

State of the Netherlands vs Urgenda Foundation, Ruling of the Court of Appeal of the Hague (9 October 2018).

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Abstract

On 9 October 2018, the Court of Appeal of the Hague upheld the District Court's decision in the case of *Urgenda*, thus confirming the obligation of the Netherlands to reduce its greenhouse gas (GHG) emissions by at least 25% by 2020 compared with 1990. This case raised some of the thorniest issues in climate law. As the Netherlands is responsible only for a tiny fraction of global GHG emissions, is it right for a court to hold that a national emission reduction mitigation target necessary to prevent dangerous climate change and its impact on human rights? If so, how can this target be quantified? The District Court and the Court of Appeal of the Hague provided insightful responses, though perhaps not entirely convincing.

Keywords

Urgenda; climate litigation; climate change mitigation; reduction in greenhouse gas emissions; the Netherlands; public interest litigation

1. INTRODUCTION

Urgenda was created as a foundation under the law of the Netherlands in 2008 in order “to stimulate and accelerate the transition processes to a more sustainable society, beginning in the Netherlands.”¹ In November 2012, Urgenda requested the State of the Netherlands to adopt a national target on climate change mitigation of 40% emission reduction by 2020, compared with 1990.² The request was denied,³ and Urgenda brought the case to court, on its own behalf and on behalf of 886 individuals. The District Court of the Hague (DC), deciding of the case in its first instance on 24 June 2015, ordered the State to reduce the greenhouse gas (GHG) emissions of the Netherlands by at least 25% (1990 basis) by the end of 2020.⁴ The State appealed on 29 grounds, and Urgenda cross-appealed on one particular ground. In its ruling on 9 October 2018, the Court of Appeal of the Hague (CA) upheld DC's judgment but, following Urgenda's ground of cross-appeal, based its decision on a slightly different reasoning.⁵

Beside its obvious significance for climate law in the Netherlands, the Urgenda case raises questions of paramount importance in comparative and international perspectives. Building on the European Convention on Human Rights (ECHR) in a way which could easily be replicated on the basis of other human rights treaties, the case illustrates the relevance of human rights as the source of an obligation to mitigate climate change. Overall, the courts engage with the

¹ By-laws of Urgenda, article 2, as cited in The District Court of the Hague (DC), *Urgenda Foundation v. The State of the Netherlands*, case No. C/09/456689 / HA ZA 13-1396 (24 June 2015), available at https://elaw.org/system/files/urgenda_0.pdf, para. 2.2. Quotes are from the translation provided by the Court.

² DC (n 1), para 2.6.

³ See the letter of the State Secretary for Infrastructure and the Environment date 11 December 2012, cited in DC (n 1), para. 2.7.

⁴ DC (n 1), para. 5.1.

⁵ Court of Appeal of the Hague (CA), *The State of the Netherlands (Ministry of Infrastructure and the Environment) v Urgenda Foundation*, C/09/456689 / HA ZA 13-1396 (9 October 2018), available at <https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:GHDHA:2018:2610>. Quotes are from the translation provided by the Court.

thorny issue of determining the obligation of a State in relation to a global problem to which it contributes only marginally—the GHG emissions of the Netherlands were estimated to represent less than 0.5% of global GHG emissions.⁶ In particular, the two judgments seek to establish methodologies to quantify the obligation of a State to reduce its GHG emissions within a particular period of time based on science, principles of fairness, and prior statements made by the Netherlands. The approach of both courts is ground-breaking but certainly not perfect; lessons can be drawn to allow for a more consistent and persuasive approach of future cases.

This note is organized as follows. Section 2 provides an overview of the case as adjudicated by both courts. Section 3 engages critically with some of the key issues underlying the case, namely the requirements of standing in relation to a global environmental issue, the legal obligation of the State to mitigate climate change, and the determination of the ambit of this obligation based on science, fairness, and the statements previously made by the Netherlands itself. Section 4 concludes with a discussion of the consequences of the case in the context of an increasing number of public interest litigation relating to the failure of governments to mitigate climate change fast enough.

2. THE CASE

This first section provides an overview of the context of the case (2.1), outlines the judgments of DC (2.2) and CA (2.3), and discusses the aftermaths of the case in the Netherlands (2.4).

2.1. The Context

The GHG emissions of the Netherlands are higher than one would expect from a small country with a high-income economy. According to the statistics communicated by the Netherlands, the country emitted 195 MT CO₂-eq of GHG emissions in 2016.⁷ While this represents a decrease by 12.5% compared with 1990,⁸ the rate of per capita GHG emissions in the Netherlands (11.6 T CO₂eq/year)⁹ remain significantly higher than in most other EU Member States.¹⁰ Most of the country's GHG emissions consist in carbon dioxide (CO₂) from the energy sector,¹¹ a source which has not declined since 1990.¹²

The Netherlands is a Member State of the European Union (EU), which has committed to reduce its aggregate GHG emissions by 20% (1990 basis) by 2020, first under the Cancún

⁶ See n 61.

⁷ The Netherlands, *National Inventory Report 2018* (13 April 2018), available at <https://unfccc.int/documents/65703>, at 26 (excluding LULUCF).

⁸ *Ibid* at 6.

⁹ Based on *ibid.* at 6 and 87.

¹⁰ Per capita emissions in the EU are estimated at 8.4 T CO₂eq/year in 2016, based on the EU's GHG emissions without LULUCF, reported in The European Union, *National Inventory Report 2018* (15 May 2018), <https://unfccc.int/documents/65886>, at vii, and a population of 511.8 million according to Eurostat, "Population and population change statistics" (July 2017), available at https://ec.europa.eu/eurostat/statistics-explained/index.php/Population_and_population_change_statistics (accessed 29 October 2018). See also CA (n 5), para 26.

¹¹ *Ibid* at 16.

¹² The Netherlands, *NIR 2018* (n 7) at 70 (table 3.1).

Pledges,¹³ and again through the Doha Amendment to the Kyoto Protocol.¹⁴ In both instruments, the EU and its Member States have also made a conditional offer of enhancing their target to 30% “as part of a global and comprehensive agreement”¹⁵—a circumstance which, in the view of the European Commission, has not realized. The *Urgenda* case was concerned with the sufficiency of this 2020 target in relation to the emissions of the Netherlands. The case was not concerned with emission reduction commitments applicable after 2020, such as the 2030 target (40% emission compared with 1990) included in the EU’s Nationally Determined Contribution (NDC) under the Paris Agreement.¹⁶

The EU-wide 20% emission reduction target does not necessarily imply a uniform emission reduction target in each Member State. The EU has long recognized that efforts should be shared among Member States based on “the principle of solidarity between Member States and the need for sustainable economic growth across the Community.”¹⁷ The EU’s current mitigation efforts consist in part in an EU-wide Emission Trading Scheme (ETS), first introduced in 2005.¹⁸ The ETS covers parts of the energy, industrial and aviation sectors, which together represent about 45% of EU-wide GHG emissions.¹⁹ Within these sectors, it is expected that, by 2020, the EU ETS will achieve an EU-wide emission reduction of the 21%, compared with 2005 emissions.²⁰ On the other hand, emissions from sectors not covered by the EU ETS are to be addressed by Member States, in part by implementing other EU rules and in part through their own national initiatives. To ensure that Member States achieve sufficient emission reduction in non-ETS sectors for the overall emission reduction of the EU to comply with its 2020 target, the European Parliament and the Council adopted an “Effort Sharing Decision,” in 2009, which defines national targets for reduction of non-ETS emissions. According to this decision, the Netherlands is to achieve at least 16% reduction by 2020, on a 2005 basis, in non-ETS emissions within its territory.²¹

¹³ See UNFCCC, *Compilation of economy-wide emission reduction targets to be implemented by Parties included in Annex I to the Convention*, UN Doc. FCCC/SBSTA/2014/INF.6 (9 May 2014), available at <https://unfccc.int/sites/default/files/resource/docs/2014/sbsta/eng/inf06.pdf>, para. 11.

¹⁴ See *Doha amendment to the Kyoto Protocol*, in annex of decision 1/CMP.8, “Amendment to the Kyoto Protocol pursuant to its Article 3, paragraph 9 (the Doha Amendment)” (8 December 2012), UN Doc. FCCC/KP/CMP/2012/13/Add.1. While the Doha Amendment has not yet entered into force, it was ratified by the EU and its Member States on 21 December 2017.

¹⁵ See UNFCCC, *Compilation of economy-wide emission reduction targets* (n 13), para. 12; Doha Amendment (n 13), note 7 under Annex revised Annex B.

¹⁶ See Latvia et al., *Intended Nationally Determined Contribution of the EU and its Member States* (6 March 2015), available at <http://www4.unfccc.int/ndcregistry/PublishedDocuments/Netherlands%20First/LV-03-06-EU%20INDC.pdf>; *Paris Agreement* (adopted 12 December 2015, entered into force 4 November 2016) 55 ILM 740, art. 4.2.

¹⁷ *Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community’s greenhouse gas emission reduction commitments up to 2020*, OJ L 140, p. 136-148, recital 8.

¹⁸ *Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC*, OJ L 275 p. 32-46.

¹⁹ EU, *7th National Communication & 3rd Biennial Report from the European Union under the UN Framework Convention on Climate Change (UNFCCC)* (December 2017) at 237.

²⁰ *Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community*, OJ L 140, p. 63-87, recital 5. Year 2005 is used as the baseline for the ETS because it was the first year the ETS was implemented and estimates of emissions within ETS-sectors are more accurate than for 1990.

²¹ Effort-Sharing Decision (n 17), annex II.

As a result of the EU ETS and a range of other measures implemented in the Netherlands, GHG emissions originating from the Netherlands overall have been on a decreasing trend, albeit the changes have been slow. In 2015, when the case brought by Urgenda was first decided by DC, the Government estimated that the Netherlands would have achieved 14-17% emission reduction by 2020 (1990 basis).²² It is noteworthy, however, that this reduction in overall GHG emissions has been achieved in large part through a reduction in the emission of GHGs other than CO₂, especially methane from waste,²³ while the level of CO₂ emissions has overall remained unchanged since 1990.²⁴ This suggests that the current trends are related to one-off measures, such as a reform of waste management, rather than by the initiation of a process of structural transition towards more sustainable modes of production and consumption.

This, in the view of Urgenda, was highly unsatisfactory. After the Government declined to adopt a more ambitious emission reduction target by 2020, Urgenda requested DC to rule that “the State acts unlawfully if it fails to reduce or have reduce the annual GHG emissions in the Netherlands by at least 40% compared to 1990, by the end of 2020.”²⁵ This claim was based on various legal bases, including the international law on climate change (the UNFCCC, the Kyoto Protocol and its Doha Amendment, as well as the “no-harm” and the precautionary principles),²⁶ the right to life and to family life as protected under the European Convention on Human Rights (ECHR),²⁷ the constitutional law obligation of the State to protect the environment,²⁸ and tort law.²⁹ These arguments were informed by the findings of the Intergovernmental Panel on Climate Change (IPCC), in particular in Fourth Assessment Report (AR4), on climate change, its impacts, and overall emission reduction pathways compatible with the objective of holding the increase in global average temperature below 2°C.³⁰

2.2. DC’s Judgment

Having established the standing of Urgenda, DC rejected most of the legal sources it had invoked. It stated that the obligations of the Netherlands under the international law on climate change are owed to other States, not to individuals or legal persons.³¹ It interpreted the rights

²² DC (n 1), para. 4.26, based on domestic policy documents. See also The Netherlands, *Second Biennial Report under the United Nations Framework Convention on Climate Change* (31 December 2015), at 54, projecting a decrease in GHG emissions by 18% by 2020 (1990 basis) with existing measures, or 19% with additional measures.

²³ The Netherlands, *NIR 2018* (n 7) at 26 and 63.

²⁴ Centraal Bureau voor de Statistiek, “CO₂ emissions in 2017 the same as in 1990” (10 September 2018), at <https://www.cbs.nl/en-gb/news/2018/37/co2-emissions-in-2017-the-same-as-in-1990>.

²⁵ DC (n 1), para. 3.1(6).

²⁶ *Ibid.* para. 4.42. See *United Nations Framework Convention on Climate Change* (adopted 9 May 1992; entered into force 21 March 1994), 1771 UNTS 107, in particular art. 4.2(a) and (b); *Kyoto Protocol to the United Nations Framework Convention on Climate Change* (adopted 11 December 1997; entered into force 16 February 2005), 2303 UNTS 162; Doha Amendment (n 13); Benoit Mayer, “The Relevance of the No-Harm Principle to Climate Change Law and Politics” (2016) 19(1) *Asia Pacific Journal of Environmental Law* 79-104.

²⁷ *Convention for the Protection of Human Rights and Fundamental Freedoms* (adopted 4 November 1950; entered into force 3 September 1953) (“ECHR”), 213 UNTS 221, arts. 2 and 8.

²⁸ The Constitution of the Kingdom of the Netherlands (2008), Published by the Ministry of the Interior and Kingdom Relations, Constitutional Affairs and Legislation Division in collaboration with the Translation Department of the Ministry of Foreign Affairs, available at <https://www.government.nl/documents/regulations/2012/10/18/the-constitution-of-the-kingdom-of-the-netherlands-2008>, art. 21, according to which “[i]t shall be the concern of the authorities to keep the country habitable and to protect and improve the environment.”

²⁹ *Burgerlijk Wetboek* (Civil Code), Book 5, Section 37 (prohibition of nuisance).

³⁰ See IPCC, *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press, 2007).

³¹ DC (n 1) para 4.42.

created by the European Convention on Human Rights in the light of article 34 ECHR, which limits access to the European Court of Human Rights to actual (or potential) victims of human rights violations, and held that Urgenda had neither claimed to be a victim of such a violation, nor established that any of its 886 individual co-plaintiffs was.³² Likewise, DC declined to interpret the constitutional obligation of the State to protect the environment as a distinct source of obligations of the State towards individuals or legal persons.³³ However, DC held that, taken together, these sources of constitutional, European and international law help determine the content of the duty of care that the State owes to society—including Urgenda—under a provision of the Civil Code and the doctrine of hazardous negligence.³⁴ Accordingly, DC recognized, in tort law, an obligation for the State “to take measures in its own territory to prevent dangerous climate change.”³⁵

In turn, DC applied this duty of care of the State to the facts of the case. DC noted conclusive evidence of the increasing social and ecological risks associated with climate change if the global average temperature exceeds 2°C above pre-industrial levels,³⁶ including their manifestation in the territory of the Netherlands,³⁷ and the need for deep cuts in GHG emissions to take place rapidly, especially in developed countries, in order to reduce the likelihood of this scenario.³⁸ In particular, building on the contribution of the IPCC’s Third Working Group (WG3) to AR4, DC concluded that a reduction of the GHG emissions of Annex I countries by 25-40% by 2020 (1990 basis) should be achieved in order to pursue the objective of holding the increase in global average temperature below 2°C.³⁹ Noting that the specific circumstances of the Netherlands did not justify any lower mitigation efforts than in an average Annex I Party, DC concluded that, in application of its duty of care, the State had to pursue a target of at least 25% reduction in GHG emissions by 2020 on a 1990 basis.⁴⁰

2.3. CA’s Judgment

The State submitted 29 grounds of appeal against DC’s judgment, thus, as CA noted, “seek[ing] to submit the dispute to the Court in its entirety.”⁴¹ CA did not give favourable consideration to any of these grounds. In contrast, CA was persuaded by the unique ground raised in Urgenda’s cross-appeal, relating to “the district court’s opinion that Urgenda, considering Article 34 ECHR, cannot rely on Articles 2 and 8 ECHR in these proceedings.”⁴² Urgenda submitted that Article 34 ECHR is concerned with the conditions of access to the European Court of Human Rights—by excluding public interest litigation before the European Court of Human Rights—, not with admissibility of claims based on the ECHR before domestic courts.⁴³ CA agreed, and it admitted that, in Dutch law, public interest litigation could invoke rights guaranteed under the ECHR.⁴⁴

³² Ibid. para 4.45. This aspect of the judgment was criticized, among others, in Anne-Sophie Tabau and Christel Cournil, “New Perspectives for Climate Justice: District Court of the Hague, 24 June 2015, Urgenda Foundation versus the Netherlands” (2015) *Journal for European Environmental & Planning Law* 221-240, at 229.

³³ DC (n 1), para. 4.36.

³⁴ See *Burgerlijk Wetboek* (n 29) book 6, article 162. See DC (n 1), paras. 4.46, 4.46 and 4.55.

³⁵ Ibid. para. 4.65.

³⁶ Ibid. para. 4.14

³⁷ Ibid. para. 4.17.

³⁸ Ibid. para. 4.20.

³⁹ Ibid. para. 4.29.

⁴⁰ Ibid. para. 5.1.

⁴¹ CA (n 5), para. 31.

⁴² Ibid. para. 32.

⁴³ Ibid. para. 35.

⁴⁴ Ibid. para. 36.

This led CA to justify DC’s conclusions on an alternative legal basis, namely by interpreting the “positive obligation [of the State] to take concrete actions to prevent a future violation of” Articles 2 and 8 ECHR.⁴⁵ CA noted that a dangerous climate change would result “in the serious risk that the current generation of citizens will be confronted with loss of life and/or a disruption of family life,”⁴⁶ referring to the rights protected under these two articles. But like DC in relation to tort law, CA recognized that the content of the positive obligation of the Netherlands to prevent a future violation of protected rights under the ECHR could be interpreted in the light of other obligations of the State, including the international law on climate change.⁴⁷

Accordingly, CA upheld DC’s judgment,⁴⁸ highlighting that “the State ha[d] done too little to prevent a dangerous climate change and [was] doing too little to catch up.”⁴⁹ CA also noted that, as Urgenda had not put forward a ground of cross-appeal against the rejection of a more demanding target, “a reduction of more than at least 25% by 2020 [could not] be awarded”⁵⁰ in appeal.

2.4. The Aftermath of the Case

The most recent reports of the Netherlands estimate that, by 2016, the country’s GHG emissions had decreased by 12.4% compared with 1990.⁵¹ This was achieved in part through the use of a new methodology for the inventory of national GHG emissions that the Netherlands adopted in 2016 in application of international requirements.⁵² Applied retroactively, the new methodology led the Netherlands to estimate higher GHG emissions for 1990, and, thus, higher rates of emission reductions compared with 1990.⁵³ All in all, while emissions of methane and some other highly-potent GHGs decreased sharply, the Netherlands’ CO₂ emissions remained overall stable since 1990.⁵⁴

The latest projections by the Dutch Government suggest that the impact of current measures will achieve around 23% emission reduction by 2020 (1990 basis), and that additional measures under consideration could bring this rate up to 24%.⁵⁵ As emphatically noted by CA, however,

⁴⁵ Ibid. para. 41.

⁴⁶ Ibid. para. 45.

⁴⁷ See in particular *ibid.* para. 63 (on the precautionary principle).

⁴⁸ Ibid. para 76.

⁴⁹ Ibid. para 71.

⁵⁰ Ibid. para 75.

⁵¹ See The Netherlands, *NIR 2018* (n 7) at 26. See also Centraal Bureau voor de Statistiek, “Greenhouse gas emissions slightly down in 2017” (9 May 2018), <https://www.cbs.nl/en-gb/news/2018/19/greenhouse-gas-emissions-slightly-down-in-2017>, for a preliminary estimate of 2017 GHG emissions at 193MT CO₂-eq, representing a decrease by 13.4% below 1990 emissions as previously reported. All data are without LULUCF.

⁵² See decision 15/CP.17, “Revision of the UNFCCC reporting guidelines on annual inventories for Parties included in Annex I to the Convention” (11 December 2011) UN Doc. FCCC/CP/2011/9/Add.2.

⁵³ See The Netherlands, *National Inventory Report 2015* (31 March 2016), available at <http://www.pbl.nl/en/publications/greenhouse-gas-emissions-in-the-netherlands-1990%E2%80%932013-national-inventory-report-2015>, at 25. The application of the 2006 methodology ascribes a higher global warming potential value to methane, whose emissions have rapidly decreased in the Netherlands since 1990. This was briefly discussed in Appeal paras 21 and 47.

⁵⁴ See for instance Centraal Bureau voor de Statistiek, “CO₂ emissions” (n 24).

⁵⁵ UNFCCC, *Report on the technical review of the third biennial report of the Netherlands*, UN Doc FCCC/TRR.3/NLD (1 August 2018), available at https://unfccc.int/sites/default/files/resource/trr.3_NLD.pdf, at 18 (emissions without LULUCF). See also The Netherlands, *Third Biennial Report under the United Nations Framework Convention on Climate Change* (31 December 2017), available at

these projections come with a high range of uncertainty.⁵⁶ It is unclear whether the Netherlands will genuinely be able to achieve almost as much emission reduction in 2 years than it has in the last 28 years. The Expert Review Team (ERT) which conducted the Technical Review of the third Biennial Report of the Netherlands in August 2018 justly noted that, “[i]f a domestic target of a 25 per cent emission reduction by 2020 below the 1990 level is formally confirmed, the Netherlands may face challenges in achieving its domestic target.”⁵⁷ Immediate action is required for the Netherlands to ensure compliance with this target. Absent any mention in the judgments, it is not clear whether the State can rely on flexibility mechanisms to achieve compliance with its target.

3. DISCUSSION OF SOME CENTRAL ISSUES

DC and CA’s judgments raised some of the most difficult questions in climate law. Climate change results from the GHG emissions occurring in multiple countries over a long period of time. Climate change mitigation requires ambitious efforts taking place concomitantly in multiple countries and pursued over decades. Yet, taken individually, the GHG emissions occurring within the territory of most countries are small, and incremental efforts to reduce these emissions hardly make any difference at all when assessed in isolation. This means that a particular measure on climate change mitigation is never indispensable to the achievement of global mitigation outcomes, and, in fact, the global impact of such an individual measure on the climate system is almost always negligible. Additional efforts by the Netherlands to decrease its GHG emissions by 2020 will be of extremely little help to any particular individual whose life or to family life could be threatened by the impacts of climate change.

Therefore, a judge could have been tempted to conclude that *Urgenda* had no standing, or that its claim that the State had an obligation to protect the rights of Dutch citizens by reducing GHG emissions in the Netherlands failed for lack of causal link between the efforts of the State to reduce GHG emissions in the Netherlands and any hindrance to the effective enjoyment of their rights. This, however, would have led to the highly unsatisfactory result that—were other courts in other countries to take the same approach—no obligation could ever be imposed on any State to address a critical problem whose importance all States have recognized.

As exposed above, both courts in *Urgenda* took a different approach, recognizing that the government of the Netherlands had to reduce the country’s GHG emissions as a matter of legal obligation and that *Urgenda* had a right to claim the performance of this obligation. The following discusses three key stages of the reasoning of the two courts, namely in relation to the conditions for standing (section 3.1), the existence of an obligation of the State to mitigate climate change (section 3.2), and the ambit of this obligation (section 3.3).

3.1. Standing for the Impacts of Climate Change

A first issue relates to the discrepancy between the scope of the case brought by *Urgenda* and the scope of climate change. Climate change is a global phenomenon, most consequences of which will take decades or even centuries to unfold and almost never materialize directly in

http://unfccc.int/files/national_reports/biennial_reports_and_iar/submitted_biennial_reports/application/pdf/625803941_netherlands-br3-1-the_netherlands_third_biennial_report_under_the_unfccc.pdf, at 67-68.

⁵⁶ The Netherlands, *Third Biennial Report* (n **Error! Bookmark not defined.**) at 85, noting that GHG emissions in 2020 could range from 163 to 181 MT CO₂-eq (90% reliability interval). This corresponds to a reduction from 19 to 17%. All data are without LULUCF.

⁵⁷ UNFCCC, *Report on the technical review* (n **Error! Bookmark not defined.**) para 88

distinct individual harm. By contrast, any litigation is confined to the rights and obligations of the parties to the dispute. This makes it remarkably difficult to bring to courts questions regarding the impacts of climate change. Framing a climate case in broad terms raises questions of standing, but framing it too narrowly may exacerbate the difficulty of establishing the urgency of action on climate change mitigation.

Urgenda attempted to frame the case broadly. It claimed to represent the interest of present and future generations in the Netherlands and abroad.⁵⁸ The State contested Urgenda's standing inasmuch as it related to present or future populations abroad,⁵⁹ and it was not clear whether the State accepted the claim of Urgenda to stand for future generations in the Netherlands.⁶⁰ Yet, both courts accepted that Urgenda had standing at least with regard to present generations living in the Netherlands. Both courts also stated that, as a matter of standing, they did not need to decide on additional, contested grounds.⁶¹

The State argued that Urgenda did not have sufficient interests in the impacts of mitigation efforts by the Netherlands. It is undeniable that, as the Netherlands emit less than 0.5% of global GHG emissions,⁶² which as a whole interfere with the climate system, any effort by the Netherlands to decrease its GHG emissions, even drastically, is unlikely to have any direct and measurable impact on the wellbeing of Dutch nationals or, indeed, anyone else. DC eluded this question. It highlighted that "the possibility of damages for those whose interests Urgenda represents, including current and future generations of Dutch nationals, is ... great and concrete,"⁶³ as if ignoring that imposing additional efforts on the State would make no significant difference.

By contrast, CA admitted that Urgenda could have standing even if only on the basis of "idealistic interests ... that people want to advocate out of a particular conviction."⁶⁴ This approach is certainly more convincing than trying to relate individual harms to the broad, systemic impact of climate change. This category of "idealistic interests" could extend beyond the social impacts of climate change—to which the *Urgenda* case is mostly confined—to include considerations for the widespread impacts of climate change on cultural and ecological values.

3.2. The Legal Obligation of the State to Mitigate Climate Change

Another question raised in *Urgenda* regards the existence of an obligation for a State to mitigate climate change under domestic law. The two judgments illustrate the availability of various legal bases for essentially similar arguments: while DC based its judgment on the doctrine of hazardous negligence,⁶⁵ CA focused on the obligation of the Netherlands to protect the rights to life and to family life under Articles 2 and 8 ECHR.⁶⁶ Urgenda invoked other grounds, such

⁵⁸ DC (n 1) para 3.3.

⁵⁹ Ibid. para. 3.3.

⁶⁰ See DC (n 1) para. 4.5, noting that the State "defers to the court's opinion" on the question; but see also CA (n 5) para. 37, according to which "the State argued, as understood by the Court, that Urgenda cannot act on behalf of future generations of Dutch nationals."

⁶¹ See DC (n 1) para. 4.92; CA (n 5) para. 37.

⁶² In 2010, about 0.42% of global GHG emissions took place in the Netherlands, according to the Emissions Database for Global Atmospheric Research (EDGAR), cited in DC (n 1) para. 2.27.

⁶³ DC (n 1) para. 4.89.

⁶⁴ CA (n 5), para. 38, citing the legislative history behind Book 3, section 305a of the Dutch Civil Code.

⁶⁵ See above note 34.

⁶⁶ See above note 46.

as article 21 of the Constitution of the Netherlands and the international obligations of the Netherlands under climate treaties and the no-harm principle,⁶⁷ although DC considered that, under Dutch law, Urgenda did not have the right to claim the performance of these obligations. Lastly, Urgenda invoked a provision of the Dutch civil code on the prohibition of nuisance, which DC did not have to assess, having established a duty of care on another ground.⁶⁸

Climate change is an environmental issue with far-reaching consequences for planetary systems,⁶⁹ ecosystems and biological diversity,⁷⁰ at least as much as it is a human rights issue⁷¹ or a cultural law issue.⁷² As such, the general obligation of a State to mitigate climate change can most solidly be based on the no-harm principle,⁷³ but also, less directly, to a range of alternative rules of international law which relate for instance to the protection of biological diversity,⁷⁴ the marine environment,⁷⁵ the world cultural heritage,⁷⁶ or human rights,⁷⁷ among others. Yet, opportunities for adjudication on the basis of these rules are often lacking, especially in environmental law. By contrast to most other fields, human rights law offers a high potential for adjudication by defining individual rights in the performance of State obligations and by establishing supranational courts and other institutions with a mandate to adjudicate disputes or, at least, interpret these rights. CA's judgment certainly contributed to a "rights turn"⁷⁸ in climate adjudication by basing its approach of the case not on tort law, but on human rights law.

The State, however, had a number of objections to the determination that it had an obligation to mitigate climate change, whether under the doctrine of hazardous negligence or under human rights law. The first objection relates to the integration of the Netherlands in the EU, and in particular to the EU Emissions Trading Scheme. The second objection regards the more fundamental question of the loose causal link between emission reduction in the Netherlands and the impacts of climate change.

First objection: market integration and the waterbed effect

⁶⁷ DC (n 1) paras 4.36 and 4.38-39.

⁶⁸ Ibid. para. 4.51.

⁶⁹ IPCC, *Climate Change 2014: Synthesis Report* (WMO and UNEP 2014) at 40-44, 60-62.

⁷⁰ Ibid at 67.

⁷¹ Ibid at 67-73. See also Alan Boyle, "Climate Change, the Paris Agreement and Human Rights" (2018) 67(4) *International & Comparative Law Quarterly* 759-777; Benoit Mayer, "Human Rights in the Paris Agreement" (2016) 6 *Climate Law* 109-117.

⁷² See e.g. Lena Reimann et al., "Mediterranean UNESCO World Heritage at risk from coastal flooding and erosion due to sea-level rise" (2018) 9 *Nature Communication* 4161.

⁷³ See Benoit Mayer, *The International Law on Climate Change* (Cambridge University Press, 2018); Benoit Mayer, "The Relevance of the No-Harm Principle" (n 26). See also *Rio Declaration on Environment and Development* (13 June 1992) UN Doc. A/CONF.151/26 (vol. I), 31 ILM 874 (1992), principle 2; ICJ, *The Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion of 8 July 1996, ICJ Reports 1996, p. 226, para. 29.

⁷⁴ See for instance, generally, *Convention on Biological Diversity* (adopted 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79.

⁷⁵ See *United Nations Convention on the Law of the Sea* (adopted 10 December 1982; entered into force 16 November 1994) 1833 UNTS 3, art. 192.

⁷⁶ See *Convention Concerning the Protection of the World Cultural and Natural Heritage* (adopted 23 November 1972, entered into force 15 December 1975) 1037 UNTS 151, art. 4.

⁷⁷ See in particular *International Covenant on Economic, Social and Cultural Rights* (adopted 16 December 1966, entered into force 3 January 1976) 993 UNTS 3, art. 2; *International Covenant on Civil and Political Rights* (adopted 16 December 1966, entered into force 23 March 1976) art. 2.

⁷⁸ See Jacqueline Peel and Hari M. Osofsky, "A Rights Turn in Climate Change Litigation?" (2018) 7(1) *Transnational Environmental Law* 37-67.

The State argued that EU legislation prevented it from taking additional measures to mitigate climate change.⁷⁹ The basis for the establishment of the EU ETS in 2005 lies in the Treaty on the Functioning of the European Union, which gives mandate to the European Parliament and the Council to decide actions to be taken on environmental protection.⁸⁰ The same treaty provides clearly that this does not prevent Member States from adopting more stringent protective measures compatible with EU Treaties.⁸¹ Thus, as CA noted, EU climate law is without prejudice of the right of the Netherlands to take more stringent measures on climate change mitigation.⁸²

A more interesting argument of the State regarded the effectivity of mitigation action in relation to activities covered by a transnational market-based mechanism. The State submitted that additional emission reduction in the Netherlands within the scope of the EU ETS would liberate emission allowances, which would be traded to other parts of the ETS, resulting in no net EU-wide emission reduction. In other words, emission reductions in the Netherlands would be balanced by increases (or less reduction) in other parts of the EU—a phenomenon sometimes referred to as the “waterbed effect.”⁸³

However, this argument is limited to those emissions in the Netherlands which fall within the scope of the EU ETS. Moreover, this argument assumes that the ETS operates like a natural market, whereas, to the contrary, public authorities have frequently had to intervene to regulate the “market price” of emission allowances,⁸⁴ and a mechanism for such intervention has been institutionalized.⁸⁵ On the short-term, a surplus in emission allowances could be balanced by the cancellation of emission allowances, while, on a longer term, less demand for emission allowances would facilitate the decision to issue fewer emission allowances in future trading periods. Thus, both courts justly rejected the objection of the State based on the waterbed effect.⁸⁶

Second objection: the drop-in-the-ocean problem

A second objection, which extends far beyond the scope of a regional organization or that of a carbon market, lies at the very core of climate law. The State justly contended that it could not possibly solve the problem of climate change on its own,⁸⁷ as the share of the Netherlands in global GHG emissions is small.⁸⁸ The lack of causal link between emission reduction in the Netherlands and the impact of climate change could be invoked in relation to any legal basis

⁷⁹ DC (n 1), para. 4.80; CA (n 5), para 54.

⁸⁰ *Treaty on the Functioning of the European Union*, consolidated version, OJ C 326, p. 47-390 (26 October 2012) (TFEU) art. 192.

⁸¹ *Ibid* art. 193.

⁸² CA (n 5), para 54. See also DC (n 1), para. 4.80.

⁸³ DC (n 1), para. 4.81; CA (n 5) para. 55.

⁸⁴ See for instance *Commission Regulation (EU) No 1210/2011 of 23 November 2011 amending Regulation (EU) No 1031/2010 in particular to determine the volume of greenhouse gas emission allowances to be auctioned prior to 2013*, OJ L 56, p. 11-13.

⁸⁵ *Decision (EU) 2015/1814 of the European Parliament and of the Council of 6 October 2015 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and amending Directive 2003/87/EC*, OJ L 264, p. 1-5. See CA (n 5), para. 56.

⁸⁶ DC (n 1), para. 4.81; CA (n 5), para. 56. On a confusion between the waterbed effect and the question of carbon leakage in DC’s judgment, see Marjan Peeters, “Urgenda Foundation and 886 Individuals v. The State of the Netherlands: The Dilemma of More Ambitious Greenhouse Gas Reduction Action by EU Member States” (2016) 25(1) *Review of European Community and International Environmental Law* 123-129 at 126.

⁸⁷ CA (n 5), para. 61.

⁸⁸ See above note 62.

of a general nature: the duty of care to avert the imminent danger of climate law,⁸⁹ the positive obligation of the State to protect the right to life and to family life under Articles 2 and 8 ECHR,⁹⁰ or, indeed, the no-harm principle.⁹¹ Every State (but for the few largest ones) contributes only marginally to global GHG emissions; its efforts to reduce its emissions is a drop in the ocean.⁹²

Both courts rejected this objection. CA, in particular, held that the small contribution of the Netherlands to global GHG emissions “does not release the State from its obligation to take measures in its territory, within its capabilities, which in concert with the efforts of other states provide protection from the hazards of dangerous climate change.”⁹³ Yet, neither of the two courts gave a complete justification for their finding.

DC noted, rather confusedly, that “any anthropogenic greenhouse gas emission, no matter how minor, contributes to an increase of CO₂ levels in the atmosphere and therefore to hazardous climate change.”⁹⁴ This led commentators to note that DC’s reasoning was “questionable from a legal perspective.”⁹⁵ Most legal obligations only apply beyond a *de minimis* threshold, most obviously in relation to the obligation for a State to “use all the means at its disposal in order to avoid activities ... causing *significant* damage to the environment of another State.”⁹⁶

By contrast, CA made two brief attempts at providing a justification for its rejection of the objection. Firstly, CA built up on the precautionary principle, according to which, as phrased in the Rio Declaration on Environment and Development, “lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation [...] where there are threats of serious or irreversible damage.”⁹⁷ In CA’s view, the State had to take into account the risk that, “due to a ‘tipping point’ for instance, the situation could become much worse than currently envisioned.”⁹⁸ Thus, CA appeared to allude to the risk of a runaway climate change triggered by powerful positive feedback, for instance methane emissions from the melting of the permafrost.

This argument does not hold water because it fails to address the problem of the drop in the ocean: even the most drastic emission reduction efforts in the Netherlands are unlikely to prevent the triggering of a tipping point if other States do not also reduce their GHG emissions.

⁸⁹ DC (n 1), para. 4.78 and 4.90.

⁹⁰ CA (n 5), para. 61.

⁹¹ See Alexander Zahar, “The Contested Core of Climate Law” (2018) 8(3-4) *Climate Law* (forthcoming).

⁹² A related objection, also raised by the State, regards the risk of carbon leakage. See DC (n 1), para. 4.81; CA (n 5), para. 57.

⁹³ CA (n 5), para. 62. See also DC (n 1), para. 4.79.

⁹⁴ DC (n 1), para. 4.79.

⁹⁵ K.J. de Graaaf and J.H. Jans, “The Urgenda Decisions: Netherlands Liable for Role in Causing Dangerous Global Climate Change” (2015) 27 *Journal of Environmental Law* 517-527, at 527. See also at 79, Jolene 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(1) *Climate Law* 65-81 at 79 noting that “the court did not set out its reasoning on this point.”

⁹⁶ *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, I.C.J. Reports 2010, p. 14, para. 101; cited in *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, Judgment, I.C.J. Reports 2015, p. 665, para. 118. See also *Trail Smelter (U.S. v. Canada)*, Arbitral Award of 11 March 1941 (1949) III UNRIIAA 1938, at 1965 (confining the application of the no-harm principle to situations “when the case is of serious consequence”).

⁹⁷ *Rio Declaration on Environment and Development* (n 73) principle 15. It is noteworthy that the Rio Declaration mentions a precautionary “approach” rather than a principle.

⁹⁸ CA (n 5), para. 63.

Measures to reduce GHG emissions in the Netherlands will not be “cost-effective ... to prevent environmental degradation,” in the sense of the Rio Declaration, because, taken in isolation, they will be ineffective. And even if these measures were of some marginal effectivity, they would probably not be “cost-effective” in protecting the rights of current and future generation of Dutch citizens. When considering its human rights obligation in isolation from the conduct of other States, it may be far more cost-effective for the Netherlands to focus on adaptation or development rather than on climate change mitigation.

The second justification sketched by CA is by far the more convincing one because it genuinely seeks to address the problem of the drop-in-the-ocean. If the objection of the State was to be allowed, CA pointed, “each state held accountable would then be able to argue that it does not have to take measures if other states do not [do] so either.”⁹⁹ As CA noted, “[t]hat is a consequence that cannot be accepted.”¹⁰⁰ Unfortunately, CA refrained from spelling out the alternative principle in a general way.

The maxim to which CA hints is not limited to climate change, to States, or to law; rather, it is an essential feature of any normative system. It is by following the same maxim that States apply international law (most of the time) and that we do not litter (most of the time). An authoritative phrasing of this maxim, the first formulation of Immanuel Kant’s categorical imperative, reads as follows: “Act only on that maxim whereby thou canst at the same time will that it should become a universal law.”¹⁰¹ CA seems to imply, justly, that each and every State should act in a way which, in a sound and reasonable assessment, would avert dangerous climate change if only other States were to act following the same maxim. In a world where opportunities for the enforcement of international law obligations remain scarce, no effort to mitigate climate change can be successful if this rule is disregarded.¹⁰² This maxim is law not because it is written in any particular code or established through any particular case, but by mere necessity.

3.3. The Ambit of the Obligation

Arguably the thorniest issue in the *Urgenda* case—and in many climate cases—was the determination of the ambit of the obligation of the Netherlands to reduce its GHG emissions.¹⁰³ The question involves a political arbitrage between various values and interests, for instance between immediate economic benefits and deferred impact on human welfare. The question is often addressed—though it does not *have* to be—by determining first a global objective, then the contribution that a State must make to achieving it.¹⁰⁴ In addressing this question, a judge must, in addition, assess the degree of deference owed to elected branches of the Government.¹⁰⁵ To assess whether the State was doing enough to reduce GHG emissions in the

⁹⁹ CA (n 5), para. 64.

¹⁰⁰ Ibid. para. 64.

¹⁰¹ Immanuel Kant, *Fundamental Principles of the Metaphysic of Morals* (Thomas Kingsmill Abbott transl., 1785), available at <http://www.gutenberg.org/cache/epub/5682/pg5682-images.html>, section 2.

¹⁰² While necessary, compliance with this rule may not be sufficient, given profound disagreements regarding the grounds for differentiation. If developed States sincerely believe that developing States should do more than developing States sincerely believe, for instance, there will remain a gap in mitigation action.

¹⁰³ See for instance Josephine van Zeben, “Establishing a Governmental Duty of Care for Climate Change Mitigation: Will *Urgenda* Turn the Tide?” (2015) 4(2) *Transnational Environmental Law* 33-357 at 344.

¹⁰⁴ See for instance *Paris Agreement* (n 16) arts. 2.1 and 3. See generally Benoit Mayer, “Construing International Climate Change Law as a Compliance Regime” (2018) 7(1) *Transnational Environmental Law* 115-137; Benoit Mayer, *The International Law on Climate Change* (Cambridge University Press, 2018), chapter 13.

¹⁰⁵ See DC (n 1) para. 102; CA (n 5) para. 69.

Netherlands and what target, if any, should be imposed onto it, the courts interpreted scientific information, ethical criteria for differentiation, and, overall, some statements made by the Government of the Netherlands itself.

Climate science

To determine the appropriate national target that could be imposed onto the State, both courts relied heavily on scientific research on climate change, in particular on synthesis of economic studies. The starting point was the IPCC's AR4, and in particular the contribution of WG3 on the mitigation of climate change, published in 2007.¹⁰⁶ Firstly, WG3's contribution to AR4 was taken as the main authority to establish the need to hold the increase in global average temperature below 2°C above pre-industrial levels ("2°C target"),¹⁰⁷ an objective which had apparently been acknowledged by Urgenda and the Dutch government during the dispute.¹⁰⁸ Secondly, WG3's contribution to AR4 was also taken as evidence of the need to stabilize GHG concentrations in the atmosphere at a level of about 450 ppm CO₂-eq by the end of the 21st Century in order to achieve the 2°C target ("450 scenario").¹⁰⁹ Lastly, WG3's contribution to AR4 was interpreted as establishing that this 450 scenario requires Annex I Parties to reduce their GHG emissions by at least 25%, and possibly as much as 40%, by 2020, compared with 1990 ("Annex I's 25-40% emission reduction target").¹¹⁰

In relying on WG3's contribution to AR4 as evidence of the 2°C target, of the 450 scenario and of Annex I's 25-40% emission reduction target, the courts gave to scientists an authority which they do not have.¹¹¹ Climate science, including economics, provides the most reliable estimates of the consequences of different choices, but climate science cannot determine what the objective should be: value-based judgments are indispensable, based on scientific knowledge, to determine what societies should seek to achieve.¹¹² Contrary to observations by both courts,¹¹³ AR4 did not adopt the 2°C target; political processes informed by AR4 did.¹¹⁴ Likewise, the two courts overstated scientific evidence presented in AR4 that the 450 scenario was necessary to achieve the 2°C target: the 450 scenario was merely mentioned in a bracket in chapter 3 of the WG3 contribution as a "best estimate."¹¹⁵ And while chapter 13 of the same contribution suggests that that the Annex I's 25-40% emission reduction target would be

¹⁰⁶ IPCC, *Climate Change 2014: Mitigation of Climate Change. Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press, 2014).

¹⁰⁷ DC (n 1), para 4.14; CA (n 5), para. 12.

¹⁰⁸ See CA (n 5), para. 44.

¹⁰⁹ See DC (n 1), para 4.20; CA (n 5), para. 12.

¹¹⁰ See DC (n 1), para 4.23 (with a mistake in the translation: the original version of the judgment mentions a rate of 25%-40%, not 20%-40%); CA (n 5), para. 12.

¹¹¹ See generally Mike Hulme, *Why We Disagree about Climate Change: Understanding Controversy, Inaction and Opportunity* (Cambridge University Press, 2009).

¹¹² See David Hume, *A Treatise of Human Nature* (Clarendon Press, 1896), book III, part I, section I, noting that a normative conclusion cannot be inferred from purely factual premises; it must be deduced from a normative premise.

¹¹³ See n 107

¹¹⁴ See IPCC, *WG3's Contribution to AR4* (n 30), for instance at 769, refraining to take a position when noting the "option ... to set a goal for long-term GHG concentrations or maximal temperature rise (such as the 2°C goal proposed by the EU)." This approach is consistent with IPCC, *Principles Governing IPCC Work* (approved 1-3 October 1998, last updated 14-18 October 2013) available at <http://www.ipcc.ch/pdf/ipcc-principles/ipcc-principles.pdf>, para. 2, according to which IPCC reports should be neutral with respect to policy." See also Samuel Randalls, "History of the 2°C climate target" (2010) 1(4) *WIREs Climate Change* 598-605; Reto Knutti et al., "A scientific critique of the two-degree climate change target" (2016) 9 *Nature Geoscience* 13-18.

¹¹⁵ Brian Fisher et al., "Issues related to mitigation in the long-term context" in IPCC, *WG3's Contribution to AR4* (n 30) 169, at 227.

required to achieve the 450 scenario,¹¹⁶ another section of the same chapter only asserts that the 2°C target would require emission reduction by 10%-40% in Annex I countries within the same time frame¹¹⁷—an inconsistency which reflects the great level of uncertainty regarding the emission reduction pathways compatible with the 2°C target.¹¹⁸ DC spectacularly eluded all of these limitations when it called Annex I’s 25-40% reduction target “scientifically proven.”¹¹⁹

Courts ought to build on the latest authoritative scientific evidence—especially in a field as dynamic as climate science and economics. WG3’s contribution to AR4 was published more than 10 years before the CA’s decision. While the IPCC’s Special Report on “Global Warming of 1.5°C” was not available to the courts,¹²⁰ they could have built on WG3’s contribution to the Fifth Assessment Report of the IPCC (AR5), published in 2014, which provided more advanced estimates of the mitigation scenarios consistent with a 2°C target. WG3’s contribution to AR5 concluded with high confidence that, while a 450 scenario is “*likely*” (which suggests more than 66% chance) to hold temperatures below 2°C, scenarios reaching 500 ppm CO₂-eq in 2100 (“500 scenarios”) are also “*more likely than not* to limit temperature change to less than 2°C.”¹²¹ Though both courts noted this finding,¹²² on which the State tried to rely in its defence,¹²³ the courts maintained nonetheless, oddly, that a “450 scenario,” rather than a “500 scenario,” was required to pursue the 2°C target.

A valid ground for this could have been that States need to pursue scenarios that imply at least 66% chance of achieving the 2°C target. Yet, neither court discussed the level of certainty which should be associated with efforts towards the 2°C target. Instead, DC contended that AR5 shows “a strong preference for the 450 scenario, as the risks are much higher with a 500 scenario.”¹²⁴ Yet, it is not sure how this “strong preference” was expressed—such an expression would likely be inconsistent with the principle of policy neutrality that guides the work of the IPCC.¹²⁵ It is also unclear how this preference could be established based on science alone: as climate risks are always lower with a more ambitious scenario, scientists would certainly prefer a 400 scenario even more. The 450 scenario inevitably involves a political arbitrage between climate change mitigation and its costs, an arbitrage which cannot be based only on science.

Going even further than DC, CA entered the scientific arena to question the reliability of WG3’s contribution to AR5. CA first noted that most mitigation scenarios presented in AR5 are based on the use of Negative Emissions Technologies (NETs)¹²⁶—a concept which refers to a broad range of technologies that would remove large quantities of CO₂ from the air, for

¹¹⁶ Sujata Gupta et al., “Policies, Instruments and Co-operative Arrangements” in IPCC, *WG3’s Contribution to AR4* (n 30) 745, at 776.

¹¹⁷ Ibid. at 748. This range was reported in Terry Barker et al., “Technical Summary” in IPCC, *WG3’s Contribution to AR4* (n 30) 25 at 90.

¹¹⁸ See also Leon Clarke et al., “Assessing Transformation Pathways” in IPCC, *WG3’s Contribution to AR5* (n 106) 413 at 433, noting clearly that “a considerable range of 2020 and 2030 emissions can be consistent with specific long-term goals.”

¹¹⁹ DC (n 1) para 4.85.

¹²⁰ IPCC, *Global Warming of 1.5 °C* (October 2018), available at <http://www.ipcc.ch/report/sr15/>.

¹²¹ Ottmar Edenhofer et al., “Summary for Policymakers” in IPCC, *WG3’s Contribution to AR5* (n 106) 1 at 10 (emphasis added), cited in first instance judgment para 2.19.

¹²² CA (n 5), para 12.

¹²³ See DC (n 1), para 4.21; CA (n 5), para 49.

¹²⁴ See in particular DC (n 1), para 4.22.

¹²⁵ See IPCC, *Principles Governing IPCC Work* (n 114) para. 2.

¹²⁶ CA (n 5), paras 12 and 49.

instance a combination of bioenergy and carbon capture and storage.¹²⁷ CA then cited a report by the European Academies Science Advisory Council which suggests that NETs “offer only limited realistic potential to remove carbon from the atmosphere and not at the scale envisaged in *some* climate scenarios.”¹²⁸ On this basis, CA concluded that AR5’s mitigation scenarios “*might* thus have painted too rosy a picture,”¹²⁹ and denied their relevance.

In doing so, CA did not assess the scientific authority of the report by the European Academies Science Advisory Council, nor did it draw any conclusion from the highly speculative phrasing of its own conclusion (“*might*”). Anecdotally, CA ignored the fact that AR4 had also recognized the essential role of NET in achieving a 450 scenario.¹³⁰ It is inevitable for an emission reduction pathway to rely on a number of assumptions, including assumptions on technological development.¹³¹ Even if some of these assumptions are highly speculative and many are the object of continuing debate, the IPCC’s Assessment Reports aim to establish best estimates from a general understanding of the scientific community.¹³² The findings of such reports should not be discarded absent strong and convincing evidence that, on a particular point, the report does not reflect the best scientific knowledge.

As such, it was certainly not appropriate for CA to reject the conclusions of the IPCC’s most recent Assessment Report on the basis of a single sceptical publication. It would have been preferable for CA to conduct a comprehensive review of the recent scientific literature on emission reduction pathways in order to assess whether the mitigation scenarios presented in WG3’s contribution to AR5 fail to represent the best scientific knowledge. Alternatively, and perhaps more realistically given resource constraints both for the Court and for the Parties themselves, CA could have noted the high level of international recognition of the IPCC and placed a very high burden of proof on any Party willing to challenge the conclusions of the IPCC’s latest Assessment Report.

Based on AR5, the objective of achieving the 2°C target does not seem to justify a 450 scenario, unless one considers that the scenario in question should be “likely” (as opposed to “more likely than not”) to achieve the target.¹³³ Yet, the need to pursue a 450 scenario could have been argued in the light of the objective, already recognized at the outset of the dispute in a number of COP decisions (and subsequently integrated in the Paris Agreement), of holding the

¹²⁷ Leon Clarke et al., “Assessing Transformation Pathways” in IPCC, *WG3’s Contribution to AR5* (n 106) 413 at 485-486.

¹²⁸ European Academies Science Advisory Council, *Negative emission technologies: What role in meeting Paris Agreement targets?* (EASAC policy report 35, February 2018), available at https://easac.eu/fileadmin/PDF_s/reports_statements/Negative_Carbon/EASAC_Report_on_Negative_Emission_Technologies.pdf, at 1 (emphasis added), cited in CA (n 5) para 49. The Report concludes: “Scenarios and projections of NET’s future contribution to CDR that allow Paris targets to be met thus appear optimistic on the basis of current knowledge and should not form the basis of developing, analysing and comparing scenarios of longer-term energy pathways for the European Union (EU).”

¹²⁹ CA (n 5), para 49 (emphasis added).

¹³⁰ Brian Fisher et al. (n 115) at 198.

¹³¹ This was reflected for instance in *ibid.* at 172: “long-term stabilization scenarios highlight the importance of technology improvement, advanced technologies, learning-by-doing, and induced technological change, both for achieving the stabilization targets and cost reduction.”

¹³² See generally IPCC, *Principles Governing IPCC Work* (n 114) para. 2.

¹³³ See Jesse Lambrecht and Claudia Ituarte-Lima, “Legal innovation in national courts for planetary challenges: *Urgenda v State of the Netherlands*” (2016) 18(1) *Environmental Law Review* 57 at 62, suggesting that even a 66% chance of achieving the 2°C target may not be sufficient. A complementary consideration would be the ability of States to react, further down the road, if realizing that a particular amount of GHG emissions have a greater impact on the climate system than first estimated.

increase in the global average temperature “*below 2°C*,” leaning towards 1.5°C.¹³⁴ On the other hand, as GHG concentrations in the atmosphere are in all likelihood *already* above 450 ppm CO₂-eq,¹³⁵ and even though most emission pathways compatible with the 450 scenario involve a temporary overshoot,¹³⁶ the question needs at least to be asked whether achieving a 450 scenario remains even possible—especially if one follows CA in its dismissal of NETs.

Altogether, science offers much weaker support to Urgenda’s claim that the Netherlands *had* to achieve at least 25% emission reduction by 2020 than the DC and CA appeared to accept.¹³⁷ Beside the mention of Annex I’s 25-40% emission reduction target as the most cost-effective mitigation scenario¹³⁸ emphasized by the two courts, AR4 details at length the uncertainty regarding, among others, the timing of emissions reduction¹³⁹ and their cost¹⁴⁰—and so does AR5.¹⁴¹ More, or less, might be needed, and more, or less, might be realistically achievable, from Annex I in general—and from the Netherlands in particular.

Grounds for differentiation

Determining the emission reduction target of a State based on a collective mitigation objective requires a determination of the contribution that this State must make to collective efforts towards the realization of this objective. The Parties to climate treaties, including the Netherlands, have recognized a principle of common differentiated responsibilities and respective capabilities and have agreed that developed States “should take the lead in combating climate change.”¹⁴² Beyond this, however, there has been little agreement regarding the criteria and scope of differentiation.¹⁴³ Even though there is a general consensus in climate politics that developed States have to do more than developing ones, there is no common

¹³⁴ See e.g. decision 1/CP.16, “The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention” (10-11 December 2010) UN Doc. FCCC/CP/2010/7/Add.1, para. 4; decision 1/CP.20, “Lima Call for Climate Action” (14 December 2014) UN Doc. FCCC/CP/2014/10/Add.1, 7th recital. See also *Paris Agreement* (n 16) art. 2.1(a) (which adds “*well below 2°C*” (emphasis added)).

¹³⁵ See European Environment Agency, “Atmospheric greenhouse gas concentrations” (31 January 2018), available at <https://www.eea.europa.eu/data-and-maps/indicators/atmospheric-greenhouse-gas-concentrations-10/assessment>, indicating 444 ppm CO₂-eq in 2015 with an increase of around 4 ppm CO₂-eq per year, thus suggesting that the threshold of 450 ppm CO₂-eq was passed around 2017.

¹³⁶ See Ottmar Edenhofer et al., “Technical Summary” in IPCC, *WG3’s Contribution to AR5* (n 106) 33 at 52; Sujata Gupta et al. (n 116) at 776 (n 30).

¹³⁷ See in particular DC (n 1) para. 3.2, where Urgenda is reported to argue that a 2020 emission reduction target of 25% (1990 basis) in the Netherlands “is not only necessary to continue to have a prospect of a limitation of global warming of up to (less than) 2°C, but is furthermore the most cost-effective.” This statement is internally inconsistent: the target is either necessary (which means that there is no alternative way to achieve the 2°C target), or it is the most cost-effective one (which implies that there are alternative ways to achieve the 2°C target). In reality, no reduction whatsoever in the Netherlands is properly “necessary” to achieving a global temperature objective as the contribution of the Netherlands is rather negligible.

¹³⁸ Sujata Gupta et al. (n 116) at 776.

¹³⁹ See e.g. Brian Fisher et al. (n 115) at 197-200.

¹⁴⁰ See e.g. *Ibid* 203-206.

¹⁴¹ See Leon Clarke et al. (n 118) at 433-434 (on timing) and 448-462 (on costs).

¹⁴² *UNFCCC* (n 26) art. 3(1). See also *Paris Agreement* (n 16) art. 2(2).

¹⁴³ See e.g. Lavanya Rajamani, “Common but differentiated responsibilities” in Michael Faure (ed), *Elgar Encyclopedia of Environmental Law* (Edward Elgar, 2018) 291-302; Philippe Cullet, “Common but Differentiated Responsibilities” in Malgosia Fitzmaurice, David M. Ong and Panos Merkouris (eds), *Research Handbook on International Environmental Law* (Edward Elgar, 2010) 161-181.

understanding of how much more they ought to do and how this ought to be distributed among them.¹⁴⁴

As far as the differentiation between Annex I and non-Annex I countries was concerned, both courts appeared reluctant to interpret the CDDRRC principle.¹⁴⁵ Yet, an interpretation of the CDDRRC principle necessarily underlies Annex I's 25-40% emission reduction target on which the judgments are based.¹⁴⁶ For instance, neither courts discussed the “equity interpretations”¹⁴⁷ on which WG3 had relied in AR4 to suggest that Annex I countries would most likely need decrease their GHG emissions by 10-40% by 2020 (1990 basis) in order to achieve 2°C target. DC simply noted that this target was necessary to achieve the 2°C “with due regard for a fair distribution.”¹⁴⁸

The modalities of differentiation had nevertheless to be discussed when the courts turned to discuss what Annex I's 25-40% emission reduction target meant for the Netherlands. In this regard, both courts interpreted the situation of the Netherlands as requiring at least as much as the Annex I average country. CA thus noted that the Netherlands had to “assume its responsibility”¹⁴⁹ given its higher-than-average per capita GDP¹⁵⁰ and per capita GHG emissions¹⁵¹—all the more so because it had “profited from fossil fuels for a long time.”¹⁵² DC also mentioned the need to consider “the onerousness of taking precautionary measures”¹⁵³ in the Netherlands, noting that the burden of proof would have been for the State to establish that it had “insufficient financial means to realize higher reduction measures.”¹⁵⁴

While most oft-heard considerations for differentiation were mentioned, none was discussed in any length, and the reader of the judgments is likely to find the approach of differentiation by the courts somewhat expeditious. If the Netherlands has greater responsibility and greater capacity than most Annex I countries, as both courts suggested, and assuming an uncontested need for *at least* 25% emission reduction in Annex I countries as a whole, thorough consideration should have been given to the possibility for DC to impose a target higher than 25% emission reduction. Instead, DC noted, perhaps too swiftly, that it saw “insufficient grounds to compel the State to adopt a higher level” of ambition,¹⁵⁵ while the question was not brought up to CA.¹⁵⁶

¹⁴⁴ Comp. Patrícia Galvão Ferreira, “‘Common But Differentiated Responsibilities’ in the National Courts: Lessons from *Urgenda v. The Netherlands*” (2016) 5(2) *Transnational Environmental Law* 329-351, which emphasizes the consensus more than its limitations.

¹⁴⁵ The principle is not even formally cited by CA. See CA (n 5), para 8, for the closest allusion to equity, responsibilities and capacities. In DC's judgment, the principle is only mentioned in the section on “facts,” not in the section on their “assessment,” although, arguably, its “spirit” is present. See Jesse Lambrecht and Claudia Ituarte-Lima, “Legal innovation in national courts for planetary challenges: *Urgenda v State of the Netherlands*” (2016) 18(1) *Environmental Law Review* 57 at 63.

¹⁴⁶ See Ferreira (n 144).

¹⁴⁷ Terry Barker et al. (n 117) at 90.

¹⁴⁸ DC (n 1), para. 4.23.

¹⁴⁹ CA (n 5), para 66.

¹⁵⁰ Ibid. para 60.

¹⁵¹ Ibid. paras 26, 44, 60 and 66

¹⁵² Ibid. para 66. See also DC (n 1), para 4.57.

¹⁵³ DC (n 1), para. 4.63. See also *ibid.* para. 4.67 et sq. DC thus alluded to a range of geographical and economic circumstances which may hinder or facilitate climate change mitigation in the country, for instance the potential for producing renewable energy.

¹⁵⁴ CA (n 5), para 4.77.

¹⁵⁵ DC (n 1), 4.86.

¹⁵⁶ See n 50.

Statements made on behalf of the Netherlands

Beside science and principles of fairness, the courts also relied on the statements made on behalf of the government of the Netherlands as a way to determine the ambit of its obligation on climate change mitigation. In a policy on climate change communicated in 2007, the Government had expressed the objective of 30% emission reduction by 2020 (1990 basis).¹⁵⁷ This target was abandoned following, it seems, the growing understanding that neither Annex I countries as a whole, nor even the EU, would unconditionally commit to a 30% emission target. The Netherlands had also actively supported an international target of 25-40% emission reduction in Annex I countries by 2020 (1990 basis) during international negotiations, in particular at the 2009 Copenhagen summit, as essential in order “to stay on credible track to keep the 2 degrees objective within reach.”¹⁵⁸

Both courts interpreted these developments as evidence that the Netherlands had once recognized both the need for a national target of 30% emission reduction by 2020 (1990 basis) and its ability to achieve it.¹⁵⁹ The courts highlighted that the State had provided no scientific justification for abandoning its 30% emission reduction target, or no economic justification for its inability to achieve this target.¹⁶⁰ Furthermore, the courts interpreted the EU’s conditional target of 30% emission reduction by 2020¹⁶¹ as evidence that the EU has also acknowledged the shortcoming of its current mitigation action.¹⁶²

This reasoning could have offered the strongest basis for the courts to determine the ambit of the obligation of the Netherlands to mitigate climate change. Admittedly, it is not clear whether the declarations made by the Netherlands in relation to their initial target were manifested with the will to be bound under international law,¹⁶³ as might be the case of Cancún Pledges or NDC, documents which were communicated to international institutions in a formal manner.¹⁶⁴ Nevertheless, having clearly admitted its responsibility, the Netherlands could not then deny the same without producing any sort of scientific or economic justification for its turnabout.¹⁶⁵ Interesting arguments could have been made in relation to the emerging principles of non-regression (in international environmental law) and progression (in climate law), whose central importance in relation to climate change mitigation was recognized in the Paris Agreement.¹⁶⁶

¹⁵⁷ Government of the Netherlands, *Nieuwe energie voor het klimaat* [New energy for the climate] (3 September 2007), available at <https://europadecentraal.nl/wp-content/uploads/2013/01/Werkprogramma-Schoon-en-Zuinig.pdf>, cited in DC (n 1), para. 2.71. See also DC (n 1), para 4.26; CA (n 5), para. 28.

¹⁵⁸ See a letter of the Minister of Housing, Spatial Planning and the Environment to the House of Representatives (12 October 2009), cited in CA (n 5), para. 19.

¹⁵⁹ CA (n 5), para 52. See also DC (n 1), para 4.29.

¹⁶⁰ See eg DC (n 1), paras 4.29, 4.70; CA (n 5), para 52.

¹⁶¹ See above note 15.

¹⁶² See CA (n 5), para. 52. See generally e.g. *Directive 2009/29* (n 20) 6th recital, stating that the European Council’s objective of a 30% emission reduction by 2020 was “scientifically necessary to avoid dangerous climate change.”

¹⁶³ See *Guiding Principles applicable to unilateral declarations of States capable of creating legal obligations* (adopted by the International Law Commission on 9 September 2006), in *Yearbook of the International Law Commission*, 2006, vol. II, part Two, principle 1. See also *Nuclear Tests (Australia v. France)*, Judgment of 20 December 1974, I.C.J. Reports 1974, pp. 267-8, paras. 43 and 46.

¹⁶⁴ See Benoit Mayer, *International Law Obligations Arising in relation to Nationally Determined Contributions* (2018) 7(2) *Transnational Environmental Law* 251.

¹⁶⁵ Such turnabout might constituted an estoppel in countries of common law tradition and even in international law. See e.g. Thomas Cottier and Jörg Paul Müller, “Estoppel” in *Max Planck Encyclopedia of Public International Law* (Oxford University Press, 2007).

¹⁶⁶ See *Paris Agreement* (n 16) arts 3 and 4.3. See generally Club des jurists, *Preliminary Draft of a Global Pact for the Environment* (24 June 2017), available at <http://pactenvironment.org/>, art. 17; Michel Prieur, “Non-

Instead, having put much emphasis on scientific assessments and some emphasis on grounds for differentiation, DC appeared to give only some marginal importance to such statements. It determined, without much justification, that the State had to achieve 25% emission reduction by 2020 (2020 basis), rather than the 30% emission reduction announced in past policy documents.¹⁶⁷ Regrettably, *Urgenda* did not bring up the question in its cross-appeal.¹⁶⁸

4. CONCLUSION

The two judgments in *Urgenda* are, to date, the only judgments which have imposed an emission reduction target on a State. Yet, they did not take place in isolation. Cases have been brought to courts in various countries, in particular in the United States, to determine the obligation of national authorities to mitigate climate change. In *Juliana v. the United States*, 21 individual plaintiffs and two NGOs allege that the US Government was violating its obligation under the public trust doctrine by its failure to commit sufficient efforts to the mitigation of climate change.¹⁶⁹ Public interest litigation focusing on the obligation of public authorities under the public trust doctrine is on-going in several US States, including Alaska,¹⁷⁰ Florida¹⁷¹ and Oregon,¹⁷² while cases have been dismissed in various other States.¹⁷³ Outside the United States, public interest litigation is also on-going against the government of Belgium,¹⁷⁴ India,¹⁷⁵

Regression in Environmental Law” (2012) 5(2) *Surveys and Perspectives Integrating Environment & Society* 53-56.

¹⁶⁷ See DC (n 1) para. 4.86, only alluding to “insufficient grounds to compel the State to adopt a higher level than the minimum level of 25%.”

¹⁶⁸ See CA (n 5) paras. 3.9 and 75.

¹⁶⁹ The case was still ongoing as of October 2018. See Climate Case Chart, “Juliana v. United States” (n.d.) available at <http://climatecasechart.com/case/juliana-v-united-states/> (last accessed 22 October 2018).

¹⁷⁰ See Climate Case Chart, “Sinnok v Alaska” (n.d.) available at <http://climatecasechart.com/case/sinnok-v-alaska/>.

¹⁷¹ See Climate Case Chart, “Reynolds v. Florida” (n.d.) available at <http://climatecasechart.com/case/reynolds-v-florida/>.

¹⁷² See *Chernaik v Brown*, Or Cir Ct, 16-11-09273 (11 May 2015), currently on appeal.

¹⁷³ See eg *AJI P. v State*, 2018 WL 3978310 (Superior Court of Washington, 14 August 2018); *Funk v. Wolf*, 638 Pa. 726 (Supreme Court of Pennsylvania, 28 March 2017); *Sanders-Reed v Martinez*, 350 P.3d 1221 (Court of Appeal of New Mexico, 12 March 2015); *Kanuk v State of Alaska*, 335 P.3d 1088 (Supreme Court of Alaska, 12 September 2014). A notable success was for climate plaintiffs was reached in *Kain v. Department of Environmental Protection*, 474 Mass. 27849 N.E.3d 1124 (17 May 2016), but on the basis of a clear statutory requirement that the Department of Environmental Protection promulgate regulations on the reduction of GHG emissions.

¹⁷⁴ See generally the website of Klimaatazaak, available at <https://www.klimaatazaak.eu/nl> (accessed 22 October 2018).

¹⁷⁵ See Climate Case Chart, “Pandey v India” (n.d.) available at <http://climatecasechart.com/non-us-case/pandey-v-india/> (last accessed 22 October 2018). The case is pending before the National Green Tribunal of India.

Ontario (Canada),¹⁷⁶ Pakistan,¹⁷⁷ Switzerland¹⁷⁸ and the UK,¹⁷⁹ as well as against the institutions of the European Union,¹⁸⁰ among many others.

Each case is likely to raise unique questions relating to the context in which it takes place. In particular, the question of standing may unfold differently depending on national rules. Yet, other aspects of the judgments in *Urgenda* may be of direct relevance to discussions of other cases, including the courts' approach of the drop-in-the-ocean problem and of the determination of the ambit of the State's obligation. Some aspects of the judgments in *Urgenda* may read as cautionary tales, in particular the misleading treatment of scientific literature as normative authority. As commentators of DC's judgment have noted, it would be desirable in such cases that courts appoint scientific experts,¹⁸¹ or otherwise that Parties produce expert testimonies, which may help the court to interpret IPCC reports.¹⁸² Other aspects of the two judgments in *Urgenda* highlight the potential for fruitful arguments, based for instance on the prior statements made by national authorities about the determination of their own responsibility to mitigate climate change. This argument could be particularly effective in the United States, in particular, as the Trump administration does little¹⁸³ to ensure the implementation of national targets on climate change mitigation communicated by the United States under the Obama administration with a clear will to be bound under international law.¹⁸⁴

¹⁷⁶ Climate Case Chart, "Greenpeace Canada v. Minister of the Environment, Conservation, and Parks; Lieutenant Governor in Council" (n.d.) available at <http://climatecasechart.com/non-us-case/greenpeace-canada-v-minister-of-the-environment-conservation-and-parks-lieutenant-governor-in-council/> (last accessed 22 October 2018).

¹⁷⁷ See Climate Change Laws of the World, "Ali v. Federation of Pakistan (Supreme Court of Pakistan)" (n.d.) available at <http://www.lse.ac.uk/GranthamInstitute/litigation/ali-v-federation-of-pakistan-supreme-court-of-pakistan-2016/> (last accessed 22 October 2018).

¹⁷⁸ See generally the website of "KlimaSeniorinnen," available at <https://klimaseniorinnen.ch/> (accessed 22 October 2018). The case is currently pending on appeal.

¹⁷⁹ Climate Case Chart, "Plan B Earth and Others v. The Secretary of State for Business, Energy, and Industrial Strategy" (n.d.) available at <http://climatecasechart.com/non-us-case/plan-b-earth-others-v-secretary-state-business-energy-industrial-strategy/> (last accessed 22 October 2018), pending on appeal.

¹⁸⁰ Case T-330/18, *Carvalho and Others v Parliament and Council*, OJ C 285/34 (13 August 2018).

¹⁸¹ Suryapratim Roy and Edwin Woerdman, "Situating *Urgenda v the Netherlands* within comparative climate change litigation" (2016) 34(2) *Journal of Energy & Natural Resources Law* 165-189 at 165.

¹⁸² See Peeters (n 86) at 128.

¹⁸³ See Sabin Center for Climate Change Law, *Climate Deregulation Tracker* (n.d.), available at <http://columbiaclimatelaw.com/resources/climate-deregulation-tracker/> (last accessed 25 October 2018).

¹⁸⁴ See e.g. The United States, *Nationally Determined Communication* (3 September 2016), available at <http://www4.unfccc.int/ndcregistry/PublishedDocuments/United%20States%20of%20America%20First/U.S.A.%20First%20NDC%20Submission.pdf>; U.S.-China Joint Announcement on Climate Change (Beijing, 12 November 2014) available at <https://obamawhitehouse.archives.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change>.