

ARTICLE

# Of Carbon Budgets, Factual Uncertainties, and Intergenerational Equity—The German Constitutional Court’s Climate Decision

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## Abstract

The German Federal Constitutional Court’s climate decision provides a nuanced acknowledgment of climate change’s constitutional relevance. In this Article, the author critically assesses how the Court innovatively sought to capture the intergenerational equity dimension of climate mitigation through a combination of negative and positive duties stemming from constitutional law. The Article demonstrates how despite progressive findings on intergenerational equity and the innovative invocation of negative duties, the operative part of the decision turned out to be rather limited. Because of remaining uncertainties about the allowable national carbon budget, the Court was unable to require the legislator to enact a stricter reduction path. The author argues that the Court could have narrowed remaining uncertainties, without engaging in judicial activism, by adopting an international and constitutional minimum approach to calculating the national budget and by adjusting the burden of proof. Finally, the Article highlights how the German legislator, by going beyond what was required by the Court “trapped itself” on an ambitious reduction path, opening opportunities for future constitutional complaints.

**Keywords:** Climate litigation; intergenerational equity; positive obligations; fundamental rights; human rights; carbon budgets

## A. Introduction

Climate litigation is a relatively new phenomenon, but one increasingly observed around the globe.<sup>1</sup> One sub-category of climate litigation is fundamental and human rights-based climate litigation. This type of litigation is rare. However, due to the universal nature of human rights and the comparability of fundamental rights concerned, it is of particular international interest, raising numerous doctrinal questions among lawyers interested in comparative constitutional law.<sup>2</sup>

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<sup>1</sup>For an overview and statistics, see *Global Climate Litigation Report, 2020 Status Review (2020)*, UNITED NATIONS ENVIRONMENT PROGRAMME, <https://www.unep.org/resources/report/global-clhttps://www.unep.org/resources/report/global-climate-litigation-report-2020-status-review>.

<sup>2</sup>See JORDI JARIA I MANZANO & SUSANA BORRAS, RESEARCH HANDBOOK ON GLOBAL CLIMATE CONSTITUTIONALISM (2020); FRANCESCO SINDICO & MAKANE MOISE MBENGUE, COMPARATIVE CLIMATE CHANGE LITIGATION: BEYOND THE USUAL SUSPECTS, vol. 47 (2021).

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One particularly thorny issue is the intertemporal and intergenerational dimensions of climate change.<sup>3</sup> The cornerstone of the recent climate decision by the German Federal Constitutional Court (BVerfG) is that fundamental rights provide guidance for how to legally address the problem.<sup>4</sup> In this Article, I demonstrate how the Court innovatively combined positive and negative duties stemming from constitutional law to capture the intertemporal choice problem by requiring the State to proportionally distribute reduction efforts over time and generations. A close examination also reveals that while surmounting some obstacles, the Court's innovative reasoning cannot solve the central problem—faced by national courts—identified under the “classical” positive obligation approach: How to distribute the remaining carbon budget among states?

The Article proceeds as follows. First, in Section B, I briefly summarize the background and central legal findings of the BVerfG's climate decision. Second, in Section C, I discuss why the Court was unable to find a violation of positive duties stemming from fundamental rights and the Basic Law's (GG) environmental provision in Article 20a GG. Third, in Section D, I explain how the Court attempted to overcome doctrinal limits of duties to protect people against dangerous climate change by inventing an intertemporal duty to respect the fundamental rights of living generations in the future,<sup>5</sup> but was ultimately unable to overcome persisting uncertainties about the equitable distribution of the global carbon budget. Finally, in Section E, I argue that by combining a decent per capita calculation of Germany's national share with a climate goal ambitious enough to prevent tipping points, the Court could have overcome these insecurities without disregarding the legislator's constitutional margin of appreciation and discretion.

## B. Background to the German Constitutional Climate Case

### I. History of the Case

Already in 2018, a diverse set of plaintiffs, including German actors, academics, and two German non-governmental organizations, lodged the first individual constitutional complaint against Germany's climate mitigation policy. At the time, the legal framework of climate change mitigation in Germany was non-existent, and studies forecasted that the country would by far fail to achieve its politically set 2020 goal of reducing greenhouse gas emissions by forty percent in comparison to 1990.

In parallel to this first constitutional claim, a number of German farmers and their families initiated climate litigation against the German government before Berlin's administrative court. This first legal action tried to compel the German government to meet its 2020 climate goal. At that time, it was not foreseeable that due to COVID-19 related restrictions, the government would meet the target. Still, the Berlin court dismissed the claim, based on the finding that to safeguard fundamental rights of plaintiffs, adequate climate mitigation was still possible at a later stage.<sup>6</sup>

Shortly after the dismissal of the case, the German legislator enacted the Federal Climate Protection Act (*Klimaschutzgesetz* “KSG”). This changed the whole situation, as only the BVerfG can declare laws to be unconstitutional. Plaintiffs thus decided not to appeal the

<sup>3</sup>On these dimensions from an international law perspective, see Catherine Redgwell, *Principles and Emerging Norms in International Law: Intra- and Inter-generational Equity*, in THE OXFORD HANDBOOK ON INTERNATIONAL CLIMATE CHANGE LAW, 186 (Kevin R. Gray, Richard Tarasofsky & Cinnamon Carlarne eds., 2016).

<sup>4</sup>Bundesverfassungsgericht [BVerfG] [Federal Constitutional Court] Mar. 24, 2021, NEUE JURISTISCHE WOCHENSCHRIFT [NJW] 1723 (2021) (Ger.); for a discussion of intra and intergenerational dimensions in the decision, see Jelena Bäuml, *Sustainable Development Made Justiciable: The German Constitutional Court's climate ruling on intra- and inter-generational equity*, EJIL:TALK! (June 8, 2021), <https://www.ejiltalk.org/sustainable-development-made-justiciable-the-german-constitutional-courts-climate-ruling-on-intra-and-inter-generational-equity/>.

<sup>5</sup>This is called *eingriffsähnliche Vorwirkung* by the Court, and only somewhat clumsily translated in the official press-release as “advance interference-like effect.”

<sup>6</sup>See Verwaltungsgericht [VG] [Administrative Trial Court] Berlin, Sept. 10, 2019, NEUE ZEITSCHRIFT FÜR VERWALTUNGSRECHT 1289 (2020) (Ger.); for a critical review, see Andreas Buser, *Eine allgemeine Klimaleistungsklage vor dem VG Berlin*, 39 NEUE ZEITSCHRIFT FÜR VERWALTUNGSRECHT 1253 (2020).

dismissive judgment of the Berlin administrative court but instead to lodge a constitutional complaint with the Court. At around the same time, two further complaints by individuals, including several minors and young adults, reached the BVerfG. Adding an extraterritorial dimension to the case, several Nepalese and Bangladeshi citizens, including two minors, initiated a separate complaint with the support of German non-governmental organizations (NGOs).

With the adoption of the KSG, the initial plaintiffs amended their complaint to primarily challenge climate mitigation goals and the reduction path set in the KSG, just as plaintiffs in later complaints did. At that time, the legislator had set yearly greenhouse gas emission amounts that differed across sectors—for example, energy, and transport—gradually leading to a fifty-five percent reduction of greenhouse gas emissions by 2030.<sup>7</sup> The period after 2030 remained largely unregulated with no further interim goals up until 2050, when the final net-zero emission target was to be achieved. Regarding the yearly reduction targets after 2030, the KSG foresaw that these targets were to be set by the government via administrative ordinances in 2025.<sup>8</sup> The KSG did not, and still does not, regulate concrete measures to achieve yearly reduction targets, as this would have overloaded the act. Rather, the KSG foresees separate, “climate protection programs”, a number of which have been passed by the legislator.<sup>9</sup>

## II. Legal Arguments by Plaintiffs

Plaintiffs primarily challenged the goals and reduction path set in the KSG, as well as the State’s omission to pursue higher reduction goals and enact a tighter reduction scheme.<sup>10</sup> More concretely, complaints sought to establish the 1.5°C goal as the primary target of Germany’s climate mitigation efforts. They also claimed that reduction targets set by the State were insufficient to limit the increase of the Earth’s temperature to 1.5°C, or at least well below 2°C degrees, as stipulated in the Paris Agreement. In complaint no. 1, for example, plaintiffs argued that the net-zero goal should be achieved between 2030 and 2040 to safeguard the constitutional rights of plaintiffs, including their right to health<sup>11</sup>, property<sup>12</sup>, and freedom of occupation<sup>13,14</sup>. With regard to positive obligations, plaintiffs also invoked a right to an ecological minimum standard (*ökologisches Existenzminimum*).

Although plaintiffs could not foresee the BVerfG’s heavy reliance on negative obligations, as most commentators<sup>15</sup> and other courts<sup>16</sup> focused on positive obligations, they still invoked them. Already, the first complaint in 2018 argued that due to the intense impact of future climate protection measures on fundamental freedoms, the legislator, not the government alone, needed to adopt stronger climate goals and measures in the present.<sup>17</sup> In later complaints, plaintiffs even

<sup>7</sup>Klimaschutzgesetz [KSG] [Federal Climate Protection Act], Dec. 12, 2019 [Federal Law Gazette] BGBl at 2513] (Ger.) § 3 para. 1, § 4 para. 1.

<sup>8</sup>KSG, BGBl at 2513, § 4, para. 6 (Ger.).

<sup>9</sup>*Id.* at § 9.

<sup>10</sup>For a summary of arguments, see NJW 1723 (2021), para. 41-42 (Ger.).

<sup>11</sup>Grundgesetz [GG] [Basic Law] art. 2, para. 2, translation at [http://www.gesetze-im-internet.de/englisch\\_gg/index.html](http://www.gesetze-im-internet.de/englisch_gg/index.html).

<sup>12</sup>*Id.* at art. 14.

<sup>13</sup>*Id.* at art. 12.

<sup>14</sup>NJW 1723 (2021), para. 45 (Ger.).

<sup>15</sup>See, e.g., Andreas Buser, *Ein Grundrecht auf Klimaschutz? Möglichkeiten und Grenzen grundrechtlicher Klimaklagen in Deutschland*, 135 DEUTSCHES VERWALTUNGSBLATT (DVBL.) 1389 (2020); Wolfgang Kahl, *Klimaschutz und Grundrechte*, 42 JURISTISCHE AUSBILDUNG 117 (2021), 118-119. From a human rights perspective, see also John H. Knox, *Human Rights Principles and Climate Change*, in THE OXFORD HANDBOOK ON INTERNATIONAL CLIMATE CHANGE LAW, 214 (Kevin R. Gray et al. eds., 2016), 222, 225.

<sup>16</sup>See Hof’s-Gravenhage 9 oktober 2018, AB 2018, 417 m.nt. GA van der Veen, Ch.W. Backes (Staat der Nederlanden/Stichting Urgenda), para. 5 (Neth.).

<sup>17</sup>Josef Göppel, Emanuel Kirschstein, Ella-Marie Kirschstein, Volker Quaschnig, Thomas Bernhard, Johannes Jung, Wolf von Fabek, Hannes Jaenicke, Andreas Sanders & Peter Rottner, VERFASSUNGSBESCHWERESCHRIFT, 129 (Nov. 22, 2018), [http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2018/20181122\\_Not-Available\\_complaint-1.pdf](http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2018/20181122_Not-Available_complaint-1.pdf).

attempted to establish a “right to a future” and argued that the national carbon budget, which was necessary to achieve the 1.5°C goal, calculated on a per capita basis, following the current reduction path, would already be depleted by 2025.<sup>18</sup> They argued that if the budget were to deplete early, an “emergency stop” would be necessary at some point. Such an “emergency stop” would then have detrimental consequences for fundamental freedoms. Moreover, plaintiffs complained about missing interim goals and a comprehensive reduction path between 2030 and 2050, which in their view could not be set by governmental ordinances but required legislative action pursuant to the so-called *Wesentlichkeitstheorie*—a theory applied by the Court that requires essential decisions to be taken by the legislature.<sup>19</sup>

### III. Summary of the Court’s Legal Findings

First, the court applied its admissibility requirements regarding complaints by individuals in a rather flexible way opening the way for its comprehensive findings on the merits but also for further constitutional complaints in the future. Generally, the Court requires plaintiffs to demonstrate the likeliness that State measures or omissions affect their constitutional rights individually, presently, and directly. These requirements safeguard against case overload and an *actio popularis* not foreseen in German constitutional law. In the present case, judges, without much ado, accepted the likeliness of present, individual, and direct affectedness of individual plaintiffs by the consequences of Germany’s climate policy.<sup>20</sup>

Present affectedness usually requires plaintiffs to demonstrate that their rights have already been violated, and that the violation continues. Yet, in earlier cases, the Court already ruled that current affectedness is given where a course of events started and can no longer be corrected.<sup>21</sup> The main argument of the Court on current affectedness in the case at hand was a simple but convincing one: As climate change is likely irreversible, the lodging of complaints at a later stage would not be as effective.<sup>22</sup>

Another, more complex, subject regarding climate cases is individual affectedness.<sup>23</sup> In German constitutional procedures, individual affectedness is the central requirement to avoid any form of *actio popularis*. The problem here is that even with a moderate temperature increase, climate change is supposed to have consequences for the lives of everyone. Does this mean that everybody is allowed to bring claims for more climate protection, or rather that, as everybody is affected, only those specifically affected have legal standing? The BVerfG opted for the former approach and accepted the right to lodge a complaint by all plaintiffs, including those from Nepal and Bangladesh,<sup>24</sup> irrespective of individual health problems or a particular exposedness of their property to climate change, for example.<sup>25</sup> The Court’s central argument to support its finding was that the mere fact that many persons either will be affected by climate change-related hazards or may be affected by massive restrictions of freedom rights in the future, does not change the fact that individuals are also affected.<sup>26</sup> Thus, the Court did not distinguish between plaintiffs specifically affected by climate change—for example, some plaintiffs living on German islands are particularly exposed to rising sea levels—and others who could not demonstrate such specific affectedness. Although the BVerfG acknowledged the particular effects climate change poses for people in

<sup>18</sup>NJW 1723 (2021), para. 38 (Ger.).

<sup>19</sup>NJW 1723 (2021), paras. 46, 61–62 & 74 (Ger.).

<sup>20</sup>NJW 1723 (2021), para. 129 (Ger.).

<sup>21</sup>NJW 229 (2016) para. 58 (Ger.).

<sup>22</sup>NJW 1723 (2021), paras. 108, 130, 133 (Ger.).

<sup>23</sup>For a comparative collection of differing standing requirements, see UNEP *supra* note 1, at 37.

<sup>24</sup>NJW 1723 (2021), paras. 101–02(Ger.).

<sup>25</sup>*Id.* at paras. 101–02, 129–30 (Ger.).

<sup>26</sup>*Id.* at paras. 110, 131 (Ger.).

Nepal and Bangladesh, it also did not require any form of special affectedness relative to all other people living there. The Court thereby accepted a global *actio popularis*.

The only complaints dismissed on procedural grounds are those by NGOs. NGOs had not made clear how climate change violates their rights as organizations.<sup>27</sup> This is in line with the German legal tradition and the fact that German constitutional law does not provide for class actions. Still, it is noteworthy because in other jurisdictions, NGOs, not individuals, successfully brought climate cases—notably in the Netherlands, Ireland, and France.

On the merits, plaintiffs from Germany were partly successful, whereas complaints lodged by people abroad were dismissed. The partial success, however, is practically a rather limited one, whereas its symbolic importance must not be underestimated. The Court did not follow the arguments of plaintiffs that the German legislator must set a more demanding reduction path, based on its finding that uncertainties regarding the remaining national carbon budget allow the legislator wide discretion. Rather, the operative part of the decision only requires the legislator to set the reduction path for the period between 2030 and 2050 earlier than required for by the KSG—end of 2022, not 2025—and by other means—act of parliament not governmental ordinance.<sup>28</sup> According to the Court, to safeguard the fundamental rights of German plaintiffs in the future against then indispensable climate mitigation measures, it is necessary to provide transparency and guidance about the future reduction path, and incentives to—German—civil society to develop and implement climate-neutral techniques and practices.<sup>29</sup>

This focus on predictability and the ability to adapt to stronger climate mitigation measures in the future led the Court to dismiss complaints by Nepali and Bangladeshi plaintiffs. These plaintiffs simply would not be affected by freedom constraints imposed by the German legislator in the future, as they are outside the German jurisdiction.<sup>30</sup>

Regarding German plaintiffs, others have argued that, despite the limited operative part, an obligation to adjust the reduction path pre-2030 can be read in-between lines of the court's decision.<sup>31</sup> Indeed, there are several hints that, with some amount of goodwill, can be understood this way: *En passant* the BVerfG notes, for example, that there are several indications that the 2030 interim goal was based on a 2.0°C temperature target, indicating that directly aiming at this target without even trying to achieve the “preferably 1.5°C” goal is not enough.<sup>32</sup> The Court also seems to argue in some paragraphs that it regards it as likely that the budget might be depleted already by 2030 or in the following years, indicating that judges had some idea of the remaining national budget, despite highlighted uncertainties.<sup>33</sup> Finally, the limited operative part may have been a compromise avoiding any indication of judicial activism while at the same time requiring the legislator to act. The Court may even have anticipated the political willingness to tighten the reduction path even before 2030. By requiring the legislator to set the reduction path post-2030 earlier it may have simply given the legislator the impetus to do so earlier and justify that decision to its constituents. If the legislator would have simply set the reduction path post-2030 without adjusting yearly emission targets pre-2030, the post-2030 reduction path would have been

<sup>27</sup>*Id.* at paras. 128, 136 (Ger.)

<sup>28</sup>*Id.* at paras. 259–66 (Ger.)

<sup>29</sup>*Id.* at para. 195. In a comparative perspective, this resembles the Irish Supreme Court's findings that the Irish National Mitigation Plan was too vague and aspirational to provide guidance for a “reasonable and interested observer.” See *Friends of the Irish Environment v. Ireland* [2017] IR 793 (Ir.) para. 6.45.

<sup>30</sup>NJW 1723 (2021), para. 132 (Ger.).

<sup>31</sup>See, e.g., Helmut Philipp Aust, *Klimaschutz aus Karlsruhe*, VERFASSUNGSBLOG (May 5, 2021), <https://verfassungsblog.de/klimaschutz-aus-karlsruhe-was-verlangt-das-urteil-vom-gesetzgeber/>; *Sechs Eckpunkte für eine Reform des Klimaschutzgesetzes*, AGORA ENERGIEWENDE (May 2021), <https://www.agora-energiewende.de/veroeffentlichungen/sechseckpunkte-fuer-eine-reform-des-klimaschutzgesetzes/>.

<sup>32</sup>NJW 1723 (2021), para. 242 (Ger.).

<sup>33</sup>*Id.* at para. 237 (Ger.).

quite tight, as highlighted by the Court in several passages, irrespective of the calculation methodology for the national budget, with deterrent effects for the industry and constituents.<sup>34</sup>

Irrespective of these potential motives, it remains that the court did not indicate any requirement for the legislator to tighten the reduction path in the operative part of the decision. Moreover, all parts of the decision dealing with the available national budget stress remaining uncertainties. Only the reference to predictability and transparency enabled the court to make a reasonable argument for setting the reduction path post-2030 earlier. After all, stressed uncertainties with regard to the national budget persist and would not be overcome even after setting the reduction path for the post-2030 period. After laying out the complete reduction path until climate neutrality is to be reached in 2045, we will have a better picture of the national budget the legislator sees as adequate to fulfill its legal obligations. However, if the legislator would have adopted a less ambitious reduction path, the Court would still be faced with uncertainties regarding flexibility instruments and different modes of sharing the global budget among States.

### C. Setting the Scene: Positive Obligation Doctrine and its Limits

The Court's findings on positive obligations stemming from fundamental rights are remarkable for their clear acknowledgment that such obligations require the State to protect its inhabitants, and potentially even people abroad, against the effects of climate change on human health and property.<sup>35</sup> In a similar vein, positive obligations stemming from the Basic Law's environmental clause—Article 20a GG—require the State to protect the climate and achieve climate neutrality.<sup>36</sup> The Court upheld the longstanding position that Article 20a GG does not contain an individual right. Yet, it activated the clause in the case at hand with the argument that the considerable risks to freedom posed in later reduction phases by climate protection measures—advance effects on fundamental rights—need justification and must be compatible with objective constitutional law, including Article 20a GG.<sup>37</sup>

Importantly, the BVerfG discarded one central argument brought forward against making positive obligations actionable in the area of climate change: That because of the global character of climate change and individual states' limited capability to mitigate climate change, individual states could not be held liable to increase their individual efforts.<sup>38</sup> On the contrary, the Court took the global character of climate change as an argument to require Germany not only to reduce its own emissions, but also to search for solutions through international negotiations, the conclusion of international treaties, and within international organizations.<sup>39</sup> In essence, positive obligations have three dimensions here, the first two of which could in principle also be invoked by people abroad:<sup>40</sup> The State must set a legislative framework to reduce greenhouse gas emissions, national climate mitigation; it has to work towards increased global protection of the climate, international climate mitigation; and to adopt climate adaptation measures on the national plane, national climate adaptation.<sup>41</sup>

<sup>34</sup>See AGORA ENERGIEWENDE, *supra* note 31, at 6.

<sup>35</sup>NJW 1723 (2021), para. 143–81 (Ger.).

<sup>36</sup>*Id.* at para. 198–99 (Ger.).

<sup>37</sup>*Id.* at para. 195 (Ger.). For a more depth on this doctrinal construct, see Christian Calliess, *Das "Klimaurteil" des Bundesverfassungsgerichts: "Versubjektivierung" des Artikel 20 a GG?*, 32 ZEITSCHRIFT FÜR UMWELTRECHT (ZUR) 355 (2021).

<sup>38</sup>See NJW 1723 (2021), para. 203. See also *Thomson v. Minister for Climate Change Issues* [2017] NZHC 733 (HC) at para. 133 (N.Z.); Hof-Den Haag, 8 oktober 2018, Case No. 200.178.245/01, para. 64 (Neth.); Hof's-Gravenhage 9 oktober 2018, AB 2018, 417 m.nt. GA van der Veen, Ch.W. Backes (Staat der Nederlanden/Stichting Urgenda), para. 5.7.7 (Neth.); *Juliana v. United States*, 947 F.3d 1159 (9th Cir. 2020).

<sup>39</sup>NJW 1723 (2021), para. 149, 200–01 (Ger.). On the international dimensions of the decision, see also: Helmut Aust, *Case Note: Climate Change Act Case*, Federal Constitutional Court, Order of the First Senate, March 24, 2021, *American Journal of International Law* 115 (forthcoming, 2021).

<sup>40</sup>NJW 1723 (2021), para. 101–02, 149 (Ger.). Note that the Court considers this issue without definitely deciding on whether positive obligations exist towards people abroad, as it assumes that in any case such obligations would not be violated.

<sup>41</sup>NJW 1723 (2021), para. 150, 164 (Ger.). See also, Andreas Buser *supra* note 15.



Despite this progressive international version of positive obligations, the Court did not acknowledge a breach of positive obligations—as in all previous environmental law proceedings decided by the Court to date.<sup>42</sup> There are several reasons for the Court’s reluctance. According to the Court’s established doctrine, in a constellation of duties to protect, such as this one, the legislator as the only organ enjoying direct democratic legitimacy has broad leeway<sup>43</sup> to evaluate the threat and determine the means necessary to prevent it. Therefore, in most decisions, the Court only evaluates whether protection measures were taken at all and whether they are not evidently unsuitable to achieve a minimum level of protection.<sup>44</sup> Only in a small number of cases, the Court has adopted a stronger standard—the so-called *Untermaßverbot*—requiring state measures to be adequate and effective to meet constitutional duties to protect.<sup>45</sup>

In the case at hand, the Court did not reference either of those standards but, in essence, applied a middle-ground position.<sup>46</sup> Under this standard of control, the judges identify several scenarios in which a violation of positive obligations would be given. Taking no climate mitigation measures is considered inadequate, as climate adaptation under such a scenario would not be enough to protect people’s health and property.<sup>47</sup> Even further, the Court found that a legislative framework not aiming at greenhouse gas net neutrality and a gradual reduction path would be considered “manifestly unsuitable.”<sup>48</sup> As the KSG foresaw net neutrality by 2050 and set a gradual reduction path, it passed muster here. The Court went on to assess whether the legal framework of the KSG and the measures taken to fulfill the reduction path “fall significantly short of” the substantial protection required by fundamental rights to health and property. It is not entirely clear how that standard differs from “manifestly unsuitable/inadequate,” but it appears that the Court became more concrete here, looking more precisely at the KSG’s reduction path and goals. Although the wording “significantly” indicates a wide standard of review, it appears to be tighter than that used in examining the first two conditions and thereby comes closer to what would be required by the *Untermaßverbot*—adequate and effective.

Based on this standard of review, the Court rightly refrained from reading a numerical climate goal into fundamental rights.<sup>49</sup> With regard to positive obligations stemming from fundamental rights, the Court backed this rejection by its rather positive evaluation of adaptation measures. According to the Court, health problems occurring between a 1.5°C and 2°C rise in global temperatures could be substantially mitigated by Germany’s climate adaptation strategy.<sup>50</sup> Regarding positive obligations stemming from Art. 20a GG, the Court depicted the KSG’s reference to the Paris goals<sup>51</sup> as a concretization of constitutional obligations,<sup>52</sup> and thereby uplifted international obligations between states, to constitutional obligations toward individuals. Yet, it did not accept the 1.5°C as the definitive target. While the Court acknowledged that opting for a 2.0°C goal would not be sufficient, it also refrained from clearly embracing the middle ground position at 1.75°C that the German Advisory Council for

<sup>42</sup>See, for example, BVerfG, NJW 1655 (1981) (Ger.); NJW 651 (1996) (Ger.); NVwZ 1489 (2009) (Ger.).

<sup>43</sup>NJW 1723 (2021), para. 152 (Ger.) (Einschätzungs, Wertungs, und Gestaltungsspielraum).

<sup>44</sup>BVerfG, Oct. 29, 1987, 77 ENTSCHEIDUNGEN DES BUNDESVERFASSUNGSGERICHTS [BverfGE] 170, 215 (Ger.); BVerfG, Nov. 30, 1988, 79 BVerfGE 174, 202 (Ger.); BVerfG, Jan. 28, 1992, 85 BVerfGE 191, n. 212 (Ger.); NVwZ 1224 (2018) (Ger.).

<sup>45</sup>BVerfG, May 28, 1993, 88 BVerfGE 203 (Ger.).

<sup>46</sup>For the argument that the Court only applied the “Evidenzkontrolle”, see Christian Calliess, *Klimapolitik und Grundrechtsschutz*, 32 ZEITSCHRIFT FÜR UMWELTRECHT (ZUR) 323, 330 (2021).

<sup>47</sup>NJW 1723 (2021), 157 (Ger.).

<sup>48</sup>NJW 1723 (2021), 155 (Ger.).

<sup>49</sup>NJW 1723 (2021), para 161–62 (Ger.). Cf. Mehrdad Payandeh, *The Role of Courts in Climate Protection and the Separation of Powers*, in CLIMATE CHANGE LITIGATION 64, 77 (Marc-Philippe Weller & Wolfgang Kahl eds., 2021).

<sup>50</sup>NJW 1723 (2021), para. 164 (Ger.).

<sup>51</sup>KSG, BGBl at 2513, § 1.

<sup>52</sup>NJW 1723 (2021), paras. 201, 211 (Ger.).

Environmental Questions had proposed.<sup>53</sup> Whereas the Court ruled that the legislator must “consider” the national budget calculated on a per-capita basis by the Advisory Council in setting the reduction path, judges also highlighted remaining uncertainties and wide regulatory discretion.<sup>54</sup>

In my opinion, the Court could well have taken the extreme dangers involved as an argument for intensified scrutiny. In that regard, the Court even discussed the dangers of reaching tipping points and made reference to the concept of a constitutional safety margin, (*Abstandsgebot*): The idea that the legislator should aim at a climate goal ambitious enough to keep some safety margin to reaching tipping points.<sup>55</sup> Counterintuitively, the Court argued that existing uncertainties with regard to forecasting the course of climate change and its effects increase the legislator’s leeway.<sup>56</sup> Without making it explicit, the Court turned the concept of an *Abstandsgebot* upside down. Rather than taking the significant dangers involved and the unpredictability of the effects of reached tipping points as an argument for intensified scrutiny,<sup>57</sup> it did the opposite.

With regard to the reduction path foreseen by the KSG to reach the Paris goal, the Court was equally unable to find a violation of positive obligations under both fundamental rights and Article 20a GG.<sup>58</sup> Although it saw some indication that the reduction path only aims at achieving the 2.0° C goal, it somewhat optimistically assumed that the State could offset health risks under such a scenario by climate adaptation measures. The decision does not reference scientific evidence of that prognosis. The Court was also unable to establish a violation of Article 20a GG with regard to the reduction path.<sup>59</sup> In particular, the Court emphasized existing uncertainties about the remaining carbon budget, a necessary prerequisite to determine the sufficiency of the reduction path, and the legislator’s remaining leeway to impose a sort of “emergency stop” at a later stage. In that regard, the Court reiterated its argument that persisting uncertainties are an argument for wide legislative leeway rather than the other way round.<sup>60</sup>

Finally, based on scientific studies, the Court acknowledged that, to date, Germany had not adopted sufficient concrete measures foreseen in “climate protection programs”<sup>61</sup> to fulfill its reduction path and climate goals envisaged.<sup>62</sup> Yet, the Court highlighted the possibility to adopt further measures in the future and the legal obligation to compensate for the failure to achieve yearly reduction targets in the following years.<sup>63</sup> That such postponement requires even stronger climate mitigation in the future, inherently unjust from an intergenerational perspective, finally led the Court to discuss the central doctrinal novelty of its decision.

<sup>53</sup>For the proposal by the Advisory Council, see *Umweltgutachten 2020: für eine entschlossene umweltpolitik in deutschland und europa*, SACHVERSTÄNDIGENRAT FÜR UMWELTFRAGEN (2020), 52, 88, [https://www.umweltrat.de/SharedDocs/Downloads/DE/01\\_Umweltgutachten/2016\\_2020/2020\\_Umweltgutachten\\_Entschlossene\\_Umweltpolitik.pdf](https://www.umweltrat.de/SharedDocs/Downloads/DE/01_Umweltgutachten/2016_2020/2020_Umweltgutachten_Entschlossene_Umweltpolitik.pdf).

<sup>54</sup>NJW 1723 (2021), paras. 220–36(Ger.); and in particular para. 229 (“Even though the Advisory Council’s specific quantification of the remaining budget contains significant uncertainties, it must be taken into consideration by the reduction targets set down in the legislation.”).

<sup>55</sup>The concept of “*Abstandsgebote*” refers to a proposal by academics that the State would have to keep a security margin to reaching tipping points. See Christian Calliess, *Abstand halten. Rechtspflichten der Klimaschutzpolitik aus planetaren Grenzen*, 30 ZEITSCHRIFT FÜR UMWELTRECHT (ZUR) 385 (2019); Andreas Buser *supra* note 15, at 1395.

<sup>56</sup>For the opposing argument that the legislator bears the burden of proof that tipping points will not be reached see Calliess, *supra* note 46, at 330.

<sup>57</sup>Buser, *supra* note 15, at 1393.

<sup>58</sup>NJW 1723 (2021), para. 166–67(Ger.).

<sup>59</sup>NJW 1723 (2021), para. 230–31(Ger.).

<sup>60</sup>NJW 1723 (2021), para. 211 (Ger.).

<sup>61</sup>KSG, BGBl at 2513, § 9.

<sup>62</sup>NJW 1723 (2021), para. 169–70(Ger.).

<sup>63</sup>KSG, BGBl at 2513, § 4 para. 3.



#### D. The Central Legal Novelty—An Obligation to Protect the Freedom of the Future

What sounds like the title of a sci-fi movie is actually the cornerstone of the BVerfG's climate decision. The Court here explicitly acknowledged the fundamental intergenerational conflict inherent in climate change, and the related intertemporal choice problem: The longer climate protection measures are postponed, the heavier they must be in order to be effective.<sup>64</sup>

Surprisingly to many commentators, the Court discussed the issue under the heading of negative obligations. However, positive obligations stemming from fundamental rights and Article 20a GG were the starting point of the Court's reasoning. To fulfill these positive obligations, the legislator, if failing to take more ambitious measures now, will be required to severely interfere with fundamental rights in the future. The State could generally act later and still be effective with regard to protecting the climate, but it would then be required by positive obligations to strongly infringe on almost all fundamental rights, as numerous human activities to some extent produce greenhouse gases and adaptation to carbon-neutral alternatives in many cases requires considerable time.<sup>65</sup>

In essence, this intertemporal negative duty bears some strong resemblance to the positive duties discussed above. Notably, the Court again granted the legislator much leeway.<sup>66</sup> Moreover, this intertemporal duty to respect fundamental rights alone would not render today's German climate policy a violation of fundamental rights, as the Court considers even severe infringements on freedom rights in the future to be justified by reference to positive obligations stemming from fundamental rights and Article 20a GG.<sup>67</sup> Yet, the constitutional crux is the intergenerational equity dimension implicit in the Court's innovative doctrinal construct. Based on the principle of proportionality, the Court requires the legislator to distribute allowable emissions in a forward-looking manner and to ensure that "reduction burdens are not unevenly distributed over time and between generations."<sup>68</sup>

Despite this innovative construct, the Court keeps turning in circles. The circularity stems from the fact that the Court is haunted by its inability to further narrow down the global- and national carbon budgets. In principle, the Court accepted the concept of a global carbon budget<sup>69</sup> and an obligation stemming from Article 20a GG to reach climate neutrality at some point.<sup>70</sup> Yet, it found itself unable to further specify the national carbon budget allowable in order to fulfil positive obligations stemming from fundamental rights and Art. 20a GG, rendering judges equally incapable of meaningfully scrutinizing the reduction path and the proportionality of the distribution of emissions. Without an estimate of the national budget, the whole doctrinal construct is reduced to symbolic value. This again reveals the central legal problem faced by constitutional climate claims—namely, how to unilaterally determine the fair national share of the global carbon budget.

This time international law proved to be of little help. Even the reference to the Paris Agreement could not answer the question of how to share the allowable emissions among states,

<sup>64</sup>NJW 1723 (2021), para. 182. (Ger.).

<sup>65</sup>NJW 1723 (2021), para. 120 (Ger.).

<sup>66</sup>NJW 1723 (2021), para. 207, 211, 236 (Ger.).

<sup>67</sup>NJW 1723 (2021), para. 192 (Ger.).

<sup>68</sup>NJW 1723 (2021), para. 192 (Ger.); on the concept of intergenerational equity in a different setting see Corte Suprema de Justicia [C.S.J.] [Supreme Court], Apr. 5, 2018, Case No.: 11001-22-03-000-2018-00319-01, (p. 18) (Colom.). Unofficial translation available at, <http://climatecasechart.com/climate-change-litigation/non-us-case/future-generation-v-ministry-environment-others/>.

<sup>69</sup>The concept of a global carbon budget is based on the fact that carbon remains in the atmosphere for decades, parts of it even for over a millennium, and that "Carbon Dioxide Removal" techniques will not be economically and technically viable for the foreseeable future and bear significant social and ecologic risks themselves. To mitigate global warming and achieve average temperature goals set in the Paris Agreement, only a limited amount of carbon emissions is permissible until the net-zero goal is to be achieved. This is called the global carbon budget. The IPCC has calculated permissible global carbon-budgets based on different average temperature goals and different probabilities to achieve them. See *Global Warming of 1.5°C: Special Report 15*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE [IPCC], (2018), <https://www.ipcc.ch/sr15/>.

<sup>70</sup>NJW 1723 (2021), para. 236 (Ger.).

as the Paris Agreement refers back to domestic law by adopting the concept of “nationally determined contributions”<sup>71</sup>, with only the principles of “equity” and “common but differentiated responsibility”<sup>72</sup> providing some limited guidance. Finally, flexibility mechanisms—for example, trading allowable emissions between states<sup>73,74</sup>—and factual uncertainties acknowledged in Intergovernmental Panel on Climate Change (IPCC) reports add further uncertainties to the evaluation of national budgets.<sup>75</sup>

Even amid prevailing uncertainties about the remaining global and national carbon budgets, the Court managed to find a violation of fundamental rights because the Court assumed that, despite those uncertainties, the reduction path foreseen by the KSG does not guarantee a smooth transition towards climate neutrality.<sup>76</sup> This is not to say that the Court practically required a stricter reduction path. Rather, setting the reduction path earlier should enhance transparency, guidance, and incentives necessary for civil society to develop and implement climate-neutral techniques and practices.<sup>77</sup> In the eyes of judges, this is necessary to smooth the transition process toward a carbon emission free society. If state interference in fundamental freedoms at some point after 2030 must be tough, then the legislator must at least announce it early, in a transparent manner, and by law rather than government ordinance.

### E. Overcoming Unresolved Uncertainties Without Engaging in Judicial Activism

Unresolved issues about the national carbon budget involve the computability of the allowable global budget and the question of how to distribute the global carbon budget among States. On the first issue, the availability of flexibility instruments foreseen in EU Law<sup>78</sup> and the Paris Agreement continues to be an issue, as do scientific uncertainties about the remaining global carbon budget. Moreover, the margin left by the Paris Agreement—between achieving the preferred 1.5°C goals and the vague “well below” 2.0°C average temperature rise—remains problematic, making it hard for a national court to estimate the remaining global budget. On the second issue, international law only provides vague guidance as to how to distribute the global budget among States.<sup>79</sup>

While the Court’s findings are already a huge step forward to constitutionally contain the dangers of climate change, in this section, I demonstrate how the Court could have gone even further. This is not intended to be a master plan for judicial activism infringing on the legitimate discretion of the legislator. Rather, it is a call for a sound argumentative basis for what some already read between the lines of the decision: The requirement to adopt a stricter reduction path aiming at the 1.5°C goal.<sup>80</sup> I do not propose that the Court should set numerical goals itself. This must be seen as too intrusive from a separation of power perspective and with scientific prognostic uncertainties involved, goals, in any case, would be somewhat arbitrarily set. Rather, I argue that further minimum requirements for the allowable national budget exist, which derive from international and

<sup>71</sup>Paris Agreement to the United Nations Framework Convention on Climate Change, Dec. 12, 2015, T.I.A.S. No. 16-1104, art. 3.

<sup>72</sup>*Id.* at art. 2, para. 2.

<sup>73</sup>*Id.* at art. 6, paras. 2, 4.

<sup>74</sup>For an overview of flexibility mechanisms, see BENOIT MAYER, *THE INTERNATIONAL LAW ON CLIMATE CHANGE* (2021) ch. 8.

<sup>75</sup>NJW 1723 (2021), para. 104 (Ger.).

<sup>76</sup>NJW 1723 (2021), para. 243 (Ger.).

<sup>77</sup>NJW 1723 (2021), para. 195 (Ger.). In a comparative perspective this resembles the Irish Supreme Court’s findings that the Irish National Mitigation Plan was too vague and aspirational to provide guidance for a “reasonable and interested observer,” see *Friends of the Irish Environment v. Ireland* [2017] IR 793 (Ir.) para. 6.45.

<sup>78</sup>See, e.g., Commission Regulation 2018/842 of May 30, 2018, on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending regulation (EU) no 525/2013, O.J. (L 156) 26–42, arts. 5, 6.

<sup>79</sup>See for a very critical position on this issue: Benoit Mayer, *Temperature Targets and State Obligations on the Mitigation of Climate Change*, 33 *JOURNAL OF INTERNATIONAL ECONOMIC LAW* (2021, forthcoming).

<sup>80</sup>See discussion *infra* Section B.III.

constitutional law. Based on these minimum requirements, the Court could have further narrowed the constitutionally allowable global and national carbon budgets. Thereby, judges would have opened the way for controlling the legislator's reduction ambitions in a meaningful manner. In any case, it must be noted that while climate goals and the reduction path should be scrutinized more comprehensively, the legislator keeps wide leeway as regards the choice of concrete measures to achieve reduction targets. In particular, the legislator remains free to choose the policy of how to fulfill the reduction path, for example, environmental subsidies, prohibitions, etc., as long as it is effective.

### *I. Do Scientific Prognostic Uncertainties Increase or Limit the Legislator's Discretion?*

Despite much progress in climate sciences, several prognostic uncertainties continue to make it difficult to precisely calculate the allowable global carbon budget, and therefrom derive the allowable national budget for Germany.<sup>81</sup> Factual uncertainties inter alia relate to different methodologies used, the sufficiency and reliability of available observation data, and the availability of negative emission technology in the future.<sup>82</sup> In addition, the national budget could, in principle, be enlarged by flexibility instruments that allow states overfulfilling their obligations to trade emission allowances with other States.

The Climate Decision overcomes some of these obstacles. The Court, in essence, dismisses the argument that flexibility instruments and negative emission technologies would substantially increase Germany's national carbon budget. According to the Court, flexibility instruments face practical limits because so far, few states, if any, are likely to overfulfill targets.<sup>83</sup> Therefore, trade in emission allowances between States on the EU or global levels so far is inexistent. There are also meager prospects that negative emission technologies will be technically available and economically viable on a larger scale in the foreseeable future.<sup>84</sup> Consequently, the mere possibility that such instruments could, in the future, increase carbon budgets does not hinder judicial control here.

What is missing in the Court's reasoning is a more comprehensive assessment of how to deal with remaining scientific uncertainties as to the allowable global budget. Although jurisprudence cannot do away with remaining uncertainties in natural science, there are different legal options for dealing with a *non-liquet*. In legal proceedings, this is covered by the notion of the burden of proof. The party to a dispute that makes a claim generally has a burden of proof to justify or substantiate that claim.<sup>85</sup>

In fundamental rights cases, the question of who bears the burden of proof in *non-liquet* situations is harder to answer. As *Kokott* has convincingly argued, uncertainties should not *a priori* be handled to the detriment of fundamental rights, even with regard to predictive decisions in positive obligation constellations.<sup>86</sup> In the peculiar situation of climate change, good arguments support the view that the state bears this burden—namely, the extreme dangers stemming from climate change and the importance of affected rights.<sup>87</sup> In such an uncertain situation the precautionary principle requires added precautions rather than less.<sup>88</sup>

<sup>81</sup>For a recent in-depth meta-study of the physical science basis in 2021, see IPCC, CLIMATE CHANGE 2021: THE PHYSICAL SCIENCE BASIS, Working Group I Contribution to the Sixth Assessment Report, 2021.

<sup>82</sup>For a summary, see Sachverständigenrat für Umweltfragen *supra* note 52, at 44–45. See also Joeri Rogelj, Piers M. Forster, Elmar Kriegler, Christopher J. Smith & Roland Séférian, *Estimating and Tracking the Remaining Carbon Budget for Stringent Climate Targets*, 571 NATURE 335 (2019).

<sup>83</sup>NJW 1723 (2021), para. 226 (Ger.).

<sup>84</sup>NJW 1723 (2021), paras. 33, 227. For an overview, see also BENOIT MAYER *supra* note 74, at ch. 9.

<sup>85</sup>See James Cargile, *On the Burden of Proof*, 72 PHILOSOPHY 59 (1997).

<sup>86</sup>JULIANE KOKOTT, BEWEISLASTVERTEILUNG UND PROGNOSEENTSCHEIDUNGEN BEI DER INANSPRUCHNAHME VON GRUND- UND MENSCHENRECHTEN (1993), 92, 107.

<sup>87</sup>Christian Calliess *supra* note 46, at 330.

<sup>88</sup>Jonathan Wiener, *Precaution and Climate Change*, in THE OXFORD HANDBOOK ON INTERNATIONAL CLIMATE CHANGE LAW 164, 169 (Kevin R. Gray, Richard Tarasofsky, Cinnamon Carlarne & Catherine Redgwell eds., 2016).

Furthermore, reaching tipping points would affect not only health and property but also human dignity.<sup>89</sup> Making humans the plaything of unforeseeable environmental changes threatens the very foundations of a dignified life in a healthy environment and the ability of many people in the Global South to sustain a livelihood. Given this grave threat, and the particular status of Article 1 paragraph 1 GG in the Basic Law, it would only be consequent to place the burden of proof on the State.<sup>90</sup>

This burden of proof does not require the state to take an absolutely safe pathway—one that is likely non-existent and in any case not achievable by one state. Nevertheless, the government and the legislator must demonstrate that there is a high likelihood that tipping points will not be reached. From that point of view, existing uncertainties about a secure pathway do not hinder judicial control. Rather, the legislator must demonstrate that worst-case scenarios are either unlikely or preventable.

## II. An International Minimum Standard for Calculating the National Carbon Budget?

The above-mentioned concept of an *Abstandsgebot* requires the legislator to keep a safety margin from reaching tipping points. According to the latest studies, global warming above 1.5°C already severely increases the probability of reaching some of these tipping points.<sup>91</sup> It is not entirely clear what will happen with the global climate when individual tipping points are reached; however, in several cases, a strong increase in global warming is likely—for example, the thawing of permafrost. This alone makes tipping points relevant for assessing the allowable global carbon budget. Moreover, reaching tipping points poses extreme and uncontrollable dangers for human rights; for example, a sea-level rise potentially stemming from Antarctic and Greenland ice shield disintegration poses severe threats for all coast-line inhabitants. The extreme and uncontrollable dangers that stem from such a scenario led scholars and plaintiffs to argue in favor of keeping a safety margin to an average global temperature increase under which the reaching of tipping points is likely. Doctrinally, the constitutional requirement of a safety margin is based on positive obligations stemming from human dignity, constitutional rights to health, property, and life, and also the precautionary principle inherent in Article 20a GG and Art. 3 Nr. 3 UNFCCC.<sup>92</sup> The Court in its climate decision even references Art. 3 Nr. 3 UNFCCC,<sup>93</sup> yet without drawing meaningful conclusions for the case at hand. Taking a safety margin into account would have allowed the Court to further narrow the constitutionally permissible climate goal—close to 1.5°C according to the current state of science—and consequently the available global budget.

Based on such an estimate, the Court could have further narrowed the constitutionally allowable national budget by adopting the least restrictive normative standard of how to distribute the global budget among states—what I call the minimum approach of distribution.<sup>94</sup> There are, of course, numerous competing normative standards of distributing the global carbon budget among States, each underlined by different notions of justice, such as state sovereignty, human equality, basic needs, or capability. One of these approaches is the per capita allocation of the global carbon

<sup>89</sup>GG art. 1 para. 1. For more detail, see Andreas Buser, *supra* note 15, at 1395.

<sup>90</sup>In that direction see KOKOTT, *supra* note 86, at 125–29 noting that her findings are not supported by the jurisprudence of the BVerfG, for example, in BVerfG, Jun. 21, 1977, 45 BVerfGE 187 (Ger.).

<sup>91</sup>Timothy M. Lenton, Johan Rockström, Owen Gaffney, Stefan Rahmstorf, Katherine Richardson, Will Steffen, & Hans Joachim Schellnhuber, *Climate Tipping Points - Too Risky to Bet Against*, 575 NATURE 592 (2019).

<sup>92</sup>*Demokratisch regieren in ökologischen Grenzen*, SACHVERSTÄNDIGENRAT FÜR UMWELTFRAGEN (June 2019) 19, 163–64, [https://www.umweltrat.de/SharedDocs/Downloads/DE/02\\_Sondergutachten/2016\\_2020/2019\\_06\\_SG\\_Legitimation\\_von\\_Umweltpolitik.pdf?\\_\\_blob=publicationFile&v=13](https://www.umweltrat.de/SharedDocs/Downloads/DE/02_Sondergutachten/2016_2020/2019_06_SG_Legitimation_von_Umweltpolitik.pdf?__blob=publicationFile&v=13); Calliess *supra* note 46, at 355. On the precautionary principle in the jurisprudence of the court, see BVerfG, NVwZ 94, 98 (2011) (Ger.).

<sup>93</sup>NJW 1723 (2021), para. 225, 229 (Ger.).

<sup>94</sup>Interestingly the Court, as mentioned above, accepts the Advisory Council's national budget based on a per-capita calculation as a guiding post, while at the same time stressing that Art. 20a GG does not specify Germany's fair share and the Paris Agreement only provides "certain indications"; see BVerfG, NJW 1723 (2021), para. 225 (Ger.).

budget. An allocation of allowable emissions per capita, based on the principle of equal access to collective goods, would rely entirely on average—projected—population shares in the period 2010–2100.<sup>95</sup>

In my opinion, calculating the national budget based on the per capita allocation represents the minimum of what is required by Article 20a GG and international law from an industrialized State. This is despite the fact that such an allocation standard is neither mentioned in the KSG nor the German basic law. Yet, the per capita approach from the perspective of an industrialized State is the least demanding approach still compatible with principles of international climate law. Notably, the per capita allocation leads to substantially higher allowable emissions for industrialized states than most standards, as the latter usually take into account historical contributions, state of industrialization, or the ability to bear burdens.<sup>96</sup>

The only calculation methodologies discussed on the international level which would allow industrialized states even larger national carbon budgets are “grandfathering” and “cost-optimal” approaches. These approaches, however, do not conform to the principles of CBDR and equity. As the Court established an international dimension of positive constitutional obligations and qualified the Paris Agreement as relevant in determining the legislator’s climate related duties, it could have taken into account the principles of CBDR and equity enshrined in Article 2 paragraph 2 and Article 4 paragraph 4 Paris Agreement more meaningfully.<sup>97</sup> Although CBDR is inherently vague, and its content is disputed, it provides at least some guidance on determining nationally determined contributions.<sup>98</sup> It notably expects states to take into account historical contributions to climate change and divergences in economic development, resulting in different capacities to tackle the problem.<sup>99</sup> Therefore, simply “grandfathering” allocations of carbon budgets based on current emission shares is hardly compatible with these principles, and ultimately, with the international dimension of positive obligations stemming from fundamental rights and Article 20a GG.

Regarding a cost-effective approach, this incompatibility is less clear, although such an approach also tends to favor industrialized states.<sup>100</sup> In any case, based on the principle of equity and in order to be effective, such an approach would require comprehensive global cooperation ensuring that developing countries are able to make use of their large low-cost mitigation potentials. For example, Germany could decide to use its resources to enable the Global South to shut down ineffective coal plants rather than immediately close its own more effective and cleaner ones. However, Germany currently focuses on domestic climate mitigation and lacks an ambitious cooperation strategy. With the inadequacy of such cooperation mechanisms, Germany must orient its national share at least on a per-capita approach.

<sup>95</sup>Nicole J. van den Berg, Heleen L. van Soest, Andries F. Hof, Michel G. J. den Elzen, Detlef P. van Vuuren, Wenying Chen, Laurent Drouet, Johannes Emmerling, Shinichiro Fujimori, Niklas Höhne, Alexandre C. Köberle, David McCollum, Roberto Schaeffer, Swapnil Shekhar, Saritha Sudharmma Vishwanathan, Zoi Vrontisi, & Kornelis Blok, *Implications of Various Effort-Sharing Approaches for National Carbon Budgets and Emission Pathways*, 162 CLIMATE CHANGE 1805, 1807 (2020).

<sup>96</sup>For an overview of calculations based on different equity standards for the EU, US, India, Brazil, China, and others, see Nicole J. van den Berg, Heleen L. van Soest, Andries F. Hof, Michel G. J. den Elzen, Detlef P. van Vuuren, Wenying Chen, Laurent Drouet, Johannes Emmerling, Shinichiro Fujimori, Niklas Höhne, Alexandre C. Köberle, David McCollum, Roberto Schaeffer, Swapnil Shekhar, Saritha Sudharmma Vishwanathan, Zoi Vrontisi & Kornelis Blok, *Implications of Various Effort-Sharing Approaches for National Carbon Budgets and Emission Pathways*, 162 CLIMATIC CHANGE 1805, 1814 (2020); MAYER, *supra* note 73, at 89–90.

<sup>97</sup>See on the rather superficial discussion of these principles without a clear conclusion: NJW 1723 (2021), para. 225 (Ger.).

<sup>98</sup>Cf. Lavanya Rajamani & Jacob Werksman, *The Legal Character and Operational Relevance of the Paris Agreement’s Temperature Goal*, 376 PHILOSOPHICAL TRANSACTIONS 8 (2018); DANIEL BODANSKY, JUTTA BRUNNÉE & LAVANYA RAJAMANI, INTERNATIONAL CLIMATE CHANGE LAW 223 (2017) (referring to “strong normative expectations”).

<sup>99</sup>Lavanya Rajamani, *The Principle of Common but Differentiated Responsibility and the Balance of Commitments under the Climate Regime*, 9 REV. EURO. CMT’Y & INT’L ENV. L. 120, 122 (2000).

<sup>100</sup>Nicole J. van den Berg et al., *supra* note 95, figure 8.



Consequently, the Court could at least have relied on the national budget calculated by the German Advisory Council for the Environment in a more meaningful manner. Preferably, it would have required the German State not to overstep an estimate of the national budget—calculated on a per capita basis— necessary to avoid reaching tipping points (close to the 1.5°C goal).

## F. Conclusion

The climate decision provides a nuanced acknowledgment of the constitutional relevance of climate change. The Court's take on constitutional limits to climate policy features many progressive findings. The most important one is the obligation to equitably distribute allowable emissions over time and generations. Yet, in this article, I demonstrated that the court's inability to narrow down the available national budget impeded meaningful judicial control of Germany's climate policy. The only relief for plaintiffs found by the Court was the legislator's obligation to set the reduction path earlier and by different means to allow plaintiffs and society to adapt accordingly.

Still, the legislator not only rapidly announced to comply with the decision but also—fulfilling new obligations from EU law<sup>101</sup>—to go beyond. The KSG's 2030 goal is going to be expanded from fifty-five percent to sixty-five percent and yearly reduction targets until then adjusted. In addition, a new interim goal is going to be set for 2040, namely, an eighty-eight percent reduction of emissions compared to 1990 levels. Finally, the net-zero reduction target, formerly intended to be achieved in 2050, is going to be moved up in time to 2045.<sup>102</sup>

After setting the complete reduction path until 2045, we will have a better picture of the national budget that the legislator views as adequate to fulfill its obligations stemming from Article 20a GG and fundamental rights. This could pave the way for future complaints if the German State proves unable to follow its reduction path. In combination with the non-regression principle stemming from Article 20a GG,<sup>103</sup> setting relatively ambitious reduction targets by law also constitutionally safeguards the path taken. Any future legislator must now justify regressions by new scientific evidence that climate change is not as dangerous as it is assumed to be today.<sup>104</sup>

Overall, the Court explicitly upholds constitutional control for the future. The judicial dialogue between the Court and the legislator on climate issues is now open and expected to continue. In the meantime, new impetus may come from Strasbourg.<sup>105</sup> With constitutional climate decisions and EU law fast establishing a European minimum standard of climate protection, the European Court of Human Rights (ECtHR) could well limit the margin of appreciation of states and require further action, including from Germany. Moreover, although Germany has now adopted quite ambitious reduction goals, it may not be completely safe from judicial interference. The question of how to reach these ambitious goals remains open. The BVerfG and the German legislator have provided new guidance for Germany's climate mitigation policy; however, this is not the end of the story.

<sup>101</sup>Only days before the decision of the court, negotiations within the EU for a new "EU climate protection law" were finalized. The new 2030 goal foresees an EU wide reduction of fifty-five percent until 2030, which requires a German reduction of CO<sub>2</sub> emissions between sixty-two and sixty-nine percent compared to 1990 levels. See AGORA ENERGIEWENDE, *supra* note 31, at 9.

<sup>102</sup>The reformed KSG's content is summarized in English here, German Federal Government, *Climate Change Act 2021 Intergenerational Contract for the Climate* (July 12, 2021), <https://www.bundesregierung.de/breg-de/themen/klimaschutz/climate-change-act-2021-1936846>.

<sup>103</sup>NJW 1723 (2021), para. 212 (Ger.).

<sup>104</sup>NJW 1723 (2021), para. 212 (Ger.).

<sup>105</sup>So far, at least four individual complaints have been lodged with the ECtHR. See *Duarte v. Portugal*, App. No. 39371/20 (Sept. 7, 2020), <http://hudoc.echr.coe.int/eng?i=002-13055>; *Verein KlimaSeniorinnen Schweiz v. Switzerland*, App. No. 53600/20 (Mar. 17, 2021) <http://hudoc.echr.coe.int/eng?i=002-13212>; *Mex M. v. Austria*, (submitted March 25, 2021); *Greenpeace et al. vs. Norway* (submitted June 15, 2021).