PROMPTING CLIMATE CHANGE MITIGATION THROUGH LITIGATION

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Abstract Courts and scholars have interpreted open-ended legal norms as imposing due diligence obligations on States and other entities to mitigate climate change. These obligations can be applied in two alternative ways: through holistic decisions, where courts determine the level of mitigation action required of defendants; or through atomistic decisions, where courts identify some of the measures that the defendant must take. This article shows that, whilst most holistic cases fail on jurisdictional grounds, atomistic cases frequently succeed. Overall, it is argued that atomistic litigation strategies provide more realistic and effective ways for plaintiffs to prompt enhanced mitigation action.

Keywords: public international law, climate litigation, climate change mitigation, *Urgenda v the Netherlands*, due diligence obligation, general obligation on climate change mitigation.

I. INTRODUCTION

States have long recognized that they are not doing enough to prevent dangerous climate change.[1] In recent years, litigation has emerged as a plausible way to prompt enhanced action on climate change mitigation. Plaintiffs around the world have argued that States, subnational or supranational authorities, and corporations have general obligations to mitigate climate change that arise from open-ended legal norms under tort law, human rights law, or customary international law.[2] Their arguments posit that compliance with specific treaty or statutory provisions is not sufficient to demonstrate compliance with general mitigation obligations. General mitigation obligations require subjects to exercise due diligence with

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[1] See eg UNFCCC Decisions 1/CP.21 (12 December 2015) para 17; 1/CP.26 (13 November 2021) para 4.

[2] See generally J Setzer and L Vanhala, 'Climate Change Litigation: A Review of Research on Courts and Litigants in Climate Governance' (2019) WIREs Climate Change e580.

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the aim of limiting or reducing greenhouse gas (GHG) emissions,[3] including by taking necessary and appropriate measures.[4]

This article explores the way courts could apply general mitigation obligations once they have been identified. It introduces a distinction between two ways a court can apply these obligations: holistically and atomistically. Holistic decisions are those in which the court determines what conditions would be both necessary and sufficient for an entity to implement a general mitigation obligation at a given time. This is typically done through the judicial determination of the level of mitigation action that is required from the defendant (ie the 'requisite level'), often expressed in terms of an emission-reduction target. For instance, in *Urgenda v the Netherlands*, the Supreme Court of the Netherlands confirmed that the State had to achieve a 25 per cent emission reduction by 2020 compared with 1990 in order to comply with its convention obligation to protect the enjoyment of certain human rights.[5] In some incomplete holistic cases, courts were asked to declare that an entity's mitigation action was insufficient, without directly determining what a sufficient level of mitigation action would be.[6]

By contrast, atomistic cases determine conditions that, whilst necessary, are not sufficient to implement an entity's general mitigation obligations. In other words, the entity could comply with an atomistic judicial decision without complying with its general mitigation obligations. Atomistic cases may relate to both procedural measures (eg the adoption of a clear and specific national strategy on climate change mitigation)[7] and substantive measures (eg ordering a government to take 'all useful measures' to adhere to a statutory emission budget—ie a cap on emissions).[8] Even when they concern substantive measures, however, atomistic decisions do not ensure compliance with general mitigation obligations. For instance, adherence to a statutory emission budget will not achieve compliance with general mitigation obligations if the statutory budget is abnormally low.

In principle, a case is either holistic (ie it applies general mitigation obligations comprehensively) or atomistic (ie it does not). Yet, strictly speaking, no case is really holistic. The *Urgenda* case, for instance, was only interested in the emissions occurring within the Netherlands, notwithstanding the government's control over, and arguably responsibility for some

[3] See B Mayer, 'Obligations of Conduct in the International Law on Climate Change: A Defence' (2018) 27 RECIEL 130. See generally Study Group on Due Diligence in International Law, 'Second Report on Due Diligence' (2016) 77 ILA Rep 1062.

[4] See generally *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, Advisory Opinion, [2011] ITLOS Rep 10, paras 117–120.

[5] ECLI:NL:HR:2019:2007 (20 December 2019), translation at (2020) 59 ILM 811.

[6] See eg Complaint for Declaratory and Injunctive Relief, in *Juliana v US* (12 August 2015) 2015 WL 4747094 (D Or).

[7] *Friends of the Irish Environment v Ireland*, [2020] IESC 49, [2020] 2 ILRM 233.

[8] *Grande-Synthe v France* (Conseil d'État, 1 July 2021), ECLI:FR:CECHR:2021:427301.20210701, art 2.

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extraterritorial emissions. In practice, however, there is a relatively clear distinction between cases that rely primarily on a judicial assessment of the requisite level of mitigation action of an entity and those focusing on narrower issues, whether these are the implementation of the entity's own policy, the consistency of that policy with the entity's own objectives, or the way in which that policy is developed and maintained.

While holistic cases tend to attract disproportionate public and academic attention,[9] this article shows that, seven years after the first decision in *Urgenda*, few courts outside the Netherlands have made any express determinations of an entity's requisite level of mitigation action. Without necessarily objecting to the identification of a general mitigation obligation, many courts have dismissed holistic cases. They have considered that the lack of useful benchmarks for determining an entity's 'fair share' in relation to global efforts on climate change mitigation would mean relying on the exercise of a relatively unfettered discretion—something that fits poorly with prevailing conceptions of the judicial function.[10]

This article suggests that atomistic cases provide a more likely means of achieving enhanced mitigation. One obvious reason is that atomistic cases succeed more frequently in courts: while dismissing one holistic case after another on the principled base that they are inconsistent with the judicial function, courts have been upholding dozens of atomistic cases. But this article also reflects on the impact of such judicial decisions more generally. Holistic cases are (or should be) based on a complex assessment of multiple and complex case-specific circumstances;[11] this makes it difficult for the few successful decisions to be replicated. By contrast, atomistic cases have started to generate a relatively consistent body of transnational jurisprudence that, by defining precisely what might be expected of each entity, may achieve a broad deterrence effect. Atomistic cases involve judges determining that entities must adopt and act upon reasonable and internally consistent views concerning the need for climate change mitigation and on their own fair share of this. Gradually, atomistic cases are thus prompting enhanced mitigation action more surely and effectively than holistic decisions.

This article focuses on litigation concerning climate change mitigation. It is not interested in 'peripheral'[12] cases that have incidental effects upon it, but only in cases (or in claims forming parts of broader cases) that are intended to prompt enhanced action on climate change mitigation. This narrow definition of climate

[9] See generally Setzer and Vanhala (n 2) 3; K Bouwer, 'The Unsexy Future of Climate Change Litigation' (2018) 30 JEL 483–4.

[10] C Möllers, *The Three Branches: A Comparative Model of Separation of Powers* (OUP 2013) 143.

[11] B Mayer, 'The Judicial Assessment of States' Action on Climate Change Mitigation' LJIL (forthcoming) <https://doi.org/10.1017/S092215652200036X>.

[12] J Setzer and M Bangalore, 'Regulating Climate Change in the Courts' in A Averchenkova et al (eds), *Trends in Climate Change Legislation* (Edward Elgar 2017) 186.

litigation allows for a more focused discussion on the judicial application of open-ended general mitigation obligations. On the other hand, the argument focuses on all cases brought against various public and private entities, irrespective of whether they are brought before national, regional, or international courts, or even before quasi-judicial bodies. There is no denying that the outcome of any particular case inevitably depends on the applicable law and the deciding judges. However, the present article seeks to look at the forest rather than the trees: its aim is not to account for differences between the various cases or to assess the likelihood of success in a particular case, but to identify a general trend—which is that atomistic cases are frequently more successful than holistic cases.

The article is comprised of two sections. Section II sets out the limitations of holistic cases whilst section III demonstrates the relative strengths and greater prospects of atomistic cases.

II. THE SHORTCOMINGS OF HOLISTIC CASES

This section shows that holistic cases are rarely successful in prompting enhanced mitigation action, and it argues that this is largely due to the absence of a useful benchmark to determine an entity's requisite level of mitigation action.

A. The Multiplication of Unsuccessful Cases

In June 2015, the Hague District Court adopted a ground-breaking judgment in *Urgenda* v *the Netherlands*: it was the first time that a court had interpreted a general mitigation obligation as implying a particular level of mitigation action. The Court took the view that the Netherlands' duty of care towards its population implied an obligation to achieve a 25 per cent reduction in national GHG emissions by 2020 compared with 1990.[13] The Court of Appeal and the Supreme Court upheld the decision, albeit on a different legal basis—instead of tort law, they inferred the existence of a general mitigation obligation from the State's convention obligation to protect the enjoyment of the rights to life and to family life of individuals within its territory.[14]

Many contemporary observers expected that *Urgenda* would inspire similar decisions in other jurisdictions, in which courts would order States or other entities to achieve a particular level of mitigation action.[15] Cases were

[13] ECLI:NL:RBDHA:2015:7145 (DC The Hague, 24 June 2015), ILDC 2456 (NL 2015).
[14] ECLI:NL:GHDHA:2018:2591 (CA The Hague, 9 October 2018); *Urgenda* (SC) (n 5).
[15] See KJ de Graaf and JH Jans, 'The Urgenda Decision: Netherlands Liable for Role in Causing Dangerous Global Climate Change' (2015) 27 JEL 527; J Lin, 'The First Successful Climate Negligence Case: A Comment on Urgenda Foundation v The State of the Netherlands (Ministry of Infrastructure and the Environment)' (2015) 5 Climate Law 81; M Loth, 'Climate Change Liability After All: A Dutch Landmark Case' (2016) 21 Tilburg Law Review 7.

filed,[16] but favourable decisions have been few and far between. In *Milieudefensie v Royal Dutch Shell*, the Hague District Court ordered Royal Dutch Shell to reduce the carbon dioxide emissions resulting from its global operations (including from the consumption of the oil and gas by end-users) by 45 per cent by 2030, compared with 2019.[17] In *Klimaatzaak v Belgium*, the Brussels Court of First Instance found that Belgian authorities were not making sufficient efforts to mitigate climate change, but it refused to indicate what level of mitigation action would be sufficient.[18] In *Klimatická Žaloba ČR v Czech Republic*, the Prague Municipal Court ordered the government of the Czech Republic to reduce national emissions by 55 per cent by 2030, compared with 1990 levels.[19] These three decisions, adopted by trial courts, are under appeal at the time of writing. Some other successful cases that are often compared with *Urgenda* are, in fact, atomistic cases: they are concerned with particular aspects of the implementation of general mitigation obligations.[20] Meanwhile, courts have dismissed many other holistic cases, including most prominently *Juliana v US*,[21] *Carvalho v Parliament* (EU)[22] *Smith v Fonterra* (New Zealand),[23] and a communication to the UN Committee on the Rights of the Child against five States.[24] Although some cases are yet to be decided (including four cases before the European Court of Human Rights), *Urgenda* appears increasingly to be an exception—a Dutch particularism perhaps, if not simply an anomaly.

n addition, the few positive decisions have in fact prompted little if any additional mitigation action. The decision in *Klimaatzaak* is sufficiently ambiguous to allow the Belgian minister to assert that it is 'without financial or legal consequences'.[25] The implementation of the decision in *Milieudefensie* may be impeded by the subsequent decision of Royal Dutch Shell to relocate its headquarters to London;[26] and, in a competitive environment, the possibility of other companies with worse environmental practices filling the gap brought about by Royal Dutch Shell's reduced

[16] See V Lefebve, 'Urgence climatique, quel rôle pour les juges et la justice?' (2019) 8 Revue Nouvelle 66.

[17] ECLI:NL:RBDHA:2021:5337 (DC The Hague, 26 May 2021), translation at <https://perma.cc/VKG6-TZ4A>.

[18] Case 2015/4585/A (French-Speaking Tribunal of First Instance of Brussels, 17 June 2021), translation at <https://perma.cc/68ZJ-2F96>.

[19] Judgment No 14A 101/2021 (15 June 2022).

[20] In particular, on *Friends of the Irish Environment*, *Neubauer*, *Barragán*, *Grande-Synthe*, and *Oxfam*, see text at (nn 78–83).

[21] 947 F.3d 1159 (9th Cir., 17 January 2020).

[22] C-565/19 P, ECLI:EU:C:2021:252 (CJEU, 25 March 2021).

[23] [2021] NZCA 552, CA128/2020 (21 October 2021). But see *Smith v Fonterra* [2020] 2 NZLR 394 (6 March 2020).

[24] CRC, Views, Sacchi/Argentina, Communication No 104/2019, CRC/C/88/D/104/2019 (22 September 2021).

[25] J Rankin, 'Belgium's Climate Failures Violate Human Rights, Court Rules' *The Guardian* (18 June 2021). See also C Renglet and S Smis, 'The Belgian Climate Case: A Step Forward in Invoking Human Rights Standards in Climate Litigation?' 25(21) ASIL Insights (4 October 2021).

[26] L Hurst, 'Shell Investors Back Headquarters Move to U.K.' *Bloomberg* (10 December 2021).

production of oil and gas cannot be excluded.[27] The court's decision in *Urgenda* may thus be the most effective, although its 25 per cent emission reduction target appears to be somewhat less stringent than it might seem, since the State revised its projections (in line with new reporting guidelines) to suggest that the pre-existing measures would actually achieve a 23 per cent emission reduction, rather than the 17 per cent as previously thought, compared with 1990.[28] Yet, an empirical study showed that the few measures that the Netherlands took to reduce its territorial emissions have not achieved any mitigation outcomes: some measures displaced emissions elsewhere, and others led to an increase of global emissions (eg a tax on the importation of waste for incineration which led to more landfill occurring in the United Kingdom).[29]

Some have suggested that unfavourable judicial decisions do not prevent cases from having a political impact, and, in particular, that they may serve to promote public awareness.[30] However, one can question whether the main impediment to enhanced mitigation action is a lack of public awareness[31] rather than, for instance, a lack of agreement on burden sharing or a lack of political momentum for action. Contrary to some speculation, a growing reluctance of investors to finance the fossil-fuel industry may not be the result of the hypothetical spectre of liability in holistic cases[32] but rather stems from the real regulatory risks facing this sector. On the other hand, there is also a risk that adverse decisions could come at a cost, for instance, by reinforcing the idea that there is a freedom to emit GHGs. The fact that most holistic cases are unsuccessful surely limits their effectiveness.[33]

B. Normative Indeterminacy as a Structural Impediment

Holistic cases involve a judicial assessment of an entity's requisite level of mitigation action. The lack of objective benchmarks means that doing so involves an uncomfortable level of exercise of judicial discretion on highly

[27] See G Dwyer, '"Market Substitution" in the Context of Climate Litigation' (2022) 12 Climate Law 1.

[28] The Netherlands, Third Biennial Report under the UNFCCC (29 December 2017) <https://unfccc.int/documents/198882> 10, 37.

[29] B Mayer, 'The Contribution of *Urgenda* to the Mitigation of Climate Change' JEL (forthcoming) <https://doi.org/10.1093/jel/eqac016>.

[30] See Setzer and Vanhala (n 2) 12.

[31] K Bouwer and J Setzer, 'Climate Litigation as Climate Activism: What Works?' (British Academy 2021) 11.

[32] G Ganguly et al, 'If at First You Don't Succeed: Suing Corporations for Climate Change' (2018) 38 OJLS 865.

[33] See J Peel and R Markey-Towler, 'Recipe for Success?: Lessons for Strategic Climate Litigation from the *Sharma*, *Neubauer*, and *Shell* Cases' (2021) 22 German Law Journal 1497–98; A Wonneberger and R Vliegenthart, '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.

consequential matters. The following subsections demonstrate that normative indeterminacy hinders the judicial and political success of holistic cases.

1. Normative indeterminacy

In a holistic case, a court is requested, first, to identify a general mitigation obligation, and then to determine the requisite level of mitigation action that this implies. The first step is not an easy one: whether a court can identify a general mitigation obligation may depend on the nature and content of the norm invoked, for instance tort law, human rights obligations, or customary international law principles.[34] Yet the second step raises an even more difficult and perhaps intractable issue: once a court has identified a norm as creating a general mitigation obligation, how can it assess whether the efforts that the entity has made are sufficient? Despite many attempts, States, moral philosophers, legal scholars, plaintiffs, and courts have remained unable to agree on a method to determine the level of mitigation action implied by a general mitigation obligation, whether legal or moral. The principle of 'common but differentiated responsibilities and respective capabilities', applied 'in the light of national circumstances' and concurrently with 'equity', is little more than an agreement by States to disagree.[35]

The decisions in *Urgenda* and *Milieudefensie* seek to base such decisions on global mitigation objectives such as the Paris Agreement's goal of limiting global warming to 2°C or, if possible, 1.5°C.[36] However, this deductive approach faces practical and normative difficulties. From a practical perspective, global mitigation objectives lack specificity.[37] The temperature goals are uncertain in many ways (eg 1.5 *or* 2°C, by when, and with what level of confidence?).[38] In addition, they are not accompanied by any precise burden-sharing formula to determine the 'fair share' of a particular State—let alone another entity—in the global effort.[39] Thus, even if a global emission budget could be calculated based on the temperature goals, there is no comprehensive legal, political, or social agreement on how this budget should be distributed among emitters.

[34] eg B Mayer, 'Climate Change Mitigation as an Obligation Under Human Rights Treaties?' (2021) 115 AJIL 409.

[35] Paris Agreement (adopted 12 December 2015, in force 4 November 2016), (2016) 55 ILM 740, art 2(2); United Nations Framework Convention on Climate Change (adopted 9 May 1992, into force 21 March 1994) 1771 UNTS 107, art 3(1). See eg L Rajamani, 'Common but Differentiated Responsibilities' in M Faure (ed), *Elgar Encyclopedia of Environmental Law*, vol 6 (Edward Elgar 2018).

[36] See Paris Agreement (n 35) art 2(1)(a).

[37] See B Mayer, 'Interpreting States' General Obligations on Climate Change Mitigation: A Methodological Review' (2019) 28 RECIEL 107.

[38] See M Allen et al, 'Framing and Context' in V Masson-Delmotte et al (eds), *Global Warming of 1.5°C: An IPCC Special Report* (IPCC 2019) 56–66.

[39] cf L Rajamani et al, 'National "Fair Shares" in Reducing Greenhouse Gas Emissions within the Principled Framework of International Environmental Law' (2021) 21 Climate Policy 983.

To determine the requisite level of mitigation action, the courts in *Urgenda* and *Milieudefensie* relied on the equity assumptions embedded in economic projections of potential global mitigation pathways—including, for instance, their general preference for cost-effectiveness over social justice.[40] These decisions largely avoided the question of differentiation. The Supreme Court in *Urgenda*, for instance, asserted that, 'in principle', every developed State should have the same target,[41] which goes directly against the clear agreement that their responsibilities are differentiated.

Tellingly, this line of analysis rarely, if ever, identifies entities that do comply with their general mitigation obligations. Advocates of this approach suggest that national courts should find '*most* (developed) States' in breach of their general mitigation obligation;[42] and a case before the European Court of Human Rights suggests that *all* high-income Member States of the Council of Europe are in breach of their general mitigation obligations.[43] Such conclusions are puzzling. If (almost) no entity complies with a standard, one could argue that all entities are in breach of their obligations, but a more likely theory is that the standard, however desirable it might be, is not the object of a positive legal obligation.

Overall, this deductive approach relies on the questionable assumption that a general mitigation obligation is an obligation to act consistently with global mitigation objectives. The parties to the Paris Agreement agreed on 1.5 and 2°C as an aspirational goal, not as an individual obligation.[44] One may try to argue that the temperature goals have now become a legal standard through practice—whether as State practice contributing to the emergence of customary law or as a 'community standard'[45] that informs the duty of care under tort law—but this proposition faces the objection that States and other entities are not generally acting consistently with either of these goals.[46] As such, reliance on temperature goals as a benchmark for the judicial application of general mitigation obligations raises a fundamental question

[40] See *Milieudefensie* (n 17) para 4.4.27; B Mayer, 'The State of the Netherlands v. Urgenda Foundation: Ruling of the Court of Appeal of The Hague (9 October 2018)' (2019) 8 TEL 167, 186. See generally DG Victor, 'Global Warming Gridlock: Creating More Effective Strategies for Protecting the Planet' (CUP 2011) 5.

[41] *Urgenda* (SC) (n 5) section 7.3.2. On the lack of differentiation in *Milieudefensie*, see B Mayer, 'The Duty of Care of Fossil-Fuel Producers for Climate Change Mitigation' (2022) 11 TEL 407, 414.

[42] L Maxwell et al, 'Standards for Adjudicating the next Generation of Urgenda-Style Climate Cases' (2022) 1 JHRE 35, section 2.2 (emphasis added).

[43] *Duarte Agostinho v Portugal*, Communicated Case No 39371/20 (ECtHR, 13 November 2020) <http://hudoc.echr.coe.int/eng?i=001-206535>.

[44] *R (Friends of the Earth) v Heathrow* [2020] UKSC 52, [2021] 2 All ER 967, para 71.

[45] American Law Institute, *Restatement (Second) of Torts* (1965) para 283. See also C Witting, *Street on Torts* (15th edn, OUP 2018) 127.

[46] B Mayer, 'Temperature Targets and State Obligations on the Mitigation of Climate Change' (2021) 33 JEL 598–600.

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concerning the power of courts to impose standards going beyond both written norms and social practice. Arguably, such standard-setting exercises are the preserve of the political branches of government.

An alternative approach would be for a court to seek to identify a standard of due diligence that reflects social practice. For instance, a (developed) State could be required to implement a level of mitigation action that is at least similar to that of other (developed) States in similar circumstances.[47] This inductive approach would overcome the normative problems posed by the deductive approach, but it faces even greater practical issues. This is because without an agreed-upon burden-sharing formula, a court could not properly assess the general relevance of the various mitigation strategies taken by different entities and induce from this a level of appropriate mitigation action on the basis of social practice—let alone seek to apply such a standard to any particular entity.

Holistic cases are not the only ones involving a degree of judicial appreciation, but they can be differentiated in two respects. First, this appreciation is largely unfettered. The choice between deductive and inductive reasoning, or the way either reasoning is implemented, could lead reasonable judges to fundamentally different conclusions. For instance, the court in *Milieudefensie* concluded that Shell had to reduce carbon dioxide emissions resulting from its operations by 45 per cent by 2030 based on economic assessment of the 'least-cost' (ie most cost-effective) mitigation pathways consistent with global temperature goals.[48] Other equally valid assessments have suggested that this target should be 25 per cent,[49] or 19 per cent[50]—and an inductive approach reflecting the practice of oil-and-gas corporations could have led to vastly different conclusions. Secondly, these choices may have unusually far-reaching economic and social consequences. For instance, compliance with the decision in *Urgenda* cost the Netherlands an estimated €3 billion,[51] for no mitigation outcome.[52] In sum, the determination of an entity's requisite level of mitigation action goes beyond the ordinary performance of the judicial function and involves a far-reaching exercise of judicial discretion on highly consequential matters—something many judges will feel uncomfortable with.

[47] See B Mayer, 'Climate Change Mitigation as an Obligation under Customary International Law' (2023) 48 YaleJIntlL (forthcoming).

[48] *Milieudefensie* (n 17) para 4.4.29. See M Allen et al, 'Summary for Policymakers' in Masson-Delmotte (n 38) 12.

[49] Allen, 'Summary' (n 48) 12 (assuming different likelihoods of achieving the temperature targets).

[50] IEA, Net Zero by 2050: A Roadmap for the Global Energy Sector (2021) 101 (estimate of the necessary reduction in emissions resulting from oil and gas, rather than from all sectors combined).

[51] J Watts, 'Dutch Officials Reveal Measures to Cut Emissions after Court Ruling' *The Guardian* (24 April 2020).

[52] (n 29).

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2. Normative indeterminacy as an impediment to holistic cases

Most holistic cases have been decided against the plaintiffs. Admittedly, some claims were dismissed on procedural grounds, such as the lack of standing of the plaintiffs[53] or (before treaty bodies) the failure to exhaust national remedies[54] that had little to do with the holistic nature of the cases. Yet as will be seen, most of the cases that fulfilled procedural requirements were also dismissed, mainly because judges realized the difficulty of determining the requisite level of mitigation action applicable to an entity.

Thus the US Court of Appeal in *Juliana* found that ordering the federal government to enhance its mitigation action would go 'beyond [the court's] constitutional power'.[55] The plaintiff was only seeking a finding that the State's action was insufficient, rather than an express determination of what would be sufficient. Nonetheless, the court was concerned that making this finding 'would subsequently require the judiciary to pass judgment on the sufficiency of the government's response to the order, which necessarily would entail a broad range of policymaking'.[56] Rather than making their case before the Judiciary, Judge Hurwitz suggested that the plaintiffs should present it 'to the political branches of government'.[57]

US state courts followed similar considerations. The Circuit Court in *Reynolds v State* found that determining whether Florida was implementing sufficient action on climate change mitigation was an 'inherently political question … that must be resolved by the political branches of government'.[58] The Court of Appeals of Washington in *Aji P v State* held that courts were 'not the vehicle by which [the plaintiffs] may establish and enforce their policy goals'.[59] And the Supreme Court of Alaska in *Sagoonick v State* concluded that a holistic case 'presented non-justiciable political questions better left to the other branches of government'.[60]

Canadian courts have come to similar conclusions. The Federal Court in *La Rose v Canada* held that a holistic case was non-justiciable due to the 'breadth and diffuse nature'[61] of the relevant actions and inactions of the State, and to the fact that the remedies would involve 'an incursion into the policy-making function of the executive and legislative branches'.[62] Soon thereafter, a different judge of the same court dismissed another holistic case, *Misdzi Yikh v Canada*, noting that determining the national action on climate change was a political question 'that may touch on moral/strategic/ideological/historical or policy-based issues and determinations within the realm of the remaining branches of government'.[63] The Quebec Court of Appeal dismissed claims in

[53] See *Carvalho* (n 22); *Verein KlimaSeniorinnen Schweize v Eidgenössisches Departement für Umwelt*, case 1C_37/2019 (Federal Supreme Court of Switzerland, 5 May 2020).
[54] See *Sacchi* (n 24). [55] (n 21) 1165. [56] ibid 1172. [57] ibid 1165.
[58] No 2018-CA-819, 2020 WL 3410846 (10 June 2020) para 3.
[59] 16 Wash App 2d 177, 480 P.3d 438, 458 (8 February 2021).
[60] 503 P.3d 777, 782 (28 January 2022). [61] 2020 FC 1008 (27 October 2020) para 41.
[62] ibid para 55. [63] 2020 FC 1059 (16 November 2020) para 72.

Environnement Jeunesse v Procureur Général du Québec on the ground that engaging in an analysis of the costs and benefits of enhanced mitigation action was not a judicial function.[64]

Similar findings were reached in Asia-Pacific. In *Smith*, the New Zealand Court of Appeal found that a court identifying the duty of care of a corporation under tort law 'would be drawn into an indefinite, and inevitably far-reaching, process of line drawing'.[65] In *Minister for the Environment v Sharma*, the Australian Federal Court of Appeal held that identifying a duty of care of the State on climate change mitigation would require consideration of 'matters that are core policy questions unsuitable … for judicial determination' and involve the application of an 'indeterminate' standard.[66] And a summary order of the National Green Tribunal dismissed holistic claims in *Pandey v India*.[67]

With the exceptions noted above, European courts have generally followed the same course. In 2021, the High Court in England and Wales denied permission to apply for judicial review against the government's alleged failure 'to take practical and effective measures to align UK greenhouse gas emissions to the Paris Temperature Limits', on the ground that the request related to 'high level economic and social measures involving complex and difficult judgments'.[68] The Court considered that deciding the case on the merits would require it 'to venture beyond its sphere of competence' and to infringe 'the constitutional separation between Courts, Parliament and the Executive'.[69] Similarly, French administrative courts dismissed claims that the State had not adopted a sufficiently ambitious emission budget even while upholding atomistic claims relating to its implementation.[70] And even though the court in *Klimaatzaak* declared that Belgium's mitigation action was insufficiently ambitious, it refused to indicate the target that the State should pursue on the ground of the separation of powers.[71]

All these cases failed because plaintiffs were asking more of the courts than the courts themselves generally believe falls within their function. The next section shows that atomistic cases, the claims that are more consistent with prevailing conceptions of the judicial function, are more likely to receive a favourable judicial response and thus prompt enhanced mitigation action.

[64] 2021 QCCA 1871 (13 December 2021) para 35.

[65] (n 23) para 27.

[66] [2022] FCAFC 35 (15 March 2022) paras 7, 342.

[67] Order of 15 January 2019, para 3.

[68] *R (Plan B Earth) v Prime Minister* [2021] EWHC 3469 (Admin), [2021] All ER (D) 92, paras 3(1), 50.

[69] Ibid, paras 54, 51.

[70] *Grande-Synthe v France* (Conseil d'État, 19 November 2020), ECLI:FR:CECHR:2020:427301.20201119, para 1; *Oxfam v France*, Application 1904967, Decision 44-008.60-01-02-02.R (Administrative Court of Paris, 2 February 2021) para 32. See also Conclusions of Advocate General S Hoynck in *Grande-Synthe* (19 November 2020) section 2.

[71] (n 18), section 2.3.2.

III. THE GREATER PROSPECTS OF ATOMISTIC LITIGATION STRATEGIES

This section shows that atomistic litigation strategies offer an attractive alternative to holistic approaches. It documents the many successful atomistic cases and demonstrates the ability of atomistic litigation strategies to induce enhanced mitigation action.

A. The Growing Numbers of Successful Cases

Courts have identified requisite measures for climate change mitigation on the basis of various sources of international and domestic law, either as corollaries of general mitigation obligations or as a result of the direct application of specific rules. And while atomistic cases have generally focused on States, there is no reason of principle to prevent their application to subnational governments or corporations insofar as they have a general mitigation obligation.

Perhaps the most obvious corollary of general mitigation obligations is the duty to adopt a strategy on climate change mitigation:[72] an entity without any sort of strategy is presumably not exercising due diligence. In *Shrestha v Prime Minister*, the Supreme Court of Nepal found that, to comply with its constitutional obligation to protect fundamental rights, including the right to a clean environment, it was necessary for the State to adopt a law providing a general framework for action on climate change mitigation.[73] Other courts have refused to interfere so directly with the legislative process,[74] but they have issued injunctions against the executive. For instance, the US Supreme Court in *Massachusetts v EPA* interpreted a general provision of the Clean Air Act as requiring the Environmental Protection Agency to take regulatory action with respect to GHG emissions.[75] The High Courts of New Zealand in *Thomson v Minister for Climate Change Issues*[76] and of England and Wales in *Plan B Earth v Secretary of State for Business*[77] appeared to accept that national governments had to reconsider their national mitigation strategies in the light of new scientific evidence or new global goals.

Other cases have identified requirements relating to the clarity and internal consistency of national mitigation strategy. In particular, the Supreme Court of Ireland held that the National Mitigation Plan that the Minister had adopted in furtherance of a statutory duty fell short of the level of specificity and clarity implicitly required by the statute.[78] In *Friends of the Earth v Secretary of State for Business*, the High Court held that the UK's long-term

[72] See UNFCCC (n 35) art 4(1)(b), (2)(a); Paris Agreement (n 35) art 4(2), (19).

[73] Order 074-WO-0283, decision 10210, NKP 61(3) (SC Nepal, 25 December 2018), translation at <https://perma.cc/YM27-HH73>.

[74] See eg *Grande-Synthe* (2020) (n 70) para 2; Decision 2021-825 DC (13 August 2021, Constitutional Council of France) para 4.

[75] 549 US 497 (2 April 2007).

[76] [2017] NZHC 733, [2018] 2 NZLR 160, para 94.

[77] [2018] EWHC 1892 (Admin), paras 36–43.

[78] (n 7) para 6.46.

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mitigation strategy was inconsistent with statutory requirements.[79] In *Neubauer v Germany*, the Federal Constitutional Court of Germany found that the State was precluded from postponing the implementation of the efforts necessary to achieve its own mitigation goals, as this would place a disproportionate burden on the rights of future generations.[80] While this case has been compared with *Urgenda*, it falls within the category of atomistic cases as the court did not engage in its own determination of the State's requisite level of mitigation action but focused on the internal consistency of the national strategy.

Courts have also controlled the implementation of national policies on climate change mitigation. In *Barragán v Presidencia*, the Colombian Supreme Court ordered the national government to comply with the policy of stopping deforestation that it had announced to foreign development partners.[81] A similar approach was instrumental in two cases against the French government: *Grande-Synthe*, where the State Council ordered the government to take 'all useful measures' in order to adhere to its statutory emission budget;[82] and *Oxfam*, where an Administrative Court ordered the government to make up for past emissions exceeding this budget.[83] In fact, *Urgenda* itself could be read as relying partly on internal consistency, as the Supreme Court noted the government's past advocacy for an ambitious EU-wide mitigation target as evidence of the State's own finding of its capacity for enhanced mitigation action.[84]

There is an extensive body of atomistic cases on the way national authorities consider climate change mitigation when approving proposed activities likely to result in significant amounts of GHG emissions. As environmental assessment is a widespread practice and a customary international law requirement,[85] the main issue in these cases is how this procedure applies to GHG emissions.[86] Where statutes have not settled the issue,[87] courts have found that GHG emissions were among the environmental impacts that had to be assessed.[88] This includes not only the GHG emissions directly caused by the activity under consideration, but often also the upstream and downstream emissions (eg in the assessment of a coal mine, the emissions resulting from the

[79] [2022] EWHC 1841 (Admin).
[80] 1 BvR 2656/18 (Federal Constitutional Court, 24 March 2021).
[81] STC-4360-2018, Radicación No 11001-22-03-000-2018-00319-01 (5 April 2018).
[82] 2021 decision (n 8) art 2.
[83] (n 70) art 2.
[84] *Urgenda* (SC) (n 5) paras 7.4.1–7.4.6.
[85] eg *Pulp Mills on the River Uruguay (Argentina v Uruguay)*, [2010] ICJ Rep 14, para 204.
[86] See B Mayer, 'Climate Assessment as an Emerging Obligation under Customary International Law' (2019) 68 ICLQ 271.
[87] See eg Consolidated version of Directive 2011/92/EU, Annex IV para 5(f).
[88] eg *Gray v Minister for Planning* [2006] NSWLEC 720; *Save Lamu v National Environmental Management Authority*, NET 196/2016 (26 June 2019, Kenya); *Barbone and Ross (on behalf of Stop Stansted Expansion) v Secretary of State for Transport* [2009] EWHC 463; *Center for Biological Diversity v National Highway Traffic Safety Administration* (9th Cir. 2008) 538 F.3d 1172.

transportation and consumption of coal), even when they take place abroad.[89] Courts have ordered national authorities to appraise the GHG emissions of proposed activities, either in light of their compatibility or consistency with local mitigation strategies[90] and international commitments,[91] or following an economic valuation.[92]

Naturally, not every atomistic case has received favourable judicial treatment. Like holistic cases, atomistic cases have sometimes been dismissed on non-specific procedural grounds, such as standing.[93] Some atomistic cases have also been dismissed on factual bases, when the plaintiff was unable to demonstrate that the entity had breached its obligations. For instance, while NGOs could successfully sue the French government for its failure to adhere to its emission budget,[94] similar claims failed before English courts because the British government had complied with its statutory emission budget.[95] Likewise, the High Court of England and Wales in *Elliott-Smith v Secretary of State for Business* found, against the plaintiff's submissions, that the government's decision on the design of the UK Emissions Trading Scheme was based on 'an appropriate and tenable understanding of the Paris Agreement'.[96] And France's State Council upheld authorizations to build new highways because these projects were not incompatible with national commitments and strategies on climate change mitigation.[97]

Such adverse judicial treatment does not reveal structural flaws inherent to atomistic cases. It is to be expected in any field of litigation that some cases will be dismissed on both procedural and factual grounds. More than anything else, these cases confirm the ability of atomistic cases, in contrast to holistic cases, to define a test that some entities may pass.

B. The Potential of Atomistic Cases

This final subsection shows that atomistic cases have a growing potential for judicial success and thus they may prompt enhanced mitigation action.

[89] eg *Centre for Biological Diversity v Bernhardt* (9th Cir. 2020) 982 F.3d 736–740; *Gloucester Resources Ltd v Minister for Planning* [2019] NSWLEC 7; *KEPCO Bylong Australia Pty Ltd v Bylong Valley Protection Alliance Inc* [2021] NSWCA 216. But see *Natur og Ungdom v Norway*, Case No 20-051052SIV-HRET (SC, 22 December 2020), translation at <https://perma.cc/5PCS-A8YH>, paras 226–241.

[90] *Center for Biological Diversity v California Department of Fish and Wildlife*, (Cal. 2015) 62 Cal.4th 220–21.

[91] *Earthlife Africa Johannesburg v Minister of Environmental Affairs* [2017] ZAGPPHC 58, [2017] 2 All SA 519, para 90.

[92] *CBD v NHTSA* (n 88). See also Executive Order 13990 (20 January 2021), 86 FR 7037, section 5.

[93] See eg *Backsen v Germany*, VG10K412.18 (Administrative Court of Berlin, 31 October 2019), translation at <https://perma.cc/7P8H-N6PS>.

[94] See eg *Grande-Synthe*, 2021 decision (n 8).

[95] *Plan B* (2021) (n 68) para 49.

[96] [2021] EWHC 1633 (Admin), [2021] All ER (D) 81 (Jun), para 60.

[97] See eg *Genève v France* (Conseil d'État, 30 December 2021) ECLI:FR:CECHR:2021:438686.20211230, paras 23–26.

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1. Potential for judicial success

Like holistic cases, atomistic cases may rely on open-ended norms, for instance on the protection of human rights[98] or the environment.[99] Some judges may refuse to identify a general mitigation obligation on the grounds that the standard applicable in relation to this obligation would be indeterminate.[100] Yet unlike holistic cases, atomistic cases focus on some clear and manageable implications of general mitigation obligations: the adoption of measures that are logically entailed by these general mitigation obligations, rather than the achievement of a requisite level of mitigation action that the court would have to determine out of thin air. Assessing whether a State is implementing its mitigation strategy and whether it has conducted an adequate environmental assessment, for instance, is more in line with the prevailing conception of the judicial function than appraising the State's requisite level of mitigation action.

Beyond these open-ended norms, atomistic cases can rely on a growing body of norms and developments that point to relevant implications of general mitigation obligations. In particular, an expanding body of legislation imposes an obligation on national institutions to adopt and implement a mitigation strategy.[101] Furthermore, the parties to the Paris Agreement are committed to adopt nationally determined contributions that 'represent a progression' and are 'informed by the outcomes of [a] global stocktake'; and they are invited to communicate a long-term mitigation strategy.[102] Mandatory biennial transparency reports and their technical review by independent experts will help to identify situations of non-compliance.[103] Likewise, non-State actors are making voluntary pledges[104] and they are increasingly expected to disclose relevant information.[105] Notwithstanding whether these developments create discrete legal obligations applicable in the case at issue, these developments define convenient benchmarks to assess whether an entity is taking appropriate measures in line with its due diligence obligation on climate change mitigation.

The relative success of atomistic cases relates also to their greater ability to rely on inductive reasoning. Few courts are impressed by the purely deductive arguments on which holistic cases tend to rely, whereby an entity's requisite level of mitigation action is inferred from global mitigation objectives following a test that few, if any, other entities seem to be meeting. A court

[98] *Neubauer* (n 80); *Shrestha* (n 73). [99] *Massachusetts* (n 75). [100] *Sharma* (n 66).

[101] eg Climate Change Act 2008, c 27, amended (UK), section 4(1); Bundesgesetz über die Reduktion der CO_2-Emissionen, 23 December 2011, AS 6989 (2012), amended 2021 (Germany), art 40.

[102] Paris Agreement (n 35) art 4(2)–(3), (9), (19).

[103] ibid, art 13(7), (11). See also UNFCCC (n 35) art 12(1).

[104] See J Kuyper et al, 'Non-State Actors in Hybrid Global Climate Governance: Justice, Legitimacy, and Effectiveness in a Post-Paris Era' (2018) 9 WIREs Climate Change e497.

[105] eg US Securities and Exchange Commission, 'The Enhancement and Standardization of Climate-Related Disclosures for Investors', proposed rule, 85 FR 21334 (11 April 2022).

would likely be concerned that such a decision would lead to multiple similar cases against 'countless' other entities,[106] or else arbitrarily impose a more stringent standard on defendants than applies to comparable entities.[107] More fundamentally, courts may question whether it is within their power, rather than that of the political branches of government, to identify legal standards that most actors do not already follow. By contrast, the identification of requisite measures can more easily be tested through an inductive reasoning. A court can, for instance, determine whether States often achieve the non-binding pledges that they have communicated on climate change mitigation, whether States generally fully consider climate change mitigation in environmental assessment procedures, or how companies normally act upon their mitigation pledges. These questions may not be dispositive of the case, but courts may be interested in understanding whether and how their decisions involve a departure from prevailing social practice.

2. Potential for political impact

If atomistic cases have received less public and scholarly attention than holistic ones, it is perhaps because they are assumed to be less effective. When they do not impose procedural formalities—an objection goes—atomistic cases only require a State to implement its own mitigation strategy, which usually lacks ambition. Yet, while an atomistic case may achieve little direct mitigation outcome when considered in isolation, a series of such cases are more effective. Multiple atomistic cases—along with other normative developments—weave a web of requisite measures which can require States, and plausibly other entities, to comply with at least some of the main aspects of their general mitigation obligation. Thus, atomistic cases can compel a State to define a clear and specific long-term mitigation strategy that it can present as consistent with global mitigation objectives, to adopt medium-term targets consistent with this long-term strategy, and to take all necessary measures to achieve these medium-term targets, while also subjecting relevant activities to an environmental assessment procedure. As a whole, this ensures that the State achieves a reasonable level of mitigation action.

On the other hand, holistic and atomistic cases have different abilities to influence mitigation action beyond the personal and temporal scope of the case. Successful holistic cases need to draw on a complex set of circumstances to determine the requisite level of mitigation action of a given entity at a particular time. These decisions are (or should be) highly case-specific, hence not easily transferrable. For instance, finding that the Netherlands must reduce its emissions by 25 per cent by 2020 says little about the obligation applicable to Belgium in 2020, or to the Netherlands in

[106] *Sharma* (n 66) para 231. See also T Wilson, 'Shell Climate Case Winner Targets Dozens More Companies' *Reuters* (13 January 2022).

[107] See *Smith* (n 65) paras 27, 33, 92, 113.

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2030. Such decisions might influence the way other courts look at comparable cases, but they do not indicate to third entities what level of mitigation action would likely be imposed onto them in hypothetical litigation. These decisions are unlikely to persuade third entities to enhance their mitigation action with the view of reducing the risk of litigation, as these third entities would likely conclude that the risk of litigation is not determined by their reaching a particular level of mitigation action.

By contrast, atomistic cases can lead to the identification of specific measures as the corollary of general norms applicable to many entities. In other words, the judicial treatment of an atomistic case can more readily be transposed to other entities. For instance, the interpretation of human rights law as requiring a State to comply with otherwise non-binding pledges (*Barragán*) and as preventing the postponement of mitigation action in ways that would unduly burden future generations (*Neubauer*) features reasoning that could be applied elsewhere in (relatively) direct and predictable ways.[108] Even cases that involve the interpretation of national legislation, for instance a statute requiring the adoption of a long-term mitigation target (*Friends of the Irish Environment*), establishing an emission budget (*Grande-Synthe* and *Oxfam*), or interpreting open-ended requirements to regulate air pollution (*Massachusetts*),[109] could set a persuasive authority capable of influencing decisions in other States with comparable legislation. A deterrent effect is possible because third entities can predict how these cases might be replicated against them.

Lastly, to the extent that courts rely on inductive reasoning to interpret general mitigation obligations, atomistic cases may point to higher ambitions than holistic cases. In holistic cases, an inductive approach would reflect the fact that States (or other entities) do not generally adopt an overall level of ambition sufficient to achieve the 1.5 or 2°C goals. By contrast, in atomistic cases, courts could come progressively to identify a series of requisite measures, separately reflected in general practice, which, taken as a whole, impose a level of ambition consistent with the temperature goals. For instance, courts could find that many States reflect temperature goals in their long-term mitigation strategies; that many States translate their long-term mitigation strategy into a medium-term emission budget; and that many States adhere to their medium-term emission budget—even though few States comply with *all three* requirements at the same time. In this hypothesis, a series of atomistic cases could require States to take all measures necessary to implement mitigation action consistent with the 1.5/2°C targets, even when a holistic case could not come to the same conclusion, at least not by following an inductive reasoning.

[108] (nn 81, 80, respectively).

[109] (nn 78, 82, 83 and 75, respectively).

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IV. CONCLUSION

In recent years there has been an increase in the number of legal cases relating to climate change mitigation. Yet it is not always clear whether and how these cases have resulted in enhanced mitigation action. While most attention tends to be focused on holistic cases, this article has argued that mitigation outcomes are more likely to come about as a result of atomistic cases. This is in part because atomistic cases succeed more often in courts, but also because, by design, they are more likely to influence States and other entities beyond the case at issue. Over time, atomistic cases tighten the noose around GHG-emitting entities, forcing them to implement effective mitigation action, in ways that holistic cases have not generally managed to do.

None of this is to suggest that atomistic cases are a panacea. Litigation on climate change mitigation remains a phenomenon limited to a handful of mostly Western countries, and it has limited prospects in countries with weaker judiciaries or more authoritarian governments. Some cases will be dismissed on procedural grounds; others will fail because relevant norms are yet to emerge. More fundamentally, mitigating climate change requires fundamental policy reforms that courts alone cannot achieve under the pretext of applying the law. An atomistic litigation strategy acknowledges these limitations of the existing law and seeks to make the best of this.