption of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, anthropogenic climate change has been approached as an issue to be dealt with by States, co-ordinated at the intra-governmental level under the aegis of the United Nations (UN). This State-centric approach assumes that States are willing to, and actually capable of, collectively 'governing' climate change, thereby achieving the ultimate goal of the UNFCCC – stabilising atmospheric greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with the climate system (UNFCCC article 2) as specified through the Paris Agreement's peak temperature goal.[6] However, global greenhouse gas emissions continue to reach new record levels each year.[7] The lack of sufficient action and ambition on the part of governments is expressed through their Nationally Determined Contributions (NDCs) under the Paris Agreement, which are far from being aligned with a pathway compatible with the Paris Agreement's peak temperature goal; worse, emissions are projected to further *increase* based on current NDCs.[8] Accordingly, considerable doubt arises as to whether placing responsibility to address climate change on States *alone* – while neglecting the business sector – is justified.[9] The situation just described calls for taking a closer look at the responsibility of non-State actors,[10] and in particular corporations, whose enormous greenhouse gas emissions and global influence due to their economic power are comparatively ignored in the climate change context.[11]

Traditionally, and although this has been contested, only States are viewed as subjects of international law, including in international climate change law.[12] Since the 1970s, numerous attempts to define corporate obligations under international law concerning environmental and social issues were made (for the most part, under the aegis of the UN), but failed.[13] Thus, by and large, corporations and other non-State actors have been ignored (or rather, excluded on purpose) as relevant actors with responsibilities to 'address' climate change at the international level (either through mitigation, adaptation, or any form of redress for loss and damage).[14] Notably, some large corporations and industry associations

[6] Keeping temperature increase 'well below' 2°C, or 1.5°C, respectively, above pre-industrial levels (Paris Agreement article 2(1)(a)).

[7] International Energy Agency, Global Energy Review: CO_2 Emissions in 2021. Global emissions rebound sharply to highest ever level. 2022). www.iea.org/reports/global-energy-review-co2-emissions-in-2021-2.

[8] In 2020, the UN Environment Programme (UNEP) warned that '[c]urrent NDCs remain seriously inadequate to achieve the climate goals of the Paris Agreement and would lead to a temperature increase of at least 3°C by the end of the century' (UNEP Emissions Gap Report 2020 (UNEP, 2020), p. xi). In 2021, the UNFCCC Secretariat reported that taken together, NDCs 'fall far short of what is required' to achieve the temperature goal of the Paris Agreement (UNFCCC Secretariat, Nationally Determined Contributions under the Paris Agreement, Synthesis report (FCCC/PA/CMA/2021/2), p. 5).

[9] See, for example, M. P. Vandenbergh, Reconceptualizing the future of environmental law: the role of private climate governance. *Pace Environmental Law Review* 2015, 32: 382; N. Gunningham, Divestment, nonstate governance, and climate change. *Law & Policy* 2017, 39: 309–324.

[10] The term 'non-state actors' is used in the international law debate to refer to a diverse set of actors ranging from individuals, international organizations, subnational administrations, industry associations, civil-society organizations, indigenous peoples, and *corporations* – the focus of this chapter (see M. Rajavuori, The role of non-state actors in climate law, in B. Mayer, A. Zahar (eds.), *Debating Climate Law* (Cambridge University Press, 2021), pp. 379–380.

[11] See, for example, L. B. Andonova, M. M. Betsill, H. Bulkeley, Transnational climate governance. *Global Environmental Politics* 2009, 9(2): 52–73.

[12] See generally E. Morgera, *Corporate Environmental Accountability in International Law*, 2nd ed. (Oxford: Oxford University Press, 2021), pp. 60–67. Specifically, on potential climate obligations of corporations, see Expert Group on Global Climate Obligations, Principles on Climate Obligations of Enterprises (Eleven International Publishing, 2018).

[13] See Morgera, *Corporate Environmental Accountability*, pp. 69–139.

[14] See, for example, M. Rajavuori, The role of non-state actors in climate law, p. 380 (noting that '[t]he conceptual rift between state and non-state actors has been engrained in the international climate regime since its inception').

have lobbied heavily against the introduction of stronger climate regulations.[15] Due to the perceived lack of responsibility under international law, companies are primarily concerned with climate-related *national* regulations, which clearly apply to them directly. At the domestic and regional (European Union) levels, corporations (and in particular 'multinational' or 'transnational' enterprises) operate in a complex and highly fragmented web of technical regulations consisting mainly of carbon taxation schemes, product standards, corporate reporting obligations, and (increasingly, and especially in Europe) due diligence requirements.[16] And yet, although it would thus seem that corporations are largely unaffected by international climate change law, the ostensibly clear lines between the public sphere (where international law is undoubtedly applicable) and the private sphere (where this is less clear) are heavily blurred. The separation between the public and the private sectors is particularly delicate in the context of climate change. In fact, many of the world's largest industrial corporate greenhouse gas emitters and the vast majority of the world's remaining fossil fuel reserves are *state-controlled*.[17] This public/private divide is rarely discussed in climate law literature,[18] and will not be explored further here, but it is important to keep in mind in the broader context of PCL.[19]

Together with growing regulatory activity across jurisdictions, financial market developments due to the broad recognition that climate change entails significant financial risks to corporate and global financial stability, and increasing shareholder engagement on climate change, PCL can be viewed as one of the main drivers of the increasing focus on 'Corporate Climate Responsibility', as the author has argued elsewhere.[20] And yet, as Bouwer observes, 'the extent of private law's potential contribution [to climate change litigation] tends to be overlooked'.[21] Aiming at contributing to filling this gap, this chapter offers a brief conceptualisation and taxonomy of PCL. The remainder of the chapter is structured as follows. The second section proposes a definition for the term PCL and identifies its main categories. The third section sketches various characteristics of PCL.

[15] See, for example, R. J. Brulle, The climate lobby: a sectoral analysis of lobbying spending on climate change in the USA, 2000 to 2016. *Climatic Change* 2018, 149: 289–303; InfluenceMap, Big Oil's Real Agenda on Climate Change – How the Oil Majors Have Spent $1bn since Paris on Narrative Capture and Lobbying on Climate. (2019). https://perma.cc/BG6R-RWT9; B. Franta, Weaponizing economics: big oil, economic consultants, and climate policy delay. *Environmental Politics*, 2022, 31(4): 555–575.

[16] With regard to climate change-related regulatory developments in financial market regulation, see, for example, A. Hösli, R. H. Weber, Climate change reporting and due diligence: frontiers of corporate climate responsibility. *European Company and Financial Law Review* 2021, 18(6): 948–979.

[17] In 2013, only 7.1% of oil reserves and 6.6% of natural gas reserves were held by investor-owned enterprises (see R. Heede, N. Oreskes, Potential emissions of CO_2 and methane from proved reserves of fossil fuels: an alternative analysis. *Global Environmental Change* 2016, 36: 12–20, at p. 19).

[18] But see, for example, B. Mayer, M. Rajavuori, National fossil fuel companies and climate change mitigation under international law. *Syracuse Journal of International Law and Commerce* 2016, 44: 55 (focusing on the role of States or *investors* rather than policy-setters and enforcers).

[19] For instance, one may ask whether the conduct of state-controlled or 'State-owned' enterprises is attributable to the respective State. One could also ask whether the directors of these companies owe their duties not (only) to the company they oversee (as is the case under corporate law), but also to the 'ultimate beneficiaries' of State-controlled enterprises, that is, arguably, the citizens of that State (at least nominally).

[20] See R. H. Weber, A. Hösli, Corporate climate responsibility – the rise of a new governance issue. *Sui Generis* 2021, 83–92 at p. 84 (using the term Corporate Climate Responsibility as 'a means to capture and contextualize various climate change-related trends in the legal sphere as well as changing market practices). See also C. A. Williams, Fiduciary duties and corporate climate responsibility. *Vanderbilt Law Review* 2021, 74(6): 1875–1916 (without explaining the term 'Corporate Climate Responsibility').

[21] K. Bouwer, The unsexy future of climate change litigation. *Journal of Environmental Law* 2018, 30: 483–506: '[w]ith the exception of . . . very high-profile actions . . . the potential of private law is largely overlooked when it comes to climate cases'.

The chapter then concludes by offering brief remarks as to whether PCL can be viewed as a tool for implementing climate change policies. The chapter does not by any means attempt to provide a comprehensive overview of the complex topic, but rather aims at systematising the phenomenon of PCL via select cases in order to outline a foundational taxonomy.

18.2 What is Private Climate Litigation?

18.2.1 Definition

Climate change litigation is a complex phenomenon that 'cuts across multiple levels of governance, areas of law, and sectors of the economy'.[22] Despite a growing body of specialised literature,[23] no generally accepted definition of climate change litigation has emerged.[24] Proposed definitions range from 'narrower' conceptions, which require that climate change or greenhouse gases are an *explicit* (albeit not necessarily the only) subject-matter of the case,[25] to 'broader' definitions that also consider the motivation of the plaintiffs or that include cases where climate change is not the central issue,[26] but rather a peripheral one.[27] One may further distinguish between 'strategic' climate litigation, which aims at putting 'bottom-up' pressure (be it on public or private actors), and 'non-strategic' climate litigation where climate change represents a secondary component of a legal action.[28]

While most cases are directed against State actors (public climate litigation), there is an increasing trend of legal actions in the private sphere (PCL). Notably, due to the blurred lines between the public and the private spheres, there may be cases where the allocation to either public or private climate litigation is debatable – notably, the categorisation as either public or private climate litigation is merely declaratory and does not have any legal consequences per se.

What does this chapter mean by PCL? Ganguly, Setzer, and Heyvaert define *strategic* private climate litigation as 'cases launched with the explicit aspiration to influence

[22] J. Peel, H. M. Osofsky, *Climate Change Litigation: Regulatory Pathways to Cleaner Energy* (Cambridge University Press, 2015), p. 4.

[23] It is not possible to cite even a representative selection of the large amount of literature and reports in one footnote, but see the various sources cited in this chapter (and also Chapter 17 by I. Alogna, N. Arnould and A. Holzhausen in this volume). Among the earliest scholarly contributions, see, for example, D. Grossman, Warming up to a not-so-radical idea: tort-based climate change litigation. *Columbia Journal of Environmental Law* 2003, 28: 9–33; H. M. Osofsky, The geography of climate change litigation: implications for transnational regulatory governance. *Washington University Law Quarterly* 2005, 83: 1789–1855.

[24] Setzer and Vanhala note that there are 'as many understandings of what counts as "climate change litigation" as there are authors writing about the phenomenon' (J. Setzer, L. C. Vanhala, Climate change litigation: a review of research on courts and litigants in climate governance. *Wiley Interdisciplinary Reviews: Climate Change* 2019, 10: e580, at p. 4).

[25] M. B. Gerrard, Climate change litigation in the United States: high volume of cases, mostly about statutes, in I. Alogna, C. Bakker, J.-P. Gauci, *Climate Change Litigation: Global Perspectives* (Brill Nijhoff, 2021), p. 33 (this definition thus excludes cases that 'may have been motivated by climate change but do not explicitly talk about it, such as an effort to stop a coal-fired power plant on non-climate legal grounds').

[26] See, for example, J. Peel, J. Lin, Transnational climate litigation: the contribution of the global south. *The American Journal of International Law* 2019, 113(4): 679–726, at p. 692.

[27] See, for example, Peel and Osofsky, *Climate Change Litigation*, pp. 4–9; J. Peel, H. M. Osofsky, Climate change litigation. *Annual Review of Law and Social Sciences* 2020, 16: 21–38, at pp. 21–38, 23–24; I. Alogna, C. Bakker, J.-P. Gauci, Climate change litigation: global perspectives, in Alogna et al., *Climate Change Litigation*, pp. 1, 15–18.

[28] G. Ganguly, J. Setzer, V. Heyvaert, If at first you don't succeed: suing corporations for climate change. *Oxford Journal of Legal Studies* (2018), 38(4): 841–848, at p. 843.

corporate behaviour and strategies in relation to climate change'.[29] While such framing tends to focus on high-profile cases, the concept of PCL in this chapter is more encompassing in that it also includes 'non-strategic' cases as well as cases where climate change is rather a 'secondary' theme, at least to the extent that there is a reasonably clear (rather than just a remote) link to climate change in the plaintiffs' claim. Whereas this last criterion (a reasonably clear link) leaves room for interpretation in some cases, PCL as defined here is focused on *objective criteria* (the legal status of the involved parties; the legal basis that the claim is based on – see Section 18.3) rather than subjective or 'soft' factors such as the motivation or even 'ultimate goals' of the plaintiffs. Of course, this is not to say that these 'soft' factors are not interesting or worthwhile exploring, but arguably they are of little help to identify a claim as PCL because: (a) they do not form part of the plaintiff's legal argument and are thus not detailed in their claim, making them unidentifiable to the objective observer; and (b) where there is more than one plaintiff in the same legal action, their individual motivations are not necessarily identical. In the light of the foregoing, PCL here refers to legal actions (brought before either courts or non-judicial dispute resolution bodies) that have a reasonably clear link to climate change, are directed against a private actor, and have their legal basis in private law.

The following example illustrates how 'non-strategic' cases that do not necessarily put climate change front and centre of their claim may nevertheless qualify as PCL. In the vast amount of private litigation that has ensued worldwide in the aftermath of criminal proceedings in the so-called 'Dieselgate' scandal,[30] it is unlikely that plaintiffs were invoking climate change arguments to claim compensation for buying a vehicle with much less 'green' credentials than advertised by the seller. And yet, at their core, these disputes concern greenhouse gas emissions (in the Dieselgate context, vehicle emissions). There is thus a 'reasonably clear link' to climate change in such a case.

18.2.2 Main Categories

The 'first wave' of climate lawsuits against corporate emitters (spanning the period from around 2005 to 2015) was litigated mainly before United States courts. Key cases include *Comer v. Murphy Oil USA*[31] and *Native Village of Kivalina v. ExxonMobil*.[32] In both instances, the plaintiffs' argument that the defendants (both companies in the energy sector)

[29] Ibid. at p. 844. See also M. K. Nagle, Tracing the origins of fairly traceable: the black hole of private climate change litigation. *Tulane Law Review* 2010, 85: 477–518, at p. 480 (using the term 'private law climate change litigation' without offering a definition).

[30] In January 2017, German automotive conglomerate Volkswagen Group AG (VW) plead guilty to 'participating in a conspiracy to defraud the United States and VW's US customers and to violate the Clean Air Act by lying and misleading the [Environmental Protection Agency] and US customers about whether certain VW, Audi and Porsche branded diesel vehicles complied with US emissions standards, using cheating software to circumvent the US testing process and concealing material facts about its cheating from US regulators' and to pay a total of US$4.3 billion in criminal and civil penalties. Several executives and high-ranking employees were indicted. See U.S. Department of Justice, 'Volkswagen AG agrees to plead guilty and pay $4.3 billion in criminal and civil penalties; six Volkswagen executives and employees are indicted in connection with conspiracy to cheat U.S. emissions tests (2017). www.justice.gov/opa/pr/volkswagen-ag-agrees-plead-guilty-and-pay-43-billion-criminal-and-civil-penalties-six. Based on the U.S. proceedings, a large number of criminal investigations and civil proceedings were opened in many jurisdictions.

[31] *Comer v. Murphy Oil USA*, U.S. Court of Appeals for the Fifth Circuit, Inc. 607 F.3d 1049 (2010).

[32] *Kivalina v. ExxonMobil Corporation et al.*, U.S. Court of Appeals for the Ninth Circuit, 696 F.3d 849, 2012 WL 4215921 (2012).

were responsible for climate-change-related injuries suffered by the plaintiffs was dismissed by the courts.[33] While this 'first wave' of climate change lawsuits against major greenhouse gas emitters in the United States remained largely unsuccessful (that is, from the perspective of the plaintiffs), a second, perhaps much stronger 'wave' began to build up across a broader range of jurisdictions.[34] The 'first wave' at least partially attempted to draw on strategies deployed in tobacco and asbestos litigation, whereas the second is characterised by a wider range of litigation strategies and arguments.[35] Early indicators such as the District Court of The Hague's ruling in *Milieudefensie and others v. Royal Dutch Shell* (*Milieudefensie*) in May 2021 show an increased likelihood of success for plaintiffs.[36]

At least two main categories of PCL cases can be identified.[37] The most obvious difference is the type of plaintiff, which influences the legal basis relied upon: from a company's perspective, a claim is either brought by a 'third party' (meaning a legal subject that does *not* stand in a direct legal relationship, contractually or otherwise, with the company), or a 'corporate constituency' (meaning a legal subject that stands in a direct legal relationship, contractually or otherwise, with the company). We can thus differentiate between 'external' and 'internal' cases.

The first type of PCL is cases brought by or on behalf of individuals against large heavy-emitter corporations (here referred to as *David v. Goliath cases*, or 'external' cases). These lawsuits typically claim that companies have a (partial) responsibility for having contributed to climate change and seek redress in the form of compensation or – in some more recent cases – declaratory or injunctive relief (in particular, with a view to reducing the respondent's greenhouse gas emissions). The second category is cases brought by 'corporate constituencies' ('internal cases', typically filed by shareholders or beneficiaries of pension funds). Often, but not always, this type of PCL takes place in a financial market context. The subject matter of these legal actions varies, but the main theme is allegations of inadequate disclosure and management of climate change-related financial risks.[38] The emergence of 'internal' cases is an expression of the fact that climate risks are 'bidirectional' for corporations.[39] On the one hand, major corporate emitters have significantly contributed to the creation of climate change risks and impacts. On the other, climate change has become such a serious issue that it also represents a financial risk to corporations, even threatening global financial stability.[40] The recognition of climate change risks as financial

[33] For a discussion of these cases, see, for example, Ganguly et al., If at first you don't succeed, pp. 846–849.

[34] See ibid., p. 842 (adding that even 'unsuccessful' cases 'may help to guide climate change responsive adjudication in the longer term). See also Bouwer, The unsexy future of climate change litigation, pp. 490–491.

[35] Ganguly et al., If at first you don't succeed, p. 856.

[36] *Milieudefensie and others v. Shell*, District Court of The Hague, C/09/571932/HA ZA 19–379, Judgment of 26 May 2021, as discussed in A. Hösli, Milieudefensie et al. v. Shell: a tipping point in climate change litigation against corporations? *Climate Law* 2021, 11: 195–209.

[37] See, for example, A. Hösli, R. H. Weber, Klimaklagen gegen Unternehmen. Internationale Entwicklungen und deren Bedeutung für die Schweiz. *Jusletter* 2021, 1–18, at p. 6.

[38] See, for example, J. Solana, Climate breakdown litigation in financial systems: a typology. *Transnational Environmental Law* 2020, 9(1): 103–135, at p. 10; Ganguly et al., If at first you don't succeed, pp. 858–861 (referring to 'litigation as a component of corporate climate risk management'); J. Setzer, C. Higham, Global Trends in Climate Change Litigation: 2022 Snapshot (Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science, 2022), pp. 38–40.

[39] L. Benjamin, *Companies and Climate Change. Theory and Law in the United Kingdom* (Cambridge University Press, 2021), p. 1.

[40] On risks to financial stability, see, for example, P. Bolton, M. Després, L. A. P. da Silva, F. Samama, R. Svartzman The Green Swan: Central Banking and Financial Stability in the Age of Climate Change (2020). www.bis.org/publ/othp31.htm. Of course,

risks calls for adequate corporate governance measures (in particular, in the areas of risk management and disclosure), which in turn triggers fiduciary duties directors owe to the company they oversee.[41] A potential third category (which may not always fall under the definition of PCL as framed here, because it typically represents *public* enforcement) is 'climate-washing' cases, where corporations face legal challenges over their climate-related advertisements.[42]

Data extrapolated from the two main (and interlinked) open-access databases on climate change litigation give indications as to the magnitude and geographical spread of PCL.[43] In September 2022, the first database listed 98 lawsuits against corporations (outside the United States) in a broad range of jurisdictions.[44] Within the United States, it is more difficult to ascertain the number of PCL cases, as the part of the first database on U.S. cases is organised by type of claim rather than the category of respondents.[45] The second database, which covers only non-U.S. cases, identifies a total of 276 results for litigation involving a corporate actor.[46] Although still by far outnumbered by cases in the public sphere, the data suggest that the share of PCL cases within climate change litigation as a whole is substantial and potentially growing. Notably, the amount of PCL cases would be much higher if cases with a rather 'incidental' (but nevertheless reasonably clear) link to climate change were to be included. Although the databases consulted are not searchable by the key characteristics of PCL as proposed here (type of respondent, legal basis, reasonably clear link to climate change), the above-mentioned figures are useful indicators.

in the longer run, anthropogenic climate change not only threatens global financial stability, but the very existence of the human (and many other) species.

[41] See, for example, S. Barker, E. Mulholland, Directors' liability and climate risk: comparative paper – Australia, Canada, South Africa, and the United Kingdom (Commonwealth Climate and Law Initiative, 2019); L. Benjamin, The duty of due consideration in the anthropocene: climate risk and English directorial duties. *Carbon and Climate Law Review* 2017, 11(2): 90–99; R. H. Weber, A. Hösli, Climate change liability: comparing risks for directors in jurisdictions of the common and civil law. *Climate Law* 2021, 10(2): 151–196.

[42] For an overview, see L. Benjamin, A. Bhargava, B. Franta, et al., Climate-washing litigation: legal liability for misleading climate communications (The Climate Social Science Network, 2022). For instance, in 2019, the Italian Competition Authority imposed a fine of five million euro on Italian oil and gas company Eni for unfair commercial practices concerning environmental claims about Eni's Diesel+ advertising campaign (*Italian Competition Authority v. ENI*, ruling concerning ENI's Diesel+ advertising campaign (2019). http://climatecasechart.com/non-us-case/italian-competition-authority-ruling-enis-diesel-advertising-campaign/).

[43] Climate Change Litigation Database maintained jointly by the Sabin Center for Climate Change Law (Columbia University) and Arnold & Porter Kaye Scholer LLP: http://climatecasechart.com/ (Database 1); Climate Change Laws of the World database (excludes cases from the United States) maintained jointly by the Sabin Center for Climate Change Law and the Grantham Research Institute on Climate Change at the London School of Economics: https://climate-laws.org/litigation_cases (Database 2). For cases in Australia, New Zealand and Pacific Islands, see also the Australian and Pacific Climate Change Litigation database maintained by the University of Melbourne: https://law.app.unimelb.edu.au/climate-change/index.php. On the variety of remedies sought in PCL, see further below.

[44] Including Argentina, Australia, Belgium, Brazil, Canada, the People's Republic of China, Columbia, Denmark, Ecuador, France, Germany, India, Indonesia, Italy, Japan, the Netherlands, New Zealand, Nigeria, Norway, the Philippines, the UK, South Africa, South Korea, and Switzerland. Note that this number (98) includes several (but not all) cases before non-judicial procedures including before UN Special Rapporteurs, OECD National Contact Points and national human rights commission or competition authorities. Seven additional cases that potentially qualify as PCL are listed under the subcategory (others), and 16 protesters cases (climate protest-related criminal trials, which do not qualify as PCL). In September 2022, the Australian and Pacific Climate Change Litigation database reported 40 cases in the category 'Corporate Accountability', of which 13 concern transparency/disclosure, and nine consumer protection.

[45] Nevertheless, certain indicators can be extrapolated. As at September 2022, Database 1/USA cases lists 24 cases in the category 'Securities and Financial Regulation', and 31 cases in the category 'Actions seeking money damages for losses' (most of which were directed against fossil fuel companies). Both of these categories generally fall within the definition of PCL as proposed here.

[46] This number, again, includes cases before non-judicial dispute settlement bodies. The significantly higher number of cases compared to Database 1 may be explained, in part, by the appearance that Database 2 includes matters of planning law (such as disputes relating to construction permits).

18.3 Characteristics of Private Climate Litigation

18.3.1 Dispute Resolution Forum and Parties

Across jurisdictions PCL cases are brought not only before courts and supervisory authorities (whose decisions are typically subject to judicial review), but also before non-judicial bodies such as National Contact Points (NCPs) under the Organisation for Economic Co-operation and Development's (OECD) Guidelines for Multinational Enterprises.[47] Further, climate change is perceived as an increasingly relevant subject matter in commercial arbitration, but due to confidentiality around these matters, there are no reliable data available for analysis.[48] Moreover, as a sign of growing shareholder engagement on climate change, there is a trend of 'Say on Climate' shareholder resolutions at annual general meetings.[49] Notably, raising an issue at an annual general meeting can represent a pre-litigation stage to a PCL claim.

On the side of the plaintiffs, the parties vary depending on the category of PCL. David v. Goliath or external cases are commonly brought by or on behalf of individuals (ranging from one single person to tens of thousands of citizens), with non-governmental organisations (such as foundations and associations) often serving as co-plaintiffs or supporters (that is, they are not formally parties to the proceedings).[50] In some instances, cases are even brought in the interest of future generations (in addition to the interest of currently living individuals).[51] 'Internal' cases, by contrast, are typically filed by shareholders, often in a derivative suit.[52] In a subset of cases, beneficiaries have brought legal actions against their pension funds, and in some cases the trustees of these pension funds, typically alleging inadequate transparency about climate-related risks.[53] Obviously, the applicable rules and precedents determine who has standing to bring a PCL claim, but within these boundaries, litigation strategy considerations are likely relevant as well to the selection of the plaintiffs.

[47] In September 2022, the database of OECD Watch reports six cases related to climate change, filed before the NCPs of Australia, Germany, Italy, the Netherlands, Poland, and the United Kingdom (OECD Watch, Complaints Database www.oecdwatch.org/complaints-database). Depending on how broadly one interprets 'climate-related', the number of cases is probably higher (for instance, Database 1 includes further cases before the NCPs of countries such as Norway and Japan). Concerning the functioning of NCPs, see C. Kaufmann, National contact points and access to remedy under the UNGP – why two can make a dream so real, in N. Bonucci, C. Kessedjian (eds.), *40 Years of the OECD Guidelines for Multinational Enterprises* (OECD, 2018), p. 175.

[48] International Chamber of Commerce (2019), Resolving Climate Change-Related Disputes through Arbitration and ADR. https://iccwbo.org/climate-change-disputes-report.

[49] For example, M. Horster, K. Papadopoulos, Climate change and proxy voting in the U.S. and Europe. *Harvard Law School Forum on Corporate Governance and Financial Regulation*, 2019. https://corpgovlaw.harvard.edu/2019/01/07/climate-change-and-proxy-voting-in-the-u-s-and-europe.

[50] For instance, in *Milieudefensie v. Royal Dutch Shell*, the lawsuit was filed in 2019 by the Dutch association Milieudefensie in its own name as well as on behalf of 17,379 individual plaintiffs, and together with six Dutch co-plaintiffs, of which four foundations, an association, and a youth organisation.

[51] In *Milieudefensie v Royal Dutch Shell*, in the part on the admissibility of the claim, the Court accepted the interests of current *and future* generations of Dutch residents and inhabitants of the Wadden Sea area that are resident in the Netherlands as being 'suitable for bundling' in a collective claim, but excluded the interests of current and future generations of the world's population (para. 4.2.3–4.2.4).

[52] For example, *Ramirez v. ExxonMobil Corp*. (2016) 3:16-cv-3111-K (Federal District Court for the Northern District of Texas); *Sarah von Colditz derivatively on behalf of ExxonMobil Corporation v. Woods* (2019) 3:19-cv-01067 (Federal District Court for the Northern District of Texas); *Williams Derivatively on behalf of PG&E v. Earley* (2018) 3:18-cv-07128-EDL (Federal District Court for the Northern District of California); *York County v. Rambo* (2019) 3:19-cv-00994 (Federal District Court for the Northern District of California).

[53] For example, *McVeigh v. Retail Employees Superannuation Trust* (2018) NSD 1333/2018 (Federal Court of Australia) (McVeigh v REST); *Fentress v. ExxonMobil Corp* (2016) 4:16-cv-03484 (Federal District Court for the Southern District of Texas).

Further, some jurisdictions are rather favourable of bundling mass claims (for instance, the Netherlands, the United States) and third-party funding arrangements, while others are not. Instances where authorities launch public enforcement type of proceedings against companies (for instance, under corporate law, competition law, consumer protection law, or criminal law)[54] typically do not qualify as PCL as defined here. But in some instances, private plaintiffs will be entitled to attach their private claims to public enforcement types of proceedings (or public authorities may attach civil claims to civil proceedings), making the public/private distinction less clear-cut. Further, especially in some 'anti-regulatory' cases, corporations appear as the *plaintiffs* in climate change litigation.[55]

On the side of the respondents, PCL is usually directed against corporations.[56] In some instances (especially in the United States), company directors and senior officers are targeted as co-respondents, typically facing allegations of having breached their fiduciary duties by inadequate disclosure and management of climate change risks.[57] Many PCL respondents operate in the energy and fossil fuel sectors, but plaintiffs have more recently broadened their spectrum to other greenhouse gas-intensive industries including manufacturing,[58] building materials (in particular cement),[59] finance (that is, organisations such as banks and pension funds),[60] transport (particularly aviation and shipping),[61] and animal agriculture.[62] Further, third-party litigation funders have begun to show interest in climate-related disputes.[63] These actors have a financial incentive and can choose to support either side of a dispute.

18.3.2 Remedies

Two main types of remedies sought by PCL plaintiffs can be distinguished. In most cases (both 'external' and 'internal' cases), plaintiffs seek financial compensation. For instance, plaintiffs claim a financial contribution to local measures needed to avert or mitigate imminent climate change-related harm (for instance, the construction of anti-flooding works).[64] In some recent cases filed in Europe, PCL plaintiffs have sought declaratory or

[54] For example, *People of the State of New York v. ExxonMobil* (2018) 452044/2018 (New York Supreme Court); U.S. Department of Justice (2017), Volkswagen AG agrees to plead.

[55] Ganguly et al., If at first you don't succeed, p. 844. See, for example, Database 1/U.S. cases, category 'Industry Lawsuits' (50 cases as at September 2022).

[56] See generally J. Setzer, C. Higham, Global trends in climate litigation: 2021 snapshot, pp. 27–30; Setzer and Vanhala, Climate change litigation, p. 1; Weber and Hösli, Climate change liability, pp. 158–162; Hösli and Weber, Klimaklagen gegen Unternehmen, p. 1.

[57] For example, *Fentress v. ExxonMobil Corp; Ramirez v ExxonMobil Corp*. See also *ClientEarth v. Board of Directors of Shell* (2022). http://climatecasechart.com/non-us-case/clientearth-v-board-of-directors-of-shell/. See Weber and Hösli, Climate change liability, pp. 172–184.

[58] For example, *Kaiser et al. v. Volkswagen AG* (Regional Court of Braunschweig, Germany), 2021. http://climatecasechart.com/non-us-case/kaiser-et-al-v-volkswagen-ag.

[59] *Four Islanders of Pari v. Holcim* (Justice of the Peace of the Canton of Zug, Switzerland, 2022). http://climatecasechart.com/non-us-case/four-islanders-of-pari-v-holcim.

[60] For example, *McVeigh v. REST*; *Four NGOs v. ING Bank*, Final Statement after examination of complaint, Dutch NCP, 19 April 2019; *Abrahams v. Commonwealth Bank of Australia* (2017) VID 879/2017 (Federal Court of Australia).

[61] For example, *Fossielvrij NL v. KLM* (Amsterdam District Court, the Netherlands) (2022). http://climatecasechart.com/non-us-case/fossielvrij-nl-v-klm.

[62] *Smith v. Fonterra Co-operative Group Limited and Others* [2020] NZHC 419, [2020] NZLR 394 (Smith v. Fonterra).

[63] See, for example, M. Golnaraghi, J. Setzer, N. Brook, W. Lawrene, L. Williams, *Climate Change Litigation – Insights into the Evolving Global Landscape* (The Geneva Association, 2021), pp. 25–26.

[64] See, for example, *Lliuya v. RWE*; *Four Islanders of Pari v. Holcim.*

injunctive relief such as a court order compelling a corporation to reduce its greenhouse gas emissions, or the production of internal documents in order to be able to assess the adequacy of climate-risk management.[65] Notably, compensation claims can be combined with seeking declaratory and injunctive relief in the same PCL action.[66]

PCL plaintiffs explore largely uncharted waters, which has led to remarkable decisions in some instances. One main example is the unprecedented ruling of the District Court of The Hague in *Milieudefensie*. For the first time worldwide, in May 2021, a corporation (specifically, the top holding company of the Shell group) was ordered by a Court to reduce its greenhouse gas emissions – in this case, to reduce the carbon dioxide emissions (both direct and indirect emissions) of the entire group by at least 45% until 2030 (relative to 2019 levels).[67] The case builds on precedent in public-sector litigation against the Government of the Netherlands (*Urgenda v. The Netherlands*),[68] which points to potential 'cross-fertilisation' between PCL and public-sector climate litigation.

The pending case of *Lliuya v. RWE* is the first legal action in Germany concerning whether major greenhouse gas emitters – in this case, Germany's largest producer of electricity – can be held liable for climate change-related damages.[69] The plaintiff, a Peruvian farmer threatened by the consequences of melting glaciers above his home town in the Andes, claims compensation proportional to the RWE's alleged historical contribution to climate change (0.47% of global industrial emissions between 1751 and 2010). The court of first instance (the *Landesgericht Essen*) rejected the claim for lack of causation between the respondent's greenhouse gas emissions and the alleged infringement of the plaintiff's property rights.[70] However, in 2018, the appellate court (*Oberlandesgericht Hamm*) held in an interlocutory decision that the fact that there are multiple tortfeasors does *not* of itself exclude the individual (partial) responsibility of each single tortfeasor, provisionally accepting the plaintiff's legal standpoint in this regard.[71]

A further example showing the diversity of legal remedies in PCL is *McVeigh v. REST*, an Australian case heard before that country's Federal Court.[72] In this matter, a member of one of Australia's largest superannuation funds (the Retail Employees Superannuation Trust, or REST) alleged that the fund's failure to provide information concerning its exposure to climate change risks and any actions taken to address them prevented the plaintiff (as a beneficiary of that fund) from making an informed judgement about the fund's management and financial condition. The case was resolved through a settlement that included

[65] Injunctive Relief: for example, *Milieudefensie and Others v. Royal Dutch Shell*; *Four Islanders of Pari v. Holcim* Production of Documents: for example, *Abrahams v Commonwealth Bank of Australia* (2021) NSD864/2021 (Federal Court of Australia). http://climatecasechart.com/non-us-case/abrahams-v-commonwealth-bank-of-australia-2021.

[66] See *Four Islanders of Pari v. Holcim* (combination of a compensation claim with seeking injunctive relief).

[67] See discussion in, for example, B. Mayer, The duty of care of fossil-fuel producers for climate change mitigation. *Transnational Environmental Law* 2022, 11(2): 407–418; L. Burgers, An apology leading to dystopia: or, why fuelling climate change is tortious. *Transnational Environmental Law* 2022, 11(2): 419–431.

[68] *Stichting Urgenda v. The State of The Netherlands (Ministry of Economic Affairs and Climate Policy)*, Hague District Court, Case C/09/456689/HA ZA 13–1396, Judgment, 24 June 2015, as confirmed in *The State of The Netherlands (Ministry of Economic Affairs and Climate Policy) v. Stichting Urgenda*, Supreme Court of The Netherlands, Case 19/00135, Judgment of 20 December 2019.

[69] See W. Frank, C. Bals, J. Grimm, The case of Huaraz: first climate lawsuit on loss and damage against an energy company before German courts, in R. Mechler, T. Schinko, S. Surminski, J. Linneroth-Bayer (eds.), *Loss and Damage from Climate Change* (Springer, 2019), pp. 475–482; Hösli and Weber, Klimaklagen gegen Unternehmen, pp. 11–14.

[70] Landgericht Essen, Decision of 15 December 2016, 2 O 285 (NVwZ 2017, p. 234).

[71] Oberlandesgericht Hamm, Decision of 1 February 2018, I-5U 15/17, p. 4.

[72] [2020] FCA 1698.

REST's commitment to take various measures concerning climate risk management including by implementing a long-term objective to achieve a net-zero carbon footprint for the fund by 2050 and measuring, monitoring, and reporting outcomes on its climate-related progress and actions in line with the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), among other things.[73]

18.3.3 Legal Basis

As noted earlier, there are at present no specific legal obligations for corporations directly derived from international climate change law – with possible exceptions with regard to State-controlled entities. Accordingly, PCL plaintiffs (must) resort to their domestic laws as a primary legal basis for their claims. These domestic norms are localised primarily in tort law (in particular, the torts of negligence and nuisance) or its civil law equivalents (such as non-contractual law and delicts),[74] corporate law and financial market law, and potentially other areas such as consumer protection law or antitrust law.

And yet, international law may be applicable 'indirectly' in PCL. Domestic laws commonly provide for openly framed (or 'open-ended') standards that purposefully leave room for specification or interpretation. A primary example in the present context is the duty of care (or its equivalents in civil law systems).[75] Arguably, domestic laws do not comprehensively regulate corporate responsibility concerning climate change. Accordingly, at least in Europe, PCL plaintiffs seem to increasingly invoke other sources of the law to give more specific meaning to open standards in national law. Such 'secondary' sources include, in particular, international human rights law (in Europe, especially, the rights to life and to respect for private and family life under the European Convention on Human Rights) and international standards on business conduct (in particular, the UN Guiding Principles and the OECD Guidelines for Multinational Enterprises).[76] 'Secondary' here means that these sources of the law, albeit not directly enforceable against a corporation (either because they are considered to only apply to States or to be some sort of 'soft law'), may well serve as *interpretive sources* to specify a broadly framed standard in domestic law; through this mechanism, they are applied 'indirectly' to specify corporations' and directors' legal obligations.[77] Due to differences between legal traditions, creating such 'indirect' effect through the judiciary may have more chances of success in some jurisdictions (such as in the

[73] See REST, Press Release (2 November 2020). https://rest.com.au/why-rest/about-rest/news/rest-reaches-settlement-with-mark-mcveigh.

[74] For example, in *Lliuya v. RWE* (*Lliuya v. RWE*, Landgericht Essen, Decision of 15 December 2016, 2 O 285 (NVwZ 2017, p. 234)) the claim is based on §1004 of the German *Bürgerliches Gesetzbuch* (Civil Code), a provision resembling the common law tort of nuisance.

[75] With respect to director's duties, see L. Benjamin, The road to Paris runs through Delaware: climate litigation and directors' duties. *Utah Law Review* 2020, 2(1): 313–381, at p. 347.

[76] This was precisely the mechanism used in *Milieudefensie v. Royal Dutch Shell*, where the Court applied an openly framed standard of national law (Book 6, Section 162, of the Dutch *Burgerlijk Wetboek* (Civil Code) – a civil law statute resembling the common law tort of negligence), which it then interpreted in the light of the facts of the matter, climate science, human rights law, and relevant international standards on business conduct. See Hösli, *Milieudefensie et al. v. Shell*, pp. 197–208.

[77] See Hösli, *Milieudefensie et al. v. Shell*, p. 209.

Netherlands) than in others.[78] Generally, courts seem to be increasingly open to novel arguments. For instance, the New Zealand case of *Smith v. Fonterra* begs the question whether there may be a specific 'common law climate tort' that is forward-looking and preventive in nature.[79]

18.3.4 Novel Legal Questions

PCL triggers novel, complex, and uncomfortable questions that most judges are not accustomed to answering. Typically, legal hurdles for PCL plaintiffs relate to justiciability (especially, but not only, in the United States), standing, and proof of causation and damage.[80] Obviously, additional practical hurdles exist, especially due to the high legal costs that such cases entail. In cases concerning compensation for climate change-related damages, the establishment of causation and damage commonly builds on findings of climate science.[81] Some commentators argue that the emerging science on extreme weather attribution may alleviate the burden of proof in this respect.[82] By contrast, in 'internal' cases, the question of causality refers to whether inadequate attention to or insufficient disclosure of climate related risks has led to a financial loss to shareholders or unduly puts a pension fund's beneficiaries' financial entitlements at risk.

Even if liability can be established in principle, questions remain as to its precise scope. For instance, does a corporation's responsibility extend to the full range of direct and indirect emissions (scope one, scope two, scope three)? Does a parent company's responsibility extend to all group emissions (that is, the emissions of all its subsidiaries)? These questions were addressed in substance – to the author's knowledge for the first time by a court in this depth – in *Milieudefensie.* With respect to the first question, the court there affirmed that a company's legal responsibility goes beyond its direct emissions (scope one), stating that there is an international consensus that corporations bear responsibilities concerning their scope three emissions.[83] Remarkably, the court further held that mainly due to its corporate policy setting position for the entire group, Royal Dutch Shell as the primary holding company is in principle responsible for all its subsidiaries' greenhouse gas emissions.[84] *Milieudefensie* for the first time discusses the substance of key legal questions,

[78] According to De Graaf and Jans, Dutch law allows a court to take into account standards in international law when interpreting open-ended norms in domestic law (reflex effect); see K. J. De Graaf, J. H. Jans, The Urgenda decision: Netherlands liable for role in causing dangerous global climate change. *Journal of Environmental Law* 2015, 27(3): 515–527, at p. 525.

[79] C. E. Forster, Novel climate tort? The New Zealand Court of Appeal decision in *Smith v. Fonterra Co-operative Group Limited and others*. *Environmental Law Review* 2022, 24(3): 224–234. Foster points out that the case was grounded in three distinct claims: negligence, public nuisance and a proposed novel tort 'breach of duty'.

[80] See, for example, Setzer and Vanhala, Climate change litigation, pp. 9–10.

[81] See, for example, P. Minnerop, F. E. L. Otto, Climate change and causation: joining law and climate science on the basis of formal logic. *Buffalo Journal of Environmental Law* 2020, 27(1): 49–86, at p. 49.

[82] S. Marjanac, L. Patton, Extreme weather event attribution science and climate change litigation: an essential step in the causal chain? *Journal of Energy and Natural Resources Law* 2018, 36(3): 265–298, at pp. 291–293 (arguing that as attribution science improves in accuracy, forseeability as an essential element of a negligence claim 'will increase in lockstep'). See generally R. F. Stuart-Smith et al., Filling the evidentiary gap in climate litigation. *Nature Climate Change* 2021, 11: 651–655.

[83] Hösli, *Milieudefensie et al. v. Shell*, pp. 200–202 (arguing that this claim is 'probably farfetched' and could have been more carefully discussed by the Court). See also C. Macchi, J. van Zeben, Business and human rights implications of climate change litigation: *Milieudefensie et al. v. Royal Dutch Shell*. *RECIEL* 2021, 30: 409–415, at p. 413.

[84] See Hösli, *Milieudefensie et al. v. Shell*, pp. 202–203.

which is in itself a major development. And yet, more research and case-law is necessary to delineate the contours of corporate climate responsibility more clearly.

As Bouwer points out, '[PCL] requires judges to engage in deeply normative processes, for instance in determining what might be reasonable, or the extent to which parties might be required to foresee problems'.[85] As for now, commentators are divided in their opinions about PCL. For some, PCL (and climate change litigation generally) is a useful tool to put pressure on both heavy corporate emitters and the directors of those companies – even more so considering that regulatory efforts in this direction seem difficult to achieve.[86] Others view going after individual emitters to be a pointless effort, among other reasons arguing that any corporate action following a lost lawsuit (say, a court-ordered reduction in greenhouse gas emissions) will be offset by the actions of competitors.[87] As the 'wave' of PCL can be expected to grow and develop further, this controversy will certainly continue.

18.4 Conclusion

International law and national climate regulations barely address the responsibilities of corporations and other non-State actors. And yet, it is impossible to ignore the crucial role of corporations (and their key corporate governance constituencies including the board of directors, shareholders, and others) in the transition to a global net-zero economy by mid-century. Undoubtedly, corporations are increasingly affected by the growing focus on corporate climate responsibility. PCL is one of the drivers of this development, in addition to increasing regulatory activities, shareholder engagement on climate change, and the growing recognition of unprecedented climate change-related financial risks. In that sense, PCL points to (and potentially contributes to filling) an accountability gap for corporations.

When thinking about the effectiveness of PCL to implement climate policies,[88] one key aspect to consider is that, as is well-known, judicial proceedings may take years until a final decision is rendered. For instance, the matter of *Lliuya v. RWE* has reportedly suffered substantial delays due to the COVID-19-related inability of German judges to travel to Peru.[89] Against the need to achieve substantial reductions of greenhouse gases by 2030 in order to keep somewhat realistic chances of limiting temperature rise under the Paris

[85] Bouwer, The unsexy future of climate change litigation, p. 484.

[86] See, for example, L. Benjamin, *Companies and Climate Change. Theory and Law in the United Kingdom* (Cambridge University Press, 2021), p. 172 (adding that '(r)egulatory approaches which impose transnational liability on companies would prove a more comprehensive solution, but may be difficult to achieve'); C. P. Carlarne, The essential role of climate litigation and the courts in averting climate crisis, in Mayer and Zahar, *Debating Climate Law*, pp. 111–127.

[87] See F. Thornton, 'The Absurdity of Relying on Human Rights Law to Go After Emitters', in Mayer and Zahar, *Debating Climate Law*, p. 159; A. Zahar, Shell and the essential irreducibility of collective responsibility for climate change (SSRN, 2021). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3898915. R. Gunderson, C. Fyock, The political economy of climate change litigation: is there a point to suing fossil fuel companies? *New Political Economy* 2022, 27(3): 441–454: 'bringing claims against corporations for civil wrongs will remain ineffective as a mitigation strategy because many carbon-intensive corporations can absorb substantial lawsuit-related costs and, even if legal costs push fossil fuel companies out of business, their competitors will step in to extract open reserves'. This 'market substitution' argument was rejected by the Court of First Instance of The Hague (*Milieudefensie v. Royal Dutch Shell*, paras. 4.4.49–50).

[88] With respect to the influence of climate change litigation more broadly, see B. J. Preston, The influence of climate change litigation on governments and the private sector. *Climate Law* 2011, 2: 485–513.

[89] Germanwatch, Climate lawsuit against RWE in decisive phase: on-site meeting with experts in Peru concluded (press release, 2022). www.germanwatch.org/en/85437.

Agreement's peak temperature goal,[90] can litigation deliver results fast enough, even if the plaintiffs succeed? Or is the judicial process simply too slow in the face of escalating climate change impacts, rendering PCL a moot exercise? Be that as it may, recent examples show that quicker outcomes are possible through settlements,[91] and that the effectiveness of PCL may be increased by courts declaring their orders to be immediately effective.[92] Further, non-judicial bodies such as NCPs under the OECD Guidelines for Multinational Enterprises may provide 'results' more swiftly.

As regards the need for further research, in addition to the multitude of legal questions triggered by PCL, more systematic research on PCL extrapolated from national law settings would be useful to better grapple with the phenomenon of PCL from a comparative point of view. Such research would benefit from improved accuracy of the existing climate change litigation databases. On a final note, while only time will tell whether PCL will contribute to deliver on what is probably its main purpose, to affect corporate behaviour as regards climate change, we can conclude that this type of litigation has reached a level of sophistication and likelihood of success that corporations and diligent directors certainly cannot ignore.

[90] In pathways limiting global temperature increase to 1.5°C with no or limited overshoot (1.5°C pathways), global net anthropogenic CO_2 emissions need to drop by about 45% until 2030 (compared to 2010 levels), reaching net zero around 2050.

[91] See, for example, *McVeigh v. REST.*

[92] Which has occurred in *Milieudefensie v. Royal Dutch Shell*, at paragraph 4.5.7: 'The interest of (the plaintiffs) for the immediate compliance with the order by (the respondent) outweighs (the respondent's) possible interest in maintaining the status quo until a final and conclusive decision has been made'.