Climate Change in Courts: A Responsive Approach

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1. Introduction

In 1954, the US Supreme Court's decision on desegregation in *Brown v Board of Education* – published in full in the *New York Times* – reverberated around the world.[1] It took decades to implement the judgment but its immediate, and perhaps greatest, impact was symbolic.[2] It helped inspire and inflect the transnational turn to courts for progressive and libertarian causes – a field that had been otherwise dominated by conservative and moneyed interests.[3]

For example, in the USA, it triggered three waves of litigation on equitable financing for education, given wall-to-wall recognition of the right to education in state constitutions.[4] In Australia, the judgment featured heavily in the 1975 government inquiry into poverty, and affected a generation of lawyers who drew on its sociological imaginary in public interest litigation.[5] In the Global South, its

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[1] *Brown v. Board of Education* 347 US 483 (1954) (Supreme Court of the United States).

[2] Sheldon Bernard Lyke, 'Brown abroad: an empirical analysis of foreign judicial citation and the metaphor of cosmopolitan conversation' (2012) 45 Vand J Transnat'l L 83; Claire L'Heureux-Dube, 'The importance of dialogue: Globalization and the international impact of the Rehnquist Court' (1998) 34 Tulsa LJ 15.

[3] On the turn to law and courts on the liberal left and libertarian right, see Duncan Kennedy, 'Three Globalizations of Law and Legal Thought' in David Trubek and Alvaro Santos (eds), *The New Law and Economic Development* (Cambridge University Press 2006) 19-73

[4] Michael Heise, 'State Constitutions, School Finance Litigation, and the Third Wave: From Equity to Adequacy, Heise, Michael ' (1995) 68 Temple Law Review 1151-76.

[5] Andrea Durbach, Brendan Edgeworth and Vicki Sentas (eds), *Law and Poverty in Australia: 40 Years After the Poverty Commission* (The Federation Press 2017)

echo was heard in the waves of constitutional rights judgments in India, Colombia, South Africa, and elsewhere.[6]

Climate change is a latecomer. Acknowledged only as an environmental threat in the 1980s, scepticism to litigation was strong. It was seen as a matter too complex for courts; political actors were expected to respond; and human rights and torts-based arguments were often viewed as anthropomorphic. However, and largely in line with orthodox legal mobilisation theory,[7] the situation has changed, dramatically. As the 'political opportunity structures' closed, with insufficient action by governments and an emerging climate catastrophe, the 'legal opportunity structures' of courts appeared more attractive.

The result is three waves of climate change litigation, based on administrative law and torts, human rights law, and commercial law[8] – generating almost 2000 pro-climate or climate-aligned cases in more than 40 countries and 9 international tribunals, and the applicants range from young people and indigenous peoples to sub-national governments.[9]

Only last week, was there a hearing in two of the seminal climate change cases in the European Court of Human Rights;[10] and the General Assembly, on the initiative of Vanuatu, requested an advisory opinion from the International Court of Justice on states' obligations.[11] The field has its own versions of *Brown v Board*

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[6] Ben Batros and Tessa Khan, 'Thinking strategically about climate litigation' (2020) Available at SSRN 3564313 ; Malcolm Langford (ed), *Social Rights Jurisprudence: Emerging Trends in International and Comparative Law* (Cambridge University Press 2008); Batros and Khan, 'Thinking strategically about climate litigation', .

[7] C. Hilson, 'New social movements: the role of legal opportunity' (2002) 9 (2) Journal of European Public Policy 238-55.

[8] Jacqueline Peel and Hari M Osofsky, 'A rights turn in climate change litigation?' (2018) 7 (1) Transnational Environmental Law 37-67; Pepper, 'Turning a Ripple into a Torrent: Riding the Waves of Climate Change Litigation,' Paper presented at Clayton Utz seminar, Climate Change Litigation, Sydney, 16 March 2021.

[9] Joana Setzer and Catherine Higham, 'Global trends in climate change litigation: 2022 Snapshot' (2022) .

[10] *Verein KlimaSeniorinnen Schweiz and Others v. Switzerland* App no 53600/20 (European Court of Human Rights); *Carême v. France* App no 7189/21 (European Court of Human Rights)

[11] *Request for an advisory opinion of the International Court of Justice on the obligations of States in respect of climate change*, UN doc. A/77/L.58, available at https://documents-dds-ny.un.org/doc/UNDOC/LTD/N23/063/82/PDF/N2306382.pdf?OpenElement

of Education in a high-profile trifecta of decisions from the USA, Pakistan, and Netherlands. In Australia, where legal opportunity structures are relatively barren, the first two waves have somewhat crested in the widely-discussed *Gloucester*[12] and *Waratah Coal*[13] judgments.[14]

Yet, despite this seeming momentum, it is important to step back, to take the long view on climate litigation. Rays of light are streaming through, but many clouds remain.

First, only half the cases are successful in some way, with courts often ruling against applicants on procedural grounds (non-justiciability, standing) or questions of causation, effectiveness of remedies, and jurisdiction over foreign emissions and entities.[15] In all these matters, courts are deeply worried about their institutional competence and legitimacy.[16]

Second, the most successful cases are narrowly framed.[17] Judgments are rarely transformational in and of themselves. Their impact is contingent on their triggering broader policy action and behavioural change.

Third, climate litigation often requires a significant investment by parties and the judiciary, especially in understanding climate science and policy, and economic modelling.[18]

This lecture will therefore ask: What role should we expect for courts on climate change? Can they maintain their competence and legitimacy while also playing a

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[12] *Gloucester Resources Limited v Minister for Planning* [2019] NSWLEC 7 (Land and Environment Court of New South Wales).
[13] *Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors* (No 6) [2022] QLC 21 (Land Court of Queensland).
[14] Laura Schuijers and Margaret A Young, 'Climate change litigation in Australia: Law and practice in the sunburnt country', *Climate Change Litigation: Global Perspectives* (Brill Nijhoff 2021) 47-78 .
[15] Setzer and Higham, 'Global trends in climate change litigation: 2022 Snapshot', .
[16] *La Rose v Canada* 2020 FC 1008 (Supreme Court of Canada).
[17] Camille Cameron and Riley Weyman, 'Recent youth-led and rights-based climate change litigation in Canada: Reconciling justiciability, Charter claims and procedural choices' (2022) 34 (1) Journal of Environmental Law 195-207
[18] See *Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors* .

transformative role? I will argue that this can be achieved through a responsive approach.

To do so, I'll describe briefly the three litigation waves, discuss three standard judicial approaches, and then responsiveness. I will also make some concluding comments on litigation strategy.

2. Trends in cases and outcomes

The ***first wave*** of climate litigation is eclectic. On one hand, it included *small-scale tactical l*itigation. In the US, environmental groups with ex-government lawyers sought to halt GHG, especially from coal mines. Their tools of choice were not constitutions, but zoning laws, planning laws, pollution and heritage statutes.[19] While many cases were lost,[20] the aim was to make new coal mines unprofitable and, in that, they were quite successful. Similar strategies were used elsewhere, for example in the UK in *Bennett v. Cumbria County Council.*[21]

On the other hand, there is *large-scale strategic* litigation. In *Massachusetts v. EPA* in 2007,[22] the US Supreme Court found that 'greenhouse gases fit well within the CAA's [Clean Air Act's] capacious definition of air pollutant'.[23] On remand, the EPA, listed six GHGs, providing a more solid groundwork for challenging planning and approval decisions, which is increasingly going beyond the energy sector in the US and elsewhere.

[19] Charles Epp, "Litigating Coal: Systematic Study of Group-Based Legal Mobilization," paper presented at the conference on Regulating Climate Change: Governance and Legal Mobilization at the International Institute for the Sociology of Law, Onati, Spain, July 27-28, 2017.
[20] Cf *Mid States Coalition for Progress v STB USA* 345 F3d 520 (8th Cir 2003) (US Court of Appeals for the Eighth Circuit) and *Mayo Found. v. Surface Transportation Board* 472 F3d 545 (8th Cir 2006) (US Court of Appeals for the Eighth Circuit).
[21] High Court Queen's Bench Division Planning Court, 2019.
[22] *Massachusetts v. Environmental Protection Agency* 549 US 497 (2007) (Supreme Court of the United States)
[23] Notably, the lawyers in the Supreme Court underplayed the climate change dimensions – focusing tightly on administrative law arguments – and the court did not rule that the EPA had no discretion but required the agency to articulate a reasonable basis for avoiding regulation of these gases.

In Australia, challenges to administrative approvals recently achieved success. In *Gloucester*, Justice Preston found that, the Rocky Hill coal mine 'will be a material source of GHG emissions and contribute to climate change'. Approval 'will not assist in achieving the rapid and deep reductions in GHG emissions that are needed' in 'limiting the increase in global average temperature to well below 2ºC above pre-industrial levels'.[24]

Other large-scale strategic cases have relied on tort law. Many have been so far unsuccessful. In *Comer v Murphy Oil*,[25] the US Court of Appeals ultimately dismissed tort-based claims that the GHG emissions of several oil companies helped facilitate Hurricane Katrina and thus damage to the applicant's property – for reasons of standing and non-justiciability (the 'political questions' doctrine).

In *Shar*ma in Australia, last year, the Full Federal Court rejected a claim that approval of an extension to the Vickey coal mine in NSW violated a statutory duty of care.[26] This was partly for reasons of statutory wording, but also justiciability and the indeterminate nature of the duty, 'as the claimant class with the requisite characteristics was not easily ascertained'. The New Zealand High Court ruled similarly in *Fonterra* in 2019.[27]

However, the Dutch High Court in *Milieudefensie v Shell* did rely on tort law in finding that the implicit duty of care in the civil code required that companies take responsibility for material harms, especially 'where these emissions form the majority of a company's CO2 emissions'. The company's target of a reduction of 45% of 2010 levels by 2030 was found to be inadequate.

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[24] *Gloucester Resources Limited v Minister for Planning* 697
[25] Ibid
[26] *Minister for the Environment v Sharma* [2022] FCAFC 35 (Full Federal Court of Australia)
[27] *Smith v Fonterra Co-Operative Group Limited* [2020] NZHC 419 (High Court of New Zealand). See discussion in Caroline E Foster, 'Novel climate tort? The New Zealand Court of Appeal decision in Smith v Fonterra Co-operative Group Limited and others' (2022) 24 (3) Environmental Law Review 224-34.

Cases have also relied on the public trust doctrine – that the government has fiduciary obligations with respect to natural resources that it holds on trust for its citizens. Here, the US District Court left the question open in *Juliana*,[28] but Canadian courts have closed the door.[29]

The claims in ***second wave*** cases draw on human rights, from the right to life to environmental health.

Some are 'framework cases', challenging a state's overall commitments. In *Urgenda,* the Dutch Supreme Court found that Netherlands 2020 GHG reduction target, 20% of 1990s levels, breached its positive obligation to protect the right to life and private and family life. It was obligated instead to set a target of at least 25%.[30] In *Neubauer v Germany*, the Federal Constitutional Court found the states' post-2030 targets insufficient.[31]

Others second wave cases concern implementation of existing policies. In *Leghari v Pakistan*, the state was faulted for failing to implement hundreds of mitigation and adaptation actions in its climate change plan.[32]

Still others targeted business. In *Milieudefensie* v *Shell*, human rights informed the content of the duty of care. In *Waratah Coal*, the Land & Environment Court of Queensland recommended that the Galilee Basin coal mining project be not approved by the government, as it would impact an array of rights in the in the state's Human Rights Act 2019.[33]

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[28] Although the case was prevented from proceeding after a 7-year procedural appeal odyssey, *Juliana v United States* (D Or, 6:15-cv-01517-TC, 11 October 2016), (US Distrcit Court of Oregon)
[29] *La Rose et al v Canada* 2020 FC 1008 (Federal Court of Canada)
[30] *Urgenda Foundation v The State of Netherlands* C/09/456689, 24 June 2015 (The Hague District Court)
[31] *Neubauer v Germany* Case No BvR 2656/18/1, BvR 78/20/1, BvR 96/20/1, BvR 288/20 (Federal Constitutional Court of Germany).
[32] *Asghar Leghari v Federation of Pakistan* WP No 25501/2015, Order Sheet, 4 September 2015 (High Court of Pakistan)
[33] *Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors*

However, other cases have failed. Almost all Charter rights-based cases in Canada have lost on procedural grounds.[34] An attempt to integrate GHG commitments in COVID-19 aviation sector relief failed in Netherlands,[35] the high-profile Norwegian equivalent of the Australian *Waratah* case in relation to oil exploration licenses failed on all counts;[36] as did a UK case on fossil fuel disinvestment based on the European Convention.[37]

The ***final wave*** of cases are in the realm of commercial law – concerning corporate disclosure and fiduciary duties, as well as misleading representations – 'greenwashing'. Many cases are pending and the claims are focused, but they potentially have great bite. Quite a few were unsuccessful. This includes *Lynn v Peacock* in the US (fiduciary duty on holding stock options in coal company's pension plans); *Global Witness v UK Export Finance* (government support to fossil fuel companies in contravention of the OECD Multinational Enterprises Convention)*;* [38] and *ACCR v Commonwealth Bank* (shareholders right to require climate risks disclosure and plans)*.*[39]

However, some third wave cases have settled or been withdrawn after changes in corporate behaviour: This includes *Abrahams v Commonwealth Bank of Australia* (disclosure of climate risk to shareholders), *McVeigh* (disclosure of climate-related risks in superannuation); *ClientEarth v. Belgian National Bank (*purchase by Belgian Central Bank of bonds from fossil fuel companies) and *ClientEarth v BP* (which ceased its *Possibilities Everywhere* advertising campaign).[40]

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[34] *La Rose et al v Canada*; *Lho'imggin et al. v. Her Majesty the Queen* 2020 FC 1059 (Federal Court of Canada)
[35] *Greenpeace Netherlands v. Netherlands*
[36] *Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors*
[37] *Ewan McGaughey et al v. Universities Superannuation Scheme Limited* [2022] EWHC 1233 (Ch) (HIGH COURT OF JUSTICE - BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALE)
[38] *Specific Instance to the UK NCP under the OECD Guidelines for Multinational Enterprises filed by Global Witness against UK Export Finance* 9 September 2020 (UK OECD Contact Point)
[39] *Australasian Centre for Corporate Responsibility (ACCR) v Commonwealth Bank of Australia* [2016] FCAFC 80 (10 June 2016)
[40] Pepper, 'Turning a Ripple into a Torrent: Riding the Waves of Climate Change Litigation,' Paper presented at Clayton Utz seminar, Climate Change Litigation, Sydney, 16 March 2021.

Postscript: The Supreme Court's decision on 25 April 2023 in *Delaware v. BP America Inc.*[41] to permit, in effect, over twenty cases against carbon majors in state courts to proceed on misrepresentation and concealment claims, will raise the profile of third wave cases and discovery processes will provide most likely access to documents on corporate knowledge of climate change effects.

3. Complex cases and standard approaches

According to psychologists, a complex problem or decision is characterised by four attributes.[42] There are a *diverse* array of elements, these elements are *interdependent*, the elements are *dynamic*, and the interactions are *opaque.* The result is that we are confronted with: (1) polytelicity (weighting highly different values and empirical measures); (2) polycentricity (one thing may unpredictably affect another); and (3) bounded rationality (limited information and time).

Solving a complex problem also often involves intervening in so-called complex adaptive systems.[43] These are systems, whether they involve traffic, finance markets, or bee populations that cannot be mechanically explained. Interdependent and adaptive, they may be highly stable or volatile – with one change triggering unpredictable consequences.

In climate litigation, judges are confronted with three complex adaptive systems: the legal system, the climate system, and climate governance system. Indeed, about half of the 372-page *Waratah Coal* judgment deals with the likely future response

[41] No. 22-821 (U.S.)

[42] Joachim Funke, 'Complex problem solving: A case for complex cognition?' (2010) 11 (2) Cognitive processing 133-42; Jose Quesada, Walter Kintsch and Emilio Gomez, 'Complex problem-solving: a field in search of a definition?' (2005) 6 (1) Theoretical issues in ergonomics science 5-33; Robert Sternberg and Peter Frensch (eds), *Complex problem solving: Principles and mechanisms* (Lawrence Erlbaum Associates, Inc. 1991)

[43] Scott E Page, 'What sociologists should know about complexity' (2015) 41 Annual Review of Sociology 21-41; Anthea Roberts and Taylor St John, 'Complex designers and emergent design: reforming the investment treaty system' (2022) 116 (1) American Journal of International Law 96-149; David Byrne, 'Complexity, configurations and cases' (2005) 22 (5) Theory, culture & society 95-111.

of each system if the coal mine proceeded or was halted.[44] As the Pakistan High Court stated:

> Climate Change has moved the debate from a linear local environmental issue to a more *complex global problem*. In this context of climate change, the identity of the polluter is not clearly ascertainable and by and large falls outside the national jurisdiction. Who is to be penalized and who is to be restrained?[45]

In a legal context, we can understand a complex case as raising questions concerning (1) epistemic certainty or a court's institutional competence and (2) its legitimacy.

Epistemic uncertainty arises when our grounds for knowing something are strained.

First, there is *legal uncertainty*. The relevant legal provision or precedent is 'open textured' or in conflict with other legal sources, such that there is no clear interpretation or rule content.[46] In climate law, most legal sources are inherently vague: human rights, duties of care, fiduciary duties.

The second is *factual uncertainty*. This might arise because of scientific and expert disputes, for example over modelling of coal and oil markets; the effectiveness of existing mitigation commitments; and the attribution of harms to climate change. Factual uncertainty might also be more prosaic, with many facts, actors, scenarios, and documents.

The third is *subsumptive uncertainty* – how a legal rule is applied to facts. Many standards – such as reasonableness, proportionality, material harm, and net benefit – are not only vague, but require multifactorial analysis. This is the problem of polytelicity. Different and often incommensurable things must be weighed against each other: e.g., employment and revenue gains against loss in biodiversity,

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[44] *Gloucester Resources Limited v Minister for Planning*
[45] *Asghar Leghari v Federation of Pakistan* PLD 2018 Lahore 364 (High Court of Pakistan) para. 21. Emphasis added.
[46] H.L.A. Hart, *The Concept of Law* (3rd edn, Oxford University Press 2012). As Dworkin, says, 'no settled rule dictates a decision either way'.Ronald Dworkin, 'Hard cases' (1974) 88 Harv L Rev 1057

changed weather patterns, and rising sea levels – with their respective economic impacts unclear. Moreover, there are questions of allocation of responsibility between, and amongst, domestic and transnational actors.[47]

The fourth is *remedial uncertainty*. Courts are expected to provide effective remedies.[48] But this may be challenging. This uncertainty was partly decisive in the Norwegian Supreme Court's denial of a rights-based challenge to oil exploration licences: the spared emissions would only occur long into the future. The government may have other policy options.[49] Likewise, courts are often uncertain over a government's willingness to act, including its sequencing of policy: in *Urgenda*, the Dutch government argued that its more ambitious post-2020 targets compensated for the less demanding 2020 target.

Finally, there is *consequential uncertainty* – the potential and unpredictable effects of a decision. Courts often exhibit confidence about predicting the second-order effects in the legal system, for example what an expansion of a duty of care might entail. However, they are often nervous about polycentricity in other systems.[50] In climate litigation, this concern is common. For example, the perfect substitution or 'drug dealer' defence – that other states will decrease their carbon reduction commitments if courts were to impose more ambitious goals; or that other corporations will increase their supply of fossil fuels if new extractive projects are blocked. Until recently, most courts simply accepted it.

If that is not enough, there is the challenge of ***legitimacy***. *Normatively*, climate litigation can often raise the counter-majoritarian dilemma. If certainty cannot be found in legislation, should unelected courts impose their own meaning? Indeed, climate change is often a central issue in elections, and existing law might reflect

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[47] Ashfaq Khalfan, 'Division of Responsibility amongst States' in Malcolm Langford and others (eds), *Global Justice, State Duties: The Extraterritorial Scope of Economic, Social, and Cultural Rights in International Law* (Cambridge University Press 2013) 299-331

[48] Susan P Sturm, 'A normative theory of public law remedies' (1990) 79 Geo LJ 1355; *La Rose v Canada*

[49] *Klimasaken (Climate Change Case)* HR-2020-2472-P (Supreme Court of Norway)

[50] Lon Fuller, 'The Form and Limits of Adjudication' (1978) 92 (2) Harvard Law Review 353-409

the majority's wishes. Moreover, courts in federal system's might be nervous about treading on each other's jurisdictional toes in cross-cutting climate governance.

Sociologically, courts are often worried about their actual legitimacy. Controversial or ambitious orders may go unimplemented undermining the rule of law. The wide breadth of orders (covering most policy and implementation) sought by plaintiffs in the *Juliana* case in the US and *Rose* case in Canada was central to their dismissal. Or courts may worry that they will provoke backlash – generating counter political mobilisation and interference with the judiciary's budget and appointment procedures. The experience of *Roe v Wade* in the United States has cast a long shadow.

4. Standard approaches

The standard responses of courts to these forms of complexity can be divided into three.

The first is *formalism*: It is taken for granted that there is 'a rule of known law' which covers the dispute.[51] But if a case raises a matter of seeming policy, from allocation of resources or commitments to the awarding of honours, it is held to be non-justiciable or disclose no reasonable cause of action. There are presumed to be no 'manageable' legal standards and that a court lacks the requisite competence and legitimacy.[52] Formalism is also often sceptical to new forms of standing, especially class actions.

The second is *deference*. 'We determine which institution should be assigned a particular task, and how much deference that institution's decisions should get, by considering the particular capacities and liabilities that each institution brings to

[51] Henry Maine, *Dissertations on Early Law and Custom* (John Murray 1890)
[52]

the task.'[53] Thus, there flexibility on procedure, finding cases justiciable, but strong scrutiny at the merits stage. On cases with great polytelicity and polycentricity, courts should defer to government or use a weak standard of review – e.g. clear irrationality. The overall vision for judging is often incrementalism.[54]

The third is *vigilance*. Courts 'should defend and enforce the fundamental principles of law.'[55] Vigilance often holds that courts can overcome competence and legitimacy concerns by using available manageable standards, e.g., expert standards and consensus, minimum and adequate thresholds, and standards of non-discrimination, non-retrogression, and non-arbitrariness. In the breakthrough climate change cases, especially in Netherlands, these have been central: e.g., use of the Paris Agreement, IPCC reports, and earlier government policy. The overall vision for judging is thus often transformation.[56]

However, vigilance also has its challenges. Overbroad remedies may go unimplemented or provoke a political backlash. The court might have to use a good chunk of its ' judicial capital' on climate change. The Chief Justice of Brazil's highest court has signalled they will do this, but not all courts may have this room.

5. Responsive courts

The alternative approach is responsiveness. Responsive institutions seek to balance *integrity* and *openness*.[57] As Drahos argues, 'Maintaining integrity requires an institution to stick to its principal and defining purpose. Openness requires an

[53] Ernest A. Young, 'Institutional Settlement in a Globalizing Judicial System' (2005) 54 Duke Law Journal 1143-261
[54] Jeff A. King, *Judging Social Rights* (Cambridge University Press 2012);
[55] T.R.S. Allan, 'Deference, Defiance, and Doctrine: Defining the Limits of Judicial Review' (2010) 60 (1) Univeristy of Toronto Law Journal 41-59
[56] See discussion in Karl Klare, 'Legal Culture and Transformative Constitutionalism' (1998) 14 South African Journal of Human Rights 146-88.
[57] Philippe Nonet and Philip Selznick, *Law and Society in Transition: Towards Responsive Law* (Transaction Publishers 1978) 76

institution to pay attention to signals from its broader environment so that it can adapt to the new contexts it faces.'[58]

Thus, a responsive court will seek to 'walk and chew gum at the same time'. It will seek to preserve its integrity but also be open and adapt, seeking to build its competence and manage its legitimacy, especially in complex cases.

More specifically, there is:

- *spatial responsiveness* (balancing the certainty of a court's existing practice with new demands, ideas, challenges, rights and values);
- *temporal responsiveness* (exhibiting flexibility as to when decisions must be made and creating space for adaptation by the court or defendants when things change) – with research indicating that allowing time, and even distraction, in complex decision-making can generate better decisions;[59] and
- *relational responsiveness* (sensitivity to the parties, but also those not represented such as other state organs, public opinion AND future generations). [60] Ros Dixon has argued that a responsive court should be especially pro-majoritarian, alert to legislatures that don't reflect the public will on climate change.[61]

And this inflects a court's posture, process, substance, and remedies.

In doing so, the aim of responsiveness can be transformative incrementalism. Like deference, it may mean, at times, mere incrementalism. Like vigilance, it may

[58] Peter Drahos, 'Responsive science' (2020) 16 Annual Review of Law and Social Science 327-42, 333
[59] Marius Usher and others, 'The impact of the mode of thought in complex decisions: Intuitive decisions are better' (2011) 2 Frontiers in psychology 37
[60] I have earlier defined it as an 'adjudicatory body that is *substantively* attuned to its legally mandated social mission (which may be broad or narrow) and *reflexively* mindful of its relationship with other actors (state organs, public opinion, non-state actors)'. Malcolm Langford, 'Judicial Politics and Social Rights' in Katherine Young (ed), *The Future of Economic and Social Rights* (Cambridge University Press 2019) 66-109, 71-2.
[61] Rosalind Dixon, *Responsive Judicial Review: Democracy and Dysfunction in the Modern Age* (Oxford University Press 2023)

mean, at times, a transformative intervention – a 'big call'. Drawing on complexity theory, it may be both simultaneously. As Roberts and Taylor state, 'Gradual revolution through incremental changes can be the most effective available path to more far-reaching, lasting transformation.'[62] This is because it provides space for actors to learn, adjust, and work cooperatively.

We have seen this open and experimental mindset work in other types of complex cases. As Rodriguez shows in Colombia,[63] a comprehensive and highly detailed order by the Constitutional Court on prison reform in 1999[64] went unimplemented, and overpopulation in prison increased instead by 50 per cent.[65] However, in a 2004 case concerning 6 million IDPs in the armed conflict, and covering a wide array of human rights, the court issued just three orders: the state must (1) develop indicators (2) increase the budget and (3) report back each year.[66] It was a lighter touch, but created an ongoing participatory remedial process that generated significant change.[67]

Why did it work? It was relationally responsive (acknowledging the state's competences and democratic mandate), spatially responsive (acknowledging that the scale of the crisis demanded judicial openness), and temporally responsive (deferring decisions until they were actually needed and allowing all actors to learn what worked along the way).

In climate change judging, how does a responsive approach look? And which cases exhibit it?

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[62] Roberts and St John, 'Complex designers and emergent design: reforming the investment treaty system', 131
[63] César Rodríguez-Garavito, 'Beyond the Courtroom: The Impact of Judicial Activism on Socioeconomic Rights in Latin America' (2011) 89 Texas Law Review 1669-98
[64] *Prison Conditions Case* T-153/98 (Constitutional Court of Colombia)
[65] Wally Broderick, "Prisons: Chronicle of a brutality foretold" *The Bogotá Post* (27 July) <https://thebogotapost.com/prisons-chronicle-of-a-brutality-foretold/7068/>
[66] *IDPs Case* T-025 (Constitutional Court of Colombia)
[67] César Rodríguez-Garavito and Diana Rodríguez-Franco, *Courts and Social Change in the Global South: The Impact of Judicial Activism on Constitutional Innovation and Socio-Economic Rights* (Cambridge University Press 2015).

As to ***posture***, a judge's stance, a responsive approach would require, for example, a court to optimize the competence of all actors. Humble in the face of uncertainty, the court searches for ways and methods to decrease it. A notable example is the *Waratah Coal* decision. Continuing a very recent trend,[68] Justice Kingham refused to accept the perfect substitution or 'drug dealer defence' at face value. Evidence was required. The defendants were thus pressed to show that halt to the mining of 1.4 billion tonnes of high quality coal (amounting to 1.58 Gt of carbon emissions) would be replaced by other mining companies. The modelling indicated largely that it wouldn't be significantly offset. According to the judge, the mine would thus 'materially' contribute to the world's carbon budget and, drawing on newer climate science, would impact human rights.

As to ***process***, an active approach to case management can help parties narrow the range of issues as was done in the new *ACCR v Santos* case concerning accuracy of the companies' climate statements.[69] It is possible that the Canadian Charter rights and US public trust cases might have been different if this occurred. Cases that were more focused passed through the justiciability hurdle (e.g., in *Mathur v Ontario,* the plaintiffs only challenged the ambition of the province's statutory-based target to reduce 2005 GHG levels by 30% by 2030).[70] Indeed, in the *Juliana* oral hearings, Judge Hurwitz commented to the claimants, 'You're asking us to do a lot of new stuff, aren't you?'

Responsiveness to process can mean creating spaces for negotiation. In a Polish case, *ClientEarth* challenged the use of lignite as a fuel for the production of energy at the Bełchatów Power Plant. The court directed the parties to negotiate.

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[70] Cameron and Weyman, 'Recent youth-led and rights-based climate change litigation in Canada: Reconciling justiciability, Charter claims and procedural choices',

Or it can be lead to increased participation by relevant parties.[71] In the Latvia pensions case, concerning a challenge to pension cuts in the midst of the Great Recession of 2008-9,[72] the court first invited submissions from 17 agencies and other societal actors and experts. In climate cases, this can require also a flexible approach to standing, given the export of both emissions and harms. In *Neubauer v Germany*, the applicants from Bangladesh and Nepal were granted standing by the court as 'the positive obligations owed by the German state could extend to them and thus entail an obligation to combat climate change on their behalf'.[73]

Responsive approaches also recognise the value of site visits – that shows engagement with local actors and provides new ways of building the judiciary's institutional competence. We have seen this earlier in complex environmental rights cases, like the Argentinean *Mendoza* case, which concerned widespread pollution in river basin.[74] Site visits were also a key part of the *Waratah Coal* case.

Or it might be accessing information, a French Court in *Amis de la Terre and Sherpa v. Perenco* permitted NGOs to access a French oil company's internal documents before deciding whether to litigate.

Substantively, responsive approaches tend to favour standards over rules. In complex policy and practice environments, Braithwaite found empirically that general standards backed by monitoring were more effective than detailed rules and regulations.[75]

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[71] John Schwartz, "Court Quashes Youth Climate Change Case Against Government" *New York Times* (17 January) <https://www.nytimes.com/2020/01/17/climate/juliana-climate-case.html>
[72] *Disbursement Law Case* Case No 2009-43-01 (Constitutional Court of Latvia)
[73] Stefan Theil, 'Cautious scrutiny: The Federal Climate Change Act case in the German Constitutional Court' (2023) 86 (1) The Modern Law Review 263-75, 267
[74] Martin Sigal, Diego Morales and Julietta Rossi, 'Argentina: Implementation of Social Rights Judgments' in Malcolm Langford, Cesar Garavito-Rodriguez and Julietta Rossi (eds), *Making it Stick: Compliance with Social Rights Judgments in Comparative Perspective* (2014)
[75] John Braithwaite, 'Rules and principles: A theory of legal certainty' (2002) 27 (2002) Australasian Journal of Legal Philosophy 47-82

A good example of this approach is the German Constitutional Court refusal to determine precise outcomes (e.g., in cases on social security benefits) [76] and instead require governments to report back in a year. This respects a government's competence and democratic role, but also allows space for engagement of civil society actors.[77]

In *Neubauer v Germany*, the first claimant argued that the state's target of reducing GHGs by 55% until 2030 from 1990 levels was insufficient; it would need to be 70% for Germany to meet its share of Paris Agreement targets.[78] The Court came perilously close to finding the current targets inadequate, but held ultimately that the lack of clear post-2030 targets failed future generations. The issue was remanded to the legislature for follow-up, which interestingly went much firther than the judgment required. It increased the 2030 targets to 65% and climate neutrality was moved forward to 2045.[79]

Complex systems also have 'sustainability thresholds' – the limits and boundaries at which we can understand and intervene without causing great volatility or negative feedback. In law, these often emerge through doctrines of minimums, available resources, and discretion. It is interesting to view the *Urgenda* decision through this lens. It has the trappings of judicial vigilance: a big step jurisprudentially and the use of a precise rule in its order – a rise in the GHG target from 20 to 25%. Yet, the emission reduction commitment – a minimum 5% increase – was not overly dramatic. Instead, its principal effect was to set a precedent and impact policy processes.

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[76] *Hartz IV* 1 BVL 1/09, 1 BVL 3/09, 1 BVL 4/09 (2010) (Federal Constitutional Court of Germany); *Asylum Seekers Benefits Case* 1 BvL 10/10 (2010) (Federal Constitutional Court of Germany)
[77] Claudia Bittner, 'Human Dignity as a Matter of Legislative Consistency in an Ideal World: The Fundamental Right to Guarantee a Subsistence Minimum in the German Federal Constitutional Court's Judgment of 9 February 2010' (2011) 12 (11) German Law Journal 1942-60
[78] *Neubauer v Germany*
[79] Theil, 'Cautious scrutiny: The Federal Climate Change Act case in the German Constitutional Court',

Finally, there are *remedies*. Already foreshadowed, these are perhaps most central to responsiveness. A flexible approach to remedies can ease pressures in assessing justiciability, requiring sufficient evidence, and making substantive determinations. Responsive remedial approaches work especially well when actors agree on ends (e.g., addressing climate change) but disagree on means (the how).

Some of the main techniques are:

- 'Responsive deferral'[80] as we have seen in the German climate cases – giving the state time and space to develop a remedy first;
- 'Rolling regimes' of report-back as we saw in the Colombia *IDPs* case.
- 'Blackjacking': where US, German and Indian courts in constitutional cases have issued a clear hard order that can be adjusted by the state if it can achieve the same aim.

Courts have also engaged in 'institutional innovation' at the remedial stage to navigate high levels of complexity. In *Leghari*, the High Court's remedy to lack of implementation was to create a Climate Change Commission to monitor, with representatives of key ministries, NGOs, and technical experts the government's progress. In 2018, the justice dissolved the commission, after finding improvements and it was replaced with a standing committee.[81]

6. Conclusion and litigation strategy

In conclusion, climate change is a hard case for courts. Morally, it is perhaps *the* issue of our time. However, legally, it requires courts to confront complexity, and the limits of their competence and legitimacy. In this respect, both deferential and vigilance reflexes are understandable.

[80] Miranda Forsyth and Thomas Dick, 'Liquid regulation: the (men's) business of women's water music?' (2022) 18 (2) International Journal of Law in Context 133-55
[81] *Asghar Leghari v Federation of Pakistan*

I have tried to argue that a responsive approach might be preferable, focused on transformative incrementalism. Judgments might be:

- focused but enforce strong claim (e.g., climate risk disclosure in commercial law)
- broad but involve a weaker claim (e.g., requiring an actor to revisit a climate target or justify a perfect substitution claim)
- stronger over time as policy and implementation fails to reflect commitments and the public will

And all such judgments can inflect policy and support political processes, and allow courts to play their role in accelerating action on climate change.

Moreover, the last scenario for judgment – government failure over time - deserves special mention. From 2025, it will most likely be very clear that the global carbon budget will soon be exhausted and that the 2030 targets will be largely unmet. This will create greater space, and wider demand, for courts to intervene

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Yet, it must be also said that courts are ultimately in the hands of the parties. In this respect, some scholars and activists worry that lessons learned from almost a century of public interest litigation may not be heeded by the climate movement.[82]

While the climate justice litigation movement is often alive to strategic considerations, five questions are always important to ask:[83]

[82] Batros and Khan, 'Thinking strategically about climate litigation',

[83] For more on lessons, see Jackie Dugard and Malcolm Langford, 'Art or Science? Synthesising Lessons from Public Interest Litigation and the Dangers of Legal Determinism' (2011) 26 (3) South African Journal on Human Rights 39-64; Gilbert Marcus and Stephen Budlender, *A Strategic Evaluation of Public Interest Litigation in South Africa* (Atlantic Trust 2008); Mónica Roa and Barbara Klugman, 'Considering strategic litigation as an advocacy tool: a case study of the defence of reproductive rights in Colombia' (2014) 22 (44) Reproductive Health Matters 31-41.

(1) What must be achieved in the courtroom, and what can courts trigger and facilitate outside of it?

(2) When is best to file an incremental 'evolutionary' case, versus a transformative 'big bang' case?

(3) Has there been sufficient social mobilisation and networking to maximise impact during a case and afterwards and draw in the ecosystems of legal and scientific expertise?

(4) Is the strategy geared sufficiently towards the material, political, and jurisprudential gains that are being sought; and

(5) Are there other legal and policy actions that might precede litigation: such as legislative reforms or judicial education?

Thank you.

Comer v. Murphy Oil Usa, Inc. 839 F Supp 2d 849 (SD Miss 2012) (US District Court, S.D. Mississippi, Southern Division.)

Urgenda Foundation v The State of Netherlands C/09/456689, 24 June 2015 (The Hague District Court)