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Inhoudsindicatie	<p>Disclaimer: The translation of this judgment on appeal is solely intended to provide information. The text of the translation is an unofficial translation. Liability cannot be claimed for possible errors and/or omissions in this translation. The Dutch text of the judgment is the only authentic and formal text (ECLI-number: ECLI:NL:GHDHA:2018:2591)</p> <p>Climate case Urgenda. Duty of care under Articles 2 and 8 ECHR. Reduction greenhouse gas emissions.</p>
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Uitspraak

THE HAGUE COURT OF APPEAL

Civil-law Division

Case number : 200.178.245/01

Case/cause list number : C/09/456689/ HA ZA 13-1396

Ruling of 9 October 2018

in the case with the aforementioned case number of:

THE STATE OF THE NETHERLANDS (Ministry of Infrastructure and the Environment),

seated in The Hague,

appellant in the appeal on the main issue,

respondent in the cross-appeal,

hereinafter referred to as: the State,

counsel: *mr.* G.J.H. Houtzagers of The Hague,

versus:

URGENDA FOUNDATION,

established in Amsterdam,

respondent in the appeal on the main issue,

appellant in the cross-appeal,

hereinafter referred to as: Urgenda,
counsel: *mr.* J.M. van den Berg of Amsterdam.

THE PROCEEDINGS

By bailiff's notification of 23 September 2015, the State instituted an appeal against the judgment in the case between the parties delivered by The Hague District Court on 24 June 2015 (ECLI:NL:RBDHA: 2015:7145). In its Statement of Appeal (with Exhibits) of 12 April 2016, the State submitted 29 grounds of appeal. In its defence on appeal (with Exhibits) of 18 April 2017, Urgenda contested the grounds of appeal and filed a cross-appeal by submitting a ground of appeal. The State responded in its defence on appeal in the cross-appeal of 27 June 2017. In a letter dated 30 April 2018, the Court submitted several questions to the parties, requesting them to focus on these questions in their counsels' oral arguments of 28 May 2018. At the hearing, Urgenda filed a 'Document containing answers to the Court of Appeal's questions and submission of additional Exhibits for the oral arguments', sent in advance to both the Court and the State, while at the same hearing the State submitted a document to the Court, entitled 'Answers to questions in letter dated 30 April 2018'. Although both parties did not act entirely in accordance with the Court of Appeal's request, neither party has objected to this course of events, so that the Court shall regard the answers to its questions as procedural documents. On 28 May 2018, the parties had their cases pleaded by their counsels, *mrs.* G.J.H. Houtzagers and E.H.P. Brans (for the State) and *mrs.* J.M. van den Berg and M.E. Kingma (for Urgenda), based on the submitted written pleadings. Prior to the oral arguments, the State submitted Exhibits 75 through to 79 to the Court, while Urgenda submitted Exhibits 145 through to 165. On 28 May 2018, the Court directed that these documents be entered into the records. A court record has been drawn up of the hearing of the oral arguments, after which the ruling was scheduled.

ASSESSMENT OF THE APPEAL

Introduction of the dispute and the factual framework

1. In brief, the proceedings on appeal in this climate case concern Urgenda's claim to order the State to achieve a level of reduction of greenhouse gas emissions by end-2020 that is more ambitious than envisioned by the State in its policy.
2. As the facts established by the district court in legal grounds 2.1 through to 2.78 of the contested judgment (hereinafter: the judgment) are not disputed between the parties, the Court shall also take them as starting points. However, it should be noted that the parties disagree about the weighting of several of these facts, and specifically the conclusions that can be drawn from them in light of the claim. The Court shall discuss this further below.
3. The assessment starts with an introduction of the dispute and the factual framework (legal ground 3), followed by a brief description of the treaties, international agreements, policy proposals and the actual situation at the global, EU and Dutch level (legal grounds 4 through to 26), for which the Court takes as a starting point the developments up to the oral arguments of 28 May 2018 (i.e., the moment when the debate was closed and the ruling was scheduled).

(3.1) Urgenda ('Urgent Agenda') is a citizens' platform with members from various domains in society. The platform is involved in the development of plans and measures to prevent climate change. Urgenda is a foundation whose purpose, according to its by-laws, is to stimulate and accelerate the transition processes to a more sustainable society, beginning in the Netherlands.

(3.2) Since the beginning of the Industrial Revolution, mankind has consumed energy on a large scale. This energy has predominantly been generated by the combustion of fossil fuels (coal, oil, natural gas). The combustion process produces CO₂ (carbon dioxide), some of which is released into the atmosphere – and stays there for hundreds of years or longer – and some of which is absorbed by the oceanic and forest ecosystems. Incidentally, this absorption capacity is declining due to deforestation and rising sea water temperatures.

(3.3) CO₂ is the main greenhouse gas which, together with the other greenhouse gases, traps the heat emitted by the Earth in the atmosphere (the so-called greenhouse effect). The greenhouse effect increases the more CO₂ is emitted into the atmosphere, which in turns exacerbates global warming. It is important to note that the climate system shows a delayed response to the emission of greenhouse gases, meaning that the full, warming effect of the greenhouse gases that are emitted today will only become apparent in 30 to 40 years from now. There are other greenhouse gases besides CO₂, such as methane, nitrous oxide and fluorinated gases, which have a less pronounced warming effect and degrade at another rate.

(3.4) The concentration of greenhouse gases in the atmosphere is indicated with the unit/abbreviation 'ppm' (parts per million). The abbreviation 'ppm CO₂-eq' (parts per million CO₂ equivalent) is used to indicate the concentration of all greenhouse gases combined, with the amount of greenhouse gases other than CO₂ being converted into CO₂ in terms of warming effect. Like the district court (in legal ground 2.14 of the contested judgment), the Court shall henceforth in this ruling use the abbreviation 'ppm', even if 'ppm CO₂-eq' is meant. Should the Court wish to indicate something else with ppm, this shall be stated specifically.

(3.5) The current level of global warming is at about 1.1° C warmer relative to the beginning of the Industrial Revolution. The current concentration of greenhouse gases amounts to approximately 401 ppm. Human-induced CO₂ emissions continue on a global level and over the past decades, the global CO₂ emissions have increased by 2% annually, which is why global warming continues unabated. There has been a general consensus in the climate science community and the world community for some time that the global temperature should not exceed 2° C. If the concentration of greenhouse gases has not exceeded 450 ppm in the year 2100, there is a reasonable chance that this 2° C target will be achieved. However, the insight has developed over the past few years that a safe temperature rise should not exceed 1.5° C, which comes with a lower ppm level, namely 430 ppm. With these starting points in mind, there is limited room ('budget') for greenhouse gas emissions, and particularly for CO₂ emissions. This budget is also referred to as the 'carbon budget', 'CO₂ budget' or 'carbon dioxide budget'.

(3.6) It follows from the above that the worldwide community acknowledges that something needs to be done to reduce the emission of greenhouse gases and of CO₂ in particular. However, the urgency of this is assessed differently within the global community. In this context, various treaties, agreements and arrangements have been drawn up in the UN context, within the EU and by the Netherlands, the principal of which are extensively formulated in the contested judgment in legal grounds 2.34 through to 2.78. Global warming can be prevented or reduced by ensuring that less greenhouse gases are emitted into the atmosphere. This is known as 'mitigation'. In addition, measures can be taken to counter the consequences of climate change, including raising dikes to protect low-lying areas. This is called 'adaptation'.

(3.7) The State supports the goal of drastically reducing CO₂ emissions and, eventually, ending such emissions entirely. The European Council has decided that the EU must achieve a reduction of greenhouse gas emissions of 20% by 2020, of at least 40% in 2030 and 80-95% in 2050, *each relative to 1990*. For the Netherlands, this translates to a minimum reduction target of 16% for the non-ETS sector and 21% for the ETS sector by 2020 (ETS = European Emissions Trading System), see legal ground 4.26 of the contested judgment and legal ground 17 of this ruling. During the plea hearing in the first instance, the State declared that it expected both sectors to have achieved a reduction of 14% to 17% by 2020, relative to 1990. In its most recent Coalition Agreement (2017), the State announced to pursue a national emission reduction of at least 49% in 2030 relative to 1990. In 2017, CO₂ emissions in the Netherlands had declined by 13% relative to 1990.

(3.8) Urgenda is of the opinion that the reduction efforts, at least those covering the period up to 2020, are not ambitious enough and claimed in the first instance – among other things – that the State be ordered to achieve a reduction so that the cumulative volume of the greenhouse gas emissions will have been reduced by 40%, or at least by 25%, by end-2020, relative to 1990.

(3.9) In brief, the district court ordered a reduction of at least 25% as of end-2020 relative to 1990 and rejected all other claims of Urgenda. Urgenda did not put forward grounds of appeal against the rejection of the other claims nor against the rejection of a reduction of more than 25%. This means that in these appeal proceedings, a reduction of more than at least 25% by 2020 cannot be awarded and that the other claims of Urgenda are no longer in dispute.

Treaties, international agreements, policy proposals and actual situation

Global level

Background

4. In 1972, the United Nations Conference on the Human Environment was held in Stockholm, which culminated into the Declaration of the United Nations Conference on the Human Environment, which laid down the basic principles of international environmental policy and environmental law. As a result of this conference, the United Nations Environment Program (UNEP) was established. The UNEP and the World Meteorological Organisation (WMO) set up the Intergovernmental Panel on Climate Change (IPCC) in 1988, under the auspices of the UN. The IPCC aims to gain insight into the various aspects of climate change based on published scientific research. The IPCC publishes a report on current climate science and climate developments. The Court shall discuss two IPCC reports, AR4 and AR5, below.

The UN Framework Convention on Climate Change

5. In 1992, the United Nations Framework Convention on Climate Change was concluded, which has since entered into force and has been ratified by the majority of the worldwide community, including the Netherlands. The Convention seeks to protect the Earth's eco-systems and mankind and envisions a sustainable development for the protection of current and future generations. The preamble contains the following underlying consideration, among other things: "Determined to protect the climate system for present and future generations".

6. Article 2 of this Convention reads as follows:

"The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner."

7. Article 3 mentions several principles (the principle of equity, the precautionary principle and the sustainability principle) by which the parties are guided in achieving this objective.

8. In brief, the parties to the convention undertake:

- to protect the climate system, also in the interest of future generations, based on the principle of equity and in accordance with their responsibilities and capabilities, giving full consideration to developing countries that are particularly vulnerable to climate change or that would have to bear a disproportionate burden under the Convention;
- to take precautionary measures to anticipate the causes of climate change and to prevent these causes as much as possible, and not to postpone such measures citing a lack of full scientific certainty as a reason.

9. In Article 4, the Convention parties are divided into two groups, the so-called Annex I countries (the developed countries, including the Netherlands) and the Annex II countries (the developing countries). Taking into account their per capita emissions, the long history of their emissions and their resource bases, the Annex I countries must take the lead in fighting climate change and its adverse effects. They have committed to reducing greenhouse gas emissions. They must periodically report on the measures they have taken with which they aim to return, either individually or jointly, to the 1990 level of greenhouse gas emissions. A group of independent experts shall judge these reports.

10. In Article 7, the Conference of the Parties (hereinafter: COP) is established, which generally convenes every year (the so-called Climate Conference). The COP is the supreme decision-making body of the Convention, although the COP decisions are not always legally binding.

11. Several COPs (Climate Conferences) have been held, such as:

- * in 1997 in **Kyoto** (COP 3), during which the Kyoto Protocol was adopted, an agreement between a number of Annex I countries, including all then EU Member States (**Kyoto Protocol**), containing, among other things, the agreed on emission reductions for each Annex I country for the period up to 2012;
- * in 2007 in **Bali** (COP 13), during which the **Bali Action Plan** was adopted which laid the basis for agreements relating to mitigation, adaptation, technological cooperation and financial support. The plan recognises the need for drastic reductions for the Annex I countries with detailed references to AR4, including to a table which states that the Annex I countries have to achieve an emission reduction of 25-40% by 2020 relative to 1990 in order to stay below the 2° C warming target;
- * in 2009 in **Copenhagen** (COP 15), during which no agreement could be reached about a follow up to or continuation of the Kyoto Protocol;
- * in 2010 in **Cancún** (COP 16), which included a recognition based on the scientific findings in the IPCC reports – including, among other things, a reference in the preamble to the urgency of a drastic emission reduction – of the long-term target for global warming not exceeding 2° C, with a possible strengthening of the goal to 1.5 °C. The COP also expressed that the Annex I countries should continue to lead the way in fighting climate change and that this requires Annex I countries to reduce their greenhouse gas emissions, *en groupe*, by 25-40% in 2020 relative to 1990. The COP also urged the Annex I countries to step up their level of ambition, either individually or jointly, relative to the earlier commitments of the Annex I countries (the so-called **Cancún pledges**). For the EU, the Cancún pledges signified a reduction of 20% by 2020 relative to 1990, with the offer to achieve a reduction target of 30% if the other developed countries would commit to similar reduction targets, among other things.
- * in 2011 in **Durban** (COP 17) with a joint statement about the substantial difference between mitigation plans of the countries involved and about scenarios with a 'likely' (> 66%) chance of achieving the 2° C/1.5° C target and an agreement to conclude a new, legally binding climate treaty or protocol no later than in 2015, making *inter alia* a reference to the desired reductions for Annex I countries by 2020 of 25-40% .
- * in 2012 in **Doha** (COP 18), during which Annex I countries were called upon to increase their reduction targets to at least 25-40% for 2020. During this COP, the **Doha Amendment** was adopted, as a follow-up to the Kyoto Protocol, with emission reduction obligations up to 2020. The EU once again committed to a reduction of 20% by 2020, with the offer to achieve a reduction target of 30% by 2020 provided that – in brief – the other developed countries do the same. This condition has not been met and the Doha Amendment has not entered into force (yet);
- * in 2013: in **Warsaw** (COP 19), with a call to raise the target in the period up to 2020, and for Annex I countries to align their reduction targets with the target of 25-40% by 2020 as reconfirmed in Doha;
- * in 2015: in **Paris** (COP 21) (the Paris Climate Conference), which led to the **Paris Agreement** (see also legal ground 15);
- * in 2016: in **Marrakech**, with a call for more ambition and a more intensive cooperation to close the gap between the current emission targets and the Paris Agreement targets as well as for further climate actions well before 2020;
- * in 2017: in **Bonn** (COP 23), where the need for 'enhanced action' in the period up to 2020 was acknowledged.

The IPCC

12. In the context of these proceedings, the following IPCC reports are particularly important:

AR4 (IPCC Fourth Assessment Report, 2007):

This report describes that global warming of more than 2° C results in a dangerous and irreversible climate change. To have a chance of more than 50% ('more likely than not') that the 2° C threshold is not exceeded, the report states that the concentration of greenhouse gases in the atmosphere must stabilise at a level of about 450 ppm in 2100 (hereinafter: the '450 scenario'). Following an analysis of several reduction scenarios, the IPCC arrives at the

conclusion in this report (see Box 13.7) that in order to achieve the 450 scenario, the total emission of greenhouse gases by Annex I countries, including the Netherlands, in 2020 must be 25-40% lower than in 1990. This report also describes that mitigation is generally better than adaptation.

AR5 (IPCC Fifth Assessment Report, 2013-2014):

According to this report, there is a 'likely' (> 66%) chance that the rise of the global temperature can stay below 2° C when the concentration of greenhouse gases in the atmosphere in 2100 stabilises at about 450 ppm. This scenario seems more advantageous than the projection of AR4, in which the chances of achieving the 2° C target at a concentration level of 450 ppm is assessed at 'more likely than not' (> 50%). However, it should be noted that in 87% of the scenarios included in the AR5 assessment assumptions have been included with respect to negative emissions, that is to say the extraction of CO₂ from the atmosphere. AR4 does not assume negative emissions. Stabilisation at about 500 ppm in 2100 gives a more than 50% chance ('more likely than not') to achieve the 2° C target. Only a limited number of studies has looked at scenarios that lead to a limitation of global warming to 1.5° C. Such scenarios assume concentrations of less than 430 ppm in 2100.

The UNEP

13. Since 2010, the UNEP has issued annual reports about the so-called 'emissions gap', the difference between the desired emission level in a certain year and the reduction targets to which the countries concerned committed. In the 2013 report, UNEP notes, for the third time running, that commitments are falling short and that the emission of greenhouse gases increases rather than decreases. The UNEP concludes that the emission targets of the Annex I countries combined are not enough to achieve the 25-40% reduction in 2020, deemed necessary in AR4, and that therefore it is becoming less likely that by 2020 the emissions will be low enough to achieve the 2° C target at the least cost. Although later reduction actions might be enough to eventually achieve the same temperature targets, they would at least be more difficult, more expensive and more risky, according to the UNEP (see quotes in the judgment, legal grounds 2.29 through to 2.31).

14. The 2017 UNEP report states that, in light of the Paris Agreement, increased pre-2020 mitigation actions are more urgent than ever. The UNEP also remarks that if the emissions gap is not bridged by 2030, achieving the 2° C target is extremely unlikely. Even if the reduction targets underlying the Paris Agreement are fully implemented, 80% of the carbon budget corresponding with the 2° C target will be used up by 2030. Starting from a 1.5° C target means that the carbon budget will be completely used up by then, which is why the UNEP calls for more ambitious targets for 2020.

The Paris Agreement

15. The Paris Agreement, which was signed on 22 April 2016 and entered into force on 4 November 2016 and covering the period from 2020 onwards, applies another system than the UN Climate Change Convention. Each country is brought to account regarding their individual responsibility (bottom-up approach). The Convention parties no longer strive to conclude global emission agreements. In brief, the following was laid down:

- Global warming must remain well below the 2° C limit relative to pre-industrial levels, while aiming for a limit of 1.5° C.
- The parties have to draw up national climate plans, or nationally determined contributions (NDCs), which have to be ambitious and whose ambition level must be raised with each new plan.
- The parties have expressed grave concerns that the current NDCs are insufficient to limit the average temperature rise to 2° C relative to pre-industrial levels.
- The parties call for an intensification and strengthening of reduction efforts up to 2020 in order to achieve the 2030 targets (40% reduction).
- The use of fossil fuels must be ceased soon, as this is a major cause of excessive CO₂ emissions.
- Rich countries are expected to financially support developing countries in reducing their emissions.
- From 2020 onwards, there will no longer be a distinction between Annex I and Annex II countries.

The European Union (EU)

16. Article 191 TFEU contains the environmental objectives of the EU (cited in legal ground 2.53 of the judgment). In order to implement its environmental policy, the EU has established many directives, including the so-called 2003 ETS Directive (Directive 2003/87/EC), subsequently amended (see legal ground 2.58 ff. of the contested judgment).

17. When the ETS Directive was amended in 2009, the European Council communicated its objective of achieving "*an overall reduction of more than 20%, in particular in view of the European Council's objective of a 30% reduction [Court: of EU emissions of greenhouse gases relative to 1990] by 2020, which is considered scientifically necessary to avoid dangerous climate change (...)*". This objective is detailed in the Directive, in which the reduction commitment of 30% by 2020 is linked to the condition – put briefly – that other countries join in.

In broad terms, the ETS system can be described as follows. Companies in the EU that fall under the ETS system, meaning energy-intensive companies such as those in the energy sector, may only emit greenhouse gases if they surrender emission allowances. Such allowances may be purchased, sold or stored. The total amount of greenhouse gases ETS companies are permitted to emit in the 2013-2020 period will decrease annually by 1.74% until a reduction of 21% has been achieved by 2020, relative to 2005.

18. Since then, the EU has committed to an emission reduction of 20% for 2020, of at least 40% for 2030 and of 80-95% for 2050, each relative to 1990, as has also been found in legal ground 3.7. The EU has decided, based on the 2009 Effort Sharing Decision (Decision 406/2009/EC), that the 20% reduction for 2020 has the effect for the non-ETS sectors that the Netherlands will have to achieve an emission reduction of 16% relative to 2005. As has been noted, the ETS sector must adhere to the EU-wide reduction of 21% relative to 2005. According to the current forecasts, the EU as a whole is expected to achieve an emissionreduction of 26-27% in 2020, relative to 1990.

The situation in the Netherlands

19. Up to the year 2011, the Netherlands, being an Annex I country, started from a reduction target of 30% for 2020 relative to 1990 (see also legal ground 2.71 in the contested judgment, with a reference to the 2007 'clean and sustainable' (*schoon en zuinig*) work programme of the Balkenende government). In a letter dated 12 October 2009 the Minister of Housing, Spatial Planning and the Environment informed the House of Representatives about the Dutch objectives in the negotiations in Copenhagen (COP 15): "*The total of emission reductions proposed by the developed countries so far is insufficient to achieve the 25-40% reduction in 2020, which is necessary to stay on a credible track to keep the 2 degrees objective within reach.*"

20. Thereafter (after 2011) the Dutch reduction target was adjusted (see also legal ground 3.7 of this ruling) to align with the EU-wide reduction of 20% for 2020 – which for the Netherlands translates to a minimum reduction of 16% for the non-ETS sector and 21% for the ETS sector, each relative to 2005 – of at least 40% for 2030 and 80-95% for 2050, each relative to 1990. On 6 September 2013, the Energy Agreement for Sustainable Growth (hereinafter: the Energy Agreement) was established, which aims to reduce energy consumption and increase the share of sustainable energy.

21. In the district court's judgment, it was still assumed that the Netherlands would achieve a total CO₂ reduction of 14-17% in 2020 relative to 1990, based on current and proposed policy. That is currently 23% (19-27%, taking account of the margin of uncertainty). The difference can largely be explained by the fact that the CO₂ emissions in the base year of 1990 were retrospectively adjusted (raised). The National Energy Outlook (*Nationale Energieverkenning* - NEV), an annual report of the Energy Research Centre of the Netherlands (*Energieonderzoek Centrum Nederland* - ECN), the PBL Netherlands Environmental Assessment Agency (*Planbureau voor de leefomgeving* - PBL), Statistics Netherlands (*Centraal Bureau voor de Statistiek* - CBS) and the Netherlands Enterprise Agency (*Rijksdienst voor Ondernemend Nederland* - RVO), wrote the following about this in 2015:

"Developments since the 2014 NEV

(....)Another change in relation to the previous NEV relates to the method for determining greenhouse gas

emissions. The present NEV uses the most recent IPCC guidelines (2006), whereas the NEO 2014 was still based on older IPCC guidelines (1996). As a result of this and of changes to the method for determining methane levels in agriculture (expressed as CO₂ equivalents), emissions have been adjusted upwards across the board (1990-2013). (...)The changes are also having an upward effect on estimates for the period after 2013."

In a press release issued by the ECN on 18 October 2016, the research centre states the following: "All in all, these changes result in a stronger relative reduction of greenhouse gas emissions than expected previously. That sounds like good news. However, upon closer inspection it appears that only a small part of the change can rightly be labelled as good news. The total emissions from 1990-2020 added together are at a much higher level than presumed in the 2014 NEV. And that is eventually what matters for the climate. (...) At first glance, the adjustment seems like good news, but for the climate the current scenario of a 23% reduction is actually worse than the scenario of 17% from the 2014 NEV."

Urgenda has acknowledged that the new calculation method is more in line with the methodology of the IPCC.

22. In response to the Paris Agreement, the PBL described in its report of 18 November 2016 the tightness of the carbon budget and the need for a strict climate policy on a global scale, a policy that should be much more ambitious than the current policy of the countries involved. According to the PBL, the Dutch policy should be tightened in the short time in order to align it with the Paris Agreement.

23. The 2016 NEV states the following, among other things:

"Greenhouse gas emissions from 1990-2020 almost reduced to level imposed by judicial ruling

Given the upwardly adjusted emissions in 1990 and the new estimates, the national level of greenhouse gas emissions will have decreased between 1990 and 2020 by 23 percent (20-26 percent) in the 'proposed policies' scenario. The projection value of 23 percent thereby comes close to the 25 percent reduction imposed on the Dutch state by the court in 2015. The calculated bandwidth of 20 to 26 percent, however, indicates that there is a lot of uncertainty."

24. According to the National Institute for Public Health and Environmental Protection (*Rijksinstituut voor Volksgezondheid en Milieu – RIVM*), the CO₂-eq emissions in the Netherlands in 2017 dropped by 13% relative to 1990. The 2017 NEV states the following, among other things:

"Expected reduction of greenhouse gas emissions will remain at 23 per cent in 202, but great uncertainty

(...)The expected reduction of greenhouse gas emissions between 1990 and 2020 levels will therefore be 23 per cent as in the previous NEV. That is not enough to comply with the court ruling in the Urgenda case. However, there is still considerable margin of uncertainty of 19 to 27 per cent, which depends to a large degree on uncertainty about the use of conventional coal-fired power plants."

25. In the Coalition Agreement (2017) the government announced a Climate Agreement, indicating its intention to reduce the emission of greenhouse gas emissions by at least 49% in 2030. This intention was repeated in the letter from the Minister of Economic Affairs dated 23 February 2018 (Exhibit: S75). The minister announced his plan to close all coal-fired power plants by 2030. In its Coalition Agreement, the government writes that it is the duty of the Netherlands to do everything in its power to achieve the Paris goal, for which reason the Netherlands has raised the bar higher than the EU, since the 40% reduction in 2030 is not enough to achieve the 2° C target, let alone the ambition of 1.5 ° C target.

26. The Netherlands has a relatively high per capita CO₂ emission compared to other industrialised countries. In terms of emissions, the Netherlands currently ranks 34th of 208 countries. Of the 33 countries with even higher emissions, only nine have a higher per capita emission, and not a single one is an EU Member State. Of the total of greenhouse gas emissions in the Netherlands, 85% are CO₂ emissions, largely generated by the energy sector. CO₂ emissions have hardly dropped in the Netherlands since 1990, and have even increased over the past few years. The reduction is due to the drop in the emission of other greenhouse gases. In the 2008-2012 period, the Netherlands achieved an emission reduction in CO₂-eq of 6.4%, while in the same period the 15 biggest EU

Member States achieved an 11.8% reduction and the EU as a whole a reduction of 19.2%. Moreover, 30-50% of the reduction in the 2008-2012 period was due to the crisis. Without the economic crisis, emissions would have been substantially higher in that period and the reduction would have been lower.

Urgenda's claim and its basis (in brief)

27. As has been considered above in legal grounds 3.8 and 3.9, the appeal proceedings concern Urgenda's claim, allowed by the district court, that the State be ordered to achieve a reduction so that the cumulative volume of Dutch greenhouse gas emissions will have been reduced by at least 25% by end-2020, relative to the year 1990 (the Kyoto base year).

28. Urgenda largely agrees with the court's judgment. Urgenda believes that the State is doing too little to limit greenhouse gas emissions and that it should assume its responsibility. Urgenda believes that much is at stake (dangerous climate change) and that without swift intervention the world is headed for a planet that will largely be inhabitable for a substantial portion of the world population, and which cannot or hardly be made inhabitable due to inertia in the climate system. In this context, Urgenda refers to authoritative publications, mainly AR4 and AR5 of the IPCC, which have been extensively set out in the judgment.

Urgenda acknowledges that this is a global problem, that the State can only intervene in the emissions from Dutch territory and that in absolute terms the Dutch emissions are minor and that the reduction it has claimed represents a drop in the ocean on a global scale, considering that the climate problem is a worldwide issue. On the other hand, or so Urgenda continues to argue, the Netherlands is a rich and developed country, an Annex I country in terms of the UN Climate Convention, that has profited from the use of fossil energy sources since the Industrial Revolution, and continues to profit from them today, that the Netherlands is one of the countries with the highest per capita greenhouse gas emissions in the world — mainly of dangerous CO₂, which lingers long in the atmosphere — and that the signing and ratification of the UN Climate Convention by the Netherlands should not be a mere formality. For reasons of equity, the Convention stipulates that the developed countries should take the lead (Article 3) at a national level. Furthermore, Urgenda points out that up to 2011 the Netherlands had taken as a starting point its own formulated reduction target of 30% by end-2020. This was then reduced to an – EU-wide – reduction target of only 20% by end-2020, apparently due to tough political decision-making. However, the State failed to specify any scientific (climate science) arguments for this reduction. Meanwhile, the Paris Agreement has been established, in which the Netherlands has committed to achieve a reduction of greenhouse gas emissions in order to stay well below the 2° C limit for global warming. The Netherlands also expressed its intention to aim for a global warming limit of 1.5° C and called for a strengthening of reduction efforts up to 2020. The State cannot shirk its responsibility with the argument that in absolute terms its emissions are minor. Considering the major risks associated with uncontrollable climate change, the duty of care of the State requires it to take measures forthwith.

29. In view of all of the above, and particularly the State's 'procrastination', meaning its failure to commit to a greater emission reduction by end-2020, Urgenda is of the opinion that the State has acted unlawfully towards it, because such conduct violates proper social conduct and is contrary to the positive and negative duty of care expressed in Articles 2 (the right to life) and 8 ECHR (the right to family life, which also covers the right to be protected from harmful environmental influences of a nature and scope this serious).

The defence of the State (in brief)

30. The State acknowledges the climate problem as well as the need to reduce greenhouse gas emissions to ensure that global warming stays below 2° C. The Netherlands has made a serious commitment in this context by agreeing to an EU-wide minimum reduction of 40% for 2030 and of 80-95% for 2050. Moreover, the State has even agreed on a national commitment to a 49% reduction for 2030. But climate scientists have also agreed that different reduction paths are available. There is no absolute need to reduce emissions by 25-40% by end-2020. The State's scope for policymaking includes, after considering all interests involved, such as those of the industry, finances,

energy-provision, healthcare, education and defence, to choose the most appropriate reduction path. This is a political question. The *trias politica* prohibits judges from making such decisions. The State emphasises that it adheres to all convention obligations and international agreements, while at the same time the State is concerned about negative effects such as the 'waterbed effect' and 'carbon leakage' and points out that measures should not be at the expense of the level playing field. Furthermore, the State is bound to the European ETS system and cannot do more than is permitted in the context of that system. The State asserts that it is very much relevant that the Dutch emissions are minor in absolute terms and that the Netherlands cannot solve the global problem of climate change on its own. The State draws particular attention to the circumstance that, scientifically speaking, there are many uncertainties regarding both the seriousness of the climate issue and the possible solutions. The IPCC has also flagged numerous uncertainties. The reduction scenarios (representative concentration pathways – RCPs) cover a huge bandwidth – the 450 scenario is not the only eligible scenario, and it is also not up to the IPCC to make decisions on the scenarios – and furthermore are not aimed at individual countries, but rather at the worldwide community (all countries together). Urgenda also underestimates the possibilities of adaptation.

Finally, the State points out that by now it is expected that, based on the currently adopted and proposed policy, a reduction of 19-27% will be achieved by end-2020, taking account of the new calculation method of the NEV, although this may possibly not be entirely sufficient to comply with the judgment.

The grounds of appeal of the State in the appeal on the main issue and the grounds of appeal of Urgenda in the cross-appeal

31. The State disagrees with the judgment and has lodged its appeal within the time limit. With its 29 grounds of appeal in the appeal on the main issue, the State seeks to submit the dispute to the Court in its entirety.

32. In its ground of appeal in the cross-appeal, Urgenda complains about the district court's opinion that Urgenda, considering Article 34 ECHR, cannot rely on Articles 2 and 8 ECHR in these proceedings.

33. In light of the grounds of appeal of both parties, the Court shall re-assess the dispute in its entirety with the proviso that, as has been noted above, the Court cannot allow a reduction further than at least 25% by 2020.

Assessment:

Articles 2 and 8 ECHR and the State's plea of (partial) inadmissibility

34. The Court shall first assess Urgenda's ground of appeal in the cross-appeal. In conjunction with this, the Court shall also consider the State's plea of Urgenda's inadmissibility, explained in ground of appeal 1 in the appeal on the main issue, insofar as Urgenda also acts on behalf of individuals and future generations outside the Netherlands. Both issues are related to the extent that their assessment relies on regulations of a predominately procedural nature, namely Article 34 ECHR and Book 3 Section 305a of the Dutch Civil Code, respectively.

35. Like the State, the district court derived from Article 34 ECHR that Urgenda cannot directly invoke Articles 2 and 8 ECHR. In doing so, the district court fails to acknowledge that Article 34 ECHR (only) concerns access to the European Court of Human Rights (ECtHR). As is evident from this article, citizens, NGOs and groups of individuals have access to the European Court of Human Rights in Strasbourg – insofar as they claim violation of their rights enshrined in the ECHR. The ECtHR has explained this article as follows (in brief), namely that 'public interest actions' are not permitted and that only the claimant whose interest has been affected has access to the ECtHR. The ECtHR has not given a definite answer about access to the Dutch courts. This is not possible, as this falls within the scope of the Dutch judges. This means that Article 34 ECHR cannot serve as a basis for denying Urgenda the possibility to rely on Articles 2 and 8 ECHR in these proceedings.

36. Dutch law is decisive in determining access to the Dutch courts – in the case of Urgenda in these proceedings Book 3 Section 305a of the Dutch Civil Code in particular, which provides for class actions of interest groups. As individuals who fall under the State's jurisdiction may invoke Articles 2 and 8 ECHR in court, which have direct effect, Urgenda may also do so on their behalf under Book 3 Section 305a of the Dutch Civil Code. Urgenda's ground of appeal in the cross-appeal is therefore well-founded.

37. It is not disputed between the parties that the claim of Urgenda, insofar as acting on behalf of the current generation of Dutch nationals against the emission of greenhouse gases on Dutch territory, is admissible. However, the State argued, as understood by the Court, that Urgenda cannot act on behalf of future generations of Dutch nationals nor of current and future generations of foreigners. The State does not have an interest in this ground of appeal, because Urgenda's claim is already admissible insofar as Urgenda acts on behalf of the interests of the current generation of Dutch nationals and individuals subject to the State's jurisdiction within the meaning of Article 1 ECHR, respectively. After all, it is without a doubt plausible that the current generation of Dutch nationals, in particular but not limited to the younger individuals in this group, will have to deal with the adverse effects of climate change in their lifetime if global emissions of greenhouse gases are not adequately reduced. Therefore, the Court does not have to consider the questions raised by the State in this ground of appeal.

38. The Court furthermore deems that Urgenda has sufficient interest in its claim. Contrary to what the State argued in its oral arguments, Urgenda's interest was made sufficiently clear in its extensively explicated assertions that there is a real threat of dangerous climate change, not only today but certainly also in the near future. There is no need for Urgenda to prove these assertions in advance in order to commence proceedings, if that was the State's intention of its argument. The defence of the State that these proceedings also involve individuals who may not even want to be represented by Urgenda is refuted by the following quote from the legislative history of Book 3 Section 305a of the Dutch Civil Code, in which the legislator specifically acknowledged this issue (Parliamentary Papers II, 1991/92, 22 486, no.3, p. 22): "*The interests that are suitable for a grouping in a class action may be financial interests, but also more idealistic interests. A class action may protect interests that directly affect people, or that people want to advocate out of a particular conviction. In the case of idealistic interests, it is irrelevant whether each member of society attaches the same value to these interests. It is even possible that the interests that are sought to be protected in the proceedings conflict with the ideas and opinions of other groups in society. This alone shall not stand in the way of a class action. (...) It does not have to concern the interests of a clearly defined group of others. It may also concern the interests of an indeterminable, very large group of individuals. (...)*"

Assessment: **The asserted unlawfulness**

39. Urgenda has based its assertion that the State has acted unlawfully towards it on Book 6 Section 162 of the Dutch Civil Code and Articles 2 and 8 ECHR. The Court shall first assess Urgenda's invocation of Articles 2 and 8 ECHR.

Articles 2 and 8 ECHR

40. The interest protected by Article 2 ECHR is the right to life, which includes environment-related situations that affect or threaten to affect the right to life. Article 8 ECHR protects the right to private life, family life, home and correspondence. Article 8 ECHR may also apply in environment-related situations. The latter is relevant if (1) an act or omission has an adverse effect on the home and/or private life of a citizen and (2) if that adverse effect has reached a certain minimum level of severity.

41. Under Articles 2 and 8 ECHR, the government has both positive and negative obligations relating to the interests protected by these articles, including the positive obligation to take concrete actions to prevent a future violation of these interests (in short: a duty of care). A future infringement of one or more of these interests is

deemed to exist if the interest concerned has not yet been affected, but is in danger of being affected as a result of an act/activity or natural event. As regards an impending violation of an interest protected under Article 8 ECHR, it is required that the concrete infringement will exceed the minimum level of severity (see, among other examples, *Öneryildiz/Turkey* (ECtHR 30 November 2004, no. 48939/99), *Budayeva et al./Russia* (ECtHR 20 March 2008, nos. [15339/02](#), [21166/02](#), [20058/02](#), [11673/02](#) and [15343/02](#)), *Kolyadenko et al./Russia* (ECtHR 28 February 2012, nos. [17423/05](#), [20534/05](#), [20678/05](#), [23263/05](#), [24283/05](#) and [35673/05](#)), and *Fadeyeva/ Russia* (ECtHR 9 June 2005, no. 55723/00).

42. Regarding the positive obligation to take concrete actions to prevent future infringements – which according to the claim is applicable here – the European Court of Human Rights has considered that Articles 2 and 8 ECHR have to be explained in a way that does not place an ‘impossible or disproportionate burden’ on the government. This general limitation of the positive obligation, which applies here, has been made concrete by the European Court of Human Rights by ruling that the government only has to take concrete actions which are reasonable and for which it is authorised in the case of a real and imminent threat, which the government knew or ought to have known. The nature of the (imminent) infringement is relevant in this. An effective protection demands that the infringement is to be prevented as much as possible through early intervention of the government. The government has a ‘wide margin of appreciation’ in choosing its measures.

43. In short, the State has a positive obligation to protect the lives of citizens within its jurisdiction under Article 2 ECHR, while Article 8 ECHR creates the obligation to protect the right to home and private life. This obligation applies to all activities, public and non-public, which could endanger the rights protected in these articles, and certainly in the face of industrial activities which by their very nature are dangerous. If the government knows that there is a real and imminent threat, the State must take precautionary measures to prevent infringement as far as possible. In light of this, the Court shall assess the asserted (imminent) climate dangers.

Dangerous climate change? Severity of the situation.

44. The Court takes as a starting point the facts and circumstances, some of which detailed above, established in the proceedings. For the sake of clarity, the Court lists the most important elements below:

- There is a direct, linear link between anthropogenic emissions of greenhouse gases, partially caused by combusting fossil fuels, and global warming. Emitted CO₂ lingers in the atmosphere for hundreds of years, if not longer.
- Since pre-industrial times, the Earth has warmed by about 1.1° C. Between 1850 and 1980, the level of global warming was about 0.4° C. Since then and in under 40 years’ time, the Earth has warmed further by 0.7 ° C, reaching the current level of 1.1° C (see the diagram ‘Global warming 1880–2017 (NASA)’, the third slide shown by Urgenda during its oral arguments). This global warming is expected to accelerate further, mainly because emitted greenhouse gases reach their full warming effect only after 30 or 40 years.
- If the Earth warms by a temperature of substantially more than 2° C, this will cause more flooding due to rising sea levels, heat stress due to more intensive and longer periods of heat, increasing prevalence of respiratory diseases due to worsened air quality, droughts (accompanied by forest fires), increasing spread of infectious diseases and severe flooding as a result of heavy rainfall, disruption in the food production and potable water supply. Ecosystems, flora and fauna will also be affected, and biodiversity loss will occur. The State failed to challenge Urgenda’s assertions (by stating reasons) regarding these issues nor did it contest Urgenda’s assertion that an inadequate climate policy in the second half of this century will lead to hundreds of thousands of victims in Western Europe alone.
- As global warming continues, not only the severity of its consequences will increase. The accumulation of CO₂ in the atmosphere may cause the climate change process to reach a ‘tipping point’, which may result in abrupt climate change, for which neither mankind nor nature can properly prepare. The risk of reaching such ‘tipping points’ increases ‘at a steepening rate’ with a temperature rise of between 1 and 2 °C (AR5 p. 72).

- On a global scale, greenhouse gas emissions continue to rise. See, among other things, slide 2 shown by Urgenda during its oral arguments: European Database for Global Atmospheric Research (EDGAR) 2017, '*Global greenhouse gas emissions, per type of gas and sources, including LULUCF*').
- The emission of CO₂ in the Netherlands also remains as high as ever. The slight decline in greenhouse gas emissions in the Netherlands can only be attributed to the drop in emissions of other, less harmful, greenhouse gases (see slide 16 shown by Urgenda in its oral arguments). CO₂ is the main greenhouse gas and is responsible for 85% of all greenhouse gas emissions in the Netherlands.
- Even between the parties there is a consensus that the global temperature rise must at least be kept well below 2° C while a 'safe' temperature rise should not exceed 1.5° C, each relative to pre-industrial levels.
- In order to achieve the 2° C target, the concentration of greenhouse gases in the atmosphere may not exceed 450 ppm. To achieve the 1.5° C target (as set in the Paris Agreement), the global concentration of greenhouse gases must be substantially lower, namely less than 430 ppm. The current concentration is about 401 ppm. This means that the concentration of greenhouse gases in the atmosphere may only rise slightly. Chances of reaching the 1.5° C target are now slim. Keeping global warming to well below 2° C, to which the Netherlands has also committed with the signing of the Paris Agreement, will at least require a considerable amount of effort.
- The longer it takes to achieve the necessary emission reduction, the greater the total amount of emitted CO₂ and the sooner the remaining carbon budget will have been used up (see also legal ground 4.32 of the contested judgement and the diagrams contained therein).

45. As is evident from the above, the Court believes that it is appropriate to speak of a real threat of dangerous climate change, resulting in the serious risk that the current generation of citizens will be confronted with loss of life and/or a disruption of family life. As has been considered above by the Court, it follows from Articles 2 and 8 ECHR that the State has a duty to protect against this real threat.

Is the State acting unlawfully by not reducing by at least 25% by end-2020?

46. The end goal is clear and is not disputed between the parties. By the year 2100, global greenhouse gas emissions must have ceased entirely. Nor do the parties hold differing opinions as to the required interim target of 80-95% reduction relative to 1990 by 2050. And Urgenda endorses the reduction target of 49% relative to 1990 by 2030, as established by the government. The dispute between the parties focuses on the question if the State can be required to achieve a reduction of at least 25% relative to 1990 by end-2020. Urgenda is of the opinion that such a reduction is necessary to protect the citizens of the Netherlands against the real and imminent threats of climate change. But the State does not want to commit to more than the 20% reduction relative to 1990 by 2020, as agreed at the EU level. It has to be examined whether the State is acting unlawfully towards Urgenda by not reducing by at least 25% by end-2020 despite the real and imminent threats mentioned above. The following considerations are relevant in this context.

47. In the first place, the Court takes as a point of departure that the emission of all greenhouse gases combined in the Netherlands had dropped by 13%, relative to 1990, in 2017. Even if the new calculation method was not used for this (see legal ground 21 of this ruling), a significant effort will have to be made between now and 2030 to reach the 49% target in 2030; much more efforts than the limited efforts the Netherlands has undertaken so far. It is also an established fact that it is desirable to start the reduction efforts at as early a stage as possible in order to limit the total emissions in this period. Delaying the reduction will lead to greater risks for the climate. A delay would, after all, allow greenhouse gas emissions to continue in the meantime; greenhouse gases which linger in the atmosphere for a very long time and further contribute to global warming. In that context, the Court would like to point out to the warnings issued by the UNEP, cited in legal grounds 2.29 through to 2.31 of the judgment. See also the report of the PBL of 9 October 2017 (Exhibit 77 of the State) p. 60, where the PBL remarks that achieving the climate targets of the Paris Agreement not necessarily concerns achieving a low emission level in 2050, but rather and particularly achieving low cumulative emissions, considering the fact that each megaton of CO₂ which is emitted into the atmosphere in the short term contributes to global warming. An even distribution of reduction efforts over the period up to 2030 would mean that the State should achieve a substantially higher reduction in

2020 than 20%. An even distribution is also the starting point of the State for its reduction target of 49% by 2030, which has been derived in a linear fashion from the 95% target for 2050. If extrapolated to the present, this would result in a 28% reduction by 2020, as confirmed by the State in answering the Court's questions.

48. In AR4, the IPCC concluded that a concentration level not exceeding 450 ppm in 2100 is admissible to keep the 2° C target within reach. The IPCC then concluded, following an analysis of the various reduction scenarios (in Box 13.7), that in order to reach this concentration level, the total greenhouse gas emissions in 2020 of Annex I countries, of which the Netherlands is one, must be 25-40% lower than 1990 levels. In AR5, the IPCC also assumes that a concentration level of 450 ppm may not be exceeded in order to achieve the 2° C target.

49. The State has argued that in AR5 multiple emission reduction pathways are presented with which this target may be reached. Based on this, the State is of the opinion that the district court was wrong to take a 25-40% reduction by 2020, as mentioned in AR4, as a starting point.

The Court does not endorse the position of the State in this. As has been stated above by the Court (see legal ground 12), 87% of the scenarios presented in AR5 are based on the existence of negative emissions. In the report of the European Academies Science Advisory Council ('Negative emission technologies: What role in meeting Paris Agreement targets?'), entered into evidence by Urgenda as Exhibit 164, the following is noted about negative emissions:

"(...)We conclude that these technologies [Court: negative emission technologies, or NETs] offer only limited realistic potential to remove carbon from the atmosphere and not at the scale envisaged in some climate scenarios (...)" (p. 1)"Figure 1 shows not only the dramatic reductions required, but also that there remains the challenge of reducing sources that are particularly difficult to avoid (these include air and marine transport, and continued emissions from agriculture). Many scenarios to achieve Paris Agreement targets have thus had to hypothesise that there will be future technologies which are capable of removing CO2 from the atmosphere." (p. 5)

"(...) the inclusion of CDR [Court: removal of CO2 from the atmosphere] in scenarios is merely a projection of what would happen if such technologies existed. It does not imply that such technologies would either be available, or would work at the levels assumed in the scenario calculations. As such, it is easy to misinterpret these scenarios as including some judgment on the likelihood of such technologies being available in the future." (p. 5)

The State has failed to contest this by not providing adequate substantiation. Therefore, the Court assumes that the option to remove CO2 from the atmosphere with certain technologies in the future is highly uncertain and that the climate scenarios based on such technologies are not very realistic considering the current state of affairs. AR5 might thus have painted too rosy a picture, and it cannot be assumed outright that the 'multiple mitigation pathways' listed by the IPCC in AR5 (p. 20) can lead to the 2° C target. Furthermore, as asserted by Urgenda and not contested by the State by stating reasons, it is plausible that no reduction percentages as of 2020 were included in AR5, because in 2014 the focus of the IPCC was on targets for 2030. In this respect too, the report does not give cause to assume that the reduction scenario in AR4, which does not take account of negative emissions, is superseded and that today a reduction of less than 25-40% by 2020 would be sufficient to achieve the 2° C target. In order to assess whether the State has met its duty of care, the Court shall take as a starting point that an emission reduction of 25-40% in 2020 is required to achieve the 2° C target.

50. Incidentally, the 450-scenario only offers a more than 50% ('more likely than not') chance to achieve the 2° C target. A real risk remains, also with this scenario, that this target cannot be achieved. It should also be noted here that climate science has meanwhile acknowledged that a safe temperature rise is 1.5° C rather than 2° C. This consensus has also been expressed in the Paris Agreement, in which it was agreed that global warming should be limited to well below 2° C, with an aim for 1.5° C. The ppm level corresponding with the latter target is 430, which is lower than the level of 450 ppm of the 2° C target. The 450-scenario and the identified need to reduce CO2 emissions by 25-40% by 2020 are therefore not overly pessimistic starting points when establishing the State's duty of care.

51. The State has known about the reduction target of 25-40% for a long time. The IPCC report which states that such a reduction by end-2020 is needed to achieve the 2° C target (AR4) dates back to 2007. Since that time, virtually all COPs (in Bali, Cancun, Durban, Doha and Warsaw) have referred to this 25-40% standard and Annex I

countries have been urged to align their reduction targets accordingly. This may not have established a legal standard with a direct effect, but the Court believes that it confirms the fact that at least a 25-40% reduction of CO₂ emissions as of 2020 is required to prevent dangerous climate change.

52. Finally, it is relevant noting that up to 2011 the Netherlands had adopted as its own target a reduction of 30% in 2020 (see legal ground 19 of this ruling). That was, as evidenced by the letter from the Minister of Housing, Spatial Planning and the Environment dated 12 October 2009, because the 25-40% reduction was necessary *'to stay on a credible track to keep the 2 degrees objective within reach'*. No other conclusion can be drawn from this than that the State itself was convinced that a scenario in which less than that would be reduced by 2020 was not feasible. The Dutch reduction target for 2020 was subsequently adjusted downwards. But a substantiation based on climate science was never given, while it is an established fact that postponing (higher) interim reductions will cause continued emissions of CO₂, which in turn contributes to further global warming. More specifically, the State failed to give reasons why a reduction of only 20% by 2020 (at the EU level) should currently be regarded as credible, for instance by presenting a scenario which proves how – in concert with the efforts of other countries – the currently proposed postponed reduction could still lead to achieving the 2° C target. The EU itself also deemed a reduction of 30% for 2030 necessary to prevent dangerous climate change (see legal ground 17 of this ruling).

53. The Court is of the opinion that a reduction obligation of at least 25% by end-2020, as ordered by the district court, is in line with the State's duty of care. However, the State has put forward several arguments – almost all of which are summarised in legal ground 30 of this ruling – based on which it is of the opinion that it is nevertheless not obliged to take further reduction measures other than those it currently proposes. Insofar as not discussed above, the Court shall now assess these arguments.

Defences of the State

54. The argument of the State that the ETS system stands in the way of the Netherlands taking measures to further reduce CO₂ emissions fails. The starting point is that Article 193 TFEU states that protective measures adopted under Article 192 TFEU do not prevent a Member State from maintaining and adopting more ambitious protection measures, provided that such measures are in line with the Treaties. This means that measures that reduce CO₂ emissions further than those ensuing from the ETS are permitted provided that these measures do not interfere with the functioning and the system of the ETS in an unacceptable manner. That this is bound to be the case due to the order imposed by the district court has not been substantiated by the State and is furthermore implausible.

55. According the State, a 'waterbed effect' will occur if the Netherlands takes a measure which reduces greenhouse gas emissions falling under the ETS system. The State argues that this will occur because the emissions cap established for the ETS sector applies to the EU as a whole. Less emissions in the Netherlands thus creates room for more emissions elsewhere in the EU. Therefore, national measures to reduce greenhouse gas emission within the framework of the ETS are pointless, or so the State argues .

56. This argument falsely assumes that other EU Member States will make maximum use of the available emission allocation under the ETS system. Like the Netherlands, the other EU Member States have an individual responsibility to limit CO₂ emissions as far as possible. It cannot be assumed beforehand that other Member States will take less far-reaching measures than the Netherlands. On the contrary, compared to Member States such as Germany, the United Kingdom, Denmark, Sweden and France the Dutch reduction efforts are lagging far behind. Moreover, Urgenda has argued, supported by reasons and on submission of various reports, including a report of the Danish Council on Climate Change (Exhibit U131), that it is impossible for a waterbed effect to occur before 2050 owing to the surplus of ETS allowances and the dampening effect over time of the 'market stability reserve'. The State has failed to provide reasoning to contest these reports.

57. The State also pointed out the risk of 'carbon leakage', which the State understands to be the risk that companies will move their production to other countries with less strict greenhouse gas reduction obligations. The State has failed to substantiate that this risk will actually occur if the Netherlands were to increase its efforts to

reduce greenhouse gas emissions before 2020. The same applies to the related assertion of the State that more ambitious emission reductions will undermine the 'level playing field' for Dutch companies. The State should have provided substantiation for these assertions, especially considering that other EU Member States are pursuing a stricter climate policy (see legal ground 26). Moreover, in light of among other things Article 193 TFEU, it is difficult to envisage without further substantiation, which is lacking, that not maintaining a 'level playing field' for Dutch companies would constitute a violation of a particular legal rule.

58. In this context, it is worth noting that the State itself has committed to reduce emissions by 49% in 2030, in other words, by a higher percentage than the one to which the EU has committed, for which these arguments are apparently not decisive.

59. The State has also argued that adaptation and mitigation are complementary strategies to limit the risks of climate change and that Urgenda has failed to appreciate the adaptation measures that the State has taken or will take. This argument also fails. Although it is true that the consequences of climate change can be cushioned by adaptation, but it has not been made clear or plausible that the potentially disastrous consequences of excessive global warming can be adequately prevented with adaptation. So while it is certainly logical for the State to also take adaptation measures, this does not take away from its obligation to reduce CO₂ emissions quicker than it has planned.

60. The State has furthermore argued that the emission reduction percentage of 25-40% in 2020 is intended for the Annex I countries *as a whole*, and that this percentage can therefore not be taken as a starting point for the emission reduction an *individual* Annex I country, such as the Netherlands, should achieve. The State has failed to provide substantiation why a *lower* emission reduction percentage should apply to the Netherlands than for the Annex I countries as a whole. That is not obvious, considering a distribution in proportion to the per capita GDP, which *inter alia* has been taken as a starting point in the EU's Effort Sharing Decision for distributing the EU emission reductions among the Member States. There is reason to believe that the Netherlands has one of the highest per capita GDP of the Annex I countries and in any case is far above the average of those countries. That is also evident from Appendix II of the Effort Sharing Decision, in which the Netherlands is allocated a reduction percentage (16% relative to 2005) that is among the highest of the EU Member States. It is therefore reasonable to assume that what applies to the Annex I countries as a whole should at least also apply to the Netherlands.

61. The State has also put forward that the Dutch greenhouse gas emissions, in absolute terms and compared with global emissions, are minimal, that the State cannot solve the problem on its own, that the worldwide community has to cooperate, that the State cannot be deemed the party liable/causer ('primary offender') but as secondary injuring party ('secondary offender'), and this concerns complex decisions for which much depends on negotiations.

62. These arguments are not such that they warrant the absence of more ambitious, real actions. The Court, too, acknowledges that this is a global problem and that the State cannot solve this problem on its own. However, this 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.

63. The precautionary principle, a generally accepted principle in international law included in the United Nations Framework Convention on Climate Change and confirmed in the case-law of the European Court of Human Rights (*Tătar/Romania*, ECtHR 27 January 2009, no. 67021/01 section 120), precludes the State from pleading that it has to take account of the uncertainties of climate change and other uncertainties (for instance in ground of appeal 8). Those uncertainties could after all imply that, due to the occurrence of a 'tipping point' for instance, the situation could become much worse than currently envisioned. The circumstance that full scientific certainty regarding the efficacy of the ordered reduction scenario is lacking therefore does not mean that the State is entitled to refrain from taking further measures. High plausibility, as described above, suffices.

64. The State's defence of the lack of a causal link also fails. First of all, these proceedings concern a claim for imposing an order and not a claim for damages, so that causality only plays a limited role. In order to give an order it suffices (in brief) that there is a real risk of the danger for which measures have to be taken. It has been

established that this is the case. Moreover, if the opinion of the State were to be followed, an effective legal remedy for a global problem as complex as this one would be lacking. After all, each state held accountable would then be able to argue that it does not have to take measures if other states do not so either. That is a consequence that cannot be accepted, also because Urgenda does not have the option to summon all eligible states to appear in a Dutch court.

65. Regarding the plea of a lack of the required relativity within the meaning of Book 6 Section 163 of the Dutch Civil Code, the Court states first and foremost that these proceedings constitute an action for an order and not an action for damages. The violated standards (Articles 2 and 8 ECHR) do seek to protect Urgenda and its supporters. For this reason alone, the plea is dismissed.

66. Insofar as the State wanted to assert that the remaining available time (until end-2020) is very short, this argument is rejected. Not only is the judgment (declared provisionally enforceable) over three years old, but the foregoing has shown that the State has known about the severity of the climate problem for a long time and that up to 2011 the State had focused its policy on a reduction of 30%. In this respect, it deserves further attention that the Netherlands, as a highly developed country, has profited from fossil fuels for a long time and still ranks among the countries with the highest per capita greenhouse gas emissions in the world. It is partly for this reason that the State should assume its responsibility, a sentiment that was also expressed in the United Nations Framework Convention on Climate Change and the Paris Agreement.

67. Incidentally, the Court acknowledges that, especially in our industrialised society, measures to reduce CO₂ emissions are drastic and require financial and other sacrifices but there is also much at stake: the risk of irreversible changes to the worldwide ecosystems and liveability of our planet. The State argues that for this reason the system of the separation of powers should not be interfered with, because it is not up to the courts but to the democratically legitimised government as the appropriate body to make the attendant policy choices. This argument is rejected in this case, also because the State violates human rights, which calls for the provision of measures, while at the same time the order to reduce emissions gives the State sufficient room to decide how it can comply with the order.

68. In this context, the State also argues that limiting the cumulated volume of Dutch emissions, as ordered by the district court, can only be achieved by adopting legislation, by parliament or lower government bodies, , that this means that from a substantive point of view the order constitutes an order to create legislation and that the court is not in the position to impose such an order on the State. However, the district court correctly considered that Urgenda's claim is not intended to create legislation, either by parliament or lower government bodies, and that the State retains complete freedom to determine how it will comply with the order. Even if it were correct to hold that compliance with the order can only be achieved through creating legislation by parliament or lower government bodies, the order in no way prescribes the content of such legislation. For this reason alone, the order is not an 'order to create legislation'. Moreover, the State has failed to substantiate, supported by reasons, why compliance with the order can only be achieved through creating legislation by parliament or lower government bodies. Urgenda has argued, by pointing out the Climate Agreement (to be established) among other things, that there are many options to achieve the intended result under the order that do not require the creation of legislation by parliament or lower government bodies . The State has failed to refute this argument with sufficient substantiation.

69. The State also relied on the *trias politica* and on the role of the courts in our constitution. The State believes that the role of the court stands in the way of imposing an order on the State, as was done by the district court. This defence does not hold water. The Court is obliged to apply provisions with direct effect of treaties to which the Netherlands is party, including Articles 2 and 8 ECHR. After all, such provisions form part of the Dutch jurisdiction and even take precedence over Dutch laws that deviate from them.

70. In short, the Court finds the defences of the State unconvincing.

Conclusion

71. To summarise, from the foregoing it follows that up till now the State has done too little to prevent a dangerous climate change and is doing too little to catch up, or at least in the short term (up to end-2020). Targets for 2030 and beyond do not take away from the fact that a dangerous situation is imminent, which requires interventions being taken now. In addition to the risks in that context, the social costs also come into play. The later actions are taken to reduce, the quicker the available carbon budget will diminish, which in turn would require taking considerably more ambitious measures at a later stage, as is acknowledged by the State (Statement of Appeal 5.28), to eventually achieve the desired level of 95% reduction by 2050. In this context, the following excerpt from AR5 (cited in legal ground 2.19 of the judgment) is also worth noting: "(...) *Delaying mitigation efforts beyond those in place today through 2030 is estimated to substantially increase the difficulty of transition to low-longer-term emissions levels and narrow the range of options consistent with maintaining temperature change below 2° C relative to pre-industrial levels.*"

72. Neither can the State hide behind the reduction target of 20% by 2020 at the EU level. First of all, also the EU deems a greater reduction in 2020 necessary from a climate science point of view. In addition, the EU as a whole is expected to achieve a reduction of 26-27% in 2020; substantially more than the agreed on 20%. The Court has also taken into consideration that in the past the Netherlands, as an Annex I country, acknowledged the severity of the climate situation time and again and, mainly based on arguments from climate science, for years assumed a reduction of 20-45% by 2020, with a concrete policy objective of 30% by that year. After 2011, this policy objective was adjusted downwards to 20% by 2020 at the EU level, without any scientific substantiation and despite the fact that more and more became known about the serious consequences of greenhouse gas emissions for global warming.

73. Based on this, the Court is of the opinion that the State fails to fulfil its duty of care pursuant to Articles 2 and 8 ECHR by not wanting to reduce emissions by at least 25% by end-2020. A reduction of 25% should be considered a minimum, in connection with which recent insights about an even more ambitious reduction in connection with the 1.5° C target have not even been taken into consideration. In forming this opinion, the Court has taken into consideration that based on the current proposed policy the Netherlands will have reduced 23% by 2020. That is not far from 25%, but a margin of uncertainty of 19-27% applies. This margin of uncertainty means that there is real chance that the reduction will be (substantially) lower than 25%. Such a margin of uncertainty is unacceptable. Since moreover there are clear indications that the current measures will be insufficient to prevent a dangerous climate change, even leaving aside the question whether the current policy will actually be implemented, measures have to be chosen, also based on the precautionary principle, that are safe, or at least as safe as possible. The very serious dangers, not contested by the State, associated with a temperature rise of 2° C or 1.5° C – let alone higher – also preclude such a margin of uncertainty. Incidentally, the percentage of 23% has become more favourable because of the new calculation method of the 2015 NEV, which assumes higher greenhouse gas emissions in 1990 than those which the district court has taken into consideration. This means that the theoretical reduction percentage can be achieved sooner, although in reality the situation is much more serious (see also legal ground 21 of this ruling).

74. On these grounds, the State's reliance on its wide 'margin of appreciation' also fails. The Court furthermore points out that the State does have this margin in choosing the measures it takes to achieve the target of a minimum reduction of 25% in 2020.

75. The other defences of the State need not be discussed. As has been considered above in legal ground 3.9, a reduction of more than at least 25% by 2020 cannot be awarded, so that the Court shall leave it at this.

Final statement

76. All of the above leads to the conclusion that the State is acting unlawfully (because in contravention of the duty of care under Articles 2 and 8 ECHR) by failing to pursue a more ambitious reduction as of end-2020, and that the State should reduce emissions by at least 25% by end-2020. The State's grounds of appeal pertaining to the district court's opinion about the hazardous negligence doctrine need no discussion under these state of affairs. The judgment is hereby upheld. The grounds of appeal in the appeal on the main issue need no separate discussion. They have been discussed in the foregoing insofar as these grounds of appeal are relevant to the assessment of the cross-appeal. As the unsuccessful party in the appeal, the State is ordered to pay the costs of the appeal on the main issue as well as of the cross-appeal.

DECISION

The Court:

- upholds the judgment of The Hague District Court of 24 June 2015 delivered in the case between the parties;
- orders the State to pay the costs of the proceedings in the appeal on the main issue and of the cross-appeal, on the part of Urgenda estimated up to this ruling at € 711 in court fees, € 16,503 in attorney fees in the appeal on the main issue and € 8,256 in attorney fees in the cross-appeal, and orders the State to pay these costs within fourteen days following this ruling, failing which statutory interest within the meaning of Book 6 Section 119 of the Dutch Civil Code is payable as at the end of the aforementioned term until the date on which payment is made in full;
- declares this judgment provisionally enforceable.

This judgment was passed by *mrs.* M.A.F. Tan-de Sonnaville, S.A. Boele and P. Glazener and pronounced in open court on 9 October 2018 in the presence of the court clerk.