# Review of literature on impacts of climate litigation

Report

Children's Investment Fund Foundation

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# **Table of Cases**

Case name	Jurisdiction	Court	Date of decision
Massachusetts v EPA	United States	Supreme Court	2007
American Electric Power v Connecticut	United States	Supreme Court	2011
Leghari v Federation of Pakistan	Pakistan	Lahore High Court	2015
Urgenda Foundation v State of	Netherlands	Hague District Court	2015
Netherlands		Court of Appeal	2018
		Supreme Court	2019
Juliana v United States	United States	U.S. District Court Oregon (standing subsequently denied by Ninth Circuit Court of Appeals)	2016
Future Generations v. Ministry of the Environment and Others [Demanda Generaciones Futuras v. Minambiente] (Future Generations)	Colombia	Supreme Court	2018
Lliuya v. RWE AG (Lliuya)	Germany	Higher Regional Court of Hamm	2018
Union of Swiss Senior Women for Climate Protection v. Swiss Federal Council and Others [Verein KlimaSeniorinnen Schweiz v. Bundesrat]	Switzerland	Swiss Federal Administrative Court (Supreme Court appeal dismissed)	2018
ENvironnement JEUnesse v. Procureur General du Canada	Canada	Superior Court of Québec	2019
Family Farmers and Greenpeace Germany v Germany			2019
Gloucester Resources Limited v Minister for Planning (Rocky Hill)	Australia	New South Wales Land and Environment Court	2019
Friends of the Irish Environment v	Ireland	High Court	2019
Ireland		Supreme Court	2020
McVeigh v REST	Australia	Federal Court (settlement)	2020
Plan B Earth and Others v Secretary of State for Transport	United Kingdom	Court of Appeal (overturned by Supreme Court)	2020
La Rose v Canada	Canada	Federal Court	2020
Mathur v Ontario	Canada	Superior Court of Ontario	2020
Sharma et al v Minister for the Environment	Australia	Federal Court (overturned by Full Federal Court in 2022)	2021
Neubeuer et al v Germany	Germany	Federal Constitutional Court	2021
Milieudefensie et al. v Royal Dutch Shell plc. (Shell)	Netherlands	Hague District Court	2021
Notre Affaire à Tous and Others v France	France	Administrative Court of Paris	2021

# **Executive Summary**

# Scope of the review

This report for the Children's Investment Fund Foundation (CIFF) reviews the findings of academic and grey literature published over the period 2000-2021 on the impacts of climate change litigation.

Climate change litigation is variously defined in the literature and may include interventions before courts, tribunals and complaints bodies where climate change is central or peripheral to any given complaint. Impacts are also understood differently in the literature. Broadly, the **impacts of climate change litigation encompass the aftermath or follow-on events, actions or changes flowing from a case or proceeding**, which can include direct legal, regulatory, policy and behavioural changes, as well as indirect effects on the conduct or actions of government, corporate, civil society and public actors.

# **Coding impact literature**

The literature surveyed in the review encompassed English-language academic literature, such as peerreviewed journal articles, as well as a select number of books, and internet-accessible, English-language grey literature, including reports.

Five hundred and ninety-nine (599) publications were located in the review for the period 2000-2021. While the available literature on climate change litigation is substantial, **only a subset of this literature addresses, in some way, the impacts of a climate change case or set of cases.** In this report, this subset of 280 publications addressing the impacts of climate change litigation is called 'impact literature'.

The impact literature was coded according to its coverage of the following factors: litigation 'targets'; discussion of the direct and indirect effects of cases; jurisdictions; and 'tactical' considerations (e.g. the objectives, legal avenues and strategies employed in litigation).

# Findings of the review

Within the impact literature, there are **few publications which undertake a more systematic review of impact**. This is partly a function of the complexity of the task of impact assessment and the lack of common approaches, definitions and methods applied across the field.

Many of the literature findings about impact, including on the direct and indirect effects of climate litigation, are **brief**, **anecdotal and speculative in nature**. There is a strong correlation in the literature between high-profile cases and the discussion of impact, which **may neglect consideration of impact from lower-profile or more complex cases or programmes of litigation**. For some high-profile cases, such as the *Urgenda* litigation, which have been a focus of attention in the literature, it is possible to gain a **picture of their impacts**, although only by piecing together various observations from multiple publications.

In the absence of more in-depth systematic and empirical studies, these findings **do not provide a strong foundation for making assessments of the strategic value** of different litigation targets, jurisdictions or forums, or legal avenues pursued in claims.

Taking into account these limitations, the impact literature offers **some insights into how climate change litigation achieves impact**. These insights relate to the conditions under which impacts may arise (which may inform tactical decisions), the types of impacts that litigation may generate, the response to litigation by particular targets, and the limitations of existing studies, as well as suggestions for how to improve knowledge in the field. These lessons are summarized in Table 1 below.

# Knowledge gaps and recommendations

The report identifies **key knowledge gaps** in the impact literature and **recommendations** for how CIFF might use findings and knowledge gaps identified both in the impact literature, and in this review report, to inform its climate litigation strategy and field-building efforts. These gaps and recommendations are also summarized in Table 1.

Table 1: Lessons from the im	pact literature,	knowledge gaps and	recommendations

Factor/aspect	Lessons from impact literature	Knowledge gaps	Recommendations
Conditions relevant for achieving impact	<ul> <li>Tactical considerations are often not explicitly discussed in the literature but may be implied from the authors' discussion of such matters as: bringing cases to achieve certain objectives; pursuing novel legal arguments and forums; associating cases with wider social campaigns and leading the best available scientific evidence.</li> <li>Litigation alone is insufficient to bring about broader social and policy change and must be coupled with other tools like campaigns and advocacy.</li> <li>Litigation cannot provide a comprehensive solution to problems of inadequate climate action although it can produce some important outcomes by changing laws and decision-making practices.</li> <li>Cases can achieve pro-regulatory impacts if court mandates are not overturned by governmental action or inaction</li> <li>Positive impacts need to be weighed against costs and risks associated with bringing litigation.</li> <li>Social science studies of narrative and the use of science in climate</li> </ul>	<ul> <li>Few studies analyze a set of cases or compare outcomes from different litigation pathways to illuminate optimal strategies.</li> <li>There is a focus on high- profile cases which neglects lessons that may come from analysis of lower-profile, more complex or programmatic litigation strategies.</li> </ul>	CIFF should continue to foster data collection for longitudinal impact assessment during projects, with dedicated funds provided to grantees for the collection of such data, and continued funding for an internal/external evaluation and audit of the data during/at the end of a project ( <b>Rec 1</b> ). CIFF might facilitate a common approach to impact assessment methodologies by working with networks of funders in order to identify 'common' approaches and clear understandings of what 'success' means. This might include a commitment to open access/publication of these methodologies and approaches as part of a field-building effort ( <b>Rec 2</b> ).
Types of impacts	<ul> <li>litigation offer insights into strategies for building effective cases.</li> <li>Assessing the impacts of a case is a complex task due to the range of possible positive and negative effects, intended and unintended effects, the dynamic circumstances in which a case occurs, and longitudinal effects of decisions.</li> <li>Effects/outcomes achieved by cases will be highly dependent on the social and legal context of the litigation. There is no 'silver bullet' or template to litigation's effectiveness.</li> <li>There has been a rise in strategic uses of climate litigation in recent years seeking pro-regulatory impacts but anti-climate uses of litigation are also possible.</li> <li>Even losing cases can generate positive outcomes e.g. for public awareness, media story-telling.</li> <li>With the growth of successful climate cases there is the possibility for cumulative impact or a 'domino effect' as judges are able to draw on a greater body of jurisprudence and pressure on policymakers is intensified.</li> <li>Empirical and/or systematic reviews of the impacts of climate change litigation are limited in number and often have a specific jurisdictional focus e.g. US, Australia. They suggest incremental, often only modest, change or impact as a result of climate change litigation in these countries.</li> <li>The impact of 'high-profile' cases and claims against particular targets (governments and corporations) has received disproportionate attention in the literature, but this does not mean that lower profile cases and cases against, for example, fossil fuel projects or financial sector actors, have not had or cannot have impact.</li> <li>Jurisdictions with the highest number of climate change cases worldwide, or where there have been notable successes (especially in the Global North), have received considerable attention in the impact</li> </ul>	<ul> <li>Limited assessment in the literature of the indirect and longer-term effects of litigation.</li> <li>Limited consideration of negative impacts and risks from litigation.</li> </ul>	<ul> <li>While the value of analysis of the impacts of litigation is recognized in the literature, this is currently not occurring in a systematic way and instead has to be 'pieced together' from multiple, often incomplete, sources. This could be improved by commissioned research or evaluation of case studies, which could be integrated with climate case law databases to expand them beyond simply cataloguing case law (<b>Rec 3</b>).</li> <li>CIFF (potentially in conjunction with other funders) could consider funding a publicly available database of non-sensitive sources of evidence of all impacts gathered from their grantees, which is maintained and added to over-time to capture longer-term impacts (<b>Rec 4</b>).</li> <li>CIFF could use the impact literature identified in this review (potentially with the addition of a detailed review of books on the topic) to identify elements of 'due diligence' as to the pitfalls/downsides and potential negative impacts of litigation, for their grantees to check off in devising strategies for climate litigation programmes (<b>Rec. 5</b>).</li> </ul>

Factor/aspect	Lessons from impact literature	Knowledge gaps	Recommendations
Types of impacts (contd)	<ul> <li>literature, but novel jurisdictions (including litigation in the Global South) are increasingly being explored.</li> <li>Litigants are pursuing a range of different outcomes (including beyond mitigation of climate change through reducing greenhouse gas emissions to adaptation and loss and damage) under a range of different laws (including claims in tort, public trust, consumer law, corporate law, administrative law, constitutional law, human rights law and environmental law) to seek impact.</li> </ul>		
Responses of particular litigation targets	<ul> <li>Climate liability suits could push major emitters to reduce emissions, especially if this litigation leads to settlements, but this is a sub-optimal way of achieving change compared to policy options like a carbon price.</li> <li>Litigation from the perspective of fossil fuel companies is increasingly casting a "dark cloud" that is beginning to influence their actions using multiple routes.</li> <li>Litigation may have indirect effects on corporations by creating stranded assets due to fines or penalties, class action damages, legal costs, changes in valuation, changes in credit ratings, reputational damage, market exclusions, direct regulation, asset confiscation, and restriction of insurance, as well as by imposing more internal costs for firms such as management distraction and lowered staff morale.</li> <li>Shareholder actions against corporations as an ineffective mitigation strategy (compared to policy/law reform) because many carbon-intensive corporations can absorb substantial lawsuit-related costs and, even if legal costs push fossil fuel companies out of business, their competitors will step in to extract open reserves.</li> <li>Viability of tort claims against corporations is dependent on developments in attribution science.</li> </ul>	<ul> <li>Focus in the literature on government and corporate (major emitter) targets with little attention so far to other targets e.g. financial sector actors.</li> <li>Impacts from litigation against government targets are better studied and easier to discern than for corporate targets.</li> </ul>	Building on <b>Rec. 4</b> , information gathering by grantees on the impacts and longer-term effects of litigation against novel litigation targets – particularly corporate and financial sector targets – could help build real world knowledge of the effectiveness of this litigation in changing behaviour, supplementing the literature analysis which is largely based on theory or anecdotal reports.
Limitations of current knowledge and lessons from other fields	<ul> <li>Most evidence surrounding impact from climate litigation is anecdotal and the question of whether case outcomes make a difference to addressing the problem of climate change is still largely unanswered.</li> <li>There is a need for the development of systematic approaches to conceptualizing/assessing effectiveness, and gathering evidence, including shared methods and approaches to defining success.</li> <li>While there is growing interest in climate litigation in novel jurisdictions (particularly in the Global South), the novelty of this litigation means existing publications are not able to say much about outcomes.</li> <li>Strategic human rights litigation on matters other than climate change offers lessons for the design of climate litigation strategies, including the need to situate litigation as part of an overall theory of change, to include consideration of how decisions will be implemented and to evaluate potential risks, particularly in the Global South.</li> </ul>	<ul> <li>No common methods of assessment across the field and the bases for assessment of impact are often unclear and inconsistent.</li> <li>Additional lessons may come from an extended review e.g. encompassing non-English literature, books, and lessons from broader public interest litigation.</li> </ul>	CIFF could consider funding further, targeted research to address knowledge gaps in the climate litigation literature on impact e.g. (1) extending the review to include non-English literature and comprehensive analysis of books; (2) undertaking a comparative analysis of impact from different pathways for climate litigation, which could provide more detailed information on the value of different legal avenues or litigation in particular forums or jurisdictions in achieving impact; and/or (3) commissioning research on the impacts of public interest litigation or environmental public interest litigation, with a view to identifying methods for assessment or lessons learned that could be transferred ( <b>Rec. 6</b> ).

# **A. Introduction**

- This report reviews the findings of peer-reviewed and grey literature,<sup>1</sup> published over the period 2000-2021, on the impacts of climate change litigation. Its findings and recommendations are intended to inform deliberations of CIFF's Board on a strategy for Strategic Climate Litigation.
- 2. The report comprises the following parts:
  - **Part A**: describing the scope of review. This includes the definitions of 'climate change litigation' and 'impact' applied, the approach employed in locating relevant literature, and the methods used in coding different factors relevant to the impacts of climate change litigation discussed in that literature. Within the broader literature on climate change litigation, a subset of 'impact literature' addressing the impacts of climate change litigation was identified.
  - **Part B**: presenting and synthesizing the findings of the review regarding the impact literature's insights into how climate change litigation achieves impact and in what circumstances.
  - **Part C**: analyzing key gaps in the impact literature and proposing recommendations to inform CIFF's decision-making as it considers its broader strategy for climate litigation.
  - Part D: listing details of the literature located and assessed in the review.

# A.1 Scope of the review

- 3. Climate change litigation emerged as a distinct phenomenon in the mid-2000s, with leading climate cases in U.S. and Australian courts (Peel & Osofsky 2015). Since that time, it has been analyzed in academic literature, especially legal publications (Fisher 2011). Between 2000-2015, only a relatively modest number of publications focused on climate change litigation, but literature on the topic significantly increased following the conclusion of the Paris Agreement in 2015 (Setzer & Vanhala 2019). There has been further exponential growth of the climate change literature in the past few years (Peel & Osofsky 2020).
- 4. This review encompasses English-language academic literature, such as peer-reviewed articles in academic journals, as well as a select number of books, and select grey literature accessible on the internet, e.g. reports, policy briefings, working papers, evaluations. Within the peer-reviewed literature, the report has largely focused on literature by legal scholars, which has been the epicentre of climate litigation analysis (Setzer & Vanhala 2019).
- 5. Given the time constraints for this review, the materials on the impacts of climate litigation considered are not comprehensive (see section A.3 below for the approach used). In addition, the review is selective in its reference to books and grey literature. Only a select number of books, recently published, have been consulted and they, or the chapters of edited volumes, have not been comprehensively read. For the grey literature, the review excludes newspaper or other media publications, as well as grey literature content that is not readily available on the internet.

# A.2 Definitions applied

- 6. This review examined publications on 'climate change litigation'. Climate change litigation is variously defined in the literature. There is still significant debate, in scholarship and practice, about how climate change litigation should be defined (Peel & Lin 2019; Lin et al 2020, pp. 2-3).
- 7. A key consideration in this regard is the required nexus between the litigation and climate change issues. Some cases have climate change at their core, for example, a challenge brought to the adequacy of a government's emissions reduction targets. In other cases, climate change is only

<sup>&</sup>lt;sup>1</sup> Grey literature includes materials and research published by organizations outside of the traditional academic publishing and distribution channels. It is generally not peer reviewed. Common grey literature publication types include reports, working papers, government policy documents, white papers and evaluations.

one of many issues but not the central issue in the case, for example, litigation enforcing laws to prevent unauthorized deforestation, which also serves climate change mitigation goals. Cases may still be classified, in some analyses, as 'climate change litigation', even though climate change is not mentioned at all in the pleadings or judgment, if the litigation was clearly motivated by climate change goals or would have significant consequences for dealing with the problem (Peel & Osofsky 2015).

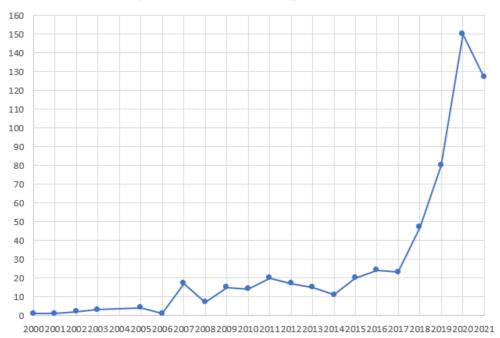
- 8. This review report adopts a **broad definition of 'climate change litigation'** as interventions before courts, tribunals and complaints bodies where climate change is featured in the evidence or argumentation or was addressed in the reasoning of the decision-making body, whether or not it was a core feature of the litigation.
- 9. The review has not covered, however, the substantial body of literature on the impact of public interest litigation in general, or in environmental law broadly, sometimes referred to as environmental citizen suits.
- 10. Broadly, the impacts of climate change litigation **encompass the aftermath or follow-on events**, **actions or changes flowing from a case or proceeding**, which can include direct legal, regulatory, policy and behavioural changes, as well as indirect effects on the conduct or actions of government, corporate, civil society and public actors.
- In examining the 'impacts' of climate change litigation, we are aware of the approach of several leading experts considering both direct and indirect effects, including the work of Peel & Osofsky 2015. However, impacts as discussed in the literature reviewed might differ in its conceptions of impacts and effects from such approaches.

# A.3 Approach

- 12. A compilation of publications for the period 2000-2021 addressing climate change litigation was collated to create a dataset for this review. The year 2000 was selected as the starting point for the review period to align with previous systematic reviews of the climate litigation literature and given that the first articles on the topic were published in the 2000s.
- 13. The approach and dataset have been informed by systematic, general reviews in Setzer & Vanhala 2019, and Peel & Osofsky 2020, which together cover the period 2000-2019. Setzer & Vanhala's review identified 130 academic articles between 2000 and the end of September 2018, with a steady growth in the number of articles published from year to year. Peel & Osofsky's review identified a further 57 articles, which was more than three times the output of each of the previous two years. Both reviews were general in nature (i.e. covering broad trends in the overall literature) and did not specifically focus on the question of the *impacts* of climate change litigation.
- 14. The literature review process in this report had four tranches:
  - Tranche 1 involved searching for the terms 'climate' and 'litigation' in the title and/or abstract of peer reviewed periodical literature published between October 2019 and December 2021 using Scopus, Web of Science, HeinOnline and Google Scholar. This located 244 publications.
  - Tranche 2 gathered articles from the existing general reviews of the climate change literature by Setzer & Vanhala 2019 (for the time period between 2000 to September 2018) and Peel & Osofsky 2020 (for articles published or accepted for publication in 2019). The reference lists provided in both reviews were used to find these articles. This located 186 publications.<sup>2</sup>

<sup>2</sup> It is noted that this number is one short of the total number of articles specified by both Setzer & Vanhala 2019 and Peel & Osofsky 2020 in their reviews. This is likely because there were minor errors in the reference lists for either or both articles.

- Tranche 3 expanded the search terms to 'mitigation OR adaptation OR greenhouse' and 'litigation' in the title and/or abstract (or in the introduction where there was no abstract) of peer reviewed periodical literature from 2000 to December 2021 using Scopus, Web of Science, HeinOnline and Google Scholar. Initial search results yielded over 400 articles, but most were subsequently excluded, e.g. because they were duplicates from previous searches, did not include the search terms in the abstract/title, were on unrelated topics or were not in English. This located 119 publications (after removing duplications etc).
- Tranche 4 involved searching for grey literature, drawing on key websites and institutions with expert knowledge of the field. This included publications by the Sabin Center, Grantham Institute, GermanWatch, Carbon Brief, Climate Action Tracker, Climate Analytics, OpenGlobalRights, the Smith School, and the British Institute of International and Comparative Law. It also captured recently published books on climate litigation. This located 50 publications.
- 15. From this, a cumulative dataset of 599 publications on climate change litigation was considered in the review. As explained further in section A.4 below, a subset of 280 publications was found to have covered impact in some way, including those publications making brief mentions of impact. This subset of publications is called 'impact literature' for the purposes of this report.
- 16. As shown in Figure 1 below, there has been a significant increase in climate change litigation literature over time. This is particularly the case for the last 3 years (2019-2021) where there has been more than double the output of the previous years (2000-2018) combined.



#### Year published - Climate Litigation Literature

# Figure 1: Annual number of climate litigation publications

#### (N.B. This figure maps all climate litigation literature located in the review, rather than the narrower subset of 'impact literature')

17. Previous general reviews of the climate change literature by Setzer & Vanhala 2019 and Peel & Osofsky 2020 pointed to increasing disciplinary and inter-disciplinary diversity in the climate change litigation scholarship over time. This continues to be the case, with contributions coming from the broader social sciences and natural sciences. Nevertheless, the literature is still dominated by legal scholars.

# A.4 Methods

- 18. The general climate litigation literature dataset compiled (599 publications) was screened and coded for its reference to elements relevant to the impacts of the litigation using a coding matrix.
- 19. The coding matrix comprised the following elements:
  - 'Y' or 'N' for whether there was some consideration of 'effectiveness/impact' in the text.
  - 'Targets' of the litigation (noting some publications related to more than one category of target).
  - 'Direct' effects of the litigation.
  - 'Indirect' effects of the litigation.
  - 'Jurisdiction' for whether there was reference to specific jurisdictions (or 'general' if not).
  - 'Theme' as a general code for the area of law or thematic focus of the article.
- 20. Given the time constraints on this review and the number of articles to be considered, only a light read of each publication by one researcher could be undertaken. This may limit the reliability of the coding and data analysis in this report.
- 21. Of the 599 publications comprising the reviewed climate change litigation literature for the period 2000-2021, **280 publications (47%) were identified as addressing impact** ('impact literature'). The first of these publications was issued in 2005.
- 22. While 47% of reviewed publications qualifying as 'impact literature' might seem like a high proportion of the climate litigation literature overall, this reflects the review's broad definition of 'impacts' combined with its comprehensive approach to coding effectiveness/impact. In particular, **publications were identified as addressing impact even where there was only brief consideration or mention of impacts and/or the effectiveness** of litigation in achieving climate goals.
- 23. A more nuanced understanding of the impact literature (especially its consideration of direct and indirect effects) can be gained from the analysis below in Part B.

# **B.** Findings of the review

- 24. This part focuses on the subset of climate change litigation literature that discusses impact in some way ('the impact literature'). It synthesizes insights into how climate litigation has impact and in what circumstances.
- 25. While a broad approach was taken in this review to identifying 'impact literature,' **few of those publications provide either a systematic review of the impacts of climate change litigation, or a general empirical analysis** (qualitative or quantitative) of the follow-on effects of climate cases.
- 26. Section B.1 synthesizes the findings of the systematic or general review publications that are available, which provide a more nuanced understanding of climate change litigation's impacts.
- 27. Section B.2 then synthesizes the findings of the impact literature as a whole in respect of key aspects, namely discussion of:
  - impacts of high-profile case(s);
  - targets of litigation, including actors such as corporations and financial sector actors;
  - categories of direct and indirect effects;
  - jurisdictions for climate change litigation, including jurisdictions in the Global South; and
  - tactical considerations for designing climate litigation for impact.
- 28. As we discuss further in section B.2, the **impact literature has various limitations** in terms of its depth and comprehensive coverage of the impacts of climate change litigation so **care should be exercised in drawing conclusions from this literature** for the purposes of litigation strategy design.

# **B.1 Impact findings from review publications**

- 29. Overall, the publications reviewed in this report attest to the scholarly and practice community's intense interest in climate change litigation as a means to advance climate mitigation and adaptation goals. Several publications explicitly recognize the value of research into the impacts of climate change litigation, although it is noted that such published research remains in its infancy (e.g. Bouwer 2018, Setzer & Vanhala 2019, Peel & Osofsky 2020, Setzer & Byrnes 2020).
- 30. This means there are **significant opportunities for more systematic research into this area into the future** as "questions about whether the outcomes of these cases actually help to address climate change in a meaningful way as yet remain unanswered" (Setzer & Byrnes 2020, p. 23).
- 31. Within the existing impact literature, some publications have examined trends across time and place, or sought to provide general lessons for litigants. There are, however, **only a small number that provide systematic or general empirical (qualitative or quantitative) reviews** of the impacts of climate litigation (see findings in sections B.1.1 and B.1.2 and Table 2 below).

# B.1.1 Systematic reviews of climate litigation by jurisdiction or issue

- 32. Markell & Ruhl's seminal 2012 empirical analysis of all climate cases in the U.S. courts was the earliest identified example of a systematic review publication. As Markell & Ruhl noted at the time, "[w]hile legal scholarship seeking to assess the impact of litigation on the direction of climate change policy is abundant and growing in leaps and bounds, to date it has relied on and examined only small, isolated pieces of the vast litigation landscape" (2012, p. 15). This focus on a subset of (mostly) high-profile cases continues to be the norm (see further section B.2.1 below).
- 33. While climate change is often regarded as a complex policy issue requiring novel policy and institutional responses, Markell & Ruhl 2012 described the approach of U.S. courts in climate cases as **judicial "business as usual"** rather than forging a new climate jurisprudence. The authors noted that climate change issues were "being channeled in the courts through a set of stale environmental laws and old common law doctrines" with responses that did not transcend the "usual" outcomes of other cases (Markell & Ruhl 2012, p. 76). Examples of "usual" outcomes

included findings of: lack of consideration of a relevant matter in decision-making; inadequacy of environmental impact assessments; or inclusion of greenhouse gas emissions within the mandate of existing environmental and public health laws.

- 34. This theme of **incremental**, **often only modest**, **change or impact** as a result of climate change litigation is also echoed in other empirical reviews in the impact literature focused on particular jurisdictions. For example, Colares & Risstovski 2014, who analyzed pleading patterns and the role of climate litigation as a driver of U.S. climate change legislation, found that "this type of litigation has not, and is not likely to, induce major GHG emitters to support federal pre-emptive emissions legislation as a risk-reducing compromise" (pp. 368-9).
- 35. McCormick and co-authors' 2018 paper also focused on the United States, reviewing strategies in, and outcomes of, climate change litigation in that jurisdiction. The authors conclude that the courts have played a central role in climate policy at all scales in the United States, although little longitudinal evidence of impact is offered to support this finding. The authors suggest that impacts may derive even from cases that are losses in court. In this regard, they draw attention to interview evidence gathered in their study that **"even cases that are 'lost' can generate positive outcomes**, such as increased publicity and public awareness" if "the court's decision includes statements that may be useful for political, media or organizational purposes" (McCormick et al 2018, p. 832).
- 36. Outside of the United States, systematic reviews of climate change litigation have focused on other jurisdictions, like Australia, with a high number of climate cases. For instance, Millner & Ruddock 2011, in a more systematic rather than empirical review, offer an analysis of early Australian climate litigation. Similarly to Markell & Ruhl in the United States, they conclude that climate change litigation "should not be seen as a means to comprehensively address the inadequate regulation of climate change causes and impacts" even though in Australia it "has achieved some important outcomes, both in terms of changing the law and highlighting issues with the law as it relates to climate change and the environment" and in terms of encouraging decision-makers to take "climate change more seriously when making decisions, particularly in the context of development" (Millner & Ruddock 2011, p. 32).
- 37. Wilensky 2015 also takes a comprehensive focus in her empirical assessment of non-U.S. climate litigation. She concluded that (at least at the time of publication) "non-U.S. climate change cases have mostly been tactical suits aimed at specific projects or details regarding implementation of existing climate policies, especially emissions trading systems" (Wilensky 2015, p. 131-2). In her view, the case law demonstrated that "litigation is not as heavily utilized as a tool to impact climate change policy outside the United States" (Wilensky 2015, p. 175). It is noted that this may no longer remain the case with the growth in strategic climate litigation outside the United States since the conclusion of the Paris Agreement.
- 38. Some systematic reviews focus on a particular law or time period, rather than providing comprehensive empirical analysis of the impacts resulting from climate change litigation in a given jurisdiction. For example, Stein 2010 and Burger & Wentz 2017 examine U.S. climate litigation under the National Environmental Policy Act; Freeman 2011 examines U.S. climate litigation on automobile emissions standards; Utecht 2020 examines U.S. climate litigation under national and Washington state environmental impact assessment laws; and Silverman-Roati 2021 discusses U.S. climate litigation during the Trump Administration.
- 39. Other systematic reviews analyze cases to examine the role of the courts or to make predictions about, or call for greater attention to, particular pathways for litigation. For example, Weaver & Kysar 2017 examine whether climate litigation stretches the bounds of judicial authority by attempting to address problems of massive scale and complexity. Peel, Osofsky & Foerster 2017, focusing on Australia, examine options to move beyond 'first generation' cases involving challenges to coal projects to explore alternative 'next generation' legal arguments focused on questions of

government or corporate accountability. Bouwer 2018 calls for a greater focus on 'unsexy' climate litigation (by which she means cases where climate issues are incidental or peripheral to a case) rather than just high-profile cases.

#### B.1.2 General reviews of climate litigation

- 40. Over the past 3 years, several more general reviews of climate litigation in articles, reports and books have emerged that identify lessons of broad relevance to the impacts of litigation. These include the Grantham Institute's annual reviews of 'Global trends in climate change litigation' (e.g. Setzer & Byrnes 2019, 2020; Setzer & Higham 2021) as well as general review articles published by Setzer & Vanhala 2019, Peel & Osofsky 2020, Bouwer & Setzer 2020, Batros & Khan 2020, Maryam et al 2021 and Setzer et al 2021.
- 41. Overall, the general reviews find that climate change litigation is increasingly being used "as a tool to influence policy outcomes and/or to change corporate and societal behaviour" (Bouwer & Setzer 2020, p. 3). This approach sees advocates using climate litigation "to drive ambition in climate action, taking a long view beyond the immediate success or failure of individual cases" (Bouwer & Setzer 2020, p. 3). Indeed, climate litigation is increasingly "strategic" in its orientation (Maryam et al 2021). In such cases, the focus is on achieving pro-regulatory impacts although "anti-climate" uses of litigation (opposing climate change adaptation and/or mitigation policies/ legislation/ projects) are also possible (Maryam et al 2021).
- 42. These general reviews identify several key observations and lessons about the impacts of climate litigation regarding:
  - the nature of the evidence of impacts;
  - the variety of follow-on effects from litigation;
  - the role of litigation as only one part of complex strategies;
  - the range of 'targets' for litigation, including corporate actors and financial regulators; and
  - possible lessons from other public interest litigation such as that in the human rights field.

These insights are synthesized in the following subsections along with Table 2 below.

# B.1.2.1 Evidence of impacts

- 43. Evidence on the impacts of climate change litigation is still mostly anecdotal in nature (Setzer and Vanhala 2019). This in part "reflects the more general challenge of assessing the impact of any litigation beyond the courtroom, especially given that many cases are still ongoing ... The nascent state of climate change litigation exacerbates this challenge even more" (Setzer & Vanhala 2019, p. 12).
- 44. Indeed, "[w]hile direct and indirect regulatory impacts can be observed among all types of climate litigation, questions about whether the outcomes of these cases actually help to address climate change in a meaningful way remain unanswered" (Setzer & Byrnes 2020, p. 23). Setzer 2022 (forthcoming) reiterates this finding specifically in the context of litigation against corporate major emitters.<sup>3</sup>
- 45. Authors also point to a **need for more systematic approaches** to gathering evidence of impact, including considering how to measure the 'success' of litigation (Peel & Osofsky 2020).

<sup>&</sup>lt;sup>3</sup> This publication is a book chapter in a forthcoming edited collection to be published later in 2022. It was included in the review at the request of CIFF and given that an unpublished version was referenced in Setzer & Higham 2021.

# B.1.2.2 Variety of impacts

- 46. As Setzer & Byrnes 2019 have discussed, climate litigation is "nuanced and can have a variety of flow-on effects" (p. 10). This means that the **social and legal context for any case will influence the outcomes and impact that can be achieved**.
- 47. However, Setzer & Byrnes 2019 urge that "the rise in strategic and routine cases, a ramp-up in legal action by NGOs, the expansion of climate change suits into other areas of law, and improvements in climate science suggest that the use of climate change litigation as a tool to effect policy change is likely to continue" (p. 10).
- 48. In terms of the pro-regulatory impacts that might flow from cases, these can include **policy change and changes to permits for emitting facilities**. These kinds of flow-on effects from cases may "lead to effective mitigation, provided that the Court mandates are not overturned by ministerial action or inaction" (Setzer & Byrnes 2020, p. 24).
- 49. There is also a need to weigh any positive impacts against the costs incurred in, or other risks generated by, taking litigation. In addition, a loss in court might still be a win in other ways. For example, Setzer & Byrnes 2020 note that "[e]ven in cases that are ultimately lost in courts, litigants might claim some success, for example in building narratives or in a strong dissenting judgment decision" (p. 2).

# B.1.2.3 Litigation as part of complex strategies

- 50. An often-emphasized finding is that litigation is only **one of many possible strategies** for producing change.
- 51. In particular, "[s]ocio-legal research suggests that litigation strategies **need to be combined with other strategies**, such as policy advocacy and public campaigns" to enhance effectiveness (Setzer & Byrnes 2020, p. 23).
- 52. Moreover, practitioner consensus in a workshop on 'Climate Litigation and Politics' was that litigation is a "last resort" and that **courts are no more than "second best" to resolve the climate issue** (British Institute of International and Comparative Law 2021).

# B.1.2.4 Range of targets for litigation

- 53. Some general reviews in the impact literature consider different targets for climate litigation and the sorts of behavioural changes that might flow for particular categories of targets.
- 54. For instance, climate liability suits against corporate actors may have the potential to change the behaviour of corporate emitters. Batros 2020 argues that these cases may push major emitters "to change their behaviour in the future to produce less (and ultimately no) fossil-fuels, thus speeding the path to global net-zero emissions and stabilizing climate change" (p. 1). Indeed, the main lesson drawn from the experience of tobacco litigation was that it ended in settlement and that falling smoking rates might be attributed to change in regulation and other terms agreed in the settlement (Batros 2020).
- 55. Other authors consider the potential for litigation risk to create a **'shadow of liability' that influences corporate action**. For instance, participants in a 'Climate Litigation and the Economy' workshop discussed how litigation is a "dark cloud" that is now beginning to influence of fossil fuel companies' actions using multiple routes (British Institute of International and Comparative Law 2021). Workshop participants referred to the ruling against Royal Dutch Shell in the Netherlands, as well as shareholders demanding changes in Exxon's board. They also remarked that litigation has led insurance companies to strengthen their efforts to take common disruption into account in their actuarial calculations and to decide what risk to insure. At the same time, they pointed out that **litigation may be a suboptimal policy driver**, as it does not provide the stable investment climate associated with a carbon price (British Institute of International and Comparative Law 2021).

56. In addition, there is **growing interest in the potential of litigation against financial sector actors**, including financial market regulators and supervisors, to impact on private sector activities especially in high-emitting industries (Setzer et al 2021).

B.1.2.5 Lessons from strategic human rights litigation

- 57. There is also potential for climate litigators to **learn from strategic human rights litigation** on how to minimize the risks and maximize the impact of such litigation (Batros & Khan 2020).
- 58. Particular lessons discussed by Batros & Khan 2020 include: the importance of identifying the role of the litigation as part of an overall theory of change; challenges of implementation of strategies; and the need to evaluate risks of strategies, including, for example, in relation to adaptation litigation in the Global South which could unfairly burden a government with limited resources.

Factor/aspect	Insights on impact of climate litigation
General lessons	Increasing strategic uses of climate litigation as a tool to influence policy outcomes and/or to change corporate and societal behaviour
	<ul> <li>Focus is on achieving pro-regulatory impacts although anti-regulatory uses of litigation are also possible</li> <li>Potential for climate litigators to learn from strategic human rights litigation about how to minimize the risks and maximize impact</li> </ul>
Empirical analysis (U.S. and	Change or impact as a result of climate change litigation is often only modest or incremental
Australian climate litigation)	Even cases that are 'lost' can generate positive outcomes, such as increased publicity and public awareness
	<ul> <li>Not a means to address comprehensively the inadequate regulation of climate change causes and impacts</li> </ul>
Evidence of impacts	Evidence provided for impact in the literature is still mostly anecdotal in nature
	• Where analysis of impacts is undertaken the bases for assessment are often unclear and inconsistent pointing to the need for better analytical frameworks and more systematic approaches to gathering evidence
	Overall, questions about whether the outcomes of climate cases actually help to address climate change in a meaningful way remain unanswered
Variety of impacts	Litigation can have a variety of flow-on effects; the particular social and legal context for any case will influence the outcomes and impact that can be achieved
	Pro-regulatory impacts that might flow from cases can include policy change and changes to permits for emitting facilities
	<ul> <li>It is important in evaluating overall effectiveness to weigh any positive impacts against the costs incurred in, or other risks generated by, taking litigation</li> </ul>
Litigation as part of complex	Litigation to be most effective needs to be combined with other strategies
strategies	Action through the courts is a last resort/second best approach compared to policy change
Targets of litigation	Climate liability suits against corporate actors have the potential to change the behaviour of corporate emitters
	Threatened or potential litigation can create a 'shadow of liability' that influences corporate action
	Corporate liability imposed through litigation is a suboptimal policy driver compared to other options e.g. carbon price
	Growing interest in potential litigation against financial sector actors

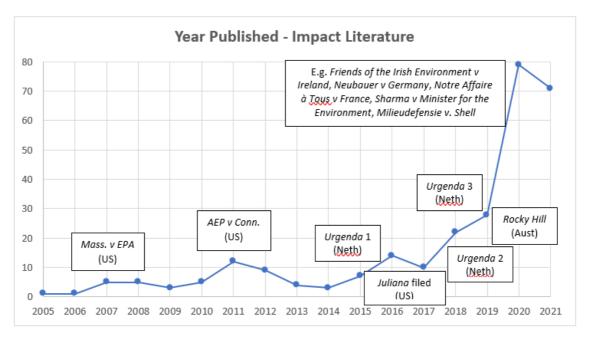
Table 2: Insights on impact from review publications

# **B.2 Findings from 'impact literature' on types of and conditions for impact**

- 59. The below sections synthesize the findings of the impact literature as a whole, focusing on key aspects relating to how climate change litigation achieves impact and in what circumstances.
- 60. Taking into account the limitations of the literature on impacts, and the complexities of the task of impact assessment itself, care should be taken in extrapolating these 'lessons' to make determinations about the strategic value of different litigation targets, jurisdictions or forums, or legal avenues pursued in claims. There remains a pressing need for more in-depth systemic, empirical and long-term studies of the impact of climate litigation to provide a robust basis for litigation strategy design.

#### B.2.1 Literature on impact of high-profile cases

- 61. There has been a significant focus in the impact literature on 'high-profile cases'. High-profile cases have been viewed in the literature "as important markers in the development and growing significance of climate change litigation" (Peel & Osofsky 2020, p. 25, citing e.g., Fisher 2013, Osofsky 2010, van Zeben 2015).
- 62. Cases may be considered high-profile for a variety of reasons, including: having been decided by a superior court (and therefore binding future decision-makers); high media attention; or because they are novel in some way e.g. employing a novel legal theory or interpretation. Identifying what constitutes a 'high-profile' case is affected by the language of a given publication, which for the purposes of this review is English language.
- 63. As seen in Figure 2 below, there is a strong correlation between the annual number of impact literature publications and developments in high-profile judgments such as *Massachusetts v EPA* or the *Urgenda* decisions.



#### Figure 2: Annual growth in impact literature (commencing 2005)

- 64. In terms of the discussion of impact in these publications, many of the legal publications concentrate on how the case provides judicial interpretation of the relevant law or sets a precedent for future cases, either because they are binding on future decision-makers or they might influence developments in other jurisdictions.
- 65. Analysis of other impacts that may flow from a high-profile case is not generally conducted on a systematic basis by using, e.g., process tracing (Checkel 2015) or other empirical methodologies (Levy 2019 suggests using "availability cascades"). Indeed, findings on the impact of high-profile cases are often limited to a short section summarizing or suggesting implications of the decision, with only brief reference to supporting evidence.
- 66. Before the 2015 Urgenda decision, publications discussing the effects of high-profile cases had largely focused on the U.S. Supreme Court's decisions in *Massachusetts v EPA* and *American Electric Power v Connecticut*. This literature focused on the legal arguments in the cases and the rulings of the Supreme Court, rather than providing an in-depth empirical analysis or evaluation of the impacts of the litigation.

- 67. The literature relating to *Massachusetts v EPA* focused on the decision's role in establishing a mandate for the U.S. federal government to regulate greenhouse gas emissions under the Clean Air Act a mandate implemented by the Obama Administration, unwound under President Trump and reinstated under the Biden Administration. The later *American Electric Power* case was considered to have had more anti-regulatory than pro-regulatory impacts as the Court affirmed that regulation under the Clean Air Act displaced any role for federal common law actions to address climate harms.
- 68. Since 2015, the *Urgenda* litigation has been the focus of considerable academic attention. However, this review did not find systematic analysis of the impacts of the decision in the literature. Rather, this has to be **pieced together from various articles**.
- 69. An example of 'piecing together' the impacts of the *Urgenda* litigation from various articles is provided in Figure 3. It represents only a fraction of the literature analyzing *Urgenda* but illustrates the complex analytical task to try to understand the impacts of a case through current publications.

#### Tracing the analysis of the impact of the Urgenda litigation across articles

Many authors have endorsed and critiqued the *Urgenda* decisions in terms of their contribution to judicial interpretation of the relevant law and policy (direct effect of litigation). Authors have also highlighted the precedent-setting role that the *Urgenda* litigation has played (indirect effect of litigation). For example, even before the first appeal judgment was handed down in 2018, Cox 2016 argued that the case is significant as it might influence future decisions and may "help change the public perception of the problem" (p. 161-2). Barritt 2020 likewise argued that the Urgenda case has "helped to foster a burgeoning transnational climate justice jurisprudence" (p. 297).

In terms of other direct and indirect effects, Peeters 2016, for example, noted the changes in conduct and behaviour of the Dutch Government, even despite its decision to appeal the 2015 ruling: "Remarkably, the Government has also decided to comply with the 25% emission reduction order issued by the Dutch lower civil court. This is a political compromise between the governing labour party, which is in favour of a more ambitious target, and the liberal party, which is in favour of a common EU approach" (p. 129). Additionally, between 2015 and 2018, as Verschuuren highlighted "the climate change policy environment in the Netherlands [had] changed dramatically" and climate change "played a major role in the negotiations leading to the establishment of a new coalition government following general elections in 2017. In June 2018, the newly elected Dutch Government announced the introduction of a Climate Bill" (2019, p. 98).

However, scholars have identified that there may be a mismatch between what is said following the decision, and actual action (one of the challenges of implementation). For example, Verschuuren wrote following the 2018 decision: "Despite promises made by the government immediately after the 2015 District Court's decision in the Urgenda case, to already implement that decision while awaiting appeal, it was recently shown by journalists that in fact, the government did not pursue any additional measures to comply with the 2015 judgment" (2019, p. 98).

Indeed, following the 2019 verdict, Nollkaemper & Burgers 2020 wrote "The Supreme Court's affirmation of the target of 25% within one year therefore will be demanding...The State is now scrambling to put together a package of measures, including the early shut-down of coal plants and lowering the maximum speed on highways". And in Backes & Van Der Veen 2021: "So despite all those statements, promises and undertakings and although the scope of the climate issue has been known for about 40 to 50 years now, the Dutch government has barely made baby steps in combating the rise of  $CO_2$  emissions and working towards reducing them" (p. 37).

Others are more hopeful. For example, White and O'Callaghan-White 2021 contend that the ruling has "driven a sense of urgency into Dutch climate policy" and there has been an estimated investment of &3 billion by the Dutch Government in new climate initiatives (p. 12).

#### Figure 3: Impacts of the Urgenda litigation as discussed in the impact literature

- 70. Other high-profile cases have also been the subject of academic analysis. As with the analysis of Urgenda, these are not systematic reviews of the impacts of climate change litigation. Discussion of impacts is typically brief and speculative. Written close in time to case developments, publications are also necessarily limited in their assessment of longer-term impacts. The publications taken as a whole provide a complex picture of the impacts that might stem from a case both positive and negative effects as well as intended and unintended effects.
- 71. Insights from the literature as to the impacts of high-profile cases are synthesized for several cases in Table 3 below.

Case	Literature	Insights
Leghari (Pakistan)	Barritt & Sediti	• Examining "its particular importance for potential litigants in the Global South" with a
	2019	"precedential impact [that] can already be identified" (pp. 204, 209).
	Romaniszyn 2020	Referring to litigants "drawing inspiration" from the arguments made in the case which
		could mean "that multiple states (or even supra-national organizations like the EU) could be held accountable for insufficient climate mitigation and adaptation" (p. 266-7)
		<ul> <li>Recognizes that "[n]ot all arguments made by applicants or recognized by court in one</li> </ul>
		jurisdiction can be transferred or translated into another" (p. 267).
		<ul> <li>Also highlights "problems with implementation of [court] decisions" that "pose</li> </ul>
		questions about the actual effectiveness of human rights climate litigation" (p. 268).
	Jodoin et al 2021	Citing case as a demonstration "that inadequate climate action may be subject to
	Dool & Opefalw	judicial review by courts and can trigger legal consequences" (p. 47).
	Peel & Osofsky 2018	<ul> <li>Discussing Leghari as an example of a potential "rights turn" in climate change litigation demonstrating "an increasing trend for petitioners to employ rights claims in</li> </ul>
	2010	climate change lawsuits, as well as a growing receptivity of courts to this framing"
		(p. 37).
Juliana v United	Meyer & Gravet	• Direct effect of the case providing judicial interpretation of relevant law, agreeing with
States (United	2020	the reasoning of the Court of Appeals dismissing the case.
States)	Mintz 2020	Direct effect of the case providing judicial interpretation of relevant law, seeing the
	Montgomery 2021	Ninth Circuit's interpretation of standing rules as a "misapplication".
	wontgomery 2021	<ul> <li>Direct effect of judicial interpretation of relevant law, noting that District Judge Ann Aiken's initial order denying the government's motion to dismiss marked the first time a</li> </ul>
		U.S. court had ever declared a constitutional right to a climate system capable of
		sustaining human life.
		Indirect effect of inspiring/precedent setting, noting that the decision generated
		"intense public and media interest" and was a "landmark ruling that climate advocates
<u> </u>	D	will be able to cite favorably in support of future cases" (p. 355).
Future Generations	Rogers 2020	Seeing youth lawsuits like <i>Future Generations</i> as having "symbolic valueYouth
(Colombia)		litigants provide a potent link between our current policy failures and future generations. Their faces and stories transform the principle of intergenerational equity
(Colombia)		from a somewhat nebulous abstraction into the stark reality of real children contending
		with an unenviable climate legacy" (p. 113).
	Gómez-Betancur	Noting "the fact that the Amazon ruling has not triggered the expected governmental
	2020	actions does not signify that its outcomes are modest" (p. 73).
		Cites outcomes such as adoption of the judicial reasoning in other cases, which
		demonstrates a promising "ripple effect," while also affirming a continuing need for
	Bouwer 2020	"intricate, systemic, and multidimensional actions" (p. 74).
Lliuya (Germany)	Bouwer 2020	<ul> <li>Noting that if the plaintiff sought an injunction "this could have a spectacular impact on RWE and the fossil fuel industry, but it would not help with the costly work required to</li> </ul>
		reduce risks from glacial melt" (p. 375).
		• Value in victory might stem from "what the decision might establish for the future
		replicability of the action, and the moral and political significance of the action, not leas
		its recognition for the lay claimant" (p. 375).
	Akhta 2020	Discusses barriers to private tort action such as standing and attribution.
KlimaSeniorinnen	Bahr et al 2018	• Direct and indirect effect of judicial interpretation and seeing the case as a model for
(Switzerland)		human rights-based litigation in other jurisdictions.
	Keller 2021	<ul> <li>Recognizing that the litigants were trying to force the Swiss government to take stronger climate protection measures (direct effect of policy change).</li> </ul>
		<ul> <li>Indirect effect of social change, analyzing the framings used in the accompanying social</li> </ul>
		movement campaign.
Canadian youth-	Cameron & Weyman	Direct effect of judicial interpretation, recognizing that these cases shape Canadian
led, rights-based	2021	climate change law.
claims		Indirect effect of inspiring/precedent setting role, recognizing that these cases are part
(ENvironnement		of "an international climate change advocacy effort" and relied on cases from other
JEUnesse c Procureur général		jurisdictions (p. 13). These cases "all add value to the transnational narrative-building
du Canada, La		that characterises climate change litigation" (p. 13).
Rose v Canada,		
Mathur v Ontario)		
German Farmers v	Minnerop 2020	• Direct effect of judicial interpretation, noting the case was dismissed for lack of
Germany		standing but shows the general justiciability of such claims and the state's duty to
Australian coal	Hughes 2019;	<ul> <li>protect fundamental rights under German law.</li> <li>Discussion of the legal implications of the decisions (direct effect of judicial</li> </ul>
cases, such as	Dehm 2020; Parker	• Discussion of the legal implications of the decisions (direct effect of judicial interpretation).
Rocky Hill	2020	·· ···································
-	McGinniss & Raff	Discussion of their limited effects in reducing emissions from coal.
	2020	
	White &	<ul> <li>Arguing that while efforts to increase Ireland's climate ambitions were underway prior to the underway back and a size if and the index of a subject to the second s</li></ul>
Friends of the Irish		the ruling, the judgment has had a significant impact in terms of providing appetite for
Environment v	O'Callaghan-White	
Environment v	0'Callaghan-White 2021	this change. For example, the Minister for Climate Action, Eamon Ryan, welcomed the
	_	

Case	Literature	Insights
Setzer et al 2021		<ul> <li>Finding transnational networks contributed to the success of the case by ensuring the lessons of climate litigation elsewhere could be transferred to the Irish context, plus benefiting from the expertise of lawyers and other experts in Ireland and abroad.</li> <li>Pressure of the case was an important contributor to the production of a new, more ambitious 2019 Climate Action Plan. In short, the case helped to "catalyse the 2019 Climate Action Plan, which made the future direction of travel cleart, thus helping to</li> </ul>
		<ul> <li>create the enabling conditions for such decisions to be taken" (p. 45).</li> <li>Contributed to a stronger and more diverse climate movement, and established a dialogue between Europe's highest courts.</li> </ul>
	Renglet 2020	<ul> <li>Providing an analysis of legal rulings in the case.</li> </ul>
McVeigh v REST (Australia)	Colombo 2021	<ul> <li>Noting that the case was the first time that "climate risk and the fiduciary duties of retail pension funds" had been tested in court (p. 1).</li> <li>Decision "suggests that courts, as well as out-of-court settlements, may articulate a duty, rather than grant permission, for pension funds to consider climate-related</li> </ul>
		<ul> <li>financial risk in their investment decisions" (p. 1).</li> <li>Argues that the case "articulated the need for a normative approach to pension fund disclosure duties and an extension of the field of climate-related risk disclosure to embrace climate-related risk due diligence" (p. 19).</li> </ul>
Plan B Earth (United Kingdom)	Mitchell 2020	<ul> <li>Speculates on the impacts of the decision in terms of the legal implications of the decision (providing judicial interpretation and precedent setting role), though noting at the time of writing it was subject to appeal.</li> </ul>
	Gordhan 2020	<ul> <li>Discussion of the direct effects of policy change and judicial interpretation flowing from the case, noting that existing legal frameworks play a defining role in answering climate claims even if the claims themselves are novel.</li> </ul>
Sharma v Minister	Avgoustinos 2021	Analyzes the outcomes of the case in providing a novel judicial interpretation of the law.
for the Environment (first instance, 2021: note reversed on appeal in 2022)	Peel & Markey- Towler 2021	<ul> <li>Noting the judicial interpretation in the case providing close consideration of scientific evidence of climate impacts and recognizing the special vulnerability of children.</li> <li>"The Sharma decision adds to growing momentum for governments to be held accountable for their actions on climate change, effectively calling for a duty to care in the face of inter-generational injustices inflicted by inaction on reducing greenhouse gas emissions to safe levels" (p. 727).</li> </ul>
	Owens 2021	<ul> <li>Described the case as a "landmark rulin[g] that will have far-reaching consequences for climate litigation and the future trajectory of the oil, gas and coal sectors" with further litigation based on the case "virtually certain in comparable contexts" (p. 396).</li> <li>Positions the courts "to play a key role in combatting the worst effects of climate change on health" (p. 396).</li> </ul>
Neubauer (Germany)	Winter 2020; White & O'Callaghan-White	<ul> <li>Direct effect of the decision was policy change, as the Government was required to amend German law.</li> </ul>
(dermany)	2021	• Indirect effects of the judgment were its "precedent-setting" role, behaviour change and social change.
		<ul> <li>Decision is part of a growing number of cases that are examples of "transnational climate jurisprudence."</li> </ul>
Shell (Netherlands)	Smith 2021	<ul> <li>Speculates as to the direct effects of the case in terms of required changes in conduct, and indirect effects in terms of behaviour change and setting a precedent for future decisions.</li> <li>Notes it was the first legal decision globally to hold a fossil fuel company accountable</li> </ul>
		<ul> <li>Quotes Leiden University law professor Eric De Brabandere's view that the case will definitely "inspire other cases".</li> </ul>
	Macchi & van Zeben 2021	<ul> <li>Describes the case as a "landmark judgement [that] represents the first imposition of a specific mitigation obligation on a private company over and above reduction targets set by existing 'cap-and-trade' regulations and/or other governmental mitigation policies" (p. 409).</li> </ul>
	MaMillan 2021	<ul> <li>Notes the Court's extensive reference to "international soft law, including the United Nations Guiding Principles on Business and Human Rights" (p. 409).</li> </ul>
	McMillan 2021	<ul> <li>Discussing whether human rights and duty of care arguments accepted by the Dutch Court could gain traction in U.S. courts (precedent setting value of the case).</li> </ul>

#### Table 3: Insights from literature on impacts of high-profile cases

- 72. Some authors have taken a more thematic approach in analyzing high-profile case(s). These assessments again point to the complexity in assessing the direct and indirect effects that may result from a decision, and the overall impact these cases might have.
- 73. For instance, *Urgenda, Juliana* and *Future Generations* have been examined using an analytical framework described as the OATH approach (objective, associated climate impact, type of justice, harm) (Beauregard et al 2021). The analysis concludes: "... the progress and achievements of these cases demonstrate the potential of climate litigation to force greater national and sub-national government action on climate change" (Beauregard et al 2021, p. 652) but that litigation better

serves some types of justice (e.g. intergenerational) than others (e.g. distributive). They conclude that "litigation must be combined with other forms of climate action to better advance justice in a post-Paris world" (p. 652).

74. There are also complex risks, costs and rewards associated with large-scale private law climate litigation. As Bouwer concludes: "any suggestion that the pursuit of 'holy grail' litigation [i.e. high-profile cases] might not be entirely worthwhile needs to be advanced with some delicacy. Yet, the unpredictability of process and outcomes, as well as the impacts thereof, can make the implications of these cases difficult to know. They may achieve much, or they may achieve less than they purport to" (Bouwer 2020, p. 377).

# B.2.2 Climate litigation targets

- 75. The 'targets' of litigation generally refers to the defendants in proceedings whose actions, decisions or conduct are being challenged by another party. Common targets of climate change litigation are governments, governmental authorities and administrative decision-making bodies ('government targets') or companies with a significant emissions profile ('corporate targets').
- 76. Outside of the United States, the majority of climate cases have been brought against government targets (Setzer & Higham 2021). Nevertheless, a growing number of cases have been filed against corporations, with this trend strengthening in recent years (Setzer & Higham 2021). Other litigation targets include financial sector enablers of climate-harming projects, such as banks, pension funds, insurance companies and other investor groups (Solana 2020).
- 77. In the impact literature, **litigation against government targets and corporate targets has been the primary focus**. Less attention has been directed towards litigation relating to fossil fuel projects or involving financial sector actors (see Figure 4 below).

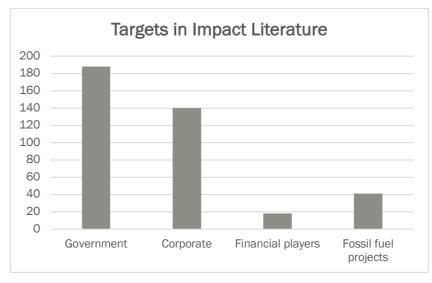


Figure 4: No. of impact publications on categories of targets

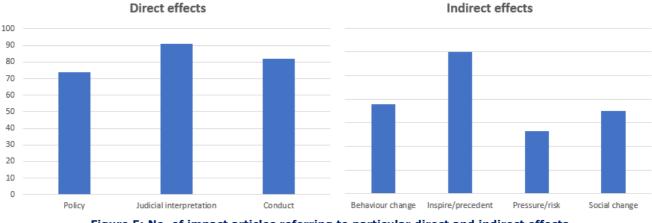
78. Although outside the scope of the reviewed literature, the 2022 IPCC Working Group III report suggests that climate cases against governments fall into two categories: "claims challenging the overall effort of a State or its organs to mitigate or adapt to climate change" and "claims regarding authorisation of third-party activity" (IPCC 2022, pp.13-30). Cases in the former category have been a growing trend since the first landmark victories in *Urgenda* and *Leghari* in 2015. These cases may, for example, compel the government to adopt more progressive climate policies. Cases in the latter category include regulatory challenges to government approval for high emitting projects. Litigants in these cases challenging the various environmental approval applications may seek to delay the project for as long as possible (IPCC 2022).

- 79. Litigants have also brought cases against targets that are corporations. These include cases where the litigants seek compensation for climate change-related damage caused by major corporate carbon emitters, for example, for property loss due the effects of climate change or costs for adaptation (British Institute of International and Comparative Law 2021; IPCC 2022).
- 80. Setzer 2022 (forthcoming) classifies cases against corporate targets as falling into two categories: cases looking to the past (liability cases, for example, in tort) and cases looking to the present/future (fraud claims, disclosure claims and human rights procedures). She argues that the **impacts of high-profile litigation against major fossil fuel companies (corporate targets) are less clear** than cases against government targets. These impacts may be regulatory and financial, direct and indirect, and might be measured through event studies assessing whether litigation affects the market valuation of listed companies (an area for future research).
- 81. In their assessment of the potential effectiveness of avenues in tort law to hold carbon-intensive corporations legally accountable for climate change harms, Gunderson & Fyock 2021 advance an alternative argument that bringing claims against corporations for civil wrongs will remain ineffective as a mitigation strategy because many carbon-intensive corporations can absorb substantial lawsuit-related costs and, even if legal costs push fossil fuel companies out of business, their competitors will step in to extract open reserves. Accordingly, the authors recommend law reform, rather than pursuing individual offenders in litigation (Gunderson & Fyock 2021). This type of litigation also relies on developments in climate attribution science (Marjanac & Patton 2021).
- 82. Climate cases against corporate targets may also seek disclosure of climate related financial risks, concrete emissions' reductions, or accountability of corporations for their human rights obligations (British Institute of International and Comparative Law 2021; IPCC 2022). One effect of such litigation may be to force company targets to reduce their emissions to avoid liability in the case or any subsequent industry-wide settlement (Batros 2020). It might also lead to more indirect effects such as stranded assets due to "fines or penalties, class action damages, legal costs, changes in valuation, changes in credit ratings, reputational damage, market exclusions, direct regulation, asset confiscation, and restriction of insurance" as well as more internal costs for firms "such as management distraction and staff morale" (Caldecott et al 2021, p. 424).
- 83. Gunningham 2020 notes the potential for shareholder action to bring **"social licence pressure"** on major corporate emitters by generating adverse publicity for the company (citing litigation against Exxon as an example).
- 84. Greater mention of government and corporate targets in reviewed publications (as opposed to other targets) may reflect the fact that more attention has been directed in the impact literature to high-profile judgments, which have usually been those involving national governments (e.g. *Urgenda*) or major corporate emitters (e.g. *Shell*). It is not necessarily an indication that, for instance, litigation against fossil fuel projects, like coal power plants, has not generated important impacts or been ineffective in securing climate mitigation goals.
- 85. Beyond government and corporate targets, financial sector actors, such as investors, are increasingly exposed to climate litigation (Davies 2020). Davies examines the advantages and disadvantages of litigation as a strategy for resolving disputes involving investors compared with other strategies (e.g. public inquiries or meditation) but does not consider the specific impacts of climate change litigation against financial sector actors.

# B.2.3 Direct and indirect effects

- 86. The impact literature identifies several ways that litigation can have direct and indirect effects although not always using that terminology.
- 87. Direct effects were classified for this review as including the following:

- Policy: changes or proposed amendments to laws, regulations or other policies following the litigation;
- Judicial interpretation: changes to the interpretation of a law or its scope of application following the decision, for example, recognizing that 'pollutants' covers greenhouse gases or broadening standing rules to allow civil society to challenge government climate policy; and
- Conduct: behavioural changes following a decision e.g. where a company issues a new corporate emissions policy to comply with a judgment.
- 88. Indirect effects were classified for this review as including the following:
  - Behaviour change: changes in behaviour by litigation targets or similar entities not directly • required by the litigation but which can plausibly be traced back to the litigation, e.g. a pension fund regulator proposing to adopt new guidelines for reporting climate risk following complaints from members about inadequate disclosures by some funds;
  - Inspiration/precedent: the role of litigation setting a benchmark (precedent) for future litigation or inspiring other litigants to bring similar cases;
  - Pressure/risk: refers to increasing costs and risks, including reputational risks, due to the litigation or credible litigation threats;
  - Social change: refers to the broader systemic changes potentially stemming from litigation including changing social norms or raising awareness of climate issues.
- 89. This review found that no single direct or indirect type of effect has received dominant focus in the literature (see Figure 5). This suggests that there is no 'silver bullet' or template to litigation's effectiveness. Indeed, the range of direct and indirect effects (intended or unintended, positive or negative) that may follow a decision serves to highlight the complexity of assessments of impact.
- 90. Nevertheless, the failure to identify particular impacts as being more prevalent, or desirable, might also be a function of the literature itself: it is self-selecting and the choice to focus on a given impact is not necessarily led by empirical data or comparative analysis.





- Publications are also variable in the extent they consider the direct/indirect effects stemming from 91. climate change litigation. Indeed, as commented above in relation to discussion of high-profile cases in the literature, analytical engagement with questions of impact is often brief (e.g. confined to a section at the end of an article) and **speculative** (without extensive reference to empirical evidence or use of a rigorous methodological approach to data collection).
- 92. A typical example of this is: "The general lesson is that litigation is having an impact and it can be expected to have even more of an impact in the future" (British Institute for International and

Comparative Law 2021, p. 17). As another example, Smith 2021 quotes expert opinion that the *Shell* case "will definitely 'inspire other cases'" (p. 387).

- 93. Assessing impact is made even more complex as **climate change litigation as a whole has cumulative impact**. For example, White & O'Callaghan-White 2021 argue that "with each successful climate case taken against a state, the corpus of international jurisprudence grows and reverberates, creating a 'domino effect' in climate litigation," adding "to the resource base of case law that can be cited in the future" and intensifying pressure on policymakers (p. 2).
- 94. Impact also occurs in complex and dynamic circumstances. For example, a change in government or an environmental disaster may further accelerate or hinder progress in mitigating and adapting to the impacts and climate change.
- 95. This point highlights that **litigation can only go so far as a tool for achieving policy or social change**. There have been numerous authors raising questions as to the appropriateness of the courts as a forum for the resolution of climate issues (e.g. Bergkamp & Hanekamp 2015; Wegener 2019).
- 96. Another barrier to deriving lessons from the impact literature on the effectiveness of litigation is the fact that there is **not often longitudinal consideration of these effects**. The scope of impacts will also dictate timeframes for assessments, noting that impacts assessed as positive or negative at a particular point in time, and from a particular perspective, might lead to further impacts at a later stage that could be viewed differently. In academic literature, there is often an imperative to publish quickly following a high-profile judgment, which mitigates against undertaking studies with a focus on the longer-term effects of litigation.
- 97. More generally, there is no common basis, methodology or analytical framework that has developed to assess the effectiveness of climate litigation. In addition, an assessment of impacts must consider how impact should be defined. A decision on the scope of 'impacts' to be assessed will determine what corresponding sources of the evidence of impacts can be obtained as a matter of public record and be used in terms of reliability.

# **B.2.4 Jurisdiction**

- 98. Jurisdictions with the **highest number of climate change cases** worldwide (i.e. United States and Australia) or jurisdictions where there have been **notable successes** (e.g. Netherlands) have received considerable attention in the impact literature. Other jurisdictions have received less attention, particularly countries in the Global South. These results are likely influenced by the constraints of the search methodology for this review, i.e. searching only in English-language.
- 99. Nevertheless, there is growing interest in the English-language literature in examining the **potential for climate litigation in 'novel' jurisdictions** i.e. jurisdictions where there has been comparatively little attention paid to climate litigation including in the following regions/countries:
  - Global South (Setzer & Benjamin 2019; Peel & Lin 2019; Peel & Osofsky 2020);
  - Africa (Humby 2018; Ali et al 2019; van der Bank & Karsten 2020; Murcott & Webster 2020; Morgenthau & Reisch 2020; Kotze & du Plessis 2020; Omuko-Jung 2021; Klaaren 2021; Mwesigwa & Mutesasira 2021; Etemire 2021; Okoth & Odaga 2021);
  - Asia Pacific (McGrath 2020; Lin & Kysar 2020; Asian Development Bank 2020);
  - South America (Losekann & Carnargo 2020; Gomez-Betancur 2020); and
  - China (Zhao, Lyu & Wang 2019; Jin 2021);
  - India (Ghosh 2020).
- 100. In particular, growing literature on climate litigation in the Global South emphasizes the predominance of cases with climate change as a "peripheral" issue and the importance of considering legal and social context in predicting potential outcomes across very diverse countries (Peel & Lin 2019).

- 101. Different objectives for litigation are also often seen when comparing Global South jurisdictions with rich or developed countries (Setzer & Benjamin 2019). As Setzer & Benjamin remark: "strategic climate litigation in the Global South is generally not asking for more ambitious regulatory action to be taken by governments, even if this is an indirect outcome of the case... However, enforcing existing environmental legislation, protecting ecosystems, boosting adaptation efforts, and enhancing institutional structures all of which may have mitigation co-benefits can be easier tasks to achieve through the courts. Similarly, strategic climate litigation in the Global South does not rely extensively on traditional tort-based approaches to climate damage against either state or non-state actors. Instead, litigation in the Global South relies on existing legislation to achieve climate aims, and utilizes human rights-based approaches" (2019, p. 99).
- 102. While literature on novel jurisdictions for climate litigation often includes a consideration of **barriers to such litigation in those jurisdictions** (which may limit the capacity to achieve positive impacts), there is (still) limited case law outside of epicentres such as the United States, Australia and Europe. This means that these publications are **not able to say very much about the outcomes of climate litigation in novel jurisdictions**. It is, however, noted that this review did not extend to reading individual chapters of recent books on climate change in the Global South (e.g. Lin & Kysar 2020, Sindico et al 2021 and Alogna et al 2021). With the growing number of climate cases in the Global South and increasingly scholarly interest in this topic we would expect more findings on the impact of this litigation to emerge in coming years.

#### **B.2.5 Tactical considerations in climate litigation**

- 103. The impact literature gives some insights as to tactical considerations for designing climate litigation for impact. In general though, **tactical considerations, or criteria for successful strategic climate litigation, are not explicitly discussed** in the reviewed literature.<sup>4</sup>
- 104. Some tactical considerations for achieving climate litigation with impact can be implied from authors' discussion of the different objectives of climate litigation (e.g mitigation and adaptation); the merits of particular legal arguments across a range of areas of law that are not specific to environmental regulation; or novel forums in which to bring cases. There is also an emerging body of interdisciplinary literature that offers general guidance on litigation strategy, including the role of narrative and science. These insights are synthesized in the following sections.

#### B.2.5.1 Different objectives of litigation

- 105. While climate change mitigation has been a strong theme of climate litigation and the impact literature, climate cases may also seek other legal outcomes beyond those that reduce greenhouse gas emissions. Alternatively, non-mitigation objectives may be pursued in climate litigation based on an assessment that these objectives align better with existing laws (and hence can be more easily pursued in litigation) or more fully respond to the particular environmental concerns of the litigants involved (Peel & Lin 2019).
- 106. As some publications discuss, climate change litigation may extend to interventions focused on climate impacts or damage, for example, 'adaptation' litigation (aimed at addressing the effects of climate change), or the pursuit of remedies for climate-related 'loss and damage' (especially compensation for the effects of climate change). A growing number of publications address these different objectives (e.g. Conley & Finnerty 2008; Lipman & Sotkes 2011; Herzog & Hecht 2013;

<sup>&</sup>lt;sup>4</sup> A recent exception to this, that falls outside the scope of the review, is Peel & Markey-Towler 2022. Through a comparative analysis of three 'successful' examples of strategic climate litigation, the authors suggest the following key 'ingredients' that potentially indicate what the authors call a 'recipe for success' in climate cases (Peel & Markey-Towler 2022): 1) Carefully selecting plaintiffs to communicate a strategic message; 2) engaging an experienced legal team with a track record of bringing other strategic climate legal interventions; 3) targeting defendants which are widely seen to be lagging in their climate action; 4) tying legal arguments closely to the latest climate science; 5) adopting innovative legal arguments, including those emphasizing duties of protection; 6) seeking remedies that extend beyond the situation of individual litigants and contribute to intended policy and regulatory impacts."

Shweitzer 2014; O'Donnell 2016; Spitzer & Burtscher 2017; Lin & Burger 2018; Landers 2018; Ganguly, Setzer & Heyvaert 2018; Adler 2018; Pekkarinen, Toussaint & van Asselt 2019; Wewerinke-Singh & Salili 2020; Toussaint 2021). Many of these have considered the barriers facing litigation for adaptation or loss and damage, in terms of access to justice limitations (including standing) and proving actionable damage.

# B.2.5.2 Diverse and novel legal avenues

- 107. Consistent with the fact that there is not one body of 'climate change law', the literature review highlighted the **diverse range of claims, and novel legal arguments, litigants are pursuing**. Claims are diverse as they include climate suits in tort, public trust, consumer law, corporate law, administrative law, constitutional law, human rights law and environmental law.
- 108. Arguments are treated as 'novel' if they have not been used before in climate cases or if they are transposed from a legal context usually associated with other subject matter (e.g. corporate or financial law). Human rights avenues in climate cases are often treated as novel even though rights-based climate litigation has longer antecedents where such arguments were trialled and failed in the past (Peel & Osofsky 2018).
- 109. In discussing diverse and novel legal avenues, the impact literature may offer insights on the 'pros and cons' of different legal approaches that can be relevant to tactical discussions. McDonnell et al 2021, for instance, discuss emerging corporate law avenues, whereas authors such as Savaresi 2019 and Keller & Kapoor 2020 discuss human rights and tort law avenues, respectively.

# B.2.5.3 Different legal forums

- 110. In tandem with pursuing a variety of different claims and arguments, litigants may choose to bring claims in different legal forums including regional and international courts, tribunals and other forums.
- 111. Literature examining litigation in these different forums (e.g. Minnerop 2019; Niska 2020; Mile 2020; Le Moli 2020; Kingston 2020; Fermeglia & Mistura 2020; Braig, Fraziska & Panov 2020; Anisimova 2021) may offer tactical insights in terms of their **different advantages or disadvantages as sites for climate litigation**. This discussion often has a strong legal focus on procedural and jurisdictional hurdles.
- 112. As an example, looking at the use of human rights claims in climate cases brought in regional and international courts and tribunals, Varvastian 2021 finds these claims have had "mixed success" although cases with "positive developments" are "likely to lay the foundation for a greater chance of success in future litigation" (pp. 369-70).

# B.2.5.4 Science and narrative in climate litigation

- 113. Publications from the broader social sciences and sciences offer some insights into the impacts or effectiveness of climate change litigation. These insights could help inform litigation strategy including by describing **the role of activism and narrative in supporting cases** and **bringing claims using the best available science**.
- 114. Activism/narrative publications (primarily) discuss the indirect effects of climate change litigation. They provide key insights into how litigation can shape broader narratives and contribute to wider social change, and vice versa, how accompanying campaigns can support the goals of climate change litigation (e.g. Vanhala 2013; Dumas 2017; Nosek 2018; Konkes 2018; Baxendale 2018; Hein & Chaudhri 2019; Vanhala 2020; Sethi 2020; Rogers 2020; Paiement 2020; Chiaramonte 2020; Wonneberger & Vliegenthart 2021; Supran & Oreskes 2021; Nixon et al 2021; Nixon & Davies 2021; Gill & Ramachandran 2021; Balzac-Arroyo 2021; Armeni 2021).
- 115. For example, Armeni 2021, (reviewing Rogers 2020 book) discusses how litigation offers a preferential platform for storytelling, with litigants and witnesses relying on narratives to recount relevant facts, as well as to appeal to the compassion and emotions of courts. Judges are also

identified as engaging in storytelling when writing their judgments. Rogers 2020 explores how climate activists use stories to mobilize the public, as well as to influence decisions, stating that "activist litigants are reshaping and repurposing legal doctrines ... in an attempt to create transformative legal climate narratives" (Armeni 2021, p. 89). As Armeni 2021 notes, strategic use of narrative in climate litigation allows stories to act as "a force of social change," an approach inherited from the civil rights movement and now re-imagined in a climate context. However, Armeni 2021 notes that the lack of success of most such cases, and their unclear impact beyond the courtroom, showing that legal re-imagination through narrative approaches remains difficult.

- 116. The indirect impacts of activism and narratives surrounding litigation (i.e. supporting social change) **may also lead to more direct effects such as influencing government policy**. For example, Wonneberger & Vliegenthart 2021 analyze interactions between media attention (newspaper articles) and political attention (parliamentary questions) in relation to the *Urgenda* case. Using vector autoregression models, they find that "media attention for the lawsuit led to greater parliamentary attention", but that parliamentary questions did not influence media coverage (Wonneberger & Vliegenthart 2021, pp. 699, 710). They also found that media attention for the case influenced greater media and political attention for climate policies in general (Wonneberger & Vliegenthart 2021, p. 699, 710). Their findings point to an important 'agenda-setting' role that litigation may play.
- 117. Publications providing insights from the physical sciences and social sciences may also support successful outcomes from climate litigation (e.g. McCormick et al 2017; Lusk 2017; Ritchie, Gill & Long 2018; McCormick et al 2018; Cullum 2019; Burger, Wentz & Horton 2020; Stuart-Smith et al 2021; Spalding 2021; Owens 2021; British Institute of International and Comparative Law 2021). These publications imply a need for a dialogue between the legal and scientific communities around how the science can support positive outcomes in climate cases.
- 118. For example, McCormick et al 2018, in their review of U.S. climate cases, pointed to the use of climate science and other science, as well as collaboration in specific types of coalitions, as relevant factors affecting the outcomes of cases. Similarly, the British Institute of International and Comparative Law's workshop series, including one on the topic of 'Climate Litigation and Science', identified potentially salient areas of science for climate litigation, such as research on effort sharing, the science of climate inaction, intergenerational impact attribution, intragenerational impact and source attribution, and negative emissions technologies (British Institute of International and Comparative Law, 2021).
- 119. Stuart-Smith et al 2021, in an article examining causation claims in climate litigation, find that the evidence submitted and referenced in these cases lags considerably behind the state of the art in climate science, impeding positive findings. They conclude that greater appreciation and exploitation of existing methodologies in attribution science could address obstacles to causation and improve the prospects of litigation as a route to compensation for losses, regulatory action and emission reductions by defendants seeking to limit legal liability.

# C. Knowledge gaps and recommendations

- 120. As highlighted throughout this report, existing literature on the impacts of climate change litigation has significant limitations and gaps. There is a pressing need for more in-depth, systematic and longitudinal studies to provide reliable insights into the types of impacts that may flow from climate change litigation and the circumstances in which such impacts may arise.
- 121. This part of the report analyzes key gaps in the existing literature on the impacts of climate change litigation (C.1) and proposes recommendations to inform CIFF's decision-making as it considers its broader strategy for climate litigation (C.2). These gaps and recommendations are also summarized in Table 1, Executive Summary, above.

# C.1 Knowledge gaps

- 122. As highlighted in the analysis of the impact literature in Part B above, this report and existing more in-depth reviews of the climate change litigation, have certain limitations due to the search methodologies adopted. This report only covered English-language literature and did not provide a comprehensive analysis of books and book chapters given time constraints. A broader methodology might potentially yield additional insights from the literature on the impacts of climate change litigation.
- 123. More specifically, recent books such as Lin & Kysar 2020, Sindico et al 2021 and Alogna et al 2021 address the absence of research on climate change litigation in the Global South (previously noted by Setzer & Benjamin 2019; Peel & Lin 2019). However, it is not clear the extent to which such publications have addressed the impact of climate change litigation in those jurisdictions.
- 124. Other gaps in knowledge identified from the literature reviewed in this report are summarized in the following sections.

# C.1.1 No common methods of assessment

- 125. A key gap limiting the scope for definitive findings on the impact of climate litigation is the lack of agreed methodologies or consensus conceptualizations for assessments of impact.
- 126. Beyond recognizing the difficulties concerning assessments of impact, the literature also does not identify and compare different methods for assessing impacts. This could be due in part to assessments, e.g. evaluations from funding programmes, not being publicly available. It might also be indicative of an absence of formal assessments, which are costly to undertake in part due to the means by which evidence of impact must be gathered from diverse sources.

# C.1.2 Linking analyses

- 127. This report has included analysis of empirical and general reviews of climate litigation although noting that such studies form only a small subset of the existing literature.
- 128. Typically, publications on climate change litigation are dedicated to analyzing one development in a case rather providing an overview and analysis of the literature on a particular case over time, or analyzing multiple cases on a comparative basis.
- 129. Moreover, even those publications reviewing multiple cases (e.g. Bouwer 2020, Beauregard et al 2021, Solana 2020) do not compare different legal pathways to consider what avenues might yield the maximum impact.

# C.1.3 Looking beyond high-profile cases

130. High-profile cases such as *Urgenda* have attracted the lion's share of attention and analysis in the literature meaning that other, lower-profile litigation often flies under the analytical radar.

- 131. For example, litigation on fossil fuel projects has not received a huge amount of attention in publications although evaluations (such as that performed by this team for CIFF on ClientEarth's strategic litigation programme) show that a series of challenges to fossil fuel projects can yield impacts and incremental change over time.
- 132. Equally, cases involving complex legal arguments in novel areas of law, such as the Tempus case involving European Union competition law (*Tempus Energy v Commission* (C-57/19 P) of 2021, in which the European Court of Justice considered matters of state-aid to electricity providers), can have significant impacts. But these are not as well-analyzed in the literature as are, for instance, human rights or torts law cases.

# C.1.4 Inattention to longer-term and indirect effects

- 133. A notable gap in the literature is the identification and analysis of direct effects over the longer term, and indirect impacts, whether immediate or long-term.
- 134. Published literature, with the bulk by legal scholars, tends to focus on direct effects in terms of a win or a loss at the time of judgment, or the result in terms of the judicial interpretation apparent from the judgment, without necessarily following up on resulting policy changes, for better or worse, or changes in the defendant's conduct.
- 135. Studies of indirect effects, such as the replication of cases inspired by judgments, or understandings of risk, are for the most part speculative, written at the time of a given decision or shortly thereafter, before such effects could be definitively known.
- 136. Indirect effects represent a particular difficulty for analysis given that they are often complex to measure or attribute to a particular source. To capture these impacts, multiple lines of evidence, and a clear understanding of the outcomes that are desired, are necessary. Practitioners undertaking (and monitoring and evaluating) climate change litigation may be best placed to understand and document the indirect effects of the cases they are bringing.
- C.1.5 Optimal strategies
- 137. The literature lacks evidence as to any 'silver bullet' approach to achieving impact. This could be an indication of gaps/biases in the literature in that existing publications do not appear, mostly, to have engaged deeply with the question of the comparative effectiveness of different pathways/targets/strategy/jurisdictions.
- 138. For example, there is a focus in the literature on high-profile litigation or human rights strategies, with little assessment of whether these are the best pathways to impact (depending on the desired outcome). Likewise, while litigation against corporate targets is receiving increasing attention in the literature, it is recognized that the impacts of this litigation are less well appreciated than for cases against government targets and that further research is needed to assess whether litigation affects the market valuation of listed companies (Setzer 2022, forthcoming).
- 139. Alternatively, the failure of the literature to discern any particular optimal strategy or criteria for successful litigation could reflect that impact is achieved through many pathways. This could suggest that a diverse 'portfolio' of investment in strategic litigation is the best approach. A middle way between these two is also conceivable (a diverse portfolio and select novel approaches).
- 140. This gap points to the need more reflection on questions of what makes for successful climate litigation and in what circumstances, a task which itself requires more systematic approaches to gathering and assessing evidence of impact.

#### C.1.6 Negative impacts

- 141. A recent paper by Batros & Khan 2020 identifies and critically analyzes some assumptions and strategies that could lead to negative impacts from climate change litigation, such as the impacts of adaptation litigation in the Global South.
- 142. However, there is overall a gap in the literature on the negative impacts of climate change litigation, or downsides to particular strategies relevant to climate change litigation, citing empirical data.
- 143. This also points to the limitations of litigation as a tool, or the appropriateness of the courts as a forum, for tackling climate change (something often pointed to in the literature).
- 144. Overall, more attention to the potential negative effects, adverse outcomes from or unintended consequences of litigation, derived from case studies, would allow a more nuanced assessment of the utility of climate litigation as a strategic tool for bringing about desired change objectives.
- C.1.7 Lessons from public interest litigation
- 145. The dataset for this review was specific to climate change litigation and did not extend to public interest litigation in general or that related to environmental law. There was, as such, no study of possible methods or lessons that could be transferred from that extensive literature for analyzing or understanding the impacts of climate change litigation.

# **C.2 Recommendations**

- 146. Based on the literature review conducted in this report, the following recommendations are made to address identified knowledge gaps and to inform CIFF's broader strategy on climate litigation.
- 147. **Recommendation 1:** CIFF should continue to foster data collection for longitudinal impact assessment during projects, with dedicated funds provided to grantees for the collection of such data, and continued funding for an internal/external evaluation and audit of the data during/at the end of a project.
- 148. **Recommendation 2**: CIFF might facilitate a common approach to impact assessment methodologies by working with networks of funders in order to identify 'common' approaches and clear understandings of what 'success' means. This might include a commitment to open access/publication of these methodologies and approaches as part of a field-building effort.
- 149. Recommendation 3: While the value of analysis of the impacts of litigation is recognized in the literature, this is currently not occurring in a systematic way and instead has to be 'pieced together' from multiple, often incomplete, sources. This could be improved by commissioned research or evaluation of case studies, which could be integrated with climate case law databases to expand them beyond simply cataloguing case law.
- 150. Recommendation 4: CIFF (potentially in conjunction with other funders) could consider funding a publicly available database of non-sensitive sources of evidence of all impacts gathered from their grantees, which is maintained and added to over-time to capture longer-term impacts. In particular, information gathering by grantees on the impacts and longer-term effects of litigation against novel litigation targets especially corporate and financial sector targets could help build real world knowledge of the effectiveness of this litigation in changing behaviour, supplementing the literature analysis which is largely based on theory or anecdotal reports.
- 151. **Recommendation 5:** CIFF could use the impact literature identified in this review (potentially with the addition of a detailed review of books on the topic) to identify elements of 'due diligence' as to the pitfalls/downsides and potential negative impacts of litigation, for their grantees to check off in devising strategies for climate litigation programmes.

- 152. **Recommendation 6:** CIFF could consider funding further, targeted research to identify knowledge gaps in the climate litigation literature on impact, as identified in section C.2 above. Options here include:
  - Extending the review to include non-English literature and comprehensive analysis of books (noting this is a time-consuming exercise).
  - Undertaking a comparative analysis of impact from different pathways for climate litigation, which could provide more detailed information on the value of different legal avenues or litigation in particular forums or jurisdictions in achieving impact.
  - Commissioning research on the impacts of public interest litigation or environmental public interest litigation, with a view to identifying methods for assessment or lessons learned that could be transferred to climate change litigation. This could be particularly useful for understanding the significance of issues such as third-party rights of access to courts for climate change litigation.

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