

---

# **Big Oil, Big Liability: Fossil Fuel Companies and Liability for Climate Change Harm**

Briony Bennett\*

*The Paris Agreement commits its signatories to mitigate and adapt to global climate change but does not provide a basis for any liability or compensation for victims. This leaves a substantial “justice gap”, as losses and damages are now an inevitable consequence of climate change. Yet, the responsibility to compensate victims need not necessarily fall on states only. Fossil fuel companies ought to bear some of the cost as they have harmed the communities that face losses and damages. Further, courts have a role to play in assigning this responsibility. Tort law is designed to deliver justice where harm-doing occurs. Specifically, the article makes a case for public nuisance — interference with the public right to economic and physical well-being and safety. The appropriate plaintiff is a state attorney general, invoking the principle of parens patriae. The serious misrepresentation of the facts of climate change by fossil fuel companies and their political lobbying have successfully thwarted attempts to regulate fossil fuel consumption and reduce greenhouse gas emissions over the last three decades. Through these actions, companies have knowingly contributed to accelerating climate change and substantially increased the risk of losses and damages related to climate change. Courts can order that the defendants compensate victims, using attribution studies to determine*

\*An earlier version of this article was submitted in October 2018 as a paper in fulfilment of a Certificate of Proficiency at the University of Auckland — Te Whare Wānanga o Tāmaki Makaurau. All errors contained within are the author’s alone. I wish to thank my supervisor, Dr Stephen Winter, for shaping my passion into something useful, and my parents, for supporting my education and making me a writer. This dissertation is dedicated to the peoples of the Pacific — Te Moana Nui a Kiwa — may you have the choice to remain in your island homes with dignity. Email: brionymbennett@gmail.com.

*what proportion of losses and damages can be attributed to sheer bad luck or the forces of nature, and what proportion can be attributed to human-made climate change.*

## 1. INTRODUCTION

In Paris, on 12 December 2015, the representatives of 196 states reached an agreement to tackle global climate change under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC). The Paris Agreement's signatories committed to mitigating climate change and adapting to its adverse effects, based on a principle of "common, but differentiated responsibilities and respective capabilities, in the light of different national circumstances".<sup>1</sup> In line with this principle, financial resources are expected to flow from developed to developing states, to help them mitigate and adapt to climate change.

The Paris Agreement combines at least two principles of justice: the "ability to pay" and the "polluter pays" principles. These principles work to assign the bulk of the responsibility for funding climate change mitigation and adaptation to developed states. The Agreement does not go so far as to assign responsibility for funding losses and damages resulting from climate change. In fact, the UNFCCC document detailing the signatories' decision to adopt the Paris Agreement explicitly states that art 8, on losses and damages, "does not involve or provide a basis for any liability or compensation".<sup>2</sup> This leaves a substantial "justice gap", as loss and damage are now an inevitable consequence of climate change and have already begun to accrue.<sup>3</sup> Who then ought to pay for the losses and damages of climate change?

This article asserts that the responsibility need not necessarily fall on states only. Fossil fuel companies ought to bear some of the cost as they have harmed the communities that are now facing losses and damages. Further, courts have a role to play in assigning this responsibility, otherwise the burden may fall on the victims themselves. Tort law is designed to deliver justice where harm-doing

1 Paris Agreement, United Nations Framework Convention on Climate Change [UNFCCC], 12 April 2016, TIAS No 16-1104 (entered into force 4 November 2016) [Paris Agreement], art 2.

2 Adoption of the Paris Agreement, Decision 1/CP.21, UN Doc FCCC/CP/2015/10/Add.1 (29 January 2016).

3 David Miller uses the term "justice gap" in the context of global poverty to describe the gap between what the poor can legitimately demand and the rich can legitimately be obliged to pay. This term is repurposed in the present article to address losses and damages related to climate change; see David Miller *National Responsibility and Global Justice* (Oxford University Press, Oxford, 2007) at 273–274.

occurs. Specifically, the article makes a case for public nuisance — interference with the public right to economic and physical well-being and safety.

This article is split into three parts. Part 2 explains the causes of climate change and how losses and damages arise. A description of the justice gap left by the Paris Agreement follows, and the role that corrective justice and litigation have to play in assigning responsibility for losses and damages.

Part 3 provides evidence of fossil fuel companies deliberately promoting scepticism about climate change and engaging in obstructive lobbying. These actions have created and contributed to the unregulated and unabated consumption of fossil fuels, leading to substantial climate change-related losses and damages.

In part 4, the case for public nuisance is defended. Fossil fuel companies' actions constitute an intentional and unreasonable interference in the lives of US citizens. It is argued that the gravity of the harm done outweighs the utility of fossil fuel companies' conduct. The scope is restricted to US domestic courts, where tort law is well established, and several real-world cases against fossil fuel companies are currently under way.

From this point onwards, any reference to losses and damages assumes that they are related to climate change. The discussion of attribution science in part 4 of the article distinguishes losses and damages related to human-made climate change from natural weather and climate phenomena.

## 2. THE JUSTICE GAP

### 2.1 Losses and Damages Resulting from Climate Change

How do losses and damages arise? They are the result of global average temperature increases that alter weather patterns and the climate. Global average temperatures have now risen more than 1 degree Celsius above pre-industrial levels.<sup>4</sup> This warming has been caused by the emission of carbon dioxide and other greenhouse gases stemming from human activities.<sup>5</sup> As the concentration of atmospheric greenhouse gases rises so too does the global average surface temperature of the planet, leading to global climate change.

4 Intergovernmental Panel on Climate Change [IPCC] *Summary for Policymakers in Global Warming of 1.5°C* (IPCC, Geneva, 2018) <<https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/>> at 3; National Centers for Environmental Information “Climate Monitoring” National Oceanic and Atmospheric Administration <<https://www.ncdc.noaa.gov/climate-monitoring/>>.

5 IPCC *Climate Change 2014: Synthesis Report* (IPCC, Geneva, 2015) <[https://www.ipcc.ch/site/assets/uploads/2018/02/SYR\\_AR5\\_FINAL\\_full.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf)> at 2–4.

For almost three decades, there has been strong evidence to show that the emissions generated during the combustion of fossil fuels such as oil, natural gas and coal are the primary contributors to global climate change.<sup>6</sup> In 1990 the Intergovernmental Panel on Climate Change (IPCC) released its first assessment report. This report collated scientific evidence for the existence of climate change, its causes and its likely effects, from hundreds of scientists representing 25 different countries in order to establish a broad consensus regarding the science of climate change.<sup>7</sup> The authors found that “[s]ince the industrial revolution the combustion of fossil fuels and deforestation have led to an increase of 26% in carbon dioxide concentration in the atmosphere”.<sup>8</sup> They concluded “beyond any doubt” that human-made carbon dioxide is responsible for over half of global warming.<sup>9</sup>

Both extreme weather events and slow-onset climatic changes, resulting from rising global temperatures, give rise to losses and damages. The phrase “losses and damages” is set out in the Paris Agreement. In this article, these terms are used to encompass all economic, physical and socio-political harms to humans as a result of climate change, where harms are defined as “unjustified disruptions in the lives of individuals and communities”.<sup>10</sup> A taxonomy of these harms is provided below.<sup>11</sup>

“Extreme weather events” include more frequent and severe droughts, heatwaves, fires, floods, cyclones and storms. These events lead to physical injuries and loss of life; hunger and malnutrition, following loss of or damage to food supplies; loss or damage to livelihoods in the natural resources and agricultural sectors; loss or damage to infrastructure, buildings and human settlements; rising insurance costs; and an increase in appeals for humanitarian aid.<sup>12</sup>

“Slow-onset climatic changes” include increased temperatures, desertification, biodiversity loss, land and forest degradation, ocean acidification and

6 JT Houghton, GJ Jenkins and JJ Ephraums (eds) *Climate Change: The IPCC Scientific Assessment* (Cambridge University Press, Cambridge, 1990) <[https://www.ipcc.ch/site/assets/uploads/2018/03/ipcc\\_far\\_wg\\_I\\_full\\_report.pdf](https://www.ipcc.ch/site/assets/uploads/2018/03/ipcc_far_wg_I_full_report.pdf)>.

7 At ii.

8 At xv.

9 At xi, 16.

10 Edward Page and Clare Heyward “Compensating for Climate Change Loss and Damage” (2017) 65 *Political Studies* 356 at 358.

11 The UNFCCC does not provide an explicit definition of losses and damages but has indicated that losses may be interpreted as permanent, whereas damages are theoretically repairable or reversible. This article uses the term generally to encompass all harms related to climate change as listed above.

12 UNFCCC *Physical and socio-economic trends in climate-related risks and extreme events, and their implications for sustainable development* UN Doc FCCC/TP/2008/3 (20 November 2008) <<https://unfccc.int/sites/default/files/resource/docs/2008/tp/03.pdf>> at 22.

rising sea levels. These changes can lead to an increase in airborne diseases, including malaria, cholera and dengue fever; loss or damage to arable and habitable land, and freshwater supplies; loss or damage to coastal settlements, infrastructure and economic activities, including fishing and tourism; coral reef bleaching, affecting the availability of seafood and the income or pleasure derived from tourism; loss of cultural benefits related to biodiversity and natural environments; and the loss of territory to rising seas.<sup>13</sup>

In addition, forced migration, following extreme weather events or because of slow-onset climatic changes, means humans may face a loss with regard to their way of life, culture and identity.<sup>14</sup> If countries become completely submerged by seas — a possibility that threatens a number of small island developing states such as Kiribati, the Cook Islands and Tuvalu — humans could even be left stateless.<sup>15</sup> This entails a rising risk of social instability, violence and conflict as people seek access to resources or migrate. While the above description of harms may not be exhaustive, it demonstrates the far-reaching scope and severity of potential losses and damages related to climate change.

Furthermore, even if all emitting activities ceased today, past emissions would continue to drive global warming, since some greenhouse gases, including carbon dioxide, remain in the atmosphere for centuries.<sup>16</sup> Even significant investment in mitigation and adaptation cannot prevent losses and damages, though it can limit them.<sup>17</sup> As such, losses and damages are unavoidable — indeed, they have already begun to accrue.<sup>18</sup>

## 2.2 The Justice Gap

The Paris Agreement's guiding principles are essentially redistributive. Developed states are the heaviest emitters of greenhouse gases and possess

13 UNFCCC *Slow Onset Events* UN Doc FCCC/TP/2012/7 (26 November 2012) <<https://unfccc.int/sites/default/files/resource/docs/2012/tp/07.pdf>> at 8–11.

14 At 39.

15 At 8; Aura Weinbaum “Unjust Enrichment: An Alternative to Tort Law and Human Rights in the Climate Change Context” (2011) 20 *Pac Rim L & Pol’y* J 429.

16 Simon Caney “Climate Change and the Duties of the Advantaged” (2010) 13 *Critical Review of International Social and Political Philosophy* 203 at 204–205.

17 Martin Parry and others *Assessing the costs of adaptation to climate change: A review of the UNFCCC and other recent estimates* (IIED and Grantham Institute for Climate Change, London, 2009) <<http://pubs.iied.org/pdfs/11501IIED.pdf>> at 107; see also Marshall Burke and others “Large Potential Reduction in Economic Damages Under UN Mitigation Targets” (2018) 557(7706) *Nature* 549.

18 “Natural catastrophe review: Series of hurricanes makes 2017 year of highest insured losses ever” (4 January 2018) Munich Re <<https://www.munichre.com/en/media-relations/publications/press-releases/2018/2018-01-04-press-release/index.html>>.

the greatest ability to pay, so they are expected to bear the greatest burden for addressing climate change.<sup>19</sup> Indeed, over 60 per cent of carbon dioxide emissions between 1750 and 2008 originated from human activities in just 31 high-income developed states, according to the World Bank.<sup>20</sup> These 31 states also accounted for 65 per cent of global domestic product in 2010.<sup>21</sup>

Under the Agreement, some emissions are justified since the combustion of fossil fuels aids economic development.<sup>22</sup> Nevertheless, a more equitable distribution of the benefits derived from emitting is desirable. Hence, developed states are expected to take the lead in reducing their emissions as, in art 4, “Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties ... in the context of sustainable development and efforts to eradicate poverty”.<sup>23</sup>

Correspondingly, the Agreement seeks to redistribute the costs associated with mitigation and adaptation. In art 9, “Developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation”.<sup>24</sup>

There are many objections to the guiding principles of the Paris Agreement, both from a practical and theoretical perspective. Its “polluter pays” and “ability to pay” principles are broadly sketched and insufficiently prescriptive. That is, they give guidance but fail to quantify and determine precisely how the burdens of climate change mitigation and adaptation ought to be divvied up. Moreover, the Agreement fails to say why states rather than any other agents ought to bear the burden of climate change. Also, the Agreement does not give reasons for covering mitigation and adaptation while excluding losses and damages, even though, in art 8, “Parties recognize the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events”.<sup>25</sup>

19 Edward Page “Give it Up for Climate Change: A Defence of the Beneficiary Pays Principle” (2012) 4 *International Theory* 300 at 304.

20 At 304.

21 “GDP Ranking” The World Bank <<https://datacatalog.worldbank.org/dataset/gdp-ranking>>; see also *The Changing Wealth of Nations: Measuring Sustainable Development in the New Millennium* (The World Bank, Washington DC, 2011) <<https://openknowledge.worldbank.org/handle/10986/2252>> (in this World Bank report, the link between wealth, development, sustainability and climate change is analysed in detail).

22 Page, above n 19, at 315; see also Henry Shue “Subsistence Emissions and Luxury Emissions” (1993) 15 *Law & Policy* 39 (Shue gives a rights-based account of emissions and economic development, as well as providing discussion of the “polluter pays” and “ability to pay” principles).

23 Paris Agreement, above n 1, art 4.

24 Article 9.

25 Article 8.

This article does not seek to “fix” the Paris Agreement. The Agreement is a political accord. Ambiguity regarding the application of its guiding principles and the limitation of their scope to mitigation and adaptation helped to achieve consensus among negotiating parties who disagreed about what justice requires.<sup>26</sup> This is to be expected when “responsibility gets determined politically, through argument and contestation”.<sup>27</sup>

Yet, the parties failed to agree on any principle, however ambiguous, to assign responsibility for losses and damages. This suggests that the victims may have to bear the cost of losses and damages themselves. Whether victims are states, individuals or other entities, such as businesses or landlords, this outcome is unjust. It is unjust because the communities that are particularly vulnerable to the adverse effects of climate change lack the financial resources required to recover from losses and damages, and have made only minor contributions to the causes of climate change.<sup>28</sup> This is antithetical to the principles of justice, the “ability to pay” and the “polluter pays” principles, stated in the Paris Agreement itself.

### 2.3 Corrective Justice

Justice requires more than the redistribution of burdens — the approach taken by the Paris Agreement. Justice also consists in holding an agent liable for and to rectify harm done to another, so as to correct the imbalance of justice between them — so-called “corrective” justice.<sup>29</sup>

Corrective justice has three key elements: (1) correlativity; (2) human agency; and (3) rectification.<sup>30</sup> That is, victim (A) suffering harm has a claim against putatively liable agent (B) under corrective justice if and only if:<sup>31</sup>

- (1) agent B caused the harm to occur through their actions (i.e. interfered with victim A) and is somehow responsible for the harm in a normatively significant way;

26 Laura Valentini “Ideal vs. Non-Ideal Theory: A Conceptual Map” (2012) 7 *Philosophy Compass* 654 at 658.

27 Michael Goodhart “Interpreting Responsibility Politically” (2017) 25 *Journal of Political Philosophy* 173 at 185.

28 UNFCCC, above n 13, at 3; Page, above n 19, at 306; Weinbaum, above n 15, at 433.

29 Catriona McKinnon “Climate Change and Corrective Justice” (2009) 17 *Annual Review of Law and Ethics* 259 at 260–261.

30 Jules Coleman “The Practice of Corrective Justice” in David G Owen (ed) *Philosophical Foundations of Tort Law* (Clarendon Press, Oxford, 1997) at 66.

31 McKinnon, above n 29, at 261.

- (2) the harm to the victim A is the result of B's human agency (as opposed to sheer bad luck or the forces of nature);<sup>32</sup>
- (3) victim A claims rectification for the harm done by the agent B (i.e. a claim for compensation).<sup>33</sup>

Corrective justice strengthens the argument made above, which asserts that it is unjust that many of the communities that are particularly vulnerable to climate change lack the financial resources required to recover from losses and damages while only having made minor contributions to the causes of climate change themselves.<sup>34</sup> Corrective justice provides another perspective and a framework for understanding the injustice that has occurred. The framework identifies victims that have suffered harms and human agents whose actions led to those same harms, and asserts that the former has a claim to compensation from the latter.<sup>35</sup> Interference with another, causing them harm, is unjust by definition in this framework.

Tort law is practised in a framework of corrective justice.<sup>36</sup> In common law jurisdictions, a tort is an act that results in harm. The harmed parties can recover their losses and damages in a lawsuit as the harm-doer, known as the tortfeasor, is legally liable for this act. There are complex debates in legal theory regarding the precise role of corrective justice in torts.<sup>37</sup> This article does not investigate these debates. This simple definition of institutionally practised torts is sufficient for the purposes of this article.

In this article, the normatively significant way in which an agent assumes responsibility for harm-doing will be defined as a public nuisance tort — “interference with a right common to the general public”.<sup>38</sup> In order to make a claim for compensation, the claimant must also show that the interference leading to harms was the result of human agency. It is these elements of correlativity, human agency and rectification that drive a public nuisance tort claim.

32 Questions of “sheer bad luck” or “the forces of nature” are revisited in part 4 of this article, in which liability is assigned for only the losses and damages that result from human agency.

33 McKinnon, above n 29, at 261.

34 UNFCCC, above n 13, at 3; Page, above n 19, at 306; Weinbaum, above n 15, at 433.

35 McKinnon, above n 29, at 266.

36 At 264.

37 See Coleman, above n 30, at 53–72; see also Jules Coleman “Corrective Justice and Wrongful Gain” (1982) 11 *J Legal Stud* 421; Hanoch Dagan “The Distributive Foundation of Corrective Justice” (1999) 98 *Mich L Rev* 138; Richard Epstein “Intentional Harms” (1975) 4 *J Legal Stud* 391.

38 Elizabeth Dubats “An Inconvenient Lie: Big Tobacco Was Put on Trial for Denying the Effects of Smoking; Is Climate Change Denial Off-Limits?” (2012) 7 *Nw J L & Soc Pol’y* 510 at 524.



Corrective justice builds on the Paris Agreement's redistributive approach. The latter avoids assigning blame, so that parties voluntarily assume responsibilities for the costs of mitigating and adapting to climate change. Yet, it leaves those suffering from losses and damages — the victims of climate change — without recourse. Litigation, specifically tort claims where blameworthy parties can be identified, provides the victims with a means to correct the injustice that has occurred.

## 2.4 Climate Change Litigation

Litigation can help deliver justice for the victims of climate change. If successful, litigation may generate funds and assign responsibility for some of the losses and damages related to climate change.<sup>39</sup> This may not fully bridge the justice gap left by the Paris Agreement, but would improve on the status quo whereby no funding mechanism exists to compensate victims.<sup>40</sup>

This article focuses on the US as it is a significant producer and consumer of fossil fuels. Historically, it is responsible for the greatest share of greenhouse gas emissions worldwide.<sup>41</sup> Being such a large contributor to the problem, success in the US courts might cover a larger proportion of losses and damages than similar cases in other jurisdictions. The victims of climate change may also be emboldened to pursue litigation in other countries if cases are successful in the US.

The scope of the argument is limited to domestic courts because international courts are rarely able to force compliance with their decisions. The US also has a significant canon of domestic tort law that the international courts lack. Furthermore, several tort cases are currently under way in a number of US states, counties and cities, including Rhode Island, California, Maryland, Washington State, Colorado and New York City. Complaints include, but are not limited to, public nuisance, trespass, negligent failure to warn, negligent design defect, strict liability for failure to warn, strict liability for design defect, and impairment of public trust resources.<sup>42</sup> This article limits its scope to public

39 Jeffrey Sachs "A Proposal for Climate Justice" (Lecture at London School of Economics, 3 October 2017) <<http://www.lse.ac.uk/Events/Events-Assets/PDF/2017/2017-MT03/20171003-Sachs-PowerPoint.pdf>>.

40 Existing funding mechanisms established under the UNFCCC target mitigation and adaptation efforts.

41 Office of Science, United States Department of Energy "Highest Emitting Nations Based on the Latest (2014) Estimates" Carbon Dioxide Information Analysis Centre <[http://cdiac.ess-dive.lbl.gov/trends/emis/meth\\_reg.html](http://cdiac.ess-dive.lbl.gov/trends/emis/meth_reg.html)>.

42 *Rhode Island v Chevron Corp* No PC-2018-4716 (RI Super Ct, 2 July 2018); *City of Oakland v BP plc* No 3:17-cv-06011 (ND Cal, 25 June 2018); *County of Marin v Chevron Corp* No CIV1702586 (Cal Super Ct, 17 July 2017); *City of Imperial Beach v Chevron Corp* No C17-01227 (Cal Super Ct, 17 July 2017); *County of San Mateo v Chevron Corp*

nuisance claims, since this type of claim is both appropriate and has significant merit.

The article draws heavily from one of the most recent cases, *Rhode Island v Chevron Corp*, which was filed on 2 July 2018. This case consolidates arguments and builds on the evidence of earlier cases.<sup>43</sup> It is also the first case to be filed by a state, and, as such, the plaintiff is empowered to sue on behalf of Rhode Island citizens — the principle of *parens patriae*.<sup>44</sup>

*Parens patriae* does not apply to cities and counties, which have to prove legal standing before their case can proceed to trial.<sup>45</sup> The legal standing doctrine requires plaintiffs to demonstrate that they have suffered particular, traceable and redressable harms.<sup>46</sup> At least two cases brought by US communities before 2010 were dismissed on the grounds that the plaintiffs lacked legal standing.<sup>47</sup> State plaintiffs can however invoke *parens patriae* to create legal standing as it gives them a generalised right to protect citizens' well-being and safety.<sup>48</sup> Therefore, cases brought by state plaintiffs are more likely to result in a trial.<sup>49</sup>

Future climate change litigants may also make a case for civil conspiracy and fraud, under the Racketeer Influenced Corrupt Organizations Act (RICO).<sup>50</sup> This line of argument proved successful in federal suits against tobacco companies (for instance, *United States v Philip Morris USA, Inc* in 2000) and, although allegations of fraudulent misrepresentation will play a key role in the arguments below, claims based on RICO are also beyond the scope of this article.<sup>51</sup>

No 17CIV03222 (Cal Super Ct, 17 July 2017); *Mayor & City Council of Baltimore v BP plc* No 24-C-18-004219 (Md Cir Ct, 20 July 2018); *King County v BP plc* No 1:18-2-11859-0 (Wash Super Ct, 9 May 2018); *Board of County Commissioners of Boulder County v Suncor Energy (USA) Inc* No 2018CV030349 (Colo Dist Ct, 17 April 2018); *City of New York v BP plc* No 1:18-cv-182 (SDNY, 9 January 2018).

43 *Rhode Island v Chevron Corp*, above n 42.

44 “Why States May Turn the Tide in Climate Liability, Led by Rhode Island” (11 September 2018) Climate Liability News <<https://www.climateliabilitynews.org/2018/09/11/rhode-island-states-climate-liability/>>.

45 Geentanjali Ganguly and others “If at First You Don’t Succeed: Suing Corporations for Climate Change” (2018) 38 OJLS 841 at 847.

46 Dubats, above n 38, at 522.

47 *Comer v Murphy Oil USA* 585 F 3d 855 (5th Cir 2009); *Comer v Murphy Oil USA* 607 F 3d 1049 (5th Cir 2010); *Native Village of Kivalina v ExxonMobil Corp* 696 F 3d 849 (9th Cir 2012); *Native Village of Kivalina v ExxonMobil Corp* 663 F Supp 2d 863 (ND Cal 2009).

48 Ganguly and others, above n 45, at 7.

49 The Rhode Island case is also the first to include strict liability claims. These may prove to be justiciable (capable of being decided upon in court) and successful in US state or federal courts although this is not explored here.

50 Climate Liability News, above n 44.

51 Dubats, above n 38, at 510.

Having established how losses and damages arise and explained the role of corrective justice and litigation in addressing the justice gap left by the Paris Agreement, the public nuisance claim against fossil fuel companies will now be considered. What were the actions undertaken by fossil fuel companies that have led to losses and damages?

### 3. THE EVIDENCE

#### 3.1 Public Nuisance

This article asserts that fossil fuel companies should be liable, under public nuisance law, for losses and damages related to climate change. The term “fossil fuel companies” refers to investor-owned companies with international operations to produce, market and sell fossil fuels — namely, oil, natural gas and coal.<sup>52</sup> State-owned fossil fuel companies are excluded from the arguments for now as the existing evidence implicating investor-owned fossil fuel companies, as outlined in this article, is stronger.<sup>53</sup>

The appropriate plaintiff is a state attorney general — the key legal advisor and law enforcement official within each of the 50 US state governments. State attorneys general can invoke the principle of *parens patriae*. In line with this principle, each US state has the right to sue on behalf of its citizens to protect their rights.<sup>54</sup>

The plaintiff’s case is that fossil fuel companies have interfered with the physical and economic well-being and safety of citizens — ie created and contributed to a public nuisance.<sup>55</sup> In public nuisance cases interference can be either intentional or unintentional (ie negligent). If it was intentional, which this article argues, then it is necessary to prove that it was also unreasonable.<sup>56</sup> The argument involves a complex chain of causality. The main thrust of it is outlined below and expanded upon in subsequent discussion.

52 Dr Paul Griffin *The Carbon Majors Database: CDP Carbon Majors Report 2017* (CDP Report, July 2017) <<https://www.cdp.net/en/articles/media/new-report-shows-just-100-companies-are-source-of-over-70-of-emissions>>.

53 Neela Banerjee and others “Exxon: The Road Not Taken” (16 September 2015) Inside Climate News <<https://insideclimatenews.org/content/Exxon-The-Road-Not-Taken>>; Uclia Wang “What Oil Companies Knew About Climate Change and When: A Timeline” (5 April 2018) Climate Liability News <<https://www.climateliabilitynews.org/2018/04/05/climate-change-oil-companies-knew-shell-exxon/>>.

54 Ganguly and others, above n 45, at 7.

55 *Rhode Island v Chevron Corp*, above n 42.

56 *City of Oakland v BP plc*, above n 42.

By 1990, the link between fossil fuel consumption and climate change was well-established. It was no longer reasonable for fossil fuel companies to doubt this causal link given the IPCC's broad consensus and the findings of its first assessment report.<sup>57</sup> Further, a number of fossil fuel companies had, in fact, recognised the causal link between fossil fuels and climate change in the decades prior to the first assessment report's publication. This is laid bare in subpoenaed internal documents.<sup>58</sup>

Nevertheless, in the 1990s, 2000s and 2010s, these companies conspired to mislead and misinform citizens and political leaders. They did so by stressing the uncertainty of the science underpinning climate change and by highlighting doubts regarding the role of fossil fuels.<sup>59</sup> Misrepresenting facts and knowingly providing false information may constitute fraud under common law in the US.<sup>60</sup>

The arguable misrepresentation of the facts of climate change by fossil fuel companies and their political lobbying have successfully thwarted attempts to regulate fossil fuel consumption and reduce greenhouse gas emissions over the last three decades. Through these actions, it has been asserted that companies have knowingly contributed to accelerating climate change and substantially increased the risk of losses and damages related to climate change within US jurisdictions.

It should be noted that it is unusual to insert misrepresentation into the causal chain in a public nuisance case. Fraudulent misrepresentation resulting in particular harms is itself a tort.<sup>61</sup> Yet, the assertion is that this action may have led to substantial losses and damages. Misrepresentation, if established and not innocent, could be proof that fossil fuel companies acted deliberately and sought to prevent the regulation of their industry knowing that this would result in substantial harm. This action could constitute an unreasonable and intentional interference with the public right to economic and physical well-being and safety — a public nuisance — under US common law.<sup>62</sup>

57 IPCC, above n 6.

58 The above evidence of fossil fuel companies' activities has accumulated in recent years. This is as a result of ongoing investigations by the Attorneys General [AGs] of 17 US states and territories. The AGs are considering charges of fraud, civil conspiracy and racketeering against ExxonMobil and other fossil fuel companies under RICO; Geoffrey Supran and Naomi Oreskes "Assessing ExxonMobil's Climate Change Communications (1977–2014)" (2017) 12(8) Environmental Research Letters 1.

59 Erik Conway and Naomi Oreskes *Merchants of Doubt* (Bloomsbury Press, New York, 2010).

60 Dubats, above n 38, at 515.

61 At 515.

62 *Rhode Island v Chevron Corp*, above n 42, at 115; *City of Oakland v BP plc*, above n 42, at 7–8. [Ed. In *Smith v Fonterra Co-operative Group Ltd* [2020] NZHC 419, the Court struck out a claim by Smith in public nuisance for adverse effects of greenhouse gas emissions on Māori.]

### 3.2 When Fossil Fuel Companies knew about Climate Change

The idea that fossil fuel consumption could lead to dangerous climate change entered the US public sphere as early as 1965. In that year, President Lyndon B Johnson said, in a special address to the Congress, “[t]his generation has already altered the composition of the atmosphere on a global scale through ... a steady increase in carbon dioxide from the burning of fossil fuels”.<sup>63</sup>

Following President Johnson’s address, research regarding the causes and likely harms of global climate change was carried out by a number of fossil fuel companies.<sup>64</sup> Internal documents from these companies reveal that they reached similar conclusions to the IPCC in the decades prior to its first assessment report in 1990.

For example, most of the major fossil fuel companies operating in the US were members of the American Petroleum Institute (API) in 1968 when it commissioned a special report on climate change and distributed it to its members. The report concludes “although there are other possible sources for the additional CO<sub>2</sub> [carbon dioxide] now being observed in the atmosphere, none seems to fit the presently observed situation as well as the fossil fuel emanation theory” and “[t]here seems to be no doubt that the potential damage to our environment could be severe”.<sup>65</sup>

In another example, an internal ExxonMobil document from 1977 states “[t]here is general scientific agreement that the most likely manner in which mankind is influencing the global climate is through carbon dioxide release from the burning of fossil fuels ...” and “[c]urrent scientific opinion overwhelmingly favors attributing atmospheric carbon dioxide increase to fossil fuel combustion”.<sup>66</sup>

In 1979 the API formed a Climate Task Force, whose members included senior scientists and engineers from nearly all the major fossil fuel companies operating in the US, including ExxonMobil, BP, Chevron, ConocoPhillips and Shell.<sup>67</sup> The minutes from a presentation to the Climate Task Force in 1980 contain the statement “there is a scientific consensus on the potential for a large future climatic response to increased CO<sub>2</sub> [carbon dioxide] levels” and “remedial actions will take a long time to become effective”.<sup>68</sup>

Then, in 1982, a primer was circulated among ExxonMobil management that was “not to be distributed externally”.<sup>69</sup> It confirmed fossil fuel combustion

63 *County of San Mateo v Chevron Corp*, above n 42.

64 Wang, above n 53.

65 *County of San Mateo v Chevron Corp*, above n 42, in Exhibit A at 1.

66 *Rhode Island v Chevron Corp*, above n 42, at 55.

67 *County of San Mateo v Chevron Corp*, above n 42, at 37–38.

68 In Exhibit A at 2.

69 *Rhode Island v Chevron Corp*, above n 42, at 63.

was the main contributing factor to human-made climate change. Further, it stated that “mitigation of the ‘greenhouse effect’ could require major reductions in fossil fuel consumption”.<sup>70</sup>

Much of the direct evidence that has been produced to demonstrate fossil fuel companies’ knowledge or awareness of climate change prior to 1990 implicates the company ExxonMobil. The volume of evidence is considerable, of which just a few examples have been provided above. This body of evidence is the result of several subpoenas as well as investigative journalism over the last few years.<sup>71</sup> However, other fossil fuel companies were also members of trade bodies and organisations that disseminated information in the 1960s, 1970s and 1980s regarding the role of fossil fuels in climate change. This includes API, as discussed above, as well as the Western States Petroleum Association (WSPA).<sup>72</sup>

### 3.3 Promoting Scepticism

In the years following the IPCC’s first assessment report, fossil fuel companies pursued a public communications strategy described by an ExxonMobil public affairs manager, Joseph Carlson, as follows: “emphasize the uncertainty in scientific conclusions regarding the potential enhanced Greenhouse Effect”.<sup>73</sup> That is, fossil fuel companies sought to promote climate change scepticism in the media and public sphere, despite possessing the knowledge that fossil fuel consumption was linked to climate change.

An example of this strategy is ExxonMobil’s advertorials, which are paid advertisements that are made to look like editorial content.<sup>74</sup> ExxonMobil bought advertising in *The New York Times* every Thursday between 1972 and 2001, reaching an audience of millions of readers.<sup>75</sup> One of ExxonMobil’s 1997 advertorials states “[w]e still don’t know what role man-made greenhouse gases might play in warming the planet”. In the same year, another advertorial referred to a “high degree of uncertainty” regarding ongoing “debate” and a “knowledge gap”.<sup>76</sup> It stressed the need for further “fact-finding” before states should act to mitigate greenhouse gas emissions. The advertorial advised that governments and other parties set a goal “of achieving a consensus view” regarding the facts, though this is what the IPCC had delivered seven years previously.<sup>77</sup>

70 *County of San Mateo v Chevron Corp*, above n 42, in Exhibit A at 2.

71 Banerjee and others, above n 53.

72 *County of San Mateo v Chevron Corp*, above n 42, at 21.

73 In Exhibit A at 3.

74 *Rhode Island v Chevron Corp*, above n 42, at 79.

75 Supran and Oreskes, above n 58, at 13.

76 At 8.

77 At 8.

A 2017 study analysed the content of 187 public communications and internal documents from ExxonMobil spanning the years between 1977 to 2014.<sup>78</sup> The authors, Geoffrey Supran and Naomi Oreskes, found that 80 per cent of its peer-reviewed papers and internal communications acknowledged that climate change is real and human-made.<sup>79</sup> Whereas 80 per cent of ExxonMobil's advertorials in *The New York Times* expressed doubt that climate change is real and human-made. Although 12 per cent of the advertorials did acknowledge that it was real and human-made, the inconsistent messaging had the desired effect of sowing doubt. The remaining advertorials (8 per cent) were described by the authors as expressing either reasonable doubt (as they were published prior to 1990) or acknowledging some aspects of human-made climate change, while doubting other aspects.<sup>80</sup>

Another example that implicates two different fossil fuel companies relates to an organisation called the Information Council for the Environment (ICE). In 1991 the members of ICE included subsidiaries of the fossil fuel companies Chevron and Occidental Petroleum.<sup>81</sup> In that year, ICE launched a campaign that involved full-page newspaper advertisements, radio commercials and flyers mailed to members of the public. This campaign had as its stated goal to "reposition global warming as theory (not fact)". The group deliberately targeted "older, less-educated males", who were believed to be "predisposed to favour the ICE agenda".<sup>82</sup> Newspaper advertisements contained slogans such as the following: "The most serious problem with catastrophic global warming is — it may not be true"; "Who told you the earth was warming ... Chicken Little?"; and "Doomsday is cancelled. Again."<sup>83</sup>

The fossil fuel industry knowingly adapted its public communications strategy from the tobacco industry. Industry groups and lobbyists had used similar strategies to promote scepticism with regard to scientific evidence of the harm caused by smoking cigarettes in the 1960s and 1970s.<sup>84</sup> A 1969 internal

78 At 8.

79 At 13.

80 The authors defined doubt as to whether climate change was real as "reasonable" prior to the IPCC's first assessment report in 1990, and doubt regarding human causality as "reasonable" prior to its second assessment report in 1995. They state that these are conservative estimates because many scientists, including researchers who were employed by ExxonMobil, made conclusions that climate change was real and human-made much earlier.

81 *County of San Mateo v Chevron Corp*, above n 42, at 22.

82 *Rhode Island v Chevron Corp*, above n 42, at 75.

83 At 76.

84 For example, the Tobacco Industry Research Committee (TIRC) distributed a pamphlet, "A Scientific Perspective on the Cigarette Controversy", to almost 200,000 doctors, journalists and policy-makers that emphasised research repudiating claims that tobacco was harmful to human health. This was published in 1954, two years after a *Reader's Digest* article, entitled "Cancer by the Carton", which gained widespread media attention. It summarised

memo from the RJ Reynolds Tobacco Company provides this description: “[d]oubt is our product since it is the best means of competing with the ‘body of fact’ that exists in the mind of the general public”.<sup>85</sup>

There is also evidence of fossil fuel companies using astroturfing, which is another strategy borrowed from the tobacco lobbyists’ “playbook”.<sup>86</sup> Astroturfing involves the creation of small associations and masking their source of funding to make it look as though there is widespread grassroots support or opposition to something.<sup>87</sup> In this case, fossil fuel companies created the false impression that climate change scepticism had strong grassroots support.

For example, in 1998, the API convened a Global Climate Science Team (GCST). Members included lobbyists and public relations representatives from ExxonMobil, Shell, BP, ConocoPhillips and Chevron, as well as Steven Milloy.<sup>88</sup> Previously, Milloy had founded a tobacco industry group called the Advancement of Sound Science Coalition that promoted uncertainty regarding the link between smoking and lung cancer. Milloy’s experience as a lobbyist for the tobacco industry was to be leveraged in order to promote climate change scepticism. ExxonMobil donated \$110,000 to Steven Milloy between 2000 and 2004, and \$50,000 to other organisations registered at his home address.<sup>89</sup>

The API’s GCST developed a Global Climate Science Communications Plan which stated “[v]ictory will be achieved when ... average citizens ‘understand’ [recognize] uncertainties in climate science [and] recognition of uncertainties becomes part of the ‘conventional wisdom’”.<sup>90</sup> Public outreach efforts, including supplying educational literature to US schools, were part of a multi-year and multi-million-dollar proposed budget.<sup>91</sup>

Another tactic used to promote climate change scepticism involved discrediting certain climate scientists, “accusing them of a political bias that makes their recommendations untrustworthy”.<sup>92</sup> This can be successful even in the absence of evidence since the goal is to sow doubt.

the growing body of scientific evidence supporting the contrary view. See James Owen Weatherall and others “How to Beat Science and Influence People: Policy Makers and Propaganda in Epistemic Networks” (2018) British Journal for Philosophy of Science <<https://doi.org/10.1093/bjps/axy062>>.

85 Conway and Oreskes, above n 59, at 34.

86 *Rhode Island v Chevron Corp*, above n 42, at 84.

87 Dubats, above n 38, at 518.

88 *County of San Mateo v Chevron Corp*, above n 42, at 58–59.

89 At 58–59.

90 *Rhode Island v Chevron Corp*, above n 42, at 81.

91 At 81.

92 Mireille Chiroleu-Assouline and Thomas P Lyon *Merchants of Doubt: Corporate Political Influence When Expert Credibility is Uncertain* (CESifo Working Paper Series No 6165, 8 November 2016) <<https://ssrn.com/abstract=2884611>> at 2.



A high-profile example concerns the lead author of ch 8 of the IPCC's second assessment report, Ben Santer, who was accused of altering the report to "deceive policy makers and the public" in a 1996 article in *The Wall Street Journal*.<sup>93</sup> The article's author, Frederick Seitz, chairman of the George C Marshall Institute, a think-tank, was a prominent physicist who had become a consultant for the tobacco and fossil fuel industries after his retirement.<sup>94</sup> Santer had edited the IPCC chapter in response to peer-review comments. He wrote a response refuting Seitz's accusation that he had falsified parts of the IPCC report. Santer's response was signed by 40 other climate scientists, though their names were not printed along with Santer's by-line when *The Wall Street Journal* published the response.<sup>95</sup>

Fossil fuel companies and lobby groups' attempts to sow doubt in the media and public sphere appear to have had significant success. Climate change scepticism was commonplace in the US throughout the 1990s and 2000s even as confidence grew within scientific circles.<sup>96</sup> For instance, in 2007 — despite the IPCC's fourth assessment report noting its "very high confidence" regarding the human causes of climate change — a Yale University-Gallup poll found that only 48 per cent of Americans believed there was a consensus in the scientific community. In addition, 40 per cent believed there was a lot of disagreement among scientists as to whether climate change was happening.<sup>97</sup>

### 3.4 Obstructive Lobbying

By promoting climate change scepticism, fossil fuel companies also sought to influence political leaders and their decisions.<sup>98</sup> The goal was to block climate change legislation that regulated the use of fossil fuels. Political leaders were less likely to regulate fossil fuel companies' activities if they doubted the scientific basis of climate change.<sup>99</sup> This is reinforced when citizens are also sceptical and exert little or no pressure on government to respond to climate change. In this article, such targeting of political leaders is referred to as "obstructive lobbying".<sup>100</sup>

93 Conway and Oreskes, above n 59, at 3.

94 Chiroleu-Assouline and Lyon, above n 92, at 2.

95 At 2.

96 Erik Conway and Naomi Oreskes "Defeating the Merchants of Doubt" (2010) 465(7299) *Nature* 686.

97 *County of San Mateo v Chevron Corp*, above n 42, at 58–59.

98 Nathaniel Rich "Losing Earth: The Decade we almost Stopped Climate Change" *New York Times Magazine* (online ed, New York, 1 August 2018) <<https://www.nytimes.com/interactive/2018/08/01/magazine/climate-change-losing-earth.html>>.

99 Conway and Oreskes, above n 59.

100 "An investor inquiry: how much big oil spends on climate lobbying" (April 2016)

Political leaders in the US had been aware of the problem of greenhouse gas emissions before the IPCC's first assessment report in 1990. Since Lyndon B Johnson's 1965 address, subsequent governments had investigated climate change. In 1974 the CIA circulated a classified report on the "carbon dioxide problem". It concluded that climate change had "already caused major economic problems throughout the world".<sup>101</sup> In 1979 the chief scientific advisor commissioned a report on global warming on behalf of President Jimmy Carter. The Charney Report, named for Jule Gregory Charney — the lead author and president of the National Academy of Sciences — was disseminated to the Departments of State, Energy, Agriculture, Defense, the Environmental Protection Agency and the National Oceanic and Atmospheric Administration.<sup>102</sup>

In 1988, when the IPCC was formed, it looked increasingly likely that fossil fuels would be regulated. The US and 196 other states had just signed the Montreal Protocol regulating human-made gases that depleted the atmosphere's ozone layer. Lee Thomas, administrator of the US Environmental Protection Agency, publicly stated that a global treaty addressing climate change would likely be next.<sup>103</sup> In June 1988, James Hansen, a scientist for the National Aeronautics and Space Administration (NASA), presented information to Congress confirming that human activities were the leading cause of climate change.<sup>104</sup>

Also in 1988, a number of senators sought to introduce a Bill to regulate greenhouse gases and alter national energy policy. Sponsors included Republican senators John Chafee, Robert Stafford and Dave Durenberger, as well as Democrats including Max Baucus, Dale Bumpers and Albert Gore.<sup>105</sup> Further, presidential candidate George HW Bush declared that he would counter the greenhouse effect "with the White House effect" during his election campaign.<sup>106</sup>

In response, the George C Marshall Institute issued a "white paper" claiming that global warming, if it was occurring, was caused by solar irradiation, not greenhouse gases.<sup>107</sup> The paper was not peer-reviewed, nor was it authored by climate scientists. Yet, the Institute contacted the White

InfluenceMap <<https://influencemap.org/report/Climate-Lobbying-by-the-Fossil-Fuel-Sector>>.

101 Rich, above n 98.

102 Rich, above n 98.

103 Rich, above n 98.

104 *County of San Mateo v Chevron Corp*, above n 42, at 48.

105 At 48; Global Warming Prevention Act of 1988, 2867, 100th Cong (1987–1988).

106 *County of San Mateo v Chevron Corp*, above n 42, at 48.

107 A white paper is a report giving information about a complex issue, generally one that has an effect on public policy-making. It presents the publishing entity's position on the issue. It is not generally peer-reviewed.

House in 1989 requesting to present the contents of the paper to members of the Council of Economic Advisers, the Office of Management and Budget, and other executive branch offices. This presentation “had a big impact, stopping the positive momentum that had been building in the Bush administration”.<sup>108</sup>

This paper was one of the first examples of lobbying that leveraged climate change scepticism. Lobbying covers a range of activities, including “regulatory engagement, contributions to trade associations and the capture of the public discourse on climate, as well as political contributions and spending on registered lobbyists”.<sup>109</sup> Fossil fuel companies’ promotion of climate-change scepticism in the public sphere was part of its broader campaign to influence political decision-making.

According to research conducted by Robert Brulle at Drexel University, the US fossil fuel sector dedicated \$370 million to lobbying Congress on climate change between 2000 and 2016. In 2015, in the lead-up to the UNFCCC negotiations in Paris, the API spent \$65 million, ExxonMobil spent \$27 million, Shell spent \$22 million and WSPA \$6 million on these activities.<sup>110</sup> In addition, during the US election campaigns in 2016 and 2018, BP, Chevron, ExxonMobil, Shell and ConocoPhillips made federal political contributions amounting to \$14.8 million.<sup>111</sup>

Fossil fuel companies’ obstructive lobbying efforts were assisted by industry groups, including the API and WSPA, as well as think-tanks such as the George C Marshall Institute, the Heritage Foundation, the Heartland Institute, the Frontiers of Freedom Institute and the Competitive Enterprise Institute.<sup>112</sup> These groups promoted climate change scepticism and received significant funding from fossil fuel companies — further evidence of astroturfing. Lawyers for San Mateo County in California claimed, in the case brought against ExxonMobil and other fossil fuel companies, that between 1998 and 2014 “ExxonMobil spent almost \$31 million funding numerous organizations misrepresenting the scientific consensus that ... fossil fuel products were causing climate change”.<sup>113</sup>

Obstructive lobbyists enjoyed significant success. The Global Climate Coalition (GCC), which counted API, ExxonMobil, BP, Chevron and Shell

108 Conway and Oreskes, above n 59, at 186.

109 InfluenceMap, above n 100, at 6.

110 At 2, 21.

111 Kathy Mulvey “Six Key Facts Ignored in Dismissal of California Climate Suits v. Fossil Fuel Companies” (27 June 2018) Union of Concerned Scientists <<https://blog.ucsusa.org/kathy-mulvey/six-key-facts-ignored-in-dismissal-of-california-climate-suits-vs-fossil-fuel-companies>>.

112 Neela Banerjee “How Big Oil Lost Control of its Climate Misinformation Machine” (22 December 2017) Inside Climate News <<https://insideclimatenews.org/news/22122017/big-oil-heartland-climate-science-misinformation-campaign-koch-api-trump-infographic>>; Conway and Oreskes, above n 59; *Rhode Island v Chevron Corp*, above n 42, at 85.

113 *County of San Mateo v Chevron Corp*, above n 42, at 61.

among its members, played a key role in opposing the Kyoto Protocol — the international agreement on greenhouse gas emissions that was negotiated under the auspices of the UNFCCC in 1997. Despite playing a leading role in the negotiations in Kyoto, the US subsequently failed to ratify the Protocol.<sup>114</sup> A 2001 briefing for the US Under Secretary of State Paula Dobriansky, ahead of her meeting with the GCC, at the API's headquarters, stated: "POTUS [President of the United States] rejected Kyoto in part based on input from you".<sup>115</sup>

This article, in part 3 above, has assembled evidence from existing lawsuits, and other sources, of fossil fuel companies' long-term, widespread and concerted effort to promote climate change scepticism. Misrepresenting facts and knowingly providing false information could constitute fraud under common law in the US.<sup>116</sup> The argument has been made that the companies have made efforts to influence political decision-making and evade regulation in the US over the last three decades.

In part 4 below, the article explains how these actions constitute interference with the public rights of US citizens. Having argued that this interference could have been intentional, the article will now assert that it was unreasonable, both creating and contributing to a public nuisance, for which fossil fuel companies could be liable under US common law.

## 4. LIABILITY

### 4.1 Unreasonable Interference

Fossil fuel companies have interfered with the *parens patriae* ability of US states to protect and promote the economic and physical well-being and safety of their citizens. The argument is that the companies created and contributed to this public nuisance by misrepresentation and engaging in obstructive lobbying. These actions appear to have been carried out both intentionally, as asserted in part 3 above, and unreasonably. To show that fossil fuel companies' actions were unreasonable involves, in public nuisance claims, a "weighing of the gravity of the harm against the utility of the conduct".<sup>117</sup>

In *City of Oakland v BP plc*, Judge William Alsup, in weighing the gravity of the harm against the utility of the conduct, reasons that:<sup>118</sup>

114 At 57–58.

115 At 58.

116 Dubats, above n 38, at 515.

117 *City of Oakland v BP plc*, above n 42, at 8.

118 This article returns to Judge Alsup's order to dismiss the *City of Oakland v Chevron Corp* case below.

our industrial revolution and the development of our modern world has literally been fuelled by oil and coal. Without those fuels, virtually all of our monumental progress would have been impossible. All of us have benefitted. Having reaped the benefit of that historic progress, would it really be fair to ignore our own responsibility in the use of fossil fuels and place blame for global warming on those who supplied what we demanded? Is it really fair, in light of those benefits, to say the sale of fossil fuels was unreasonable?<sup>119</sup>

Judge Alsup goes on to say that the court “recognizes but does not resolve these questions”.<sup>120</sup>

These questions are important and may be pertinent in other tort claims, such as the strict liability for product design defect and negligent product design defect claims in *Rhode Island v Chevron Corp.* Yet, Judge Alsup misses the mark. The relevant question in public nuisance claims against fossil fuel companies is not whether fossil fuel consumption was unreasonable but rather whether it was unreasonable for fossil fuel companies to promote climate change scepticism and engage in obstructive lobbying.

This article asserts, in part 4.2 below, that these actions were not reasonable for two reasons. First, fossil fuel companies have interfered with the process whereby science informs citizens and political leaders’ decisions regarding energy use. Secondly, fossil fuel companies’ obstructive lobbying activities have politicised climate change and thwarted the regulation of their industry leading to accelerated climate change.<sup>121</sup>

Fossil fuel companies’ conduct had utility.<sup>122</sup> Their goal would appear to be to preserve the business model and continue profiting from the production, marketing and sales of fossil fuels. While it is not *a priori* wrong to generate profits, even from harmful activities, was it reasonable to perpetrate a misrepresentation in order to continue these activities? To thwart regulation at the expense of those now facing losses and damages? The gravity of the resulting harms, outlined in part 4.3 below, cannot be overstated. The remainder of this article argues that the harm done outweighs the utility of fossil fuel companies’ conduct. It discusses how compensation could be awarded if fossil fuel companies are held liable for losses and damages related to climate change under US common law.

119 *City of Oakland v BP plc*, above n 42, at 8.

120 At 8.

121 Dubats, above n 38, at 535.

122 *City of Oakland v BP plc*, above n 42, at 8.

## 4.2 Scientific Integrity

Promoting climate change scepticism and misleading citizens and political leaders is unreasonable because it prevents them from making informed choices about fossil fuel consumption.

If citizens had better information — if they had never doubted the dangers of fossil fuels and climate change — would they have acted differently? Perhaps citizens would have consumed fewer fossil fuels and therefore emitted fewer greenhouse gases. This is not something that can be proven, but the problem is rather that citizens have not been given the choice. Consumers are not necessarily demanding fossil fuels, as Judge Alsup claims, they are demanding energy products.<sup>123</sup>

Further, if fossil fuel companies had not misrepresented the dangers of fossil fuel use and climate change, what political decisions would have turned out differently? Perhaps developers of renewable energy technologies would have received more public funding and seen more private investment over the past three decades.<sup>124</sup> Public planners may have decided against investments in critical infrastructure, such as oil and gas transmission pipelines, or electricity generation facilities that burn oil, gas or coal. They may have opted to build more public transportation, instead of planning and funding roads for cars and trucks. Instead of this, the development of energy infrastructure over the past three decades in the US has only increased consumer dependence on fossil fuels and restricted consumers' choices with respect to energy consumption.

By speculating about alternative developments in energy production, this article claims that citizens and political leaders have not shown a “willingness to make a trade-off”.<sup>125</sup> Citizens and political leaders have not been able to weigh the likelihood and severity of the harms resulting from climate change against the utility of consuming fossil fuels in an informed and confident way. Fossil fuel companies' misinformation campaigns may have deliberately created the conditions whereby citizens and political leaders remained ignorant or confused as to the dangers of fossil fuel use and climate change.

Ultimately, fossil fuel companies' actions raise important questions regarding scientific integrity and corporate accountability — particularly, where science may inform decision-making and corporations play a role in disseminating scientific facts. It is not necessarily unreasonable to produce and sell fossil fuels simply because they contribute to climate change. In the same way, in similar tort claims, it is not *a priori* unreasonable to produce and

123 Jennifer Dorroh “In Liability Cases, Oil Companies Argue Climate Change is Your Fault” (28 June 2018) Climate Liability News <<https://www.climate-liabilitynews.org/2018/06/28/climate-liability-cases-consumers/>>.

124 *Rhode Island v Chevron Corp*, above n 42, at 89–97.

125 Dorroh, above n 123.

sell tobacco products because their use can lead to respiratory disease.<sup>126</sup> It is, however, unreasonable to falsely reassure citizens and political leaders that harm is unlikely to accrue, as in the tobacco lawsuits. It is also unreasonable to hinder citizens' and political leaders' ability to make informed decisions about energy consumption, when they are relying on information disseminated by the fossil fuel companies.

Moreover, fossil fuel companies' obstructive lobbying efforts have politicised climate change issues.<sup>127</sup> In addition to arguably misleading and misinforming political leaders about the dangers of climate change, fossil fuel companies have made political contributions and funded election campaigns in exchange for politicians' support for their business interests.<sup>128</sup> By developing relationships with politicians, fossil fuel companies have helped to build a political movement opposed to the regulation of fossil fuels and greenhouse gases. Today, fossil fuel companies' interests are aligned with "general conservative, anti-regulatory politics".<sup>129</sup>

As a result, the legislative and executive branches of government are ill-equipped to address climate change. Politicians confuse scientific facts with political opinions. Whether this is deliberate or not on the part of politicians, a statement has been made that there is an advantage "to dealing with the issues of scientific fraud in the courtroom ... courts isolate questions of fact from questions of law or opinion, and they have procedural rules, which separate truth from political rhetoric".<sup>130</sup>

It is not obvious that political leaders would have introduced stringent regulations to reduce fossil fuel consumption and emissions in the past three decades, but for the obstructive lobbying efforts of fossil fuel companies. Nevertheless, the analysis provided in this article suggests that obstructive lobbying did succeed in thwarting efforts to regulate in the 1990s, 2000s and 2010s. It is not *a priori* wrong for fossil fuel companies to promote their business interests. However, this conduct resulted in the almost entirely unregulated and unabated consumption of fossil fuels, thereby accelerating harmful climate change.

### 4.3 Unregulated Fossil Fuel Consumption

The potential scale and impact of losses and damages resulting from climate change is substantial. Thus far, US-based tort claimants have sought compensation for a wide range of losses and damages, which is testament to

126 Dubats, above n 38, at 514–515.

127 At 535.

128 InfluenceMap, above n 100.

129 Dubats, above n 38, at 535.

130 At 532.

the far-reaching scope and severity of potential losses and damages, as outlined in part 2 of this article.

For instance, Rhode Island state, New York City, and several cities and counties in California have sought compensation for rising seas levels, which is likely to cause widespread loss of property and infrastructure in the coming decades.<sup>131</sup> In addition, they highlight the risk of saltwater intrusion and flooding, leading to the contamination of local water supplies. Plaintiffs also claim that rising seas will inhibit the use and enjoyment of coastal resources, including beaches, fisheries and ports.<sup>132</sup>

In a similar case, which was dismissed in 2009, *Native Village of Kivalina v ExxonMobil Corp*, claimants sought compensation of between \$90 million and \$400 million for the costs of relocating their village.<sup>133</sup> The village is located atop a barrier reef in Alaska and is threatened by erosion and rising seas. This had prompted government agencies to advise that villagers relocate.<sup>134</sup>

In *Comer v Murphy Oil USA*, residents of Mississippi sued for compensation following the damage wrought by Hurricane Katrina in 2005. They sought compensation for loss of property, loss of business and income, clean-up costs, loss of loved ones, mental anguish and emotional distress, and disruption to the normal course of their lives.<sup>135</sup> Their claims were also dismissed by the court. The reasons for dismissal in the above cases are discussed in part 4.4 below.

Loss and damage on this scale was not always inevitable. In the last three decades, after the IPCC's first assessment report was published, a great acceleration in fossil fuel production and consumption has taken place. Since 1988, more greenhouse gases were emitted in total than during the entire period from the start of the Industrial Revolution, in 1750, up to 1988.<sup>136</sup>

Fossil fuel companies, ultimately, sought this outcome — the unregulated and unabated production and consumption of fossil fuels was their stated goal. An API memo illustrates this: “[c]limate is at the center of the industry’s business interests. Policies limiting carbon emissions reduce petroleum product use. That is why it is API’s highest priority issue.”<sup>137</sup>

131 These claims are either pending or have been dismissed and are now under appeal.

132 *Rhode Island v Chevron Corp*, above n 42, at 97–114; *County of San Mateo v Chevron Corp*, above n 42, at 72–75; *City of New York v BP plc*, above n 42, at 2–6.

133 Louis Chambers *Tort Law, Climate Change and Private Nuisance* (unpublished manuscript on file with University of Otago Library, 2012) at 1; *Native Village of Kivalina v ExxonMobil Corp*, above n 47.

134 *Native Village of Kivalina v ExxonMobil Corp*, above n 47.

135 *Comer v Murphy Oil USA*, above n 47.

136 Griffin, above n 52; see also Richard Heede “Tracing Anthropogenic Carbon Dioxide and Methane Emissions to Fossil Fuel and Cement Producers, 1854–2010” (2014) 122 *Climatic Change* 229.

137 *Rhode Island v Chevron Corp*, above n 42, at 81.



Why did fossil fuel companies promote the unregulated and unabated use of fossil fuels? The production, marketing and sale of fossil fuels is an immensely profitable economic activity.<sup>138</sup> The combined profits of BP, Chevron, ConocoPhillips, ExxonMobil and Royal Dutch Shell stood at more than \$44 billion in 2017.<sup>139</sup> According to the World Bank, more than 110 countries had a GDP of less than \$44 billion apiece in 2017.<sup>140</sup> Furthermore, Chevron, ExxonMobil and ConocoPhillips have been on the Fortune 500 list, which ranks the world's most valuable investor-owned companies by revenue, every year since 1955.

Fossil fuel companies evidently saw great utility in limiting attempts to regulate fossil fuel consumption. It enabled these companies to continue generating and growing their profits, which rose as fossil fuel production and sales rose too.<sup>141</sup>

Does unregulated and unabated fossil fuel consumption have any utility for states and their citizens?<sup>142</sup> Economic analysis shows that investment in mitigation and adaptation, which involves regulating fossil fuel use and emissions, can significantly reduce the cost of losses and damages.<sup>143</sup> It also reduces the overall costs of climate change, when mitigation, adaptation and losses and damages are considered in aggregate. Therefore, regulating fossil fuel consumption and reducing emissions is more economically efficient than allowing unregulated and unabated fossil fuel consumption.<sup>144</sup> Further, had mitigation occurred sooner, then the total cost would also be less.<sup>145</sup>

Thus, the broad economic utility of unregulated and unabated fossil fuel consumption is limited.<sup>146</sup> The economic benefits of unregulated and unabated fossil fuel consumption are weighted in favour of fossil fuel companies and

138 See "Crude Oil and Petroleum Products, Cushing, Oklahoma WTI Spot Price (Dollars Per Barrel)" United States Energy Information Administration <<https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RWT&f=A>> (this data shows the increasing price for crude oil traded in the United States from 1966 onwards).

139 Mulvey, above n 111.

140 The World Bank, above n 21.

141 Griffin, above n 52; see also Organisation for Economic Co-operation and Development "Crude oil production" OECD <<https://data.oecd.org/energy/crude-oil-production.htm#indicator-chart>> (this data shows growth in crude oil production from 1960 onwards).

142 This does not mean that fossil fuel consumption has no utility for states and their citizens. Recall, in part 2.2, some emissions can be justified since the combustion of fossil fuels aids economic development and wealth creation.

143 Parry and others, above n 17, at 107.

144 At 107.

145 James Hansen and others "Assessing 'Dangerous Climate Change': Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature" (2013) 8(12) *PLoS ONE* e81648 at 10; see also Burke and others, above n 17.

146 This analysis raises important questions regarding intergenerational fairness and economic utility, which this article does not have space to address.

their business interests, but deliver economically inefficient outcomes for states and their citizens (ie taxpayers). States and their citizens would be far better off, in economic terms, if fossil fuel companies had not thwarted the regulation of their industry for the past three decades, as early mitigation would have reduced the overall costs of climate change, including adaptation, losses and damages. Moreover, the costs associated with losses and damages within the US primarily accrue not to the fossil fuel companies, but to the states and their citizens. That is, the utility of unregulated fossil fuel consumption is not evenly distributed.

On balance, the gravity of the harm outweighs the utility of fossil fuel companies' conduct vis-à-vis the victims — US states and their citizens that now face substantial losses and damages resulting from climate change. Early regulation and climate change mitigation would have reduced or even prevented losses and damages.

Therefore, fossil fuel companies' conduct can be claimed to be unreasonable. It has resulted in accelerated climate change and increased the costs of losses and damages for US states and their citizens. This interferes with states' ability to promote and protect the economic and physical well-being and safety of their citizens — a public nuisance — under US common law.

#### 4.4 Justiciability and the Limits of Law

To date, no public nuisance case related to climate change has defeated dismissal and gone to trial on its merits. All complaints were dismissed because of a lack of legal standing or because they raised non-justiciable political questions.<sup>147</sup>

As discussed previously, *Rhode Island v Chevron Corp* may overcome the precedent that has been set with regard to legal standing and assert the principle of *parens patriae* on behalf of Rhode Island citizens. In July 2019 a federal judge ruled that Rhode Island's case would remain in state courts. Judge William Smith decided that “there is no federal jurisdiction under the various statutes and doctrines adverted to by the defendants”, which bodes well for proceeding to trial for which a date has yet to be set.<sup>148</sup>

On 25 June 2018, Judge Alsup dismissed the *City of Oakland v Chevron Corp* case. Judge Alsup ruled that the claim raised non-justiciable political questions. That is, he decided that climate change issues ought to be addressed by politicians, not courts.<sup>149</sup> Judge John F Keenan reached a similar conclusion with regard to *City of New York v BP plc*, which was dismissed on 19 July

147 Dubats, above n 38, at 520; Ganguly and others, above n 45, at 7.

148 *Rhode Island v Chevron Corp* No 1:18-cv-00395 (DRI, 22 July 2019) at 1.

149 *City of Oakland v BP plc*, above n 42, at 10–23.

2018.<sup>150</sup> These cases all remain under appeal, as of July 2019. In addition, a number of cases that make similar claims are still under way in the US courts.

Judges Alsup and Keenan deferred to the legislative and executive branches of government, because “[e]veryone has contributed to the problem of global warming and everyone will suffer the consequences — the classic scenario for a legislative or international solution”.<sup>151</sup> This article has already reasoned that politicians are ill-equipped to address climate change, since the issue of climate change has been politicised. Further, current policies have altogether failed to reduce greenhouse gas emissions in the US as fossil fuel companies’ lobbying efforts have thwarted attempts to regulate their activities.

Even if climate litigants were to concede that it is appropriate for politicians to decide how to mitigate and adapt to climate change, due to the widespread or international nature of the problem, this does not hold for losses and damages. This article argued, in part 2, that dealing with the plight of victims who have been harmed by the actions of others is the domain of corrective justice and tort litigation.

Moreover, Judges Alsup and Keenan have conflated the scientific question of whether or not harms are attributable to the defendants with the political question of how to regulate greenhouse gases.<sup>152</sup> The public nuisance claim does not seek an injunction preventing fossil fuel use or emissions.<sup>153</sup> It seeks compensation for those suffering harms resulting from unregulated fossil fuel consumption in the US. The global nature of climate change does not prevent it from resulting in localised harms.

Judge Alsup admits to leaving the question of liability for public nuisance unresolved, saying, “weighing the gravity of the harm against the utility of the conduct ... [the court] recognizes but does not resolve these questions”.<sup>154</sup>

Courts must decide this question. The chain of causality establishing fossil fuel companies’ responsibility for losses and damages related to climate change is highly complex, but it should still be justiciable. The courts have a role to play in depoliticising climate science, as “separating fact from fiction is a core judicial function”.<sup>155</sup> They must defend scientific integrity and hold companies to account for actions that interfere with citizens’ and political leaders’ ability to make informed decisions. That is, the courts must determine whether promoting climate change scepticism and obstructive lobbying were reasonable. They must judge whether the utility of unregulated and unabated fossil fuel consumption outweighs the substantial harms resulting from accelerated climate change.

150 *City of New York v BP plc*, above n 42, at 13–16.

151 *City of Oakland v BP plc*, above n 42, at 12.

152 Dubats, above n 38, at 531.

153 At 527.

154 *City of Oakland v BP plc*, above n 42, at 8.

155 Dubats, above n 38, at 513. [Ed. Compare *Smith v Fonterra*, above n 62.]

Courts must correct the injustice that follows when fossil fuel companies intentionally and unreasonably interfere with US states' ability to protect and promote their citizens' right to economic and physical well-being and safety. In summary, courts should hold fossil fuel companies liable for both creating and contributing to climate change — a public nuisance — under US common law.

#### 4.5 Claiming Compensation

The last section of this part of the article briefly outlines how liability should be attributed, and how compensation should be awarded. Plaintiffs' public nuisance claims may relate to slow-onset changes resulting from climate change, such as sea-level rises, as in *County of San Mateo v Chevron Corp* or *Rhode Island v Chevron Corp*.<sup>156</sup> They may also make claims for compensation following extreme weather events, such as Hurricane Katrina in 2005, as in *Comer v Murphy Oil USA*.<sup>157</sup>

Attribution science determines the increase in likelihood or severity of a slow-onset climatic change or given weather event because of the increased concentration of greenhouse gases in the atmosphere. It does this using computer models, which have become more advanced in recent years.<sup>158</sup> Although any given climatic change or weather event cannot be categorically linked to climate change, measuring the “relative contributions of multiple causal factors to a change or event with an assignment of statistical confidence” is possible.<sup>159</sup>

In the first event-attribution study, published in 2004, meteorologists found that human-made climate change increased the risk of heat-related mortality by approximately 70 per cent in Paris and 20 per cent in London during the 2003 European heatwave. They estimated that “64 (±3) deaths were attributable to anthropogenic climate change in London and 506 (±51) in Paris”.<sup>160</sup>

156 *County of San Mateo v Chevron Corp*, above n 42; *Rhode Island v Chevron Corp*, above n 42.

157 *Comer v Murphy Oil USA*, above n 47.

158 Daniel Mitchell and others “Attributing Human Mortality during Extreme Heat Waves to Anthropogenic Climate Change” (2016) 11(7) *Environmental Research Letters* 1.

159 See Thomas F Stocker and others (eds) *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press, Cambridge and New York, 2013) <<http://www.ipcc.ch/report/ar5/wg1/>> at 872; Sophie Marjanac and Lindene Patton “Extreme Weather Event Attribution Science and Climate Change Litigation: An Essential Step in the Causal Chain?” (2018) 36 *Journal of Energy & Natural Resources Law* 265; Peter Stott and others “Detection and Attribution of Climate Change: A Regional Perspective” (2010) 1(2) *Wiley Interdisciplinary Reviews: Climate Change* 192.

160 Anthropogenic means origination in human activity; Mitchell and others, above n 158, at 1.

It is therefore possible, using attribution studies, to determine what proportion of losses and damages can be attributed to sheer bad luck or the forces of nature, and what proportion can be attributed to human-made climate change. For instance, one study found that human-made climate change contributed around 20 per cent to the probability of an increase in extreme rainfall during Hurricane Harvey in Texas in 2017.<sup>161</sup> The extreme flooding events that followed on from the hurricane resulted in final economic damages of more than \$90 billion and up to \$160 billion.<sup>162</sup> Therefore, damages related to climate change following Hurricane Harvey amount to between \$18 billion and \$32 billion — 20 per cent.<sup>163</sup>

Such methodologies have been approved by the US National Academy of Sciences.<sup>164</sup> Similar methods are applied in epidemiological studies of the causes of disease and have been applied in cases relating to asbestos and tobacco in US courts.<sup>165</sup> Therefore, judges have experience in dealing with statistical analysis and probabilities. That is, “[e]xpert evidence based on complex computer models is ... accepted in a range of civil proceedings across various jurisdictions, particularly those cases involving environmental and health matters”.<sup>166</sup> So, the attribution approach is not without precedent in the US courts.

Likewise, the contribution of multiple tortfeasors — ie “joint and several” defendants — can be determined statistically as well. This also has a precedent in environmental and health-related civil proceedings.<sup>167</sup>

Statistical methods have shown that over half of global greenhouse gas emissions since 1988 can be traced back to the production and sale of fossil fuels by just 25 corporate and state-owned companies.<sup>168</sup> Of these, ExxonMobil’s contribution between 1988 and 2015 constitutes 2 per cent of total emissions; Shell’s 1.7 per cent; BP’s 1.5 per cent; Chevron’s 1.3 per cent; and ConocoPhillips’ 0.9 per cent.<sup>169</sup> Thus, five companies on the docket of *Rhode Island v Chevron Corp*, for example, are accountable for more than 7 per

161 Simon Wang and others “Quantitative attribution of climate effects on Hurricane Harvey’s extreme rainfall in Texas” (2018) 13(5) *Environmental Research Letters* 1 at 2.

162 At 2.

163 Multiply \$90 billion by 0.2 and \$160 billion by 0.2 to arrive at this estimate of the monetary damages.

164 Marjanac and Patton, above n 159, at 15.

165 At 8.

166 At 15.

167 At 21.

168 The Carbon Majors Database shows that the direct operational and product-related carbon dioxide and methane emissions of 100 extant fossil-fuel producing companies represents over half of global industrial greenhouse gas emissions since the start of the Industrial Revolution in 1750 up to 2015; see Griffin, above n 52; Heede, above n 136.

169 Griffin, above n 52.

cent of global emissions since the IPCC was formed in 1988. The full list of defendants accounts for over 14.5 per cent of “global fossil fuel product-related CO<sub>2</sub> [carbon dioxide] between 1965 and 2015”, according to the plaintiff.<sup>170</sup>

Therefore, a judge might order ExxonMobil to pay 2 per cent of damages in a given public nuisance claim; Shell 1.7 per cent; BP 1.5 per cent; Chevron 1.3 per cent; ConocoPhillips 0.9 per cent, and so on. The judge might order that the defendants only pay for losses and damages that have already accrued, rather than estimating future losses and damages. For example, Hurricane Sandy in 2012 caused a storm surge and an abnormally high tide in Providence, Rhode Island, resulting in extensive flood damage. Total economic damages came to \$11.2 million for this weather event, according to the National Oceanic and Atmospheric Administration.<sup>171</sup>

Hypothetically, if these five defendants were to compensate the state and citizens of Rhode Island for their share in 20 per cent of the damages — if that were the portion attributed to human-made climate change — the compensation would only amount to \$0.17 million.<sup>172</sup> Although this is just a fraction of fossil fuel companies’ annual profits, the costs would become quite significant as more claims for different weather events or slow-onset changes were compensated.<sup>173</sup>

To illustrate this point, consider if these five defendants were to each pay their share of compensation for 20 per cent of the damages resulting from the entire 2017 hurricane season in the US, including Hurricane Harvey. All of the hurricanes in the US in 2017 resulted in over \$215 billion in losses and damages, according to the reinsurance firm Munich Re — the costliest season on record.<sup>174</sup> Compensation for the five defendants’ share of 20 per cent of losses and damages would amount to \$3.2 billion, or over 7 per cent of the profits of ExxonMobil, Shell, BP, Chevron and ConocoPhillips in that year.<sup>175</sup> This does not consider damages resulting from other weather events, such as the extreme heatwaves and wildfires that also occurred in the US in 2017.<sup>176</sup>

This would begin to unlock a significant pool of funds for the victims of climate change. At present, those facing losses and damages have little recourse

170 *Rhode Island v Chevron Corp*, above n 42, at 48.

171 National Centers for Environmental Information “Storm Events Database: Search Results for Rhode Island” National Oceanic and Atmospheric Administration <<https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=44%2CRHODE+ISLAND>>.

172 The five defendants’ combined share is 7.4 per cent of 20 per cent of \$11.2 million, which is equal to \$0.17 million.

173 The combined profits of BP, Chevron, ConocoPhillips, ExxonMobil and Royal Dutch Shell stood at more than \$44 billion in 2017; see Mulvey, above n 111.

174 Munich Re, above n 18.

175 The five defendants’ combined share is 7.4 per cent of 20 per cent of \$215 billion, which is equal to \$3.2 billion. Considering their combined profits of \$44 billion in 2017, \$3.2 billion is roughly 7 per cent of \$44 billion; see Mulvey, above n 111.

176 Sachs, above n 39.

to domestic or international funding schemes in light of the Paris Agreement's justice gap. Yet, it follows from corrective justice that victims suffering harms resulting from another's actions have a claim to compensation from the latter.<sup>177</sup> Interference with another, causing them harm, is unjust in line with corrective justice. Litigation, specifically tort claims where blameworthy parties can be identified, provides the victims of climate change with a means to correct the injustice that has occurred.

## 5. CONCLUSION: THE ROLE OF LITIGATION

Recently, courts have been able to settle some of the facts regarding climate change in tort cases brought against fossil fuel companies. Before he dismissed the *City of Oakland v Chevron Corp* case, Judge Alsup ordered that a climate science "tutorial" take place in his court. This novel request resulted in a five-hour hearing. Judge Alsup asked both the defendants and plaintiffs to present on the current state of climate science and its history, and warned them "not to get political".<sup>178</sup> The plaintiffs presented scientific evidence from the IPCC. Of the defendants, only Chevron's attorney made a presentation, prompting Judge Alsup to criticise the attorneys from ExxonMobil, ConocoPhillips, BP and Shell who had opted not to speak.

Judge Alsup's order to dismiss the case subsequently stated that "[t]he issue is not over science. All parties agree that fossil fuels have led to global warming and ocean rise and will continue to do so."<sup>179</sup> This is an important outcome as it refutes the defendants' argument that the science is too uncertain to prove that plaintiffs have suffered harms resulting from climate change. This sets an important precedent for future cases. Moreover, it may mark the end of fossil fuel companies' freedom to promote climate change scepticism.

Litigation against fossil fuel companies ultimately serves more than one purpose.<sup>180</sup> It helps separate facts from fiction and disseminate information regarding climate change to the public and political leaders. Also, even if claimants lose their case, it may serve to increase local, national and global awareness of the plight of victims suffering losses and damages resulting from

177 McKinnon, above n 29, at 266.

178 Amy Westervelt "In Climate Tutorial, Oil Industry Doubles Down on Science Uncertainty" (22 March 2018) Climate Liability News <<https://www.climateliabilitynews.org/2018/03/22/climate-tutorial-judge-alsup-chevron-liability/>>.

179 *City of Oakland v BP plc*, above n 42, at 6.

180 Gerald Torres and others "Can Fossil Fuel Companies Be Held Liable for Climate Change?" (23 October 2017) (recorded panel discussion at Columbia Law School) <<http://columbiaclimatelaw.com/news-events/events/2017-2/can-fossil-fuel-companies-be-held-liable-for-climate-change/>>.

climate change. Courts provide a forum for public debate, especially if a case attracts significant media attention.<sup>181</sup> This may influence public and political opinion and eventually lead to a legislative response for victims. If cases continue to be dismissed on the grounds that political leaders ought to address losses and damages, both globally and within the US, then litigation is a means to draw attention to the failure of international and domestic legislation and regulation, and the need to lobby for reform. And, of course, some claimants may eventually win significant settlements, as happened with the tobacco suits.<sup>182</sup>

Litigation is unlikely to fully bridge the Paris Agreement's justice gap. First, not all victims will have access to litigation. The victims may lack resources, such as time, money and legal knowledge, and this may prevent them from pursuing a claim in court. This is another reason, in addition to the *parens patriae* doctrine, why state attorneys general should pursue claims on behalf of their citizens in the US. This article restricted the scope of its arguments to US courts, which have a significant canon of domestic tort law. Public nuisance claims may not exist in law in other jurisdictions or claimants may face very different legal challenges to those that have been outlined in this article.

Furthermore, compensation, even if it is awarded, may not ultimately be sufficient to cover all losses and damages. Fossil fuel companies may not be able to cover the full costs as these multiply. The ongoing costs have the potential to be ruinous to fossil fuel companies.<sup>183</sup> Hence, the title of this article: "Big Oil, Big Liability".

Finally, and fatally, public nuisance and other tort claims may (continue to) be dismissed by the courts. That is, litigation may prove futile and fail to deliver justice for those suffering from losses and damages. Should further decisions go against claimants, especially *Rhode Island v Chevron Corp*, which was the first case brought by a state, then a precedent will be set that will limit US states' and their citizens' ability to pursue justice by this means.

The first climate litigation cases in the US were brought by a village in Alaska and residents of Louisiana, then by counties and cities. Now Rhode Island state has brought a case against fossil fuel companies. This evolution follows the trend seen in litigation against tobacco companies in the US. Tobacco companies fought off a wave of tort claims in the 1980s and 1990s, including public nuisance, before the US federal government won its case under RICO against Philip Morris in 2000.<sup>184</sup> This case argued that tobacco

181 Torres and others, above n 180. [Ed. In *Smith v Fonterra Co-operative Group Ltd* [2020] NZHC 419, claims based on public nuisance and negligence against corporations causing greenhouse gas emissions were disallowed.]

182 Ganguly and others, above n 45, at 16.

183 Parry and others, above n 17, at 107.

184 Climate Liability News, above n 44.



companies have committed fraud and civil conspiracy. It unlocked substantial compensation to cover the public healthcare costs associated with lung and respiratory disease.<sup>185</sup>

In October 2018, the Attorney General of the State of New York brought a new legal complaint against ExxonMobil.<sup>186</sup> Following ExxonMobil's unsuccessful attempts to dismiss the case, Judge Barry Ostrager of the New York Supreme Court cleared the way for the case to proceed to trial in October 2019.<sup>187</sup> The complaint seeks redress for "a longstanding fraudulent scheme", under US financial laws.<sup>188</sup> The company is accused of causing loss to investors and the investment community by providing "false and misleading assurances" that it was managing the economic risks posed to its business by climate change.<sup>189</sup> Litigation that considers misrepresentation or fraud under RICO or US financial laws may ultimately prove successful.

Nevertheless, the case for public nuisance against fossil fuel companies has considerable merit. Further, successful litigants in the US may embolden the victims of climate change to pursue similar cases in other jurisdictions. This would be a positive development, since closing the justice gap is important. This article argues that US courts should hold fossil fuel companies to account for promoting climate change scepticism and engaging in the obstructive lobbying that accelerated climate change. The hope is that those who are facing losses and damages as a result of accelerated climate change may eventually see some justice.

185 Ganguly and others, above n 45, at 16.

186 *New York v ExxonMobil Corp* No 452044/2018 (NY Sup Ct, 24 October 2018) at 1.

187 Karen Savage "Judge Rejects Exxon Challenges to New York's Climate Fraud Suit" (12 June 2019) Climate Liability News <<https://www.climateliabilitynews.org/2019/06/12/new-york-exxon-climate-fraud-suit/>>.

188 *New York v ExxonMobil Corp*, above n 186.

189 *New York v ExxonMobil Corp*, above n 186.