

# Climate Litigation as a Social Driver Towards Deep Decarbonisation I: A Framework and a General Assessment

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*A growing number of court cases are being brought against governments, administrations, and corporations in support of enhanced climate action. This is the first of two articles that examine climate litigation as a social process and potential driver of deep decarbonisation from a perspective that combines legal, social, and political science. Contributing to an emerging interdisciplinary research agenda on the dynamics and effects of climate litigation and on its societal embeddedness, we present and test two analytical tools, the Social Plausibility Assessment Framework and the Global Opportunity Structure for Climate Action. The first article introduces these analytical tools, and applies them to assess the overall evolution of climate litigation and identify developments in its legal and societal context that enable or constrain future driver dynamics. Based on this assessment, we conclude that climate litigation constitutes an important but on its own insufficient driver of deep decarbonisation, which is shaped by, and continuously shapes, legal, socio-political, economic, and scientific scripts and repertoires that enable novel forms of societal agency. The second article further operationalises and illustrates the approach by zooming in on a case-specific level and examining two recent landmark decisions in the Netherlands and Germany.*

## I. Introduction

Over the last two decades, a growing number of climate lawsuits have been initiated against governments, administrations, or companies to strengthen national emission reduction commitments, prevent

carbon-intensive infrastructure projects, or hold firms accountable for warming impacts.<sup>1</sup> Most of these take place before national courts.<sup>2</sup> However, the path towards bringing a climate litigation case is seldom straightforward. As Murcott and Webster note, ‘there has been a rise in the use of litigation specifi-

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- 1 William CG Burns and Hari M Osofsky (eds), *Adjudicating Climate Change: State, National, and International Approaches* (CUP 2009); United Nations Environment Programme, ‘UN Environment 2017 Annual Report’ (2018); Joana Setzer and Lisa C Vanhala, ‘Climate change litigation: A review of research on courts and litigants in climate governance’ (2019) 10(3) WIREs Climate Change 1; Shaik Eskander, Sam Fankhauser and Joana Setzer, ‘Global Lessons from Climate Change Legislation and Litigation’ (2021) 2 Environmental and Energy Policy and the Economy 44; Joana Setzer and Catherine Higham, ‘Global Trends in Climate Change Litigation: 2023 Snapshot’ (Grantham Research Institute and LSE 2023).
- 2 As of 2023, there are three key databases – Sabin Center for Climate Law, ‘Global Climate Change Litigation’ <<http://climatecasechart.com/non-us-climate-change-litigation/>> accessed 18 November 2023; Sabin Center for Climate Change Law / Arnold & Porter Kaye Scholer LLP Database, ‘U.S. Climate Change Litigation’ <<http://climatecasechart.com/us-climate-change-litigation/>> accessed 18 November 2023; Grantham Research Institute on Climate Change and the Environment and Sabin Center for

cally in the context of climate change, pursuant to which lawyers and litigants are increasingly reaching beyond the boundaries of the state, linking with those who have preceded them, and sharing scientific research, legal arguments and expertise.<sup>3</sup> The process requires legal and financial support and specialised expertise, and it involves continued interactions among a multitude of actors. In light of these interactions, including the constitution of cross-national support structures and global networks, climate litigation increasingly appears as a transnational social phenomenon which has been generating growing attention in legal research and beyond.<sup>4</sup> Legal scholars have aimed at developing typologies of climate litigation via interpreting individual cases in their respective jurisdictional contexts, described common legal strategies<sup>5</sup> and arguments.<sup>6</sup> They have also identified common trends across jurisdictions such as a recent 'rights turn'.<sup>7</sup> Socio-legal research has adopted a wider focus on the social dynamics of climate litigation and embedded the phenomenon in its broader political and societal context.<sup>8</sup> Studies have examined litigation's effectiveness in driving policy ambition and emissions reductions,<sup>9</sup> high-

lighted the interplay between successful climate litigation and social movements,<sup>10</sup> and examined the supportive role of organisational networks, expertise and public advocacy campaigns.<sup>11</sup> Social movements influence the discursive context of climate litigation in a way that can encourage new interpretations of legal norms.<sup>12</sup> Climate litigation cases can in turn produce new narratives and discursive frames.<sup>13</sup> Finally, ethnographic studies, while still rare, promise to provide highly valuable insights into the social context and the social construction of climate litigation.<sup>14</sup>

In sum, the social embeddedness of climate litigation, its social and political effects, and its effectiveness in terms of achieving decarbonisation and climate justice have increasingly come into the focus of climate litigation scholarship.<sup>15</sup> Addressing these topics requires combining legal and social science perspectives. This article therefore brings together scholars from Law, Sociology, and Political Science. Drawing on the pioneering work of the Hamburg Climate Futures Outlooks,<sup>16</sup> it introduces and applies a novel analytical framework to examine the role of climate litigation as a social driver of decarbonisation

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Climate Change Law, 'Climate Change Laws of the World Database', <<https://climate-laws.org/>> accessed 18 November 2023.

- 3 Melanie Murcott and Emily Webster, 'Litigation and regulatory governance in the age of the Anthropocene: The case of fracking in the Karoo' (2020) 11(1-2) *Transnational Legal Theory* 144, 146.
- 4 Wolfgang Kahl and Marc-Philippe Weller (eds), *Climate Change Litigation. A Handbook* (Bloomsbury 2021); Jacqueline Peel and Hari M Osofsky, *Climate Change Litigation. Regulatory Pathways to Cleaner Energy* (CUP 2015).
- 5 Jody Freeman and Adrian Vermeule, 'Massachusetts v EPA: From Politics to Expertise' [2007] *The Supreme Court Review* 2007 51; McCormick and others, 'Strategies in and outcomes of climate change litigation in the United States' (2018) 8(9) *Nature Climate Change* 829.
- 6 Felix Ekardt and Katharine Heyl, 'The German constitutional verdict is a landmark in climate litigation' (2022) 12(8) *Nature Climate Change* 697; Meinhard Doelle and Sara Seck, 'Loss & damage from climate change: from concept to remedy?' (2020) 20(6) *Climate Policy* 669.
- 7 Jacqueline Peel and Hari M Osofsky, 'A rights turn in climate change litigation?' (2018) 7(1) *Transnational Environmental Law* 37; Laura Burgers and Tim Staal, 'Climate Action as Positive Human Rights Obligation: The Appeals Judgment in Urgenda v The Netherlands' in Ramses A Wessel, Wouter Werner, and Bérénice Boutin (eds), 49 *Netherlands Yearbook of International Law 2018* (Springer Nature 2019).
- 8 Lisa C Vanhala, 'The comparative politics of courts and climate change', (2013) 22(3) *Environmental Politics* 447; Dana R Fisher and Sohana Nasrin, 'Climate activism and its effects' (2021) 12(1) *WIREs Climate Change* 1.
- 9 Setzer and Vanhala (n 1) 11ff.
- 10 Louis Kotzé and Henrike Knappe, 'Youth movements, intergenerational justice, and climate litigation in the deep time context of

the Anthropocene' (2023) 5(2) *Environmental Research Communications* 025001; Seline Keller and Basil Bornemann, 'New Climate Activism between Politics and Law: Analyzing the Strategy of the KlimaSeniorinnen Schweiz' (2021) 9(2) *Politics and Governance* 124.

- 11 Benjamin K Sovacool and others, 'Conflicted transitions: Exploring the actors, tactics, and outcomes of social opposition against energy infrastructure' (2022) 73 *Global Environmental Change* 102473.
- 12 Geetanjali Ganguly, Joana Setzer, and Veerle Heyvaert, 'If at First You Don't Succeed: Suing Corporations for Climate Change' (2018) 38 *Oxford Journal of Legal Studies* 841.
- 13 Phillip Paiement, 'Urgent agenda: How climate litigation builds transnational narratives' (2020) 11(1-2) *Transnational Legal Theory* 121.
- 14 David Noah Walker-Crawford, 'Climate Change in Court. Making Neighbourly Relations in a Warming World' (DPhil thesis, University of Manchester 2021); David Noah Walker-Crawford, 'The Moral Climate of Melting Glaciers. Andean Claims for Justice and the Paris Climate Change Summit' in Paul Sillitoe (ed), *The Anthropocene of Weather and Climate: Ethnographic Contributions to the climate change debate* (Berghahn 2021).
- 15 Jacqueline Peel, Alice Palmer, and Rebekkah Markey-Towler, 'Review of Literature on Impacts of Climate Litigation: Report' (Children's Investment Fund Foundation and University of Melbourne 2022).
- 16 Detlef Stammer and others (eds), 'Hamburg Climate Futures Outlook 2021. Assessing the plausibility of deep decarbonization by 2050' (Cluster of Excellence Climate, Climatic Change, and Society (CLICCS) 2021); Anita Engels and others (eds), 'Hamburg Climate Futures Outlook 2023. The plausibility of a 1.5°C limit to global warming—Social drivers and physical processes' (Cluster of Excellence Climate, Climatic Change, and Society (CLICCS) 2023).

and to categorise and analyse existing and future climate litigation cases with regard to their effect on global societal dynamics towards or away from a low-carbon future.

This approach implies foregrounding the temporal dimension in litigation trends and a dynamic momentum of climate litigation which is, to a certain degree, self-sustained.<sup>17</sup> On the one hand, legal development through the courts is path-dependent as it builds on an existing body of legislation and as earlier rulings by higher jurisdictions may constitute precedents for new cases. On the other hand, support structures and transnational networks encourage new cases and lines of argument which permit exchanges of experience and the circulation of actors, practices and arguments across different jurisdictions. To capture this process, the article adopts a narrow definition of climate litigation which exclusively includes cases brought ‘in favour of’ decarbonisation and climate justice. We address climate litigation as a global phenomenon in the context of global norm contestations and mobilisations<sup>18</sup> because climate

cases frequently draw on international norms and legal documents such as the UN Framework Convention on Climate Change (UNFCCC), the Paris Agreement or transnational obligations. They also rely on global exchanges of data and experiences within transnational litigation networks, and on non-legal resources such as reports from international expert bodies.<sup>19</sup>

Against this backdrop, we consider climate litigation as a ‘social driver’ of global deep decarbonisation. Notwithstanding the difficulty of directly attributing specific greenhouse gas emission reductions to individual lawsuits, we aim to show that, if and when conceived as a social process, it is possible to identify a range of direct and indirect effects of climate litigation. This includes legal effects and norm constitution as well as the generation of novel opportunities and resources for global climate action. Conceiving climate litigation as a social process hence enables us to account for the growing impact of societal agency on global climate politics.<sup>20</sup> To illustrate the argument, this first of two related articles presents an interdisciplinary research agenda aimed at understanding what drives and shapes climate litigation, and how climate litigation affects global climate politics. It introduces a framework based on two related concepts, the Social Plausibility Assessment Framework and the Global Opportunity Structure, and applies them to assess the overall evolution and social embeddedness of climate litigation. This is followed by a preliminary conclusion, which sums up main findings and provides an outlook to the subsequent article. The second article then tests the framework at a more granular level and scrutinises conditions and effects of two recent European climate cases.

## II. Assessing Climate Litigation as a Social Process

Climate lawsuits have become a constitutive element of the ‘contentious repertoire’<sup>21</sup> of the climate justice movement. They often combine *legal* objectives such as enforcing international or national climate law,<sup>22</sup> establishing state responsibility,<sup>23</sup> or corporate liability,<sup>24</sup> and more explicitly *societal* objectives, which involve exerting political pressure, blocking fossil infrastructures, exposing greenwashing, producing media narratives, or giving voice to marginalised

17 Stefan C Aykut, Antje Wiener, and others, ‘The Social Plausibility Assessment Framework. Societal Climate Futures as a Research Object. An Assessment Framework Centered on Social Processes’, in Stammer and others (eds) (n 16); Cathrin Zengerling and others, ‘Social driver assessment: Climate litigation’ in Engels and others (n 16); Arthur L Stinchcombe, *Rebellion in a high school* (Quadrangle Books 1964).

18 Antje Wiener, *Constitution and Contestation of Norms in Global International Relations* (CUP 2018).

19 Hari M Osofsky, ‘The geography of climate change litigation: implications for transnational regulatory governance’ [2005] Washington University Law Review 1789; Jacqueline Peel and Jolene Lin, ‘Transnational climate litigation: the contribution of the global South’ (2019) 113(4) American Journal of International Law 679.

20 Aykut and Wiener, ‘The Global Opportunity Structure for Climate Action. Theorizing Societal Agency towards Decarbonization’ (28th Academic Convention of the DVPW, panel P158 Norms Research Beyond IR, 14 – 16 September 2021), on file with the author, abstract available at <www.dvpw.de/fileadmin/docs/Kongress2021/2021\_Panelprogramm\_2021-09-08.pdf> accessed 18 November 2023.

21 Charles Tilly, ‘Contentious Repertoires in Great Britain, 1758-1834’ (1993) 17(2) Social Science History 253.

22 Esmeralda Colombo, ‘Enforcing International Climate Change Law in Domestic Courts: A New Trend of Cases for Boosting Principle 10 of the Rio Declaration’ (2017) 35(1) UCLA Journal of Environmental Law and Policy 98.

23 Roger HJ Cox, ‘The liability of European states for climate change’ (2014) 30(78) Utrecht Journal for International and European Law 125; Roda Verheyen, *Climate Change Damage and International Law. Prevention Duties and State Responsibility* (Brill 2005).

24 Andrew Gage and Michael Byers, ‘Payback Time? What the Internationalization of Climate Litigation Could Mean for Canadian Oil and Gas Companies’ (Canadian Centre for Policy Alternatives, October 2014).

groups.<sup>25</sup> To capture these varieties of objectives and the intimate relation between climate litigation and other forms of climate-related societal agency, this article's interdisciplinary approach does not look at litigation in isolation, but connects it to its wider socio-political environment and other social processes. This contextualised approach builds on prior research that developed a *Social Plausibility Assessment Framework*, which allows for situating climate litigation as one among several social drivers that develop dynamics towards or away from deep decarbonisation.<sup>26</sup>

Social drivers are thereby conceptualised as social processes, ie temporal phenomena of a certain duration that develop a dynamic momentum of their own.<sup>27</sup> The concept perceives social drivers as constituted by, but also constitutive of, social agents, institutions, and mechanisms, and embedded in specific structural and institutional environments that constrain or enable them.<sup>28</sup> Such contextual conditions which can be, inter alia, socio-political, legal, discursive, normative, economic, or scientific, and are specific to the societal agents or social processes under consideration. This usefully complements discussions on opportunities and obstacles or enabling and constraining conditions of sustainability transformations.<sup>29</sup>

The method of situating drivers within a larger context allows researchers to combine a focus on the path-dependence of institutions and structures with an effect on agency and change. As such, social drivers are self-referential to a certain degree. At the same time, however, in a globalised world they also develop through interaction with other social drivers within a global context. Following Aykut, Wiener and others, we call this specific constellation the *Global Opportunity Structure* for climate action<sup>30</sup> (compare Figure 1 below). This 'double take' on enabling societal agency (ie situating drivers and revealing the Global Opportunity Structure) helps identifying the development of new *scripts* and *repertoires*<sup>31</sup> of global climate action. These circulate across national jurisdictions and constitute 'resources' for agents willing to engage in new litigation cases.<sup>32</sup> The remainder of this section operationalises this approach into four successive analytical steps: we first explore historic trajectories and legacies that frame driver dynamics (1). We then scrutinise their structural and institutional environments (2), as well as more specific legal and societal enabling and constraining con-

ditions (3). Finally, we examine how the production of new resources (scripts and repertoires) shapes the Global Opportunity Structure for societal agency (4). Steps 1 to 3 comprise the Social Plausibility Assessment introduced above, and step 4 traces changes in scripts and repertoires of the Global Opportunity Structure.

## 1. Historic Trajectories and Legacies

Conceiving climate litigation as a social process draws attention to defining features of its historical and social trajectory, which are expected to also shape and frame present dynamics. This conception draws on social science traditions that explore societal futures as resulting from an interplay of large historical processes and institutional structures on the one hand, with individual decisions and societal agency, on the other.<sup>33</sup> Transformative social dynamics can be generated by disruptive innovations or political upheavals, but also result from more incremental processes of policy change, or learning in organisations and communities of practice.<sup>34</sup> The path-dependency of previous transformations thereby condi-

25 For a very comprehensive taxonomy of aims and strategies, see Setzer and Higham, 2023 Snapshot (n 1).

26 Aykut, Wiener, and others (n 17) 37. Deep decarbonisation is defined as a scenario of social transformations that lead to net-zero carbon emissions by 2050: Engels and others (n 16) 24. The other social drivers analysed in the Hamburg Climate Futures Outlook are UN climate governance, transnational initiatives, climate-related regulation, climate protests and social movements, media, knowledge production, consumption patterns, corporate responses and fossil-fuel divestment: Engels and others (n 16) 25.

27 Stinchcombe (n 17) 103.

28 Jane Jenson, 'Naming nations: Making nationalist claims in Canadian public discourse' (1993) 30(3) *Canadian Review of Sociology/Revue canadienne de sociologie* 337, 339; Doug McAdam, Sidney Tarrow, and Charles Tilly, 'Dynamics of contention' (2003) 2(1) *Social Movement Studies* 99; Charles Tilly, *Explaining social processes* (Routledge 2008).

29 Heleen de Coninck and others, 'Strengthening and Implementing the Global Response' in Valerie Masson-Delmotte and others (eds), *Global Warming of 1.5°C. An IPCC Special Report* (IPCC - The Intergovernmental Panel on Climate Change 2018) 313.

30 Aykut, Wiener, and others (n 17).

31 Charles Tilly, *Regimes and Repertoires* (University of Chicago Press 2006).

32 Aykut and Wiener (n 20).

33 Charles Tilly, *Big structures, large processes, huge comparisons* (Russel Sage 1984).

34 Frank W Geels and others, 'The Socio-Technical Dynamics of Low-Carbon Transitions' (2017) 1 *Joule* 463.



tions future changes.<sup>35</sup> For example, the current dynamics and trajectories of national energy transitions are profoundly shaped by previous policies and social mobilisations.<sup>36</sup> Similarly, favourable court decisions in climate litigation cases can create new legal opportunities for subsequent cases, and encourage new litigants to adopt similar legal strategies, while negative decisions, especially in high-profile cases, can discourage future litigation attempts and trigger shifts in contentious strategies. The analysis of climate litigation as a social driver therefore commences with an assessment of historical legacies and emergent trends, which in many ways set the stage for the creative work of societal agency.

Datasets of the Sabin Centre for Climate Law and the Grantham Institute/LSE show first climate cases in 1986 and – with a few exceptions – a steady rise in climate litigation from the year 2000 onwards and an acceleration since the Paris Agreement has been signed in 2015.<sup>37</sup> In May 2023 the database of the Sabin Centre accounted for roughly 2,300 cases. There are large regional discrepancies in the numbers of cases but overall, a geographical spreading can be observed in recent years. Historically, the vast majority of climate cases – over 1,500 – were brought in the U.S. Hotspots of climate litigation outside the U.S. can be identified in Australia (130 cases), UK (102), EU (67), Germany (59), Brazil (40) and Canada (35).<sup>38</sup> A total of 135 climate cases are accounted for in countries of the Global South with around 20 cas-

es filed each year in 2020, 2021, and 2022 respectively. For example, several climate cases were brought in Latin America,<sup>39</sup> Africa,<sup>40</sup> and Asia.<sup>41</sup> Moreover, a small but increasing number of cases is brought before regional and international courts.<sup>42</sup>

Golnaraghi and others identified three waves of climate litigation:<sup>43</sup> prior to 2007, climate cases were regionally limited mainly to the US and Australia, and framed as administrative cases focused on environmental standards and brought against governments with climate change often being more peripheral rather than central to the line of argument. From 2007 to 2015, regional extension to Europe and legislator-forcing claims aiming to substitute lacking international climate ambition were characteristic for the second wave. From 2015 onwards, the third wave of climate litigation cases shows further regional expansion, a rise in cases against companies and a higher diversity in types of claims.<sup>44</sup> Key accelerating moments that create momentum for new climate litigation can often be found in the aftermath of a legal success which sets a precedent by using new legal norms, or new interpretations of existing norms.<sup>45</sup>

Outside of the US, Setzer and Higham identify a steady rise in so-called strategic climate litigation.<sup>46</sup> There is no clear-cut definition of strategic litigation but in general litigation is considered ‘strategic’ rather than ‘only individual’ if the purpose of bringing the case goes beyond the individual or private interests of the plaintiffs and targets a broader agenda

35 Paul Pierson, *Politics in Time: History, Institutions, and Social Analysis* (Princeton University Press 2004).

36 Daniel Rosenbloom, Brendan Haley, and James Meadowcroft, ‘Critical choices and the politics of decarbonization pathways: Exploring branching points surrounding low-carbon transitions in Canadian electricity systems’ (2018) 37 *Energy Research & Social Science* 22.

37 Although these databases apply a wider definition of climate lawsuits that also includes non-climate-aligned cases, trends appear to be driven mainly by pro-climate litigation. For example, from January to the end of May 2023, 47 of 61 newly submitted cases in the U.S. and all new cases outside the U.S. were pro-climate cases.

38 Setzer and Higham, 2023 Snapshot (n 1) 12.

39 César Rodríguez-Garavito, ‘Human rights: The global south’s route to climate litigation’ (2020) 114 *American Journal of International Law Unbound* 40; Juan Auz, ‘Human rights-based climate litigation: a Latin American cartography’ (2022) 13(1) *Journal of Human Rights and the Environment* 114; Fernanda de Salles Cavedon-Capdeville and others, ‘An Ecocentric Perspective on Climate Litigation: Lessons from Latin America’ (2023) huad031 *Journal of Human Rights Practice*.

40 Louis Kotzé and Anél du Plessis, ‘Putting Africa on the Stand: A Bird’s Eye View of Climate Change Litigation on the Continent’ (2020) 50(3) *Environmental Law* 615; Tatenda Wangui, Cathrin

Zengerling, and Oliver Fuo, ‘Tracing the trend – Emerging Climate Litigation in Kenya and South Africa’ (*Völkerrechtsblog*, 21 March 2022) <<https://voelkerrechtsblog.org/tracing-the-trend/>> accessed 18 November 2023.

41 Jiangfeng Li, ‘Climate Change Litigation: A Promising Pathway to Climate Justice in China?’ (2019) 37(2) *Virginia Environmental Law Journal* 132; Jolene Lin and Douglas A Kysar (eds), *Climate Change Litigation in the Asia Pacific* (CUP 2020).

42 United Nations Environment Programme, ‘Global Climate Litigation Report 2023 Status Review’ (2023), 26ff.

43 Maryam Golnaraghi and others, ‘Climate Change Litigation – Insights into the evolving global landscape’ (*The Geneva Association*, 2021) <[https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf\\_public/climate\\_litigation\\_04-07-2021.pdf](https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf_public/climate_litigation_04-07-2021.pdf)> accessed 18 November 2023.

44 Ibid 27ff.

45 Chris McGrath, ‘Urgenda appeal is groundbreaking for ambitious climate litigation globally’ (2019) 36(1) *Environmental and Planning Law Journal* 90; Benjamin T Sharp, ‘Stepping into the breach: state constitutions as a vehicle for advancing rights-based climate litigation’ (2019) 14 *Duke Journal of Constitutional Law & Public Policy* 39.

46 Joana Setzer and Catherine Higham, ‘Global trends in climate change litigation: 2022 Snapshot’ (Grantham Research Institute, LSE 2022), 15.

of legal, political or societal change.<sup>47</sup> Similarly, Setzer and Higham define strategic cases as those in which motives of the claimants ‘go beyond the concerns of the individual litigant and aim at advancing climate policies, creating public awareness, or changing the behaviour of government or industry actors’.<sup>48</sup> Their latest analysis shows that most strategic climate cases are climate-aligned and use a diversifying set of common strategies that can be understood as new scripts in the analytical framework of the Global Opportunity Structure.<sup>49</sup> Accordingly, the most applied script was ‘integrating climate considerations’ (206 cases) aiming to include climate-related standards and principles into decision-making often challenging new fossil fuel projects. The second most applied script was so-called ‘government framework’ cases (81) challenging (lacking) state climate policies.<sup>50</sup> Two rather new and increasingly used scripts are so-called ‘climate-washing’ (57 cases, 52 of those brought against companies) and ‘turning off the taps’ cases (28, prevent funding of carbon intense projects).<sup>51</sup> Finally, at the regional and international level five new ‘global guidance’ cases (requests for advisory opinions) have been filed against governments with the International Tribunal on the Law of the Sea (ITLOS), the Inter-American Court of Human Rights (IACtHR) and the International Court of Justice (ICJ).<sup>52</sup>

In terms of outcomes, around 55% of the decided climate cases documented in the Sabin Centre’s database have direct judicial outcomes that support decarbonisation.<sup>53</sup> However, it is important to bear in mind that an assessment of actual effects is highly complex. From a qualitative perspective, it is important to highlight that there were several major wins in climate litigation in recent years, which established novel and strengthened existing legal arguments and will likely have a positive impact on future climate litigation.<sup>54</sup> Based on these historic trajectories and legacies it seems likely that climate cases will further rise in numbers, geographical expansion and pro-climate impact.

## 2. Structural and Institutional Environments

Climate litigation is embedded in judicial, political, and constitutional institutions which frame the normative and political ‘rules of engagement’ at different micro-, meso-, and macro scales of the global or-

der on ideal-typical ‘local sites’.<sup>55</sup> These rules of engagement are specified by criteria such as, inter alia, access to justice (criteria for standing to sue, ie the right to file a case in the first place), fundamental legal norms (ie, constitutional provisions or common law traditions, status of international law), dominant judicial institutions and practice (ie court system, role of the judge, traditions in interpreting the constitution), the scientific evidence to prove the facts relevant to the case (esp. the causation between action or lack of action and damage or violation of a specific right or duty, state of attribution science) as well as social (institutional) environments in support for or constraint against issues of climate justice.

Access to justice in environmental matters has traditionally been broad in countries that allow for environmental citizen and NGO suits in the public interest such as for example the US. Furthermore, 47 states’ parties of the 1998 Aarhus Convention and 12 states’ parties the 2018 Escazú Agreement, which entered into force in 2001 and 2021 respectively, allow for rather broad standing in environmental matters in the (geographically) European and Latin American ratifying countries.<sup>56</sup> With regard to fundamental legal norms, at least 155 states have acknowledged

47 Alexander Graser and Christian Helmrich (eds), *Strategic Litigation: Begriff und Praxis* (Nomos 2019).

48 Setzer and Higham, 2022 Snapshot (n 46) 15.

49 Setzer and Higham, 2023 Snapshot (n 1) 3, 22, 23.

50 Ibid.

51 Ibid.

52 Ibid.

53 Setzer and Higham, 2023 Snapshot (n 1) 28.

54 E.g. *Friends of the Irish Environment CLG v Government of Ireland* [2020] IESC 49; *Commune de Grande-Synthe and Others v France*, case no. 427301, French Conseil d’Etat order of 1 July 2021, and case No. 467982, order of 10 May, 2023; *Neubauer and Others v Germany*, German Federal Constitutional Court (BVerfG) Order of the First Senate (24 March 2021) 1 BvR 2656/18, 1 BvR 288/20, 1 BvR 96/20, and 1 BvR 78/20; *Minister for the Environment v Sharma* [2022] FCAFC 65, Federal Court of Australia Judgment of 22 April 2022, and FCAFC 35, Judgment of 15 March 2022; *DG Khan Cement Company v Government of Punjab*, Supreme Court of Pakistan Judgment of 15 April, 2021; *Milieudefensie and others v Royal Dutch Shell PLC*, The Hague District Court decision of 26 May 2021, File No. C/09/571932/HA ZA 19-379; see Setzer and Higham, 2022 Snapshot (n 46) 19ff for case summaries; as well as part II of this article which scrutinises the *Neubauer* and the *Shell* cases in depth.

55 Wiener (n 18) 51-52.

56 The implementation process of the Escazú Agreement is still ongoing, see Gaston Medici-Colombo and Thays Ricarte, ‘The Escazú Agreement contribution to environmental justice in Latin America: An exploratory empirical inquiry through the lens of climate litigation’ (2023) huad029 Journal of Human Rights Practice.

a right to a healthy environment via treaties, constitutions or legislation.<sup>57</sup> Many of these clauses explicitly enshrine rights of future generations. In a landmark decision in 2021 which is likely to strengthen the rights of future generations, the German Constitutional Court interpreted the constitutional state objective towards environmental protection in conjunction with the fundamental right to freedom to encompass ‘intertemporal guarantees of freedom’ (*Neubauer and others v Germany*).<sup>58</sup> Furthermore, 193 countries ratified the Paris Agreement and thus signed on to the ‘well below 2° C’ and ‘efforts to limit the temperature increase to 1.5°C’ temperature targets as well as the pledge and review mechanism. With regard to judicial institutions and practice most environmental case law can be handled in general courts, specialised administrative courts (as in most civil law countries), and also in a growing number of specialised environmental courts.<sup>59</sup> However, the latest Human Rights Outlook highlights increased risks to judicial independence in 45 countries, most notably in Poland, China, and Russia.<sup>60</sup> Additionally, the nomination of three new Justices under the Trump administration cemented a strong conserva-

tive majority in the US Supreme Court and is likely to hamper successful climate litigation in the US.

With regard to the need of scientific evidence, the assessment reports from the Intergovernmental Panel on Climate Change (IPCC) have firmly established the reality of climate change and attributed the observed warming trend to human activities.<sup>61</sup> Furthermore, several landmark climate cases of the last year significantly build on Paris Agreement targets linked to IPCC reports to reason their decisions (for example *Neubauer and others v Germany*; *Milieudefensie et. al. v Royal Dutch Shell PLC*). Finally, opinion polls and surveys in many countries as well as a growing climate movement around the world indicate a rise in societal awareness of climate change and increasing support for ambitious climate policy, and therefore ultimately the implementation of climate justice as a fundamental norm of global climate governance.<sup>62</sup> All in all, the structural and institutional environments for climate litigation have been improving over the last decades

### 3. Legal and Societal Enabling and Constraining Conditions

Driver dynamics are also influenced by a set of more specific enabling and constraining conditions. These include, first, the body of substantive and procedural law, which within a given jurisdiction constitutes the basic conditions for bringing and arguing a case. The thinner the legal basis in procedural and substantive law, the riskier and arguably more political and prone to ‘judicial overreach’ becomes the case.<sup>63</sup> In addition to core regulatory bodies of climate change and energy law, legal requirements for establishing causation and the burden of proof, ie which party has to prove which parts of the facts, are of specific relevance. This condition is closely linked to the state of attribution science referred to below. We can therefore work with this scientific fact as an emerging norm of global climate governance. Furthermore, court rulings of higher-ranking judiciaries significantly shape climate litigation. Prior landmark rulings in other jurisdictions can also influence lines of arguments and decisions. Beyond these specific legal conditions, ‘infrastructural’ support for climate litigation is a key enabling condition. For example, (trans)national litigation networks involve agents operating at multiple sites and are able to make use of

57 David R Boyd, ‘The Right to a Healthy and Sustainable Environment’ in Yann Aguila and Jorge E Viñuales (eds), *A Global Pact for the Environment – Legal Foundations* (C-EENRG 2019) 30, 33.

58 German Federal Constitutional Court (BVerfG), Order of the First Senate (24 March 2021) 1 BvR 2656/18, 1 BvR 288/20, 1 BvR 96/20, and 1 BvR 78/20; Felix Ekardt and Katharine Heyl, ‘The German constitutional verdict is a landmark in climate litigation’ (2022) 12(8) *Nature Climate Change* 697.

59 George (Rock) Pring and Catherine (Kitty) Pring, ‘Environmental Courts & Tribunals – A Guide for Policy Makers’ (United Nations Environmental Programme, Law Division 2016) <<https://wedocs.unep.org/20.500.11822/10001>> accessed 19 November 2023.

60 Verisk Maplecroft, ‘Human Rights Outlook 2021’ (*Verisk Maplecroft*, 2021) <<https://www.maplecroft.com/insights/analysis/human-rights-outlook-2021-executive-summary/>> accessed 19 November 2023.

61 Gabriele C Hegerl and others, ‘Detecting Greenhouse-Gas-Induced Climate Change with an Optimal Fingerprint Method’ (1996) 9(10) *Journal of Climate* 2281; For the latest report, see: IPCC, ‘Summary for Policymakers’ in Core Writing Team, Hoesung Lee, and José Romero (eds) *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC 2023) 1.

62 For an overview of recent studies see Aniket Narawad, ‘Global surveys show people’s growing concern about climate change’ (*Clean Energy Wire*, 14 November 2023) <<https://www.cleanenergywire.org/factsheets/global-surveys-show-peoples-growing-concern-about-climate-change>> accessed 19 November 2023.

63 Bernhard W Wegener, ‘Urgenda – Weltrettung per Gerichtsbeschluss’ (2019) 30(1) *Zeitschrift für Umweltrecht* 3; Katrina Fischer Kuh, ‘The Legitimacy of Judicial Climate Engagement’ (2019) 46 *Ecology Law Quarterly* 731.

structures that comprise different scales of global order,<sup>64</sup> essentially forming networks of know-how and practice. They bear the potential to enhance the exchange of know-how and practice on the side of plaintiffs, defendants and the judiciary, and together with environmental NGOs provide the financial and personal capacity to bring climate lawsuits and ensure the quality of legal advice and exchange experiences.<sup>65</sup> Among important further societal factors that influence the scope and content of climate litigation<sup>66</sup> are media coverage and framing, as well as engagement of NGOs and local communities. The latter may shape (local) politics, eg through campaigning or providing ‘infrastructural’ support via network capacities and encouraging potential plaintiffs.

Several supportive dynamics can be observed in the legal conditions. First, there is a growing body of climate-related legislation.<sup>67</sup> A growing body of law enlarges and improves the procedural and substantive basis to bring and argue a case, especially with a view to ‘environmental standard’ and ‘framework’ scripts mentioned above. If new or revised legislation goes along with more ambitious targets, it also enables climate litigation to ‘raise the bar’ in this sense. Another observable dynamic is considerable progress in the scientific and legal argumentation regarding causation. Scientifically, there is a growing body of attribution studies,<sup>68</sup> ie research concerned with establishing causation chains between anthro-

pogenic GHG emissions, global warming, and specific extreme weather events,<sup>69</sup> as well as of studies in climate economics aimed at calculating global warming costs and damages,<sup>70</sup> optimal transformation pathways and exploitable fossil fuel reserves for given climate objectives,<sup>71</sup> and relative contributions from individual organisations and firms to overall warming.<sup>72</sup> On the legal side, in *Lluyia v RWE* for example, the Higher Regional Court in Hamm, Germany opened the stage of evidence and conducted an on-site visit in Huaraz, Peru, which presupposes that the court accepted the plaintiff’s arguments in law.<sup>73</sup> Already this interim success sets new precedents for future cases. In *Milieudéfensie and others v Royal Dutch Shell PLC*,<sup>74</sup> the District Court of The Hague also saw Shell as a contributor to climate change. Several pending climate cases against Carbon Majors potentially profit from the advancements in arguing causation and related attribution science. In climate cases against governments, several courts also accepted the respective countries’ contribution and thus responsibility (eg *Neubauer and others v Germany*; *Friends of the Irish Environment v Ireland*; *Urgenda v State of the Netherlands*).<sup>75</sup> Furthermore, the several landmark cases decided by the highest-ranking courts in the respective jurisdictions serve as precedents in a narrow (jurisdiction-bound) and most likely also in a wider (non-binding, transnational) sense. It is important to note that there is also a

64 Paul Schiff Berman, ‘The new legal pluralism’ (2009) 5 Annual Review of Law and Social Science 225; James Tully, ‘Deparochializing political theory and beyond: A dialogue approach to comparative political thought’ (2016) 1(1) Journal of World Philosophies 51.

65 Scott L Cummings and Deborah L Rhode, ‘Public interest litigation: Insights from theory and practice’ (2009) 36 Fordham Urban Law Journal 603.

66 Martha Finnemore and Stephen J Toope, ‘Alternatives to “legalization”: Richer views of law and politics’ (2001) 55(3) International organization 743.

67 For example, the ‘Climate Change Laws of the World Database’ counts more than 2500 climate laws and policies globally: Grantham Research Institute on Climate Change and the Environment and Sabin Center for Climate Change Law (n 2).

68 Friederike EL Otto and others, ‘Causality and the fate of climate litigation: The role of the social superstructure narrative’ (2022) 13(5) Global Policy 736; Michael Burger, Jessica Wentz, and Radley Horton, ‘The Law and Science of Climate Change Attribution’ (2020) 45(1) Colum. J Envtl L 57; Sophie Marjanac and Lindene Patton, ‘Extreme weather event attribution science and climate change litigation: an essential step in the causal chain?’ (2018) 36(3) Journal of Energy & Natural Resources Law 265.

69 Burger, Wentz, and Horton (n 68).

70 Richard SJ Tol and Roda Verheyen, ‘State responsibility and compensation for climate change damages—a legal and econom-

ic assessment’ (2004) 32(9) Energy Policy 1109; Nicholas Stern, *The Economics of Climate Change: The Stern Review* (CUP 2006).

71 Dan Welsby and others, ‘Unextractable fossil fuels in a 1.5 C world’ (2021) 597 Nature 230; Pierre Friedlingstein and others, ‘Global carbon budget 2020’ (2020) 12(4) Earth System Science Data 3269.

72 Richard Heede, ‘Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010’ (2014) 122(1) Climatic change 229; Paul Griffin and Richard Heede, ‘The Carbon Majors Database’ (Carbon Disclosure Project, July 2017) <<https://cdn.cdp.net/cdp-production/cms/reports/documents/000/002/327/original/Carbon-Majors-Report-2017.pdf?1501833772>> accessed 19 November 2023.

73 *Luciano Lluyia v RWE AG*, Case No. 2 O 285/15, Essen Regional Court (Germany).

74 *Milieudéfensie and others v Royal Dutch Shell PLC*, C/09/571932 / HA ZA 19-379 (English version); *Milieudéfensie and others v Royal Dutch Shell PLC*, The Hague District Court (Netherlands) Summons (Unofficial English translation), File No. 90046903, 5 April 2019, <[http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2019/20190405\\_8918\\_summons.pdf](http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2019/20190405_8918_summons.pdf)> accessed 19 November 2023.

75 *Neubauer and Others v Germany* (n 54); *Friends of the Irish Environment CLG v Government of Ireland* (n 54); *Urgenda Foundation v the Netherlands*, Dutch Supreme Court (Hoge Raad) judgment of 20 December 2019, No. 19/00135, File No. ECLI:NL:HR:2019:2006.



considerable number of decisions that potentially serve as negative precedents. These are on the one hand climate cases that have been brought against climate protection interests and have been won, and on the other hand climate cases in support of climate protection interests that have been lost.<sup>76</sup> In the latter case, however, even decisions in ultimately 'lost' cases may contain crucial interim successes that may serve as building blocks in future lawsuits.<sup>77</sup> In parts in reaction to pro-climate litigation several SLAPP cases (Strategic Litigation Against Public Participation; aimed at exerting a chilling effect on activists and potential litigants)<sup>78</sup> and anti-ESG litigation (to weaken the growing climate taxonomy alliance)<sup>79</sup> can be observed in the U.S. and beyond.

Concerning the societal conditions of 'infrastructural support', a growing body of literature on climate litigation<sup>80</sup> and case law indicates an increase in legal know-how and practice. The Climate Change Litigation Databases of the Sabin Center at Columbia University and the Grantham Institute at the LSE collect climate-related case law in the US and globally, and are an important resource for lawyers and other climate activists. The USC Science Hub for Climate Litigation aims to link science and litigation and catalyse legally relevant scientific research.<sup>81</sup> Furthermore, strategic climate litigation networks, eg the Climate Litigation Network founded by the Urgenda Founda-

tion, Green Legal Impact,<sup>82</sup> Lawyers4Future,<sup>83</sup> and older networks such as the Climate Justice Programme and ELAW<sup>84</sup> play an important role in supporting potential plaintiffs and circulating arguments and 'best practices', both in the global North and South.<sup>85</sup> Regarding socio political enabling and constraining conditions we observe further uptake of litigation as a topic in social movements.<sup>86</sup> For example, a new wave of climate activists use civil disobedience tactics and courtrooms as a supplementary public arena to voice their claims (Just Stop Oil, Letzte Generation, Dernière rénovation) and their cases are increasingly heard in court. At very few instances, courts in the U.S. and one German court accepted 'climate emergency' as justifying acts of trespassing and similar civil disobedience actions.<sup>87</sup> However, while civil disobedience tactics increase the visibility of the climate crisis, they can be severely contested and come with a risk of societal backlash,<sup>88</sup> especially as the wars in Ukraine and the Middle East shift media reporting and public attention in general away from the climate urgency.

In sum, we observe an increase in legal and societal enabling conditions of climate litigation over time as a consequence of climate-aligned developments in other social drivers of decarbonisation such as climate-related legislation, knowledge production and climate protests. However, it is important to further observe the potential of anti-climate litigation,

76 Joana Setzer and Catherine Higham, 'Global trends in climate change litigation: 2021 Snapshot' (Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science 2021), 15, 18ff.

77 See, for example, Winter who argues that eleven lost cases brought against German states based on the *Neubauer* ruling clarified several arguments of the *Neubauer* decision and 'consolidated its dogmatic': Gerd Winter, 'Von der Bewahrung zur Bewirtschaftung natürlicher Ressourcen. Ein Kommentar zum zweiten Klimabeschluss des BVerfG' (*Verfassungsblog*, 10 March 2022) <<https://verfassungsblog.de/von-der-bewahrung-zur-bewirtschaftung-natuerlicher-ressourcen/>> accessed 19 November 2023.

78 Ian Higham and Catherine Higham, 'Submission to the Special Rapporteur on the promotion and protection of human rights in the context of climate change' (Grantham Research Institute on Climate Change and the Environment, May 2023) <<https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2023/05/Consultation-submission-Enhancing-climate-change-legislation-litigation-and-intergenerational-justice.pdf>> accessed 19 November 2023, 5.

79 Setzer and Higham, 2023 Snapshot (n 1) 4.

80 Setzer and Vanhala (n 1) 1.

81 Union of Concerned Scientists, 'The UCS Science Hub for Climate Litigation. Resources and Opportunities for Experts' (3 August 2020) <<https://www.ucsusa.org/resources/science-hub-climate-litigation>> accessed 19 November 2023.

82 Green Legal Impact Germany <<https://www.greenlegal.eu/en/start-english/>> accessed 19 November 2023.

83 Lawyers 4 Future eV <<https://lawyers4future.org/>> accessed 19 November 2023.

84 Environmental Law Alliance Worldwide <<https://www.elaw.org/climate/>> accessed 19 November 2023.

85 Stefan C Aykut, 'Le contentieux et le politique. L'activisme judiciaire sur le climat entre moyen de pression et stratégie de contournement' in Marta Torre-Schaub and Blanche Lormeteau (eds), *Droit et changement climatique: comment répondre à l'urgence climatique? Regards croisés à l'interdisciplinaire* (Mare & Martin 2020); David Ciple, 'Contesting Climate injustice: Transnational Advocacy Network Struggles for Rights in UN Climate Politics' (2014) 14(4) *Global Environmental Politics* 75.

86 Paiement (n 13); May Aye Thiri and others, 'How social movements contribute to staying within the global carbon budget: Evidence from a qualitative meta-analysis of case studies' (2022) 195 *Ecological Economics* 107356.

87 The District Court Flensburg (Germany), 7 November 2022 - 440 Cs 107 Js 7252/22 saw trespass justified by climate emergency but the judgement was reversed by the OLG Schleswig (Germany), 9 August 2023 - 1 ORs 4 Ss 7/23, and handed back to the district court Flensburg for revised hearing and decision; see also Finn-Lauritz Schmidt, 'Der "Klimanotstand" als rechtfertigender Notstand?' (2023) 2 *Klima und Recht* 16.

88 Maxim Bönnemann, 'Civil Disobedience in the Climate Crisis' (*Verfassungsblog*, 22 September 2023) <<https://verfassungsblog.de/editorial-english/>> accessed 19 November 2023.

societal backlash and shifting public attention to undermine public support for climate litigation.

Our findings with regard to the three elements of the Social Plausibility Assessment – historic trajectories and legacies, structural and institutional environments, legal and societal enabling and constraining conditions – show that climate litigation is and at least in the nearer future is plausibly expected to remain an important social driver towards deep decarbonisation. However, it is not the ‘silver bullet’ and highly dependent on dynamics in other social drivers of deep decarbonisation.

#### 4. Changes in the Global Opportunity Structure

As a social driver of deep decarbonisation climate litigation draws on and interacts with a variety of other social processes and forms of climate action, whether they target individual behaviour, public debate, political processes, economic markets, or financial investment decisions. Our research identifies these interactions by examining the global ‘repertoire of resources’ which are generated by each social driver, and which ‘acquire global visibility and can be used by societal agents in national and transnational contexts.’<sup>89</sup> Such resources include for example climate treaties, activist networks, landmark cases of climate litigation, new policy instruments, energy discourses, and climate-related norms which frame the political, economic, legal, and cultural context of transnational societal agency in relation to decarbonisation. As introduced above, these resources and context conditions constitute the *Global Opportunity Structure* for climate action (see Figure 1).

The concept of the *Global Opportunity Structure* draws on insights from contextual political analysis where comparative studies show that ‘context and contextual effects lend themselves to systematic description and explanation, hence their proper understanding facilitates discovery of true regularities in political processes.’<sup>90</sup> By applying these methodological tools and insights to the global level, we aim to take account of the role of societal agency in the ongoing process of constituting and re-constituting resources for global climate action. Here, we are especially interested in how resources for climate change obtain visibility, ie as tools that are used by other

agents, on the one hand, and how they assume materiality, ie through effective use that is observed by other agents, on the other hand.

As argued earlier, with reference to Tilly’s work on social mobilisation,<sup>91</sup> ‘performances between at least two agents generate shared *scripts*. Over time, these acquire recognition as *repertoires*’ when ‘considered effective, and ultimately [...] shared, by more than one group of social agents.’<sup>92</sup> In line with our interdisciplinary approach several types of changes in resources, scripts, and repertoires are differentiated. First, effects on legal resources modify the context conditions for future climate litigation cases and the development of climate law. This includes case-specific effects directly attributed to the implementation of a specific ruling or settlement.<sup>93</sup> These effects are as heterogeneous as the claims themselves, and may range from direct or indirect impacts such as the change in legislation or administrative regulation, prevention of carbon-intensive infrastructure to change of behaviour of companies. Beyond these case-specific direct effects, a positive ruling on a case or even just a line of argument or a narrative in a claim may serve as a ‘precedent’ case or inspiration for ‘insofar-comparable’ cases in the same or even other jurisdictions.<sup>94</sup> Thus, successful pro-climate cases, unsuccessful contra-climate cases, and even partial pro-climate ‘wins’ in both types of cases contribute to building new or strengthening already existing resources in these different dimensions. This ranges from change in legislation that can be used by other actors to developing convincing legal arguments around climate-related rights and obligations (eg constitutional rights, human rights, environmental rights, and liability).

Beyond the legal domain, climate litigation provides socio-political resources that shape the context for public debate, social mobilisations, and political

89 Aykut, Wiener, and others (n 17) 32.

90 Robert Goodin and Charles Tilly, ‘It Depends’ in Robert Goodin and Charles Tilly (eds), *The Oxford Handbook of Contextual Political Analysis* (OUP 2006) 6.

91 Tilly, *Regimes and Repertoires* (n 31) 35.

92 Aykut and Wiener (n 20).

93 Mette Eilstrup-Sangiovanni and Teale N Phelps Bondaroff, ‘From Advocacy to Confrontation: Direct Enforcement by Environmental NGOs’ (2014) 58(2) *International Studies Quarterly* 348.

94 Hari M Osofsky, ‘Climate change litigation as pluralist legal dialogue?’ (2007) 43A(1) *Stanford Journal of International Law* 181.

processes. Successful cases can be used as arguments in policy debates, and change the dynamics of party politics or voter behaviour.<sup>95</sup> In providing media coverage to the climate cause, climate litigation permits regular agenda-setting and intervenes in the co-production of wider societal narratives of responsibility and temporality in support of urgent climate action.<sup>96</sup> Cases may also contain dispositions that modify rules of democratic engagement, facilitate access to political information, or affect participation in (global) governance institutions.<sup>97</sup> Another important effect is the emergence of transnational litigation networks which operate across national borders, and often also involve cooperation among political and legal actors.<sup>98</sup> Such networks have become to represent a hybrid type of societal agency that not only supports new litigation cases, but affects a range of other climate-related social processes. They draw the contours of a transnational societal context, in which norms of global climate governance evolve and change through the practice of climate litigation, which in turn co-evolves with the active use of such networks.

Moreover, climate litigation intervenes in the constitution of economic resources and shapes market dynamics. Successful cases send signals to market actors and enter financial calculations as liability risks.<sup>99</sup> These signals and risks may become part of new economic scripts and repertoires for fossil fuel divestment or ‘greening’ of business models.<sup>100</sup> Finally, climate litigation has been influential with re-

gards to developments in climate science and climate-related research in a number of fields. To conform with standards of proof in most legal systems, research used in court has to be issued by major scientific organisations such as the IPCC, or published in peer-reviewed journals.<sup>101</sup>

However, climate litigation may also have a range of negative effects on resources in the Global Opportunity Structure. For example, lost cases may become negative precedents and protect carbon intense activities. Holding governments accountable for their climate targets may prevent ambitious target setting. Cases against companies could also entail stronger lobbying against substantive climate protection law and against procedural rights to enforce substantive law in administrations, compliance control bodies, and courts. Climate litigation could trigger opposition and contribute to a societal backlash. This is arguably currently visible in the US context, where a stable conservative Supreme Court majority blocks ambitious climate legislation-initiatives by the new US administration, as seen in the ruling in *West Virginia v EPA*.<sup>102</sup>

Five resources stand out with regard to their dynamically evolving global quality: legal precedents, generated by legal cases and understood in a wide sense; network capacities, constituted by transnational litigation networks spanning micro, meso, and macro scales and facilitating hybrid knowledge production; expert knowledge, such as studies establishing causality or attributing emissions; climate-related frames and narratives, for example on climate justice and corporate responsibility; and agenda-setting, as spectacular litigation cases facilitate social media and traditional media coverage of climate issues and trigger political discourse. While this driver’s vital part in the dynamic generation of global resources is relatively undisputed, the degree to which these resources can be exploited to enhance the plausibility of deep decarbonisation depends in considerable parts on the closely inter-related future dynamics of other drivers such as climate-related law, climate protests and social movements, journalism, and knowledge production.<sup>103</sup>

### III. Interim Conclusion

Contributing to an emerging interdisciplinary research agenda on the dynamics and effects of climate

95 Paiement (n 13); Anke Wonneberger and Rens Vliegthart, ‘Agenda-Setting Effects of Climate Change Litigation: Interrelations Across Issue Levels, Media, and Politics in the Case of Urgenda Against the Dutch Government’ (2021) 15 Environmental Communication 699.

96 Grace E Nosek, ‘Climate Change Litigation and Narrative: How to Use Litigation to Tell Compelling Climate Stories’ (2017) 42 William & Mary Environmental Law and Policy Review 733.

97 David Estrin and Helena Kennedy, ‘Achieving Justice and Human Rights in an Era of Climate Disruption’ (International Bar Association 2014).

98 Osofsky, ‘The geography of climate change litigation’ (n 19); Antje Wiener, ‘Bringing on the Torture Convention: The Rumsfeld case and contested ‘universal jurisdiction’’, in Wiener (n 18).

99 Benjamin Franta, ‘Litigation in the Fossil Fuel Divestment Movement’ (2017) 39(4) Law & Policy 393.

100 Gage and Byers (n 24).

101 Quirin Schiermeier, ‘Climate science is supporting lawsuits that could help save the world’ (2021) 597 Nature 169.

102 *West Virginia and others v EPA and others*, No 20-1530, United States Supreme Court decision of 30 June 2022.

103 Zengerling and others (n 17); Aykut, Wiener, and others (n 17).

litigation and on its societal embeddedness, this article introduces and applies two analytical tools. The Social Plausibility Assessment Framework is used to assess the overall evolution of climate litigation and identify developments in its legal and societal context that enable or constrain future driver dynamics. Based on this assessment, the heuristic of the Global Opportunity Structure for Climate Action permits to show that climate litigation is shaped by, and continuously shapes, legal, socio-political, economic, and scientific scripts and repertoires that enable novel forms of societal agency. Overall, we find that climate litigation plays an increasingly important, yet on its own insufficient role in driving global deep decarbonisation. We conclude that the driver's signifi-

cance can only be increased decisively in conjunction with other social drivers, especially UN Climate Governance, climate-related regulation, knowledge production and climate protests. We also identify effects of climate litigation on five categories of resources of a global quality: legal precedents (understood in a wide sense), transnational network capacities, knowledge production and circulation, climate-related frames and narratives, and agenda-setting. We will further test and discuss the approach outlined here in a subsequent article, which places the focus at a more granular scale and examines the context conditions and the effects of two recent European landmark cases: *Milieudefensie and others v Royal Dutch Shell PLC* and *Neubauer and others v Germany*.