

If at First You Don't Succeed: Suing Corporations for Climate Change

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Abstract—This article discusses the history and the future prospects of private climate litigation, which seeks to hold private entities legally accountable for climate change-related damage or threats of damage. It argues that, following failed attempts to clear judicial thresholds with regard to standing, proof of harm and causation, a new wave of private climate change lawsuits can be identified, and it is by no means doomed to failure. This is because climate change litigation takes place in a rapidly evolving *scientific, discursive* and *constitutional* context, which generates new opportunities for judges to rethink the interpretation of existing legal and evidentiary requirements and apply them in a way that will enhance the accountability of major private carbon producers. Moreover, even unsuccessful cases can contribute to articulating climate change as a legal and financial risk, which may help to guide climate change-responsive adjudication in the longer term.

Keywords: private climate litigation, Carbon Majors, judicial interventions, climate change causation, corporate responsibility, climate risk disclosure

1. Introduction

In recent talks, former NASA scientist James Hansen called for a wave of lawsuits against governments and fossil fuel companies that are delaying action on climate change. For Hansen, a pioneer of climate science, the key is to sue corporations like ExxonMobil, BP and Shell for the damage they are doing to

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the environment, those affected and future generations.¹ Hansen is currently involved in a lawsuit against the US federal government, brought by his granddaughter and 20 others.² Similarly, Jeffrey Sachs, economist, director of the Earth Institute at Columbia University and a UN special adviser, now urges citizens to pursue major polluters and negligent governments for liability and damages, and ‘flood the courts’ with legal cases demanding the right to a safe and clean environment.³

This article contributes to the burgeoning literature on climate litigation by examining recent developments in climate litigation launched against corporations. We argue that, notwithstanding the failure of a past generation of climate litigation to hold private actors to account, the second wave of pending court challenges is by no means doomed to failure. The second wave is characterised by a broader range of arguments and litigation strategies than its predecessor, and unfolds within a rapidly evolving *scientific*, *discursive* and *constitutional* context. We argue that this evolving context generates new opportunities for judges to rethink the interpretation of existing legal and evidentiary thresholds for claimants to meet the burden of proof and apply them in a way that will enhance the accountability of private greenhouse gas (GHG) emitters. Although the judicial enforcement of corporate accountability for climate change has proved elusive thus far, future cases may fare better. Moreover, even unsuccessful cases may help to guide climate change-responsive adjudication in the longer term.

The structure of this article is as follows. Section 2 situates our research within the broader context of climate litigation and explains the distinguishing characteristics of strategic private climate litigation, which is the focus of our investigation. Section 3 provides an expanded analysis of key issues in the first wave of strategic private climate litigation, and examines the challenges involving jurisdiction, standing and causation in prominent cases. Section 4 discusses the changes in the scientific, discursive and constitutional context in which current lawsuits emerge, and their likely impact on the outcome of adjudication. Section 5 contemplates the possibility that this second wave of private litigation may still end in failure, and reflects on the contribution, if any, of climate litigation under such circumstances. Section 6 presents conclusions and issues for further exploration.

¹ Jonathan Watts, ‘“We Should Be on the Offensive”—James Hansen Calls for Wave of Climate Lawsuits’ *The Guardian* (London, 17 November 2017) <www.theguardian.com/environment/2017/nov/17/we-should-be-on-the-offensive-james-hansen-calls-for-wave-of-climate-lawsuits> accessed 29 November 2017.

² *Juliana v United States*, No 6:15-cv01517 (2017) <<http://climatecasechart.com/case/juliana-v-united-states/>> accessed 29 November 2017.

³ Jeffrey Sachs, ‘A Proposal for Climate Justice’ lecture delivered at the London School of Economics and Political Science and hosted by the Grantham Research Institute on Climate Change and the Environment (3 October 2017) <www.lse.ac.uk/Events/2017/10/20171003t1830vOT/a-proposal-for-climate-justice> accessed 29 November 2017.

2. Strategic Private Climate Litigation

Climate litigation is a broad and still maturing term that refers to the rapidly growing body of lawsuits in which climate change and its impacts are either a contributing or key consideration in legal argumentation and adjudication.⁴ More than 1000 cases have been identified as concerning climate change litigation—828 in the United States alone, and 263 cases in 25 other countries, with most filed since the mid-2000s.⁵ The majority have climate change as a secondary component of the lawsuit. Such ‘incidental climate litigation cases’ deal with issues from false green advertising to challenges over permits issued, to energy or coal mining activities. In the 25 non-US jurisdictions, over three-quarters of the cases concern climate change only at the periphery of the argument and acknowledge the issue as relevant but not determinative.⁶ Strategic climate litigation, in contrast, concerns cases initiated to exert bottom-up pressure on governments (‘strategic public climate litigation’) or corporations (‘strategic private climate litigation’) to mitigate, adapt or compensate for losses resulting from climate change. Strategic climate litigation cases are in the minority, but receive considerable attention from academics, state and non-state actors.

Strategic public climate litigation aims to influence public policy or policy decisions with climate change implications, primarily through the attainment of injunctive relief. Cases asserting governmental failure to account for GHG emissions associated with public projects and cases of judicial review of public regulatory action (or inaction) on climate change have already achieved some degree of success.⁷ The first was *Massachusetts v Environmental Protection Agency (EPA)* (2007), in which the US EPA was found in breach of its statutory obligations to regulate GHG emissions under the Clean Air Act.⁸

⁴ A recent report by the United Nations Environment Program (UN Environment), in cooperation with the Sabin Center for Climate Change Law at Columbia University (Sabin Center), concludes that climate change litigation is not only proliferating, but also growing in ambition and effectiveness. See UN Environment, ‘The Status of Climate Change Litigation: A Global Review’ (2017) <<http://wedocs.unep.org/bitstream/handle/20.500.11822/20767/climate-change-litigation.pdf?sequence=1&isAllowed=y>> accessed 25 June 2017.

⁵ Non-US cases can be found in the Climate Change Laws of the World database maintained by the Grantham Research Institute on Climate Change and the Environment, at the London School of Economics and Political Science, jointly with the Sabin Center, ‘Climate Change Laws of the World Database’ (2017) <www.lse.ac.uk/GranthamInstitute/climate-change-laws-of-the-world> accessed 3 February 2018. US cases are listed in the Climate Litigation Database maintained by the Sabin Center <<http://climatecasechart.com/us-climate-change-litigation/>> accessed 3 February 2018. Note that while these are the most comprehensive resources available on the subject, they are not exhaustive.

⁶ For this and other trends in climate litigation see Michal Nachmany and others, ‘Global Trends in Climate Change Legislation and Litigation’ (2017) <www.lse.ac.uk/GranthamInstitute/publication/global-trends-in-climate-change-legislation-and-litigation-2017-update/> accessed 25 October 2017; Joana Setzer and Mook Bangalore, ‘Regulating climate change in the courts’ in A Averchenkova, S Fankhauser and M Nachmany (eds), *Trends in Climate Change Legislation* (Edward Elgar 2017) 175–92.

⁷ Although focused on regulatory behaviour, these cases are highly relevant to corporations. Judicial review can: lead to the adoption of more stringent emissions standards; compel the inclusion of GHG emissions limits in regulatory permits issued for new activities or particular sectors; result in the delay or revocation of permits and licences; or lead to more stringent procedural obligations (reporting, disclosure).

⁸ *Massachusetts v Environmental Protection Agency (EPA)* 549 US 497 (2007).

The 2015 *Urgenda* case, which held that, in failing to adopt sufficiently ambitious mitigation targets, the Dutch state had breached its duty of care *vis-à-vis* society under Dutch tort law, as provided in section 6:162 of the Dutch Civil Law Code,⁹ heralded a new era for strategic public climate litigation.¹⁰ Mere months later, in the less publicised but equally momentous decision in *Leghari*, the Lahore High Court determined that the national government's delay in implementing Pakistan's climate policy constituted a breach of the country's human rights obligations.¹¹ The momentum created by *Urgenda* and *Leghari* led to similar cases emerging in the courts of several jurisdictions, from Belgium to India and the United States.¹²

The focus of this article, however, is not on strategic public but specifically on strategic *private* climate litigation. It involves cases launched with the explicit aspiration to influence corporate behaviour and strategies in relation to climate change.¹³ In the early 2000s, a small clutch of lawsuits against oil, gas and electric companies was tested in North American courts. Victims claimed that the actions of such companies exacerbated damages they suffered as a result of extreme weather events. The cases were high profile because of the novelty of their subject matter, yet all were unsuccessful. Claimants found it exceedingly difficult to surmount procedural and substantive thresholds. The discouraging precedents, however, evidently have not dampened enthusiasm for the cause.¹⁴ Indeed, a second wave of strategic private climate litigation can now be observed. The current strategic cases against private defendants typically allege climate change-related damage and seek compensation from major carbon producers.

Two strong motivations underpin renewed efforts to target corporations as defendants. The first relates to their *appropriateness*, that is, the argument that corporations are the 'right' parties to bear responsibility for climate change.

⁹ *Stichting Urgenda v Government of the Netherlands (Ministry of Infrastructure and the Environment)*, ECLI:NL:RBDHA:2015:7145, Rechtbank Den Haag, C/09/456689/HA ZA 13-1396, para 4.35.

¹⁰ Giulio Corsi, 'A Bottom-Up Approach to Climate Governance: The New Wave of Climate Change Litigation' ICCG Reflections No 57 (October 2017). The *Urgenda* ruling is currently under appeal and a verdict is anticipated in October 2018.

¹¹ *Ashgar Leghari v Federation of Pakistan* (WP No 25501/2015), Lahore High Court Green Bench, Orders of 4 and 14 September 2015. In a far-reaching judgment, the Green Bench of the Lahore High Court ordered the Pakistani government to appoint a focal person on climate change and develop a list of adaptation measures to be implemented by 2015. The court also established a Climate Change Commission to oversee the government's compliance with its orders.

¹² The analysis of strategic public climate litigation is outside the scope of this article. For some research on the subject, see Josephine van Zeven, 'Establishing a Governmental Duty of Care for Climate Change Mitigation: Will *Urgenda* Turn the Tide?' (2015) 4 TEL 2; Jesse Lambrecht and Claudia Ituarte-Lima, 'Legal Innovation in National Courts for Planetary Challenges: *Urgenda v State of the Netherlands*' (2016) 18 Env L Rev 1.

¹³ In only 34 out of 263 cases currently identified in jurisdictions other than the United States are corporations defendants or co-defendants. Grantham Research Institute on Climate Change and the Environment, 'Climate Change Laws of the World Database' (2017) <www.lse.ac.uk/GranthamInstitute/climate-change-laws-of-the-world> accessed 3 February 2018. It is worth noting that corporations also feature as claimants in climate litigation, typically to challenge climate change regulation. This article focuses on cases in which corporations feature as defendants.

¹⁴ Reimund Schwarze, 'Liability for Climate Change: The Benefits, The Costs, and the Transaction Costs' (2007) 155 U Pa L Rev 1949.

Arguably, enterprises in energy, transport, agriculture and other manufacturing sectors such as cement bear a collective and therefore legal responsibility for climate change through their carbon-emitting activities.¹⁵ This view is also voiced by non-governmental organisations (NGOs) and climate activists. For example, a report published by the Climate Justice Programme asserts:

The Carbon Majors are responsible for two thirds of the human-made carbon emissions in the atmosphere today. These corporations have made outrageous profits while outsourcing the true cost of their product upon the poor who are paying with their homes, ability to grow food and with their lives.¹⁶

Moreover, corporations are increasingly cast as pivotal actors in the global effort to transition to low-carbon economies and improve resilience. Since the consumption of fuel products for electricity generation and transportation generates nearly 70% of global GHGs, corporations play a vital role in achieving climate change mitigation.¹⁷ When considering adaptation, corporations are involved in infrastructure provision, development and land use.

The second motivation relates to the potential *effectiveness* of targeted private climate litigation. Successful action against a relatively small group of corporations who are responsible for a large percentage of emissions could generate a considerable global impact. Richard Heede's work, which seeks to measure the responsibility for carbon emissions of the 'Carbon Majors', the world's largest GHG emitters, buttresses this argument.¹⁸ From a legal perspective, Hsu contends that 'seeking direct civil liability against those responsible for [GHG] emissions' is the only litigation strategy 'that holds out any promise of being a magic bullet'.¹⁹ Hsu further observes that '[a civil] litigation strategy is potentially a means of regulation itself, as a finding of liability could have an enormous ripple effect and send [GHG] emitters scrambling to avoid the unwelcome spotlight'.²⁰ Hence, private climate litigation targeted at the Carbon Majors may be more effective than either public litigation or alternative governance strategies.

The turn to private litigation targeting corporations is, furthermore, consistent with the transnationalisation of climate change governance in response to inadequate international regulation by states under the auspices of

¹⁵ Jutta Brunnée and others (eds), *Climate Change Liability: Transnational Law and Practice* (CUP 2012) 29.

¹⁶ Keely Boom, Julie-Anne Richards and Stephen Leonard, 'Climate Justice: The International Momentum towards Climate Litigation' (June 2016) <<http://climatejustice.org.au/wp-content/uploads/2016/06/Report-Climate-Justice-2016.pdf>> accessed 5 August 2016. The term 'Carbon Majors' usually refers to 90 corporations that are responsible for over 30% of global industrial GHG emissions. As a result, emissions from these companies rival those of nation states. See Richard Heede, 'Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010' (2014) 122 *Climatic Change* 229.

¹⁷ See Jacqueline Peel and Hari M Osofsky, *Climate Change Litigation: Regulatory Pathways to Cleaner Energy* (CUP 2015) 173–220.

¹⁸ Heede (n 16).

¹⁹ Shi-Ling Hsu, 'A Realistic Evaluation of Climate Change Litigation through the Lens of a Hypothetical Lawsuit' (2008) 79(3) *U Colo L Rev* 13.

²⁰ *ibid* 14.

the United Nations Framework Convention on Climate Change (UNFCCC).²¹ The dismantling of the distinction between Annex I and non-Annex I member states in the post-Kyoto Protocol era, as well as deep resistance to the idea of state liability for loss and damage,²² has led to calls for a new approach that predominantly focuses on the responsibility of non-state actors, particularly Carbon Major companies with a presence in both Annex I and non-Annex I countries and operating in a transnational regulatory space.²³

3. *The First Wave of Private Climate Litigation*

The first wave of private climate litigation spanned 2005 to 2015 and was mainly concentrated in the United States. Several lawsuits filed in state district courts were dismissed on the grounds of non-justiciability of a political question.²⁴ The most salient examples are *Comer v Murphy Oil* and *Kivalina v ExxonMobil*. In both cases, the plaintiffs argued that the defendants (energy producers) engaged in emitting activities which contributed substantially to climate change and were therefore responsible for climate change-related injuries suffered by them. In *Comer*, the plaintiffs (residents of Louisiana) alleged that the emitting activities of the defendant energy companies contributed to climate change and had intensified the destructive capacity of Hurricane Katrina.²⁵ Similarly, in the *Kivalina* case, the plaintiffs (Inupiat Eskimo peoples from Alaska) alleged that the activities of a group of energy companies, including ExxonMobil,²⁶ were responsible for the transboundary release of GHGs, which had produced a series of adverse climate impacts in Kivalina, such as coastal erosion and the melting of Arctic sea ice and

²¹ See Kenneth W Abbott, 'The Transnational Regime Complex for Climate Change' (2012) 30 *Environment and Planning C: Politics and Space* 571; Liliana B Andonova, Michele M Betsill and Harriet Bulkeley, 'Transnational Climate Governance' (2009) 9(2) *Global Environmental Politics* 52.

²² A 2012 UNFCCC-commissioned literature review defined climate change 'loss and damage' as: 'the actual and/or potential manifestation of impacts associated with climate change in developing countries that negatively affect human and natural systems'. Damage is considered to be the physical impact of climate change, while losses are seen in terms of monetised values. See UNFCCC, 'Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts' (2013) <https://unfccc.int/files/meetings/bonn_nov_2017/in-session/application/pdf/cp23_auv_i7.pdf> accessed 14 May 2018; Emma Lees, 'Responsibility and Liability for Climate Loss and Damage after Paris' (2017) 17(1) *Climate Policy* 59–70.

²³ Heede (n 16) 231. See also Peter C Frumhoff, Richard Heede and Naomi Oreskes, 'The Climate Responsibilities of Industrial Carbon Producers' (2015) 135(1) *Climatic Change* 157; Lisa Benjamin, 'The Responsibilities of Carbon Major Companies: Are They (and Is the Law) Doing Enough?' (2016) 5 *TEL 2; Environmental Law Alliance Worldwide (ELAW), 'Holding Corporations Accountable for Damaging the Climate'* (2014) <www.elaw.org/system/files/elaw.climate.litigation.report.pdf> accessed 3 August 2016. See also Peel and Osofsky (n 17) 13. Peel and Osofsky argue that litigation has a vital role to play in addressing the failures of the international climate treaty regime with respect to emissions reductions.

²⁴ See *People of the State of California v General Motors Corp* No C06-05755 (ND Cal, 17 September 2007); *American Electrical Power Co (AEP) v Connecticut* 564 US 410; *Kivalina v ExxonMobil Corporation et al* 696 F.3d 849, 2012 WL 4215921 (9th Cir 2012); *Comer v Murphy Oil USA Inc* 607 F.3d 1049 (5th Cir 2010).

²⁵ *Comer* (n 24).

²⁶ In 2008, the villagers of Kivalina filed a lawsuit (encompassing a series of common law tort claims) against nine oil companies, fourteen power companies, and one coal company.

permafrost.²⁷ These impacts threatened the existence of their village and way of life, and ultimately resulted in their displacement and relocation.

Common allegations in the first wave of private climate litigation were built around the argument that the carbon-emitting behaviour of corporations causes damage to legally protected interests, and that this damage should be remedied. Consequently, most cases revolved around (i) procedural questions of standing and jurisdiction, and (ii) substantive issues of causation and damage. The sections below further explore the court's reasoning on these matters, with specific reference to *Comer* and *Kivalina*.

A. *Standing and Jurisdiction*

In the first wave of private climate litigation, corporate defendants successfully filed motions to dismiss plaintiffs' claims on procedural grounds. In the United States, corporate defendants managed to prevent several climate change lawsuits from proceeding to the merits stage by challenging the court's jurisdiction through the invocation of the *standing* and *political question* doctrines as a first line of defence. Derived from article III of the US Constitution, the standing doctrine stipulates that the jurisdiction of federal courts is limited to cases where: (i) the plaintiff has suffered an injury in fact; (ii) that is fairly traceable to the defendant's misconduct (causation)²⁸; and (iii) is capable of being redressed by the court.²⁹ Unless all three conditions are met, the plaintiff will lack standing before the court. As such, the standing doctrine has posed a considerable challenge to plaintiffs seeking to bring claims alleging harms resulting from climate change.

While courts have accepted injuries alleged by plaintiffs (eg damage claims for rising sea levels and loss of recreational or aesthetic value from changing landscapes), they have generally rejected their assertions regarding causation and redressability.³⁰ In *Massachusetts v EPA*, the court found that, as the State of Massachusetts, the plaintiff was entitled to 'special solicitude',³¹ and decided that the failure to regulate GHGs presented an 'actual' and 'imminent risk of harm to the state'.³² *A contrario*, private claimants do not benefit from 'special

²⁷ *Kivalina* (n 24).

²⁸ US Constitution, art III; the fair traceability/causation limb of the art III standing doctrine is separate from the 'proximate causation' or 'causation in fact' requirements under the tort of negligence. The former is a *procedural requirement* that must be cleared by a plaintiff before a court can even proceed to make a determination on causation at the *merits* stage of the case.

²⁹ US Constitution, art III.

³⁰ Niran Somasundram, 'State Court Solutions: Finding Standing for Private Climate Change Plaintiffs in the Wake of *Washington Environmental Council v Bellon*' (2015) 42 *Ecology LQ* 1.

³¹ 'Special solicitude' is a legal rule that refers to the special consideration afforded by the US Supreme Court to the federal states. This is on the basis that states have special, quasi-sovereign interests in protecting their lands, the air and the health of their populations which renders them exempt from meeting requirements under the law of standing that plaintiffs are generally required to fulfil when suing the US federal government. Christie Henke, 'Giving States More to Stand On: Why Special Solicitude Should Not Be Necessary' (2008) 35 *Ecology LQ* 385.

³² *Massachusetts v EPA* (n 8).

solicitude'. Accordingly, the federal court decisions that followed this case denied standing to private plaintiffs seeking relief for climate change against regulatory agencies or GHG emitters.³³

Alternatively, private claims relating to climate change have stumbled over the *political question doctrine*, which stipulates that federal courts will not adjudicate certain controversies because their resolution is a matter for the political branches of government. Under American constitutional law, the political question doctrine prescribes that courts can exclusively adjudicate on questions of law, which are deemed justiciable. Therefore, courts will generally refrain from adjudicating questions that are inherently political.³⁴ In *Massachusetts v EPA* and *American Electrical Power v Connecticut*, the US Supreme Court ruled that the EPA, operating under the executive branch of government, has exclusive authority to regulate GHG emissions pursuant to the Clean Air Act.³⁵ Consequently, American courts deferred to the executive on questions of fact pertaining to climate change and opined that such questions require an initial policy determination.

In *Comer* and *Kivalina*, the plaintiffs filed a series of tort claims in the areas of nuisance, civil conspiracy and negligence. In response, the defendant corporations successfully contended that the plaintiffs' arguments raised inherently non-justiciable political questions in respect of which courts have no subject-matter jurisdiction.³⁶ Such questions, the defendants argued, were more suited to resolution by the political branches of government.³⁷ In both cases, the district courts found in favour of the defendants and ruled that they were precluded by the political question doctrine from considering the plaintiffs' nuisance claims.³⁸ Consequently, both courts decided that the plaintiffs lacked standing.

Developments briefly appeared to take a more favourable turn for private claimants in climate litigation when, in *Comer*, the plaintiffs were successful on appeal. A panel of the district court ruled that the plaintiffs had standing and their claims were justiciable.³⁹ However, the case was eventually dismissed and a further petition to the US Supreme Court was denied.⁴⁰ In 2011, the same plaintiffs attempted to file a new complaint in the Southern District Court of Mississippi, but had their claims dismissed on the basis that they were barred

³³ See eg *Washington Environmental Council v Bellon* 732 F.3d 1131, 1136 (9th Cir 2013).

³⁴ The political question doctrine derives from the US Supreme Court's decision in *Marbury v Madison* 5 US (1 Cranch) 137; *Baker v Carr* 369 US 186 establishes a set of criteria for determining if a question is political in nature.

³⁵ *AEP* (n 24).

³⁶ *Kivalina* (n 24); *Comer* (n 24).

³⁷ See *Native Village of Kivalina v ExxonMobil Corp* 696 F.3d 849, 858 (9th Cir 2012), cert denied, 133 S Ct 2390 (2013); *Comer* (n 24) 863–7.

³⁸ *ibid.*

³⁹ *Comer* (n 24).

⁴⁰ *In re Comer* US No 10-294 (Jan. 10, 2011).

by the doctrine of *res judicata*,⁴¹ the statute of limitations, the political question doctrine, lack of standing and an inability to prove causation.⁴²

B. Causation

The difficulty of proving causation—the link between an actor's behaviour and subsequent harm to another—has also been an obstacle to successful private climate litigation. Causation requires that a plaintiff demonstrate a causal connection between an injury and the defendant's action to satisfy the proposition that remedies for injury should come from those responsible. Yet, pinpointing the actor(s) responsible for an injury can be factually and conceptually difficult, if not impossible, in cases where the damage is a result of climate change. The difficulties for plaintiffs to persuasively pinpoint the cause of climate change-related harm is, again, beautifully illustrated in *Kivalina*. The district court held that the plaintiffs could not demonstrate either a 'substantial likelihood' that ExxonMobil's activities had caused the plaintiffs' injuries or that the 'seed' of their injuries was 'fairly traceable' to the defendant's GHG emissions.⁴³ Specifically, the court concluded that the plaintiffs could not establish causation because there was 'no realistic possibility of tracing any particular alleged effect of global warming to any particular emissions by any specific person, entity, [or] group at any particular point in time'.⁴⁴ The Ninth Circuit affirmed the decision of the district court, although it did so without revisiting the issues raised by the political question doctrine and standing.⁴⁵ The Ninth Circuit held, instead, that federal legislation pre-empted the plaintiffs' federal common law claims, explaining that any solution for the alleged effects of global warming 'must rest in the hands of the legislative and executive branches of our government, not the federal common law'.⁴⁶ Similarly, the district court in the *Comer* case ruled that the plaintiffs could not demonstrate proximate causation.⁴⁷

4. *The Second Wave of Private Climate Litigation*

Although so far no precedents exist of successful private climate litigation, future private climate lawsuits are by no means doomed to failure. A rapidly evolving *scientific*, *discursive* and *constitutional* context has cleared the path for a second wave of strategic private litigation cases, which have a better chance of overcoming the judicial hurdles of standing, proof of harm and causation that scuppered earlier attempts. This 'new wave' of private climate litigation was

⁴¹ *Res judicata* refers to the common law doctrine whereby claims that have already been adjudicated by a competent court cannot be relitigated by the same parties.

⁴² *Comer et al v Murphy Oil USA et al* No 1:11-cv-00220 (SD Miss).

⁴³ *Kivalina* (n 24).

⁴⁴ *Kivalina* (n 24).

⁴⁵ See *Kivalina* (n 37).

⁴⁶ *Kivalina* (n 37).

⁴⁷ *Comer* (n 24).

motivated by the publication of the Carbon Majors study in 2013 and has spread beyond the United States into new jurisdictions. It gathered momentum in 2015, with a petition filed with the Commission on Human Rights of the Philippines by typhoon survivors, advocates, NGOs including Greenpeace Southeast Asia, and thousands of online supporters.⁴⁸ This initiative was followed by cases such as *Lliuya v RWE*,⁴⁹ also filed in 2015; the cases filed by two Californian counties (San Mateo and Marin County) and the city of Imperial Beach⁵⁰ against 37 oil, natural gas and coal companies and trade groups in 2017; *Guy Abrahams v Commonwealth Bank of Australia*,⁵¹ which was filed in the Federal Court of Australia, again in 2017; and a lawsuit filed by New York City against the world's five largest Carbon Majors (ExxonMobil, Shell, BP, Chevron and Conoco-Phillips) in January 2018.⁵² At the time of writing, the second wave of strategic private climate litigation shows no sign of cresting, as news alerts regarding new or planned litigation continue to be filed on a regular basis.

Focusing on (i) the *scientific context*, we examine how new developments in climate science and research are delivering new evidence that can strengthen assertions of a causal link between climate change-related harm and a private company's behaviour, which could clear a major hurdle on the path towards establishing standing and vindicating claims. With regard to (ii) *legal discourse*, we argue that better prospects for establishing causal connections between climate change harm and the behaviour of a discrete group of corporate defendants could, in turn, augment the precedential value of successful tobacco and asbestos litigation. We also reflect on recent changes in the discourse around directors' liability and disclosure requirements, which could conceivably alter understandings of what constitutes responsible 'climate change behaviour' and open the door to new categories of claimants. Finally, we take account of (iii) the changing environmental *constitutional context* and identify jurisdictions in which climate-based claims before the court may find a more receptive hearing, thus raising the likelihood of successful private litigation.

A. *Scientific Context*

The first factor propelling a new wave of strategic private climate litigation—and the likelihood of courts upholding claims in damages against large

⁴⁸ *Philippines Reconstruction Movement and Greenpeace v Carbon Majors* Case No CHR-NI-2016-0001 (2015) <www.lse.ac.uk/GranthamInstitute/litigation/in-re-greenpeace-southeast-asia-et-al-2015_-_commission-on-human-rights-of-the-philippines-2015/> accessed 21 August 2017.

⁴⁹ *Saul Luciano Lliuya v RWE* (2017) 20171130 Case No-2-O-28515.

⁵⁰ *County of San Mateo v Chevron Corp* (2017) <<http://climatecasechart.com/case/county-san-mateo-v-chevron-corp/>> accessed 21 August 2017.

⁵¹ *Guy Abrahams v Commonwealth Bank of Australia* (2017) VID879/2017. <www.lse.ac.uk/GranthamInstitute/litigation/abrahams-v-commonwealth-bank-of-australia/> accessed 21 August 2017.

⁵² *New York v BP plc* (2017) <<http://climatecasechart.com/case/city-new-york-v-bp-plc/>> accessed 5 February 2018.

emitters—is the scientific context in which the litigation evolves. Strategic private climate litigation today looks significantly different from private climate litigation 10 years ago as a result of (i) the growth and consolidation of climate science released by the Intergovernmental Panel on Climate Change (IPCC), and better and up-to-date localised data; (ii) the increased possibility of quantifying the proportional contribution of the world's largest emitters to climate change; and (iii) developments in attribution science.

(i) The growing resilience of climate science

The first wave of strategic climate litigation was underpinned by the syntheses of climate change data released by the IPCC. In the United States, *Comer v Murphy Oil* gave states the green light to use IPCC climate science to prove the existence of anthropogenic climate change.⁵³ The plaintiffs' pleadings relied heavily on IPCC-certified science, furnishing climate models that project increases in global temperatures as supporting evidence.⁵⁴ IPCC data was treated as sufficient to confirm the requirement of 'fair traceability'. Although the *Comer* case ultimately failed after being remanded to the district court for a decision on the substance, the Court of Appeal's engagement with the question of climate change causation beyond the level of a *prima facie* dismissal hints at the potential for future judicial recognition of a less stringent climate change causation threshold.

The new wave of strategic climate litigation draws upon the existence of a robust scientific consensus on anthropogenic climate change, as articulated by the IPCC Fifth Assessment Report.⁵⁵ In the area of public climate litigation, the Dutch *Urgenda* case aptly illustrates that courts in civil law jurisdictions are willing to embrace the IPCC assessment reports as incontrovertible evidence of climate change as a serious humanitarian and planetary threat.⁵⁶

Moreover, climate science is being used more strategically by claimants, with the most recent and localised scientific evidence infused in the proceedings. In a string of recent lawsuits filed by US local authorities in locations ranging from Richmond, Virginia, to the City of Imperial Beach, California, the local authority plaintiffs assert that large corporations such as Chevron and Royal Dutch Shell are directly responsible for a substantial portion of committed sea level rise (sea level rise that will occur even in the absence of any future

⁵³ Francis Menton, 'Issues of Proof in Climate Change Litigation' (2009) 242 *New York Law Journal* 124. In the *Comer* case, the Court of Appeals for the Fifth Circuit court reversed the district court's initial ruling in the wake of the IPCC's publication of its Third Assessment Report in 2009. *Kivalina* (n 24); *Comer* (n 24). In the same vein, IPCC assessments were accepted as evidence in *AEP* (n 24), where the US Supreme Court ruled that corporations cannot be sued for climate change under federal common law because the Clean Air Act empowers the EPA to regulate carbon and GHG emissions.

⁵⁴ *Comer* (n 24) 863–7.

⁵⁵ IPCC, 'Fifth Assessment Report (AR5)' (2013–2014) <www.ipcc.ch/report/ar5/> accessed 20 May 2017. The IPCC is currently in its sixth assessment cycle and the next round of IPCC assessment reports (AR6) are due to be published in 2021.

⁵⁶ *Urgenda* (n 9).

emissions) because of the consumption of their fossil fuel products.⁵⁷ Accordingly, they seek compensation for the costs of responding to flooding events and adapting to current and future climate change damage from sea-level rise. In their argumentation, the plaintiffs rely on up-to-date sea-level-rise science and vulnerability evaluations. These cases shift the focus from meteorological change to sea-level change, which has become explicitly linked to a warming planet. The greater precision in mapping areas prone to inundation, or susceptible to greater flooding risks due to rising sea levels, may help to both visualise and actualise damaging climate change impacts in a way that was previously difficult.

(ii) *Quantifying businesses' historical emissions*

In the first wave of strategic private climate litigation commonly corporate defendants argued that their contribution to GHG emissions is insignificant in relation to historical or global emissions, and therefore cannot be said to directly cause climate change harms or have a significant environmental impact.⁵⁸ The temporal and geographical scope of anthropogenic climate change spans decades and continents. The diffuse and transboundary character of GHG emissions renders it difficult to attribute liability for climate change to particular actors. Courts were therefore reluctant to make definitive findings of fact about climate change causation, and tended to regard climate change as a consequence of collective policies rather than individual choices. For that reason, climate change challenges were treated as political questions that were generally unsuitable for judicial review or adjudication.

However, advances in climate science have enabled researchers to identify discrete groups of potential defendants whose contributions to the climate crisis are identifiable, measurable and significant. Richard Heede's 2013 study was the first to map and quantify the cumulative emissions of the 90 largest carbon producers from 1854 to 2010.⁵⁹ The study calculates a percentage figure for the individual contribution of each 'Carbon Major Entity' of two-thirds of all global anthropogenic carbon emissions.⁶⁰ Although the study and its methodology are not without controversy,⁶¹ the results of Heede's research

⁵⁷ Laura Paddison, 'Exxon, Shell and Other Carbon Producers Sued for Sea Level Rises in California' *The Guardian* (London, 26 July 2017) <www.theguardian.com/sustainable-business/2017/jul/26/california-communities-lawsuit-exxon-shell-climate-change-carbon-majors-sea-level-rises> accessed 13 October 2017; *County of Marin v Chevron Corp* CIV1702586 Cal Super Ct, 3; *City of Oakland v BP plc* 3:17-cv-06011; *New York v BP plc* (n 52).

⁵⁸ Jacqueline Peel, 'Issues in Climate Change Litigation' (2011) 1 *Climate Change Law Review* 15, 16.

⁵⁹ Heede (n 16). 1854 to 2010 roughly corresponds to the period since the Industrial Revolution to the present day.

⁶⁰ Heede (n 16).

⁶¹ Douglas Starr, 'Just 90 Companies Are to Blame for Most Climate Change, This Carbon Accountant Says' *Sciencemag.org* (August 2016) <www.sciencemag.org/news/2016/08/just-90-companies-are-blame-most-climate-change-carbon-accountant-says> accessed 11 October 2016. UC San Diego political scientist David Victor does not criticise the findings of Heede's research, but notes that focusing on the 90 major carbon producers ignores that we are all energy users and have all contributed to the problem. While Heede has conceded this point, he has

have since been peer reviewed and published in the academic journal *Climatic Change*. A critical finding of this study is that the 90 Carbon Majors released more than half of their total contribution of carbon emissions after 1988, which indicates that the roots of the problem are more recent and easier to trace than previously assumed.⁶²

Many regard this study as ‘a turning point in the debate about apportioning responsibility for climate change’⁶³ and commend it as the first study of its kind to ‘[identify] a discrete class of defendants’⁶⁴ in climate litigation, with the potential to assist plaintiffs in claiming compensation for climate change harms. ELAW claims that the existence of such research ‘removes a previously insurmountable hurdle for grassroots lawyers seeking to hold major carbon emitters accountable’, and that it will ‘help lawyers around the world seeking to hold corporations liable to meet the burden of causation’.⁶⁵

Indeed, shortly after its publication, the Carbon Majors study formed the basis of two unprecedented private climate change lawsuits. The first is the petition filed in September 2015 by the Philippines Reconstruction Movement and Greenpeace Southeast Asia with the Philippines’ Commission on Human Rights. The petition requests that the Commission exercise its investigative powers to look into the role of Carbon Majors in causing climate change and ocean acidification.⁶⁶ The central legal question in the case is: ‘whether or not the Respondent Carbon Majors must be held accountable ... for the human rights implications of climate change and ocean acidification’. The Carbon Majors study was one of the ‘bedrock pieces of science research’ that helped shape Greenpeace’s campaign.⁶⁷

The second is the lawsuit filed in November 2015 by Saul Luciano Lliuya, a farmer from the Andean region of Peru, against the German utility company RWE. Through this claim, Lliuya, who is supported by the NGO Germanwatch, demanded from RWE a US\$21,000 financial contribution related to the costs of building defences against glacial lake flooding, landslides, likely inundation of his village and destruction of his property. The sum of \$21,000 equates to 0.47% of the estimated cost of engineering projects that would protect against flooding of the glacial lake. The claim is based upon the Carbon Majors research and its finding that 0.47% of CO₂ that has been

further argued that the choices of individual consumers are already made for them by the energy infrastructure (ie fossil fuel companies), for example, through their extraction and commercial use of fossil fuels.

⁶² Heede (n 16).

⁶³ Starr (n 61).

⁶⁴ Starr (n 61). This observation was made by Carol Muffett, the President and CEO of the Center for International Environmental Law in Washington, DC.

⁶⁵ ELAW (n 23).

⁶⁶ *Philippines Reconstruction Movement and Greenpeace* (n 48).

⁶⁷ Starr (n 61).

emitted into the atmosphere during the industrial era can be traced back to RWE.

Whether or not they refer explicitly to the Carbon Majors study, the lawsuits initiated in the second wave of private climate litigation specifically quantify the individual and historical emissions from major carbon-emitting corporations and argue on the basis of defendant-specific attribution. For example, in their recent lawsuit against 37 Carbon Majors, Californian local governments in Marin County, San Mateo and the City of Imperial Beach argue that the fossil fuel defendants 'are directly responsible for 227.6 gigatons of CO₂ emissions between 1965 and 2015, representing 20.3% of total emissions of that potent greenhouse gas during that period'.⁶⁸ Supported by IPCC-certified climate science and studies such as Heede's work on Carbon Majors, NGOs, civil society groups and public authorities are likely to continue filing climate change lawsuits on behalf of local communities that experience climate harms. Similarly, citizens might rely on this type of evidence to petition for legal change.

(iii) Developments in attribution science

While Heede's work helped identify individual defendants or groups of defendants, it did not resolve the question of whether very large emitters are responsible for specific climate change-related events. However, climate change attribution research is also developing rapidly. In recent years, attribution research with respect to single (extreme) events has made significant progress. For example, researchers from the Union of Concerned Scientists and Oxford University collaborated with Heede to combine both fields of attribution.⁶⁹ By tracing company emissions over time, Ekwurzel and others attribute fractions of the accumulation of CO₂ in the atmosphere, increases in atmospheric temperature and elevation of the sea level to individual companies.⁷⁰ Just as significantly, their article indicates how deaths from a single extreme weather event could be attributed to climate change and, ultimately, to Carbon Major companies.⁷¹ These ongoing developments in the science of extreme weather event attribution have the potential to significantly impact the legal landscape for climate-related suits.⁷²

Lawsuits in the second wave of private climate litigation are already drawing upon the advancements in climate attribution science, and courts might be more open to the notion of individual corporate responsibility for climate

⁶⁸ *County of Marin v Chevron* (n 57).

⁶⁹ See Brenda Ekwurzel and others, 'The Rise in Global Atmospheric CO₂, Surface Temperature, and Sea Level from Emissions Traced to Major Carbon Producers' (2017) 144 *Climatic Change* 579.

⁷⁰ Ekwurzel and others (n 69).

⁷¹ Ekwurzel and others (n 69).

⁷² Sophie Marjanac, Lindene Patton and James Thornton, 'Acts of God, Human Influence and Litigation' (2017) 10 *Nature Geoscience* 616; Sophie Marjanac and Lindene Patton, 'Extreme Weather Event Attribution Science and Climate Change Litigation: An Essential Step in the Casual Chain?' (2018) 36 *Journal of Energy & Natural Resources Law* 265.

harm, provided that partial or contributory causation can be scientifically proven with respect to the defendant's conduct. In *Lluya v RWE*, the Civil High Court in Hamm (Germany) rejected the judgment of the Essen Court, which had dismissed the plaintiff's claims in the first instance based on his inability to establish specific causation.⁷³ The Essen Court provided two main reasons for its dismissal. First, in a manner reminiscent of the California District Court in *Kivalina*, it held that the complexity of climate change and its consequences made it impossible to trace a clear causal link between CO₂ emissions from the defendant's power plants and the endangerment to the plaintiff's home in Peru from glacial flooding.⁷⁴ The plaintiff therefore failed to satisfy the 'but for' test of causation under German civil law. Secondly, it opined that RWE's contribution to climate change did not meet the test of adequacy due to the existence of numerous co-contributors to climate change.⁷⁵ As such, it was impossible to establish a causal link between the CO₂ emissions of a single entity and specific climate change impacts.

In contrast, the Hamm Court has provisionally accepted the plaintiff's causation arguments subject to requests for further evidence and expert opinions to be submitted at the evidentiary stage of the hearing. It declared that 'while RWE's emissions are not wholly responsible for the flood risk to Huaraz, it is *enough* that its emissions are *partially responsible* for the actual, present risk'.⁷⁶ Accordingly, the court held that there is no legal basis to rule out the existence of *partial causation* in this case, whereby RWE can be considered a co-contributor to climate change impacts on Huaraz.⁷⁷ It also generally accepted climate models as valid sources of legal evidence, and concluded that the question of whether RWE's emissions are partially contributing to the endangerment of the plaintiff's hometown of Huaraz is a *scientific determination*.⁷⁸

Following the decision, the Union of Concerned Scientists stated that

lawsuits such as this one will draw on the rapidly advancing field of climate attribution science, which now enables us to pinpoint just how much fossil fuel producers have contributed to rising seas, increasing global temperature, and a growing list of other impacts.⁷⁹

This burgeoning field of research and its swift incorporation into litigation underline the potentially pivotal role of attribution science for strategic climate litigation, and private climate litigation in particular.

⁷³ *Saul Luciano Lluya v RWE* (2018) Az 5 U 15/17 OLG Hamm.

⁷⁴ *Lluya v RWE* (n 73).

⁷⁵ *Lluya v RWE* (n 73).

⁷⁶ Germanwatch, 'General Ruling of the Civil High Court in Hamm' (*Germanwatch.org*, 14 November 2017) <<https://germanwatch.org/en/huaraz>> accessed 14 November 2017.

⁷⁷ Germanwatch (n 76).

⁷⁸ Germanwatch (n 76).

⁷⁹ Kathy Mulvey, 'Climate Case by Peruvian Farmer Green-Lighted in Germany' (*Climateliabilitynews.org*, 14 November 2017) <www.climateliabilitynews.org/2017/11/14/climate-change-peru-germany-rwe/> accessed 18 November 2017.

B. Legal Discourse

The developments discussed in the preceding paragraphs involve changes in scientific knowledge which may make it easier for claimants in private climate cases to meet evidentiary thresholds. Through a combination of advances in climate science, quantification and attribution science, claimants may now argue with some credibility that, 'but for' the emissions of company X, they would not have suffered a particular, measurable harm. The proliferation of such argumentation could result in climate change no longer being represented before the court as a diffuse and general problem caused by myriad unknown and unidentifiable sources, but instead as the consequence of a specific set of choices and actions, undertaken by a discrete group of well-informed actors, which causes particular and measurable damage. This conceptualisation could trigger a shift in the judicial mindset and recast climate change from a political question into an individual concern. Recent litigation already shows signs of subtle shifts in the narrative. Two prominent emanations of this shift are (i) the resurgence of interest in exploiting the precedential value of tobacco and asbestos litigation and (ii) recent changes in the discourse around directors' liability and disclosure requirements.

(i) *Augmenting the precedential value of tobacco and asbestos litigation*

The first wave of tort-based climate litigation reflected some of the strategies used in tobacco and asbestos litigation. Examples of successful asbestos and tobacco litigation abound. In the English tort case of *Fairchild v Glenhaven*, the House of Lords ruled in favour of the plaintiff, who had contracted mesothelioma as a result of being exposed to asbestos while working for different employers. With respect to causation, the court found that although it was impossible to pinpoint which employer had directly caused the harm, the defendant corporation Glenhaven had nonetheless materially increased the risk of harm to the plaintiff and was found to be jointly and severally liable.⁸⁰ Similarly, in the 1990s and early 2000s, plaintiffs began to experience greater levels of success in US tobacco litigation. In 2002, an individual plaintiff in tobacco litigation secured a major victory against the Philip Morris company. A jury found the tobacco corporation liable to pay a record \$28 billion in punitive damages to Betty Bullock, a 64-year-old woman who had contracted inoperable lung cancer from tobacco smoke.⁸¹ The punitive damages award was eventually reduced in 2011 to \$28 million on appeal.⁸²

The challenges surrounding private climate litigation have a number of similarities with those affecting asbestos and tobacco litigation. In all cases, liability involves the manufacture of products (asbestos, tobacco and fossil

⁸⁰ *Fairchild v Glenhaven* [2002] UKHL 22.

⁸¹ *Bullock v Philip Morris USA Inc* (California Court of Appeal, Second District, Case No B222596).

⁸² *Bullock v Philip Morris USA Inc* Cal App 4th 543 (2011).

fuels, respectively) initially considered harmless but later understood to create severe health and environmental risks. In all cases, attribution of harm is complicated by the existence of multiple sources of causation. Moreover, in all cases the government, as a provider of public services, incurs major public costs in dealing with the consequences of, respectively, asbestos exposure, tobacco use and climate change.⁸³ But the success of private asbestos and tobacco litigation was not replicated in the first wave of strategic private climate litigation. The main reason was the relatively greater challenge in establishing a causal chain in climate cases. Whereas tobacco and asbestos victims could at least pinpoint the group of potential culprits, plaintiffs in first-generation climate change lawsuits could not.

However, in light of the changing context of causation in the field of climate change, tobacco and asbestos precedents might be more instructive for future tort-based climate litigation. Developments in attribution science are likely to bring private climate litigation into closer alignment with asbestos and tobacco litigation, particularly since the cohort of potential defendants in climate litigation has become easier to identify and narrow down to a key set of players, the Carbon Majors. Moreover, there has been an ongoing effort to demonstrate that, much like 'big tobacco', major carbon emitters have long had knowledge and awareness of climate change, yet took actions to confound or mislead the public.⁸⁴ In the landmark tobacco case of *USA v Philip Morris*, DC District Court Judge Kessler famously ruled that the Department of Justice had presented overwhelming evidence of Philip Morris's participation in a conspiracy to defraud the public.⁸⁵ The US experience thus showed that it was not only possible for directly affected private parties to sue for damage, but that governments, too, could sue corporations to recover health and environmental damage-related costs. ExxonMobil has been at the centre of a similar controversy in the context of climate change, being accused of suppressing climate change research, as well as spreading doubt in advertorials.⁸⁶

Recent attempts to build on the legacy of tobacco and asbestos litigation and use it as a relevant precedent for climate litigation are the Californian lawsuits filed in July 2017 by San Mateo County, Marin County and the City of Imperial Beach. In a manner analogous to the tobacco and asbestos litigation of the 1990s, the plaintiffs in the California climate lawsuits accuse oil companies of knowing that their emitting activities are causing catastrophic climate change. The emergence of governments as claimants in private climate litigation moreover helps to overcome some of the legal obstacles that thwarted

⁸³ Martin Olszynski, Sharon Mascher and Meinhard Doelle, 'From Smokes to Smokestacks: Lessons from Tobacco for the Future of Climate Change Liability' (2017) 30 *Geo Int'l Envtl L Rev* 1.

⁸⁴ See Center for International Environmental Law—CIEL, 'Smoke and Fumes' (November 2017) <www.ciel.org/wp-content/uploads/2017/11/Smoke-Fumes-FINAL.pdf> accessed 10 November 2017.

⁸⁵ *USA v Philip Morris USA Inc* 449 F.Supp.2d 1 (DDC 2006).

⁸⁶ Geoffrey Supran and Naomi Oreskes, 'Assessing ExxonMobil's Climate Change Communications (1977–2014)' (2017) 12 *Environmental Research Letters* 084019.

the claimants in *Kivalina* and *Comer*. Rather than relying on federal common law, which the courts decided could not be applied because the common law on these issues was displaced by the Clean Air Act, these cases are grounded instead in state common law, which is unaffected by the prior rulings.⁸⁷

The tobacco and asbestos precedents are also instructive in highlighting the regulatory potential of private climate litigation. Tobacco and asbestos litigation proved a powerful mechanism for modifying corporate behaviour through the introduction of legislative schemes. By the 1990s and early 2000s, the sheer volume of class action tobacco and asbestos litigation against major corporations influenced the adoption of sweeping legislative changes in the form of both compensation funds and new regulatory frameworks. Although courts did not always hold defendants liable due to the scientific complexity of establishing a causal link between exposure and the manifestation of future harms, asbestos and tobacco cases were nevertheless instrumental in the development of legislative schemes to provide systemic redress to victims.

In view of such developments, in this second wave of strategic private climate litigation it is foreseeable that lawsuits may drive legislative change, particularly as the scientific evidence on attribution for particular climate change impacts mounts. Proposals for model legislative schemes for climate change victims are already in circulation. As Douglas Kysar predicted, while US tort law in its current incarnation is ill-equipped to respond to climate change, the growing volume of private climate litigation will ultimately compel the tort system to adapt and shift into alignment with the administrative state's regulatory role in relation to climate change.⁸⁸

(ii) *Litigation as a component of corporate climate risk management*

Another change in the legal context driving the second wave of strategic private climate litigation involves a growing representation of litigation as an aspect of corporate climate risk management. In addition to the possibility of directly affected victims of climate change initiating tort actions against corporate emitters, corporations face actions over corporate disclosure requirements and associated duties of directors, as well as claims by shareholders and investors for greater transparency and disclosure of information relating to climate risk exposure.⁸⁹ In particular, the argument that energy-intensive companies have a legal responsibility to disclose the impact of climate change is gradually maturing into a self-standing ground for litigation.

⁸⁷ John Schwartz, 'Students, Cities and States Take the Climate Fight to Court' *New York Times* (New York, 10 August 2017) <www.nytimes.com/2017/08/10/climate/climate-change-lawsuits-courts.html> accessed 12 August 2017. Attorneys for the plaintiffs said they modelled their legal tactics on past efforts to hold accountable tobacco companies and producers of cancer-causing agents. Joshua Emerson Smith, 'Novel Legal Strategy Underpins Sea Level Rise Lawsuits against Oil and Coal Companies,' *San Diego Union Tribune* (San Diego, 23 July 2017) <www.sandiegouniontribune.com/news/environment/sd-me-climate-change-legal-20170723-story.html> accessed 12 August 2017.

⁸⁸ Douglas A Kysar, 'What Climate Change Can Do about Tort Law' (2011) 41 *Environmental Law* 1, 5.

⁸⁹ Peel and Osofsky (n 17) 182.

Climate risk disclosure has become the subject of intense litigation in the United States and beyond. In 2015, the New York Attorney General's settlement with Peabody Energy Corporation required improved climate change disclosures after a two-year investigation into the company. A further investigation led by the New York Attorney General (and others) focuses on ExxonMobil for potentially misleading investors about climate risks to the company. The inquiry relates to the allegations that ExxonMobil funded outside groups that seek to discredit climate science, while at the same time its in-house scientists were outlining potential climate risks to Exxon company executives. In the UK, the NGO ClientEarth recently issued a complaint to the Financial Reporting Council (FRC) regarding the omission of climate risk reporting in the annual reports of two oil and gas companies, SOCO International plc and Cairn Energy plc.⁹⁰

The prospect that company directors could be held legally liable for failing to manage climate change risks has become all the more explicit since Bank of England Governor Mark Carney's speech of September 2015. Carney warned that company directors and pension fund trustees could be held liable for contributing to anthropogenic climate change, for not reasonably managing the risks associated with climate change, for misleading investors about the business risks of climate change or for failing to comply with legal reporting requirements.⁹¹

Such predictions are gradually being vindicated, as the second wave of private climate litigation includes a small but significant cohort of cases in which shareholders sue financial services firms over climate risk disclosure. The first of such cases was filed in August 2017, against the Commonwealth Bank of Australia, over its 2016 annual report.⁹² The shareholder plaintiffs argued that the report, prepared by the Commonwealth Bank of Australia, failed to address climate risk as part of its risk management framework and did not include reference to funding for the Carmichael coal mine in Queensland. The shareholders requested a declaration that the Commonwealth Bank had contravened the Corporations Act and an injunction to prevent it from omitting climate risks from future annual reports. The case was dropped one month later as the Commonwealth Bank included in its 2017 annual report an acknowledgement that climate change posed a significant risk to its operations,

⁹⁰ ClientEarth, 'ClientEarth Triggers Review of Companies' Climate Disclosures' (*ClientEarth.org*, 22 August 2016) <www.clientearth.org/clientearth-triggers-review-companies-climate-disclosures/> accessed 1 November 2016.

⁹¹ Mark Carney, 'Commonwealth Climate and Law Initiative (CCLI)' (2016) <www.smithschool.ox.ac.uk/research-programmes/ccli/background.php> accessed 1 November 2016.

⁹² Michael Slezak, 'Commonwealth Bank Shareholders Sue over "Inadequate" Disclosure of Climate Change Risks' *The Guardian* (London, 8 August 2017) <www.theguardian.com/australia-news/2017/aug/08/commonwealth-bank-shareholders-sue-over-inadequate-disclosure-of-climate-change-risks> accessed 21 August 2017.

with a promise to conduct climate change risk assessments in the upcoming financial year.⁹³

Against the backdrop of escalating climate investor suits, and at the request of the G20 finance ministers and central bank governors, a Taskforce on Climate-Related Financial Disclosures (TCFD) was established by the Financial Stability Board, under the leadership of former New York City mayor Michael Bloomberg. The TCFD was assigned the mission to review how the financial sector could take climate-related issues into account,⁹⁴ and to develop ‘voluntary, consistent climate-related financial disclosures that would be useful to investors, lenders, and insurance underwriters in understanding material risks’.⁹⁵ In its final report, published in June 2017, the TCFD outlines a set of recommendations and guidelines for corporations on their financial risk disclosure obligations relating to climate change across the G20 jurisdictions.

In a similar vein, proposals have been made to reform company law by introducing a corporate duty of environmental care.⁹⁶ Such a duty would resemble the norm of malfeasance⁹⁷ and the common law tort of negligence (the duty to avoid harm to others), and would render corporate disclosure and reporting requirements mandatory.⁹⁸ At the core of this duty of environmental care is the notion that the purpose and functions of the modern corporation require significant revision in the face of planetary challenges like climate change. More specifically, as Mathiopoulous argues, redefining the purpose of the modern corporation requires a shift away from shareholder-centric models of corporate governance towards a broader stakeholder-oriented model, requiring corporations to act in the public interest and in a manner that is socially and environmentally responsible.⁹⁹

The importance of these developments is difficult to overstate. They represent a significant shift in our understanding of climate change risk from an external, public health and safety risk to an internalised corporate risk which needs to be adequately managed. From the corporation’s perspective, climate

⁹³ Gareth Hutchens, ‘Commonwealth Bank Shareholders Drop Suit over Nondisclosure of Climate Risks’ *The Guardian* (London, 21 September 2017) <www.theguardian.com/australia-news/2017/sep/21/commonwealth-bank-shareholders-drop-suit-over-non-disclosure-of-climate-risks> accessed 22 November 2017.

⁹⁴ Taskforce on Climate-Related Financial Disclosures, ‘Recommendations of the Taskforce on Climate Related Financial Disclosures’ (2017) <www.fsb-tcfid.org/publications/final-recommendations-report/> accessed 20 April 2017.

⁹⁵ *ibid.*

⁹⁶ Beate Sjäffell and Benjamin J Richardson, ‘The Future of Company Law and Sustainability’ in Beate Sjäffell and Benjamin J Richardson (eds), *Company Law and Sustainability: Legal Barriers and Opportunities* (CUP 2016) 312.

⁹⁷ Malfeasance refers to any act that is wrongful or unlawful. Under civil law, it includes the carrying out of an unlawful act by a public official in violation of their professional duty which causes injury to others. Cornell Law School: Wex Legal Dictionary, ‘Malfeasance’ <www.law.cornell.edu/wex/malfeasance> accessed 20 January 2018.

⁹⁸ Sjäffell and Mähönen further posit that a duty of environmental care could be given effect under company law through the following statutory wording in relation to directors’ duties: ‘the purpose of a company is to create sustainable value through the balancing of the interests of its investors and other involved parties within the planetary boundaries’. Beate Sjäffell and Jukka Mähönen, ‘Upgrading the Nordic Model for Sustainable Companies’ (2014) 11(2) ECL 58.

⁹⁹ Jim Apollo Mathiopoulous, ‘The Purpose of For Profit Corporations in Light of Modern Perceptions and Wider Corporate Responsibilities (Part 1)’ (2017) 38 Co Law 9, 278.

change becomes an agenda point that needs to be addressed through policies ranging from investment in technological innovation to the development of disclosure strategies, contingency planning and insurance. These developments might further corporate transparency and reduce the likelihood of disinformation campaigns on climate change. From a company's perspective, they could also serve to reduce the risk of future climate litigation.

What is key for our discussion is that the maturing understanding of climate change risks as corporate risks opens the door to new categories of litigants who have a stake in ensuring that firms behave as responsible climate risk managers. These now expand beyond the familiar category of victims who are exposed to climate change-related damage, and the NGOs that assist them, to include shareholders and investors who have a vested interest in obtaining full information about all corporate assets and liabilities, including liabilities related to climate change risk. The final category of new litigants consists of public authorities who have an interest in ensuring that the public is not being defrauded by misleading information and that public resources will not be depleted in remedying climate change-related damage. These are new players, and they are also a different kind of player. Compared with the victims of the physical impacts of climate change, such as the thousands of people who lost their homes and possessions during Hurricane Katrina and, more recently, the storms that battered the Caribbean and the South-East US coastline, investors, shareholders and public authorities tend to be better resourced and more experienced in litigation, and to have greater access to legal expertise.

C. Institutional and Constitutional Context

Although the vast majority of climate litigation still takes place in the United States, in recent years courts and other adjudicative bodies around the world have been experiencing an increase in lawsuits involving climate change. In some cases at least, courts outside the United States have proved surprisingly receptive to litigants' claims. This development is most evident in public climate litigation, which has been thoroughly shaken up by the decisions of the Hague District Court in *Urgenda* and the Lahore High Court in *Leghari*.¹⁰⁰

In private climate litigation, too, courts and tribunals have recently sent some unexpectedly encouraging signs to claimants. First, with respect to the Greenpeace Philippines petition, the Human Rights Commission confirmed its explicit authority and jurisdiction to investigate all forms of human rights violations, including those resulting from climate change, in this national inquiry involving 47 investor-owned carbon producers.¹⁰¹ This means the Commission considered the issue of jurisdiction and rejected the companies' motions to dismiss the investigation. The Commission announced multiple

¹⁰⁰ *Leghari* (n 11).

¹⁰¹ *Philippines Reconstruction Movement and Greenpeace* (n 48).

fact-finding missions and public hearings in 2018—three in Manila, one in the United States and another in Europe. The petitioners will ramp up the global call for the companies to participate in the public hearings and for the Commission to issue findings and a resolution to the national inquiry by 10 December 2018, the 70th Anniversary of the UN Universal Declaration of Human Rights. Secondly, the recent ruling by the Hamm Regional Court in *Lliuya v RWE* has also given the plaintiff's case a new lease on life, particularly with respect to the issue of climate change causation.

It is difficult to pinpoint the precise reasons for these shifts in judicial decision making, particularly in legal cultures as different as the Netherlands and the Philippines. Perhaps a factor is that, as extreme weather events become ever more frequent and warning signs that our planet is teetering on the brink of catastrophic change multiply, something simply has got to give. In the Global South, too, an upward trend in climate litigation against corporations on behalf of individuals can be discerned. Following the petition in the Philippines, residents of several other southeastern countries—including Vanuatu, Kiribati, Tuvalu, Fiji and the Solomon Islands—declared their intent to file similar petitions.¹⁰² In a similar vein, a finding of liability in *Lliuya v RWE* could potentially have far-reaching impacts, notwithstanding the small sum of sought damages involved. The following paragraphs identify three factors that may help to explain these recent shifts: (i) the proliferation of environmental courts; (ii) the constitutionalisation of environmental protection; and (iii) the rise of transnational judicial networks.

(i) The proliferation of environmental courts

An increase in the litigation and adjudication of climate change matters worldwide might partly be attributed to increased judicial capacity to deal with such matters, as indicated by the recent surge of specialist environmental courts and tribunals, particularly in the Global South. Among other common law countries, Kenya has legal provisions that may be conducive to climate litigation, as well as a specialised environmental court.¹⁰³ In India, judges have been willing to consider the proposition that environmental damage may constitute a violation of fundamental rights. The right to a healthy environment is enshrined in article 21 of the Indian Constitution. In addition, India has a National Green Tribunal (NGT) that, since its inauguration in 2010, has already issued a number of decisions that affirm environmental protection as a fundamental right. NGT decision-making procedures are heavily animated and enhanced by the involvement of scientific and technical experts who are key

¹⁰² Peter E Seley and Richard Dudley, 'Emerging Trends In Climate Change Litigation' (*Law360.com*, 7 March 2016) <www.law360.com/articles/766214/emerging-trends-in-climate-change-litigation> accessed 10 August 2016.

¹⁰³ ELAW (n 23).

evidentiary actors and data providers.¹⁰⁴ This signals the potential for climate science to play a greater role in future legal proceedings on climate change in India.

(ii) The constitutionalisation of environmental protection

The adoption of constitutions by many countries around the world over the past decades has been accompanied by an 'environmental rights revolution', with environmental problems increasingly being addressed through the prism of human rights and constitutionalism.¹⁰⁵ Of the 196 countries with constitutions, 148 have enshrined some form of environmental constitutionalism.¹⁰⁶ Countries such as Brazil, Colombia, Kenya and Mexico have constitutional provisions that recognise the right to a healthy environment and the role of the public prosecutor's office in the enforcement of this right against private corporations or the government. The combination of such constitutional provisions with a growing body of robust climate change legislation provides an increasingly solid basis for climate litigation.¹⁰⁷

In Brazil, federal legislation further provides for the 'polluter pays' principle and *strict liability* for environmental offences, which means that it is unnecessary to prove that the defendant caused harm through negligence or intent. The Brazilian Superior Court of Justice has relied on these legal provisions to ban the use of fires in sugarcane harvesting, among other reasons, because of the GHG emissions generated by this activity.¹⁰⁸ Since the enactment of the 2009 national climate change law (Law 12,187), the Prosecutor's Office filed a class action lawsuit against 40 aeroplane companies operating in the international airport of São Paulo for the emissions and pollution caused during landing and departures. The case is pending at the Federal Court.

(iii) The rise of transnational judicial networks

The international legal community also plays an increasingly active role in educating international and domestic courts and tribunals about climate justice, and the importance of their role in achieving it. For example, the Oslo Principles on Global Climate Change Obligations, drafted in 2015 by legal experts and judges, identify a number of existing legal bases on which both governments and enterprises (including large fossil fuel and cement corporations) are obligated to reduce GHG emissions. Obligations imposed on enterprises include self-assessment of vulnerability and risk; public disclosure duties towards clients, investors and entities likely to be directly or indirectly

¹⁰⁴ Gitanjali Nain Gill, 'Environmental Justice in India: The National Green Tribunal and Expert Members' (2015) 5 TEL 2.

¹⁰⁵ Roderic O'Gorman, 'Environmental Constitutionalism: A Comparative Study' (2017) 6 TEL 435.

¹⁰⁶ *ibid.*, 436, 461.

¹⁰⁷ ELAW (n 23).

¹⁰⁸ Recurso Especial No 1.000.731—RO, 25 August 2009, *Braulino Basílio Maia Filho v Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis—IBAMA*.

affected by their activities; and conducting environmental impact assessments prior to the construction of new facilities.¹⁰⁹ The Expert Group on Climate Obligations of Enterprises has undertaken a similar initiative, with legal experts and judges involved in the drafting of the Principles on Climate Obligations for Enterprises.¹¹⁰ Inspired by the Oslo Principles, which apply primarily to states, the Enterprise Principles comprise a series of climate obligations specifically targeted at enterprises and investors, with an emphasis on emissions reduction.

5. *Failing Better*

Together, developments in climate science, legal discourse and the constitutional context could herald a shift towards a more propitious climate for private litigation. Most importantly, developments in attribution science could help to overcome the causation hurdle, as they make it easier for claimants to argue convincingly that, but for a defendant's actions, they would not have been exposed to environmental harm. Equally relevant are the developments in the discourse which represent corporate failings to act against climate change not only as failings *vis-à-vis* the immediate victims of climate change, but also as failings towards the state and towards investors and shareholders. This framing unlocks the potential for new categories of litigants who may bring particular strengths to the table that climate change victims tend to lack. Investors and shareholders may be better resourced than NGOs representing local communities at risk. Public authority claimants, too, tend to have greater resources and experience than typical 'first wave' claimants, and moreover may be able to invoke legal privileges, such as 'special solicitude' considerations, which are unavailable to private claimants. Moreover, the example of a few unexpected, arguably iconoclastic rulings, such as the *Urgenda* and *Leghari* decisions, may embolden other courts to follow suit. The evolving constitutional context, which underlines the vital importance of a healthy and sustainable environment as a precondition for the very existence of a democratic society under the rule of law, may constitute precisely the sort of enabling environment that the judiciary needs to take new and controversial steps towards the reconceptualisation of climate change mitigation and management as a universal legal responsibility.

In our view, the scientific, discursive and constitutional changes discussed in this article improve the odds of success for present and future plaintiffs. Admittedly, however, they do not constitute an iron-clad guarantee. For example, in the US context, the political question and displacement doctrines

¹⁰⁹ Expert Group on Global Climate Change Obligations, 'Oslo Principles on Global Climate Change Obligations' (1 March 2015) <<http://globaljustice.macmillan.yale.edu/sites/default/files/files/OsloPrinciples.pdf>> accessed 8 August 2016.

¹¹⁰ Expert Group on Climate Obligations of Enterprises, *Principles on Climate Obligations of Enterprises* (Eleven International Publishing 2018).

may prove impervious to contextual shifts. Moreover, even if it becomes easier for claimants to assert with greater confidence that large corporate actors are responsible for a sizeable and knowable percentage of the choices and behaviour that result in climate change, this form of attribution may still fall short of judicial expectations that particularised harm is linked to a specific cause for liability to be established. Indeed, the cases launched by the cities of San Francisco and Oakland against five corporate defendants¹¹¹ before the US District Court for the Northern District of California were recently dismissed because, according to the judge, the causes of climate change 'are worldwide' and cannot be addressed through court action.¹¹² Corporations have been quick to claim that this means that, for all remaining similar lawsuits, the writing is on the wall. Hence, improved odds notwithstanding, the next generations of private climate litigation may meet the same fate as the first.

However, the world of environmental litigation is rich in both pyrrhic victories and sublime failures. Claimants need not always be vindicated in court to get their point across and contribute to long-term legal change. Indeed, the existing body of experience with private climate litigation already illustrates this dynamic: even though no corporate actors have yet been held legally accountable, the sheer possibility of this happening has fostered the conceptualisation of climate change as a legal and financial corporate risk, and the corresponding expectation on the part of shareholders and investors that corporations will manage this risk.

Defendant corporations in climate litigation are likely to incur costs in terms of reputational damage. Even if a corporate defendant successfully deflects a climate change lawsuit and recovers costs, its practices are likely to remain subject to ongoing public and financial scrutiny. A prominent example of this is ExxonMobil, which had its 'triple A' credit rating downgraded in 2017 and subsequently faced pressure from investors to disclose climate risks. In addition, ExxonMobil suffered reputational damage when it emerged that it actively misled investors and the public about climate science.¹¹³

In addition, there are litigation costs. Climate change lawsuits are expensive to litigate, even for well-resourced corporations. Since climate change is a transboundary phenomenon, corporations can potentially be sued for damages in any jurisdiction in which climate harm occurs and could therefore face a litany of lawsuits. The exponential increase in climate harms globally means that Carbon Major corporations may be liable to pay billions of dollars worth of damages for existing as well as future climate harms. In addition, not all

¹¹¹ Chevron Corp, BP plc, ConocoPhillips, Exxon Mobil Corp and Royal Dutch Shell plc.

¹¹² *City of Oakland v BP plc* (n 57).

¹¹³ Megan Darby, 'Shareholder Pressure Mounts on Downgraded ExxonMobil' *The Guardian* London, 28 April 2016) <www.theguardian.com/environment/2016/apr/28/shareholders-pressure-mounts-on-downgraded-exxonmobil-climate-change> accessed 16 November 2016.

climate change damage is covered by insurers. Corporate defendants typically rely on liability insurers for indemnification and defence, but climate change-related allegations against corporations do not automatically trigger the corporate insurer's indemnification and defence duties *vis-à-vis* their clients.¹¹⁴

The broader field of climate litigation also provides a different, but equally compelling, reminder not to confuse judicial outcomes with long-term results. Climate litigation also encompasses court action aimed at challenging climate change law and regulation, as exemplified in the European Court of Justice's *ETS Aviation* ruling.¹¹⁵ Here, the plaintiffs failed in their attempt to invalidate an EU legal measure, as the court deemed that the aviation-related amendments to the Emissions Trading Directive were lawful. Yet within one year, the EU decided to suspend the application of the aviation provisions *vis-à-vis* third-country airlines. In the event, the ECJ ruling did not settle the dispute between the EU, the aviation sector and non-EU governments. Rather, it brought it to a head and led third countries to apply renewed diplomatic pressure and threaten the EU with trade sanctions against what they continued to see as an unacceptable measure, whether or not judicially sanctioned.¹¹⁶

The ETS aviation saga shows that success in the courtroom does not necessarily translate into long-term sustainability of the 'winning' approach. Moreover, it is important not to reduce the significance of a judgment to its dispositive part. Even when dismissing claims, judges may use the adjudicative process as a signalling opportunity to highlight a need for legal change, or to indicate an alternative pathway that might be more fruitfully pursued to achieve the objectives of unsuccessful claimants. As observed in the context of tobacco and asbestos litigation, judicial signalling might trigger legislative change through the adoption of remedial schemes for those who have experienced harm. Finally, even in the absence of such 'judicial nudging', unsuccessful cases can contribute to social change. Examples from the field of animal rights litigation are instructive in this context. Even though attempts to have non-human animals recognised as rights holders before the court habitually fail, the argument is frequently made that such cases help to raise social awareness and may contribute to a change in attitudes that could

¹¹⁴ For example, in the *Kivalina* case, one of the successful defendants, AES Corporation, sued its insurer for defence and indemnification. The court ruled in favour of the insurer on the grounds that the climate change damage in question did not constitute an 'occurrence' such as 'a fortuitous event or accident', sufficient to trigger the insurer's obligations under the insurance policy. *AES Corp v Steadfast Ins Co* 725 S.E.2d 532 (Va 2012). See Sabin Center for Climate Change Law, 'Virginia Court to Decide the First Climate Change-Related Insurance Coverage Case' (2017) <<http://blogs.law.columbia.edu/climatechange/2011/05/16/virginia-court-to-decide-the-first-climate-change-related-insurance-coverage-case/>> accessed 1 November 2017.

¹¹⁵ C-366/10 *Air Transport Association of America and Others v Secretary of State for Energy and Climate Change* [2011] ECR I-13755.

¹¹⁶ See Suzanne Kingston, Veerle Heyvaert and Aleksandra Cavoski, *European Environmental Law* (CUP 2017) 269–73.

ultimately prove more effective in tackling a public interest problem than any set of legal changes would be.¹¹⁷

6. Conclusion

The judgments and pending cases discussed in this article provide an overview of litigation strategies to hold large GHG emitters accountable for their respective contributions to global warming or to exert pressure on industry to address climate change. The analysis yields a number of important insights about the current state of private climate litigation and an indication of the direction that such litigation might take in future. The first generation of private climate litigation was largely unsuccessful due to the failure of plaintiffs to establish sufficient causal links between climate harm and defendant conduct. Nevertheless, the move towards private climate litigation is gaining momentum, with plaintiffs adopting innovative strategies that capitalise on new developments in climate science. Scientific developments, together with shifts in the legal discourse and the institutional context in which climate litigation unfolds, have significantly raised the likelihood of success for plaintiffs in pending and future climate change lawsuits.

Climate litigation has also spread beyond the United States into new jurisdictions throughout Asia, South America, the Pacific and Europe. Corporations are being investigated for the impact their activities have on human rights. In addition, citizens from the Global South are suing northern corporations in their respective jurisdictions. Private citizens and civil society actors are also increasingly employing innovative litigation strategies in jurisdictions of the Global South such as Brazil, India, Pakistan and Kenya, which are more receptive to environmental and rights-based protections.

Even if a corporation avoids being held accountable by climate change victims, it may incur a series of costs in terms of liability for future climate harms, reputational damage and ongoing public scrutiny and pressure to disclose climate change risk. Moreover, governments may challenge private corporations for withholding from the public and investors information about climate change and its risks. Furthermore, company executives and directors may be directly sued for breach of their fiduciary duties and obligations to consider and disclose climate change risk. Concerns about climate change risk have re-energised private sector discourses and given rise to law reform proposals to redefine the purposes and functions of the modern corporation. Litigation on climate risk disclosure is likely to grow significantly and may become a major category of second-wave climate change lawsuits.

¹¹⁷ Alexia Staker, "Should Chimpanzees Have Standing?" *The Case for Pursuing Legal Personhood for Non-Human Animals* (2017) 6 TEL 3; Anne Peters, 'Global Animal Law: What It Is and Why We Need It' (2016) 5 TEL 1; Jacqueline Peel and Hari M Osofsky, 'A Rights Turn in Climate Change Litigation?' (2017) 1 TEL 31.

In sum, although we cannot guarantee that the second wave of private climate litigation will be more successful than the first, the odds have definitely improved. Moreover, the proliferation of lawsuits in spite of discouraging past experience shows that private plaintiffs and advocacy organisations are committed to the continued pursuit of new litigation strategies in an expanding range of fora. While it remains unlikely that all claimants will emerge victorious, it is even more improbable that this wave of momentum will leave the law unchanged.