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# Fairness, equity, and justice in the Paris Agreement: Terms and operationalization of differentiation

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## Abstract

The Paris Agreement (2015) and the Rulebook (2018) introduce the terms ‘fair’ and ‘climate justice’ for burden-sharing and differentiation. The article analyses to what extent these terms amend the existing term ‘equity’ and the principle of common but differentiated responsibilities (CBDR).

The principle of CBDR is an open balancing concept with one clear requirement: Contracting parties contribute to climate protection to a different extent. The terms which appear to have normative weight (‘equity’ and ‘climate justice’), in international climate agreements, are limited to their procedural relevance. They aim at an equal participation in sub-institutions of the Paris Agreement or at making arguments for differentiation transparent. The term ‘fair’ focuses on the discourse on individual concepts of differentiation and on narrowing down common criteria in the long-run.

Considering the operationalization of differentiation beyond the terms, it becomes clear that criteria are hardly specified, not weighted against each other and that self-differentiation dominates pre-defined criteria, in particular within the central rules on mitigation and financial transfers. However, the Paris Agreement still specifies criteria with different relevance: Capabilities are followed by vulnerability and the responsibility for emissions. After all, the prevailing procedural terms and rules of differentiation might give orientation, inspire subsequent decisions and the nationally determined contributions (NDCs). The more transparent the various specifications of differentiation are, the more the rules of differentiation can be narrowed. If the reference of criteria to individual states is possible, the Paris Agreement might be implemented effectively which allows for better compliance with the Agreement.

**Keywords:** CBDR; climate agreement; common but differentiated responsibilities; Paris Rulebook; UNFCCC

## 1. Introduction

States agree on the common responsibility to face climate change problems while they recognize that the contribution of developed countries must be higher than that of developing countries.<sup>1</sup>

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<sup>1</sup>In international climate law, a deviation from the sovereign equality of states has become the rule. C. Voigt and F. Ferreira, ‘Differentiation in the Paris Agreement’, (2016) 6 *Climate Law* 58, at 59; C. D. Stone, ‘Common but Differentiated Responsibilities in International Law’, (2004) 98 *AJIL* 276, at 281; S. Maljean-Dubois, ‘The Paris Agreement: A New Step in the Gradual Evolution of Differential Treatment in the Climate Regime?’, (2016) 25 *Review of European, Comparative and International Environmental Law* 151, at 151–2, 159. On differentiation in other fields of international law see Stone, *ibid.*, at 278.

However, there is no consensus on how strong differentiation should be or on which criteria it should be based.<sup>2</sup> The distribution of the costs for climate protection (burden-sharing) and procedural rules of differentiation affect participation in climate agreements, the implementation, and compliance with these agreements.<sup>3</sup>

All international climate agreements contain terms and rules of differentiation. The United Nations Framework Convention on Climate Change (UNFCCC)<sup>4</sup> and the Kyoto Protocol<sup>5</sup> formulate the principle of common but differentiated responsibilities (CBDR)<sup>6</sup> and ‘equity’ as guiding principles. The Paris Agreement<sup>7</sup> and the Paris Rulebook<sup>8</sup> refer to these requirements even more frequently adding ‘fairness’ and ‘climate justice’ as new terms.

Many publications mention the principle of CBDR, ‘equity’, ‘justice’, and ‘fairness’ in one breath without explaining the differences.<sup>9</sup> Several authors discuss differentiation concentrating on operationalization.<sup>10</sup> Others make their own suggestions on how terms of differentiation *should* be interpreted.<sup>11</sup> The differences between the terms of differentiation have only attained little attention in the context of international climate law.<sup>12</sup>

The use of various terms means that each term has a discrete meaning which leads to the following research questions: What do the various terms of differentiation mean? How can they be distinguished from each other and what is the use (*effet utile*) of each term? How are they operationalized?<sup>13</sup> To what extent their clarification provides new arguments for the controversy around burden-sharing or procedural rules of differentiation?

A better understanding of the terms and their operationalization might have an impact on later climate agreements and decisions of the Conferences of Parties to the UNFCCC (COPs) and the

<sup>2</sup>D. Bodansky, J. Brunnée and L. Rajamani, *International Climate Change Law* (2017), at 27.

<sup>3</sup>T. Honkonen, ‘CBDR and Climate Change’, in M. Faure (ed.) *Elgar Encyclopedia of Environmental Law* (2016), 142, at 142. Criticizing the strategic combination of fairness and effectiveness of climate measures, E. A. Posner and D. Weisbach, *Climate Change Justice* (2010), at 5, 192. Against this criticism M. Prost and A. T. Camprubí, ‘Against Fairness?: International Environmental Law, Disciplinary Bias, and Pareto Justice’, (2012) 25 *LJIL* 379, at 389–91.

<sup>4</sup>1992 United Nations Framework Convention on Climate Change, 1771 UNTS 107 (‘UNFCCC’).

<sup>5</sup>1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change, 2303 UNTS 162 (‘Kyoto Protocol’).

<sup>6</sup>The Paris Agreement always uses the qualifier ‘respective capabilities’. As Art. 4(1) UNFCCC does not use this qualifier, we use the shorter term with the acronym CBDR. See L. Rajamani, ‘The Papal Encyclical & The Role of Common but Differentiated Responsibilities in the International Climate Change Negotiations’, (2015) 109 *AJIL Unbound* 142; and see Bodansky et al., *supra* note 2, at 221.

<sup>7</sup>Paris Agreement, Dec. 1/CP.21 Annex, UN Doc. FCCC/CP/2015/10/Add.1 (2016) (‘Paris Agreement’).

<sup>8</sup>Report of the Conference of the Parties Serving as the Meeting of the Parties to the Paris Agreement on the third part of its First Session, Held in Katowice from 2–15 December 2018, UN Doc. FCCC/PA/CMA/2018/3/Add.1 (2019), UN Doc. FCCC/PA/CMA/2018/3/Add.2 (2019); Report of the Conference of the Parties Serving as the Meeting of the Parties to the Paris Agreement on its Second Session, Held in Madrid from 2–15 December 2019, UN Doc. FCCC/PA/CMA/2019/6/Add.1 (2020). Decisions specifying the UNFCCC and the Kyoto Protocol were also considered as ‘rulebook’. UNFCCC, ‘A Guide to the Climate Change Convention Process’, available at [unfccc.int/resource/process/guideprocess-p.pdf](http://unfccc.int/resource/process/guideprocess-p.pdf), at 6–7, 11.

<sup>9</sup>V. Tørstad and H. Sælen, ‘Fairness in the Climate Negotiations: What Explains Variation in Parties’ Expressed Conceptions?’, (2017) 18 *Climate Policy* 642, at 643; L. Rajamani and E. Guérin, ‘Central Concepts in the Paris Agreement and How they Evolved’, in D. Klein et al. (eds.), *The Paris Agreement on Climate Change: Analysis and Commentary* (2017), 74, at 87; see Voigt and Ferreira, *supra* note 1, at 60; J. Huang, ‘Climate Justice: Climate Justice and the Paris Agreement’, (2017) 9(1) *Journal of Animal & Environmental Law* 23, at 25, 27; F. Soltau, *Fairness in International Climate Change Law and Policy* (2009), at 7, 133, 177, 187, 224.

<sup>10</sup>L. Rajamani, ‘Ambition and differentiation in the 2015 Paris Agreement: Interpretative possibilities and underlying politics’, (2016) 65 *ICLQ* 493; see Voigt and Ferreira, *supra* note 1; Huang, *ibid.*, at 9.

<sup>11</sup>E.g., A. Gajevic Sayegh, ‘Climate Justice after Paris: A Normative Framework’, (2018) 13 *Journal of Global Ethics* 344; S. P. Murphy, ‘Global Political Process and the Paris Agreement: A Case of Advancement or Retreat of Climate Justice?’, in T. Jafry, M. Mikulewicz and K. Helwig (eds.), *Routledge Handbook of Climate Justice* (2019), at 80–2; Z. Mi et al. ‘Assessment of Equity Principles for International Climate Policy Based on an Integrated Assessment Model’, (2019) 95(1–2) *Natural Hazards* 309.

<sup>12</sup>C. P. Carlarne and J. D. Colavecchio, ‘Balancing Equity and Effectiveness: The Paris Agreement & The Future of International Climate Change Law’, (2019) 27 *New York University Environmental Law Journal* 107.

<sup>13</sup>On the importance of implicit criteria without references to the terms of differentiation see Stone, *supra* note 1, at 277.

Paris Agreement (CMA)<sup>14</sup> as well as on the nationally determined contributions (NDCs). This article should make it possible to use the terms in a more thoughtful and targeted way, in climate politics but also in research.

Article 2(1)(a) Paris Agreement requires holding the increase in the global average temperature below 2 °C above pre-industrial levels referring to *all* contracting parties as a group. This aim is binding but not sufficiently precise to evaluate the compliance of individual contracting parties.<sup>15</sup> To tell to what extent each party complies with the Agreement, the rules of differentiation need to be clarified. The more clearly these rules are defined, the less they can be manipulated to excuse insufficient contributions to climate protection. Additionally, the international climate policies being perceived as appropriately differentiated can increase the willingness to contribute.<sup>16</sup>

Terms like ‘climate justice’ invite to a broader discussion on what is the objective measure for burden-sharing and differentiation. However, this article does not analyse how climate agreements *should* be.<sup>17</sup> It remains within the scope of existing agreements using the methods of legal interpretation defined in the Vienna Convention of the Law of the Treaties (VCLT). Even if the terms of differentiation always maintain a certain normative weight,<sup>18</sup> their discussion shall be as unbiased and close to the treaty as possible. Where the agreement refers to vague terms or allows for discretion, different interpretations might remain relevant.<sup>19</sup> The specification of criteria for differentiation depends on the climate agreements whether or not ethical reasons speak for their consideration.

The Paris Agreement refers to ‘the Convention’.<sup>20</sup> Decision 1/CP.21 mentions the Kyoto Protocol.<sup>21</sup> To explain the historical development and context of the terms of differentiation, these earlier agreements are included in the analysis. COP and CMA decisions are also comprised,<sup>22</sup> especially if these are formulated in mandatory terms.<sup>23</sup>

After clarifying the various terms of differentiation of the climate agreements (Section 2), we discuss their broader context and the operationalization of criteria of differentiation (Section 3). The result summarizes what is the legal measure for burden-sharing and differentiation in international climate agreements (Section 4). The outlook provides future perspectives (Section 5).

## 2. Terms

The principle of CBDR and the terms ‘equity’, ‘fairness’, and ‘climate justice’ seem to overlap, all aiming at differentiation.<sup>24</sup> The question is to what extent these terms differ from one another. This section analyses these terms according to the rules of Articles 30–33 VCLT.<sup>25</sup>

<sup>14</sup>CMA’ stands for ‘Conference of the Parties serving as the meeting of the Parties to the Paris Agreement’.

<sup>15</sup>Precision is decisive for the bindingness of obligations. L. Rajamani, ‘The 2015 Paris Agreement: Interplay Between Hard, Soft and Non-Obligations’, (2016) 28 *Journal of Environmental Law* 337, at 343. Evaluating compliance based on own normative benchmarks but without evidence in the legal text see Climate Analytics and New Climate Institute, ‘Climate Action Tracker (CAT): Comparability of Effort’, available at [climateactiontracker.org/methodology/comparability-of-effort/](http://climateactiontracker.org/methodology/comparability-of-effort/); Y. R. Du Pont et al. ‘Paris Equity Check: How Fair Are Countries’ Climate Pledges?’, available at [paris-equity-check.org/multi-equity-map.html](http://paris-equity-check.org/multi-equity-map.html).

<sup>16</sup>See Carlarne and Colavecchio, *supra* note 12, at 141.

<sup>17</sup>Cf. *supra* note 11.

<sup>18</sup>D. Schlosberg, ‘Climate Justice and Capabilities: A Framework for Adaptation Policy’, (2012) 26 *Ethics & International Affairs* 445.

<sup>19</sup>L. Rajamani and D. Bodansky, ‘The Paris Rulebook: Balancing International Prescriptiveness with National Discretion’, (2019) 68 *ICLQ* 1.

<sup>20</sup>Paris Agreement, 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 5<sup>th</sup>, 12<sup>th</sup> preambular recital, Arts. 1, 2(1), 4(14), (16), 5(1), (2), 7(7)(b), 9(1), (8), (9), 10(3), (5), 11(2), (5), 13(3), 13(4), (5), (13), 16(1), 16(2), (3), (5), (8), 17, 18, 19(1), 20(1), 21(1), (2), 22, 23(1), 24, 28(3).

<sup>21</sup>Adoption of the Paris Agreement, Dec. 1/CP.21, UN Doc. FCCC/CP/2015/10/Add.1 (2016) (Dec. 1/CP.21), 11<sup>th</sup> preambular recital, paras. 60, 61, 80, 106(a), 107, 108.

<sup>22</sup>These are subsequent agreements. See 1969 Vienna Convention on the Law of Treaties 1155 UNTS 331 (VCLT), Art. 31(3)(a); see also Rajamani, *supra* note 10, at 500, footnote 52.

<sup>23</sup>UNFCCC, Art. 7; Kyoto Protocol, Art. 13(1); Paris Agreement, Art. 16(1).

<sup>24</sup>See Carlarne and Colavecchio, *supra* note 12, at 116.

<sup>25</sup>Considering Arts. 31 and 32 to be customary law, see Report of the International Law Commission, Seventieth Session (30 April–1 June and 2 July–10 August 2018), UN Doc. A/73/10 (2018), 13. Considering them as emerging customary law, M. E. Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties* (2009), at 439–40, paras. 37–8.

The frequency and the combination of terms of differentiation in international climate agreements and subsequent decisions (Table 1)<sup>26</sup> reveal to what extent a term is institutionalized whereas its legal weight depends on the bindingness, content, and context of the respective provision.

**Table 1.** Terms of differentiation in international climate agreements and subsequent decisions

agreement/ decision	CBDR	equity	fairness	justice	CBDR and equity	CBDR and fairness	equity and fairness
UNFCCC	3	3	–	–	1	–	–
Kyoto Protocol	1	–	–	–	–	–	–
Doha Amendment	–	–	–	–	–	–	–
Paris Agreement	4	6	–	1	2	–	–
Decision 1/CP.21	–	2	1	–	–	1	–
Decisions 1–20 CMA/1	1	21	4	1	1	1	2
Decisions 1–9 CMA/2	1	5	1	–	–	–	1

Source: own design.

The term ‘equity’ appears most frequently, followed by the principle of CBDR. The term ‘climate justice’ is used once in the preamble of the Paris Agreement.<sup>27</sup> The term ‘fair’ is used once in the preamble of Decision 1/CP.21 and five times in the Paris Rulebook. The principle of CBDR is used in the same context as ‘equity’ and ‘fair’. The Paris Rulebook uses the terms ‘equity’ and ‘fair’ together.

Differentiation depends on the comparison of one party’s contribution with those of other parties based on pre-defined characteristics. The more these characteristics differ, the more parties might be treated differently and *vice versa*. Which criteria are relevant, potential thresholds, and how all relevant criteria are interrelated, is controversial.<sup>28</sup>

Criteria for differentiation of climate agreements can be summarized under the following headings: equality, capabilities, vulnerability, responsibility,<sup>29</sup> and open criteria.

- *Equality* can be an argument for differentiation if it depends on a neutral criterion, for example on equal chances for development<sup>30</sup> or equal emission rights per capita;<sup>31</sup>

<sup>26</sup>Terms appearing several times in one paragraph are counted only once.

<sup>27</sup>Preambles are part of the treaty (VCLT, Art. 31(2)). They include its aims, recognized ‘facts, principles, or ideas’. See Carlarne and Colavecchio, *supra* note 12, at 120; M. M. Mbengue, ‘The Notion of Preamble’, in R. Wolfrum (ed.), *The Max Planck Encyclopedia of Public International Law* (2008). Preambles can be taken up in other rules. However, if preambles are vague, their binding effect is limited. Defining preambles as unbinding, M. P. Carazo, ‘Contextual Provisions (Preamble and Article 1)’, in D. Klein et al. (eds.), *The Paris Agreement on Climate Change: Analysis and Commentary* (2017), 107, at 107.

<sup>28</sup>See Rajamani, *supra* note 6, at 143; Bodansky et al. *supra* note 2, at 27.

<sup>29</sup>M. G. den Elzen and P. L. Lucas, ‘The FAIR model: A Tool to Analyse Environmental and Costs Implications of Regimes of Future Commitments’, (2005) 10 *Environmental Modeling & Assessment* 115, at 117, Table 1.

<sup>30</sup>Referring to the right to development, Paris Agreement, 11<sup>th</sup> preambular recital and Dec. 1/CP.21, 7<sup>th</sup> preambular recital. See also Tørstad and Sælen, *supra* note 9, at 644–5; Stone, *supra* note 1, at 277. Outside the context of climate agreements, see Declaration on the Right to Development, UN Doc. A/RES/41/128 (1986).

<sup>31</sup>References to sovereign equality speak *against* differentiation. See UNFCCC, 8<sup>th</sup> and 9<sup>th</sup> preambular recital, Art. 18; Kyoto Protocol, Art. 22; Paris Agreement, Art. 25; Amendment to the Kyoto Protocol Pursuant to its Article 3, Paragraph 9 (the Doha Amendment), Dec. 1/CMP.8, UN Doc. FCCC/KP/CMP/2012/13/Add.1 (2013) (‘Doha Amendment’), footnote 12; Paris Agreement, Art. 13(3).

- *Capabilities*<sup>32</sup> include the state of development correlated with the financial, institutional, and technological capacity to face climate change problems;
- *Vulnerability* includes the susceptibility to climate change<sup>33</sup> today and in the future. The more vulnerable a state is, the more it benefits from climate activities;<sup>34</sup>
- The *responsibility* for emissions<sup>35</sup> can include the share of global absolute and per capita emissions in the past, today, and in the future.<sup>36</sup> Responsibility indirectly refers to the availability of resources affecting climate change, e.g., fossil fuels or sinks;<sup>37</sup>
- *Open criteria* for differentiation, e.g. ‘national circumstances’<sup>38</sup> and ‘priorities’<sup>39</sup> can be defined by the contracting parties.

To bring all these criteria into consistency by an all-in-one indicator is difficult. Equal emissions per capita,<sup>40</sup> for example, can reflect the first four criteria as far as they correlate with high absolute, cumulative and historical emissions, with a high state of development and capacity to face climate change problems and with low vulnerability to climate change. However, the example of China and India shows that immense absolute emissions can correlate with moderate per capita emissions and cumulative emissions.<sup>41</sup> Moreover, relative indicators are uncritical about limited resources (here a stable climate) and the limits of growth,<sup>42</sup> i.e., if the emissions per capita were the only criterion of differentiation, a limitation of absolute emissions would remain important.

Even if criteria of the five categories above can be specified, it is not clear which of them apply, what weight they have,<sup>43</sup> how they are measured, how often they need to be updated,<sup>44</sup> and how to deal with uncertainties or lack of data. How these criteria refer to the terms of differentiation of international climate agreements is also unclear. A deeper analysis of climate agreements and subsequent decisions might elucidate the relevance of the criteria for the terms and in the context of operationalization.

<sup>32</sup>The term ‘capabilities’ is used in the principle of CBDR (*supra* note 6), in UNFCCC, Art. 7(2)(b), (c); Kyoto Protocol, Art. 13(4)(c), (d); Doha Amendment, footnotes 7, 9, 11; Paris Agreement, Arts. 13(12), 15(2).

<sup>33</sup>‘Vulnerability’ is used in UNFCCC, 19<sup>th</sup> preambular recital, Arts. 3(2), 4(4), (10); Kyoto Protocol, Arts. 12(8), 12<sup>ter</sup>; Paris Agreement, 5<sup>th</sup>, 9<sup>th</sup>, 11<sup>th</sup> preambular recital, Arts. 6(6), 7(1), (2), (5), (6) (9)(c), 9(4), 11(1). Discussing vulnerability as a criterion of differentiation, Carlarne and Colavecchio, *supra* note 12, at 114, 132–4, 144, 159, 161–2.

<sup>34</sup>See Posner and Weisbach, *supra* note 3, at 125–6.

<sup>35</sup>In this article, the term ‘emissions’ is used for greenhouse gas emissions.

<sup>36</sup>On the principle of CBDR, see Paris Agreement, 3<sup>rd</sup> preambular recital, Arts. 2(2), 4(3), 4(19); Matters relating to the implementation of the Paris Agreement, Dec. 3/CMA.1, UN Doc. FCCC/PA/CMA/2018/3/Add.1 (2019) (‘Dec. 3/CMA.1’), 3<sup>rd</sup> preambular recital. Referring to historical and current responsibility, UNFCCC, 3<sup>rd</sup> preambular recital. Referring to all three time dimensions, Carlarne and Colavecchio, *supra* note 12, at 117; Rajamani, *supra* note 6, at 145–6; Voigt and Ferreira, *supra* note 1, at 294; den Elzen and Lucas, *supra* note 29, at 117, Table 1; R. Dellink et al. ‘Sharing the Burden of Financing Adaptation to Climate Change’, (2009) 19 *Global Environmental Change* 411, at 411.

<sup>37</sup>On this criterion see Schlosberg, *supra* note 18, at 449.

<sup>38</sup>UNFCCC, Arts. 3(2), 2(a), 4(1), 7(2)(b), (c); Kyoto Protocol, Arts. 2(1)(a), (4), 10(1), 13(4)(c), (d); Paris Agreement, 5<sup>th</sup> preambular recital, Arts. 2(4), 13(12).

<sup>39</sup>UNFCCC, 18<sup>th</sup> preambular recital, Art. 4(1), (7); Kyoto Protocol, Art. 10(1); Paris Agreement, 10<sup>th</sup> preambular recital, Arts. 7(d), 9(3), 13(5).

<sup>40</sup>UNFCCC, 3<sup>rd</sup> preambular recital.

<sup>41</sup>World Bank, ‘World Bank Open Data, CO2 emissions (metric tons per capita) 2014’, available at [api.worldbank.org/v2/en/indicator/EN.ATM.CO2E.PC?downloadformat=excel](https://api.worldbank.org/v2/en/indicator/EN.ATM.CO2E.PC?downloadformat=excel); World Bank, ‘World Bank Open Data, CO2 emissions (kt) 2014’, available at [api.worldbank.org/v2/en/indicator/EN.ATM.CO2E.KT?downloadformat=excel](https://api.worldbank.org/v2/en/indicator/EN.ATM.CO2E.KT?downloadformat=excel).

<sup>42</sup>D. H. Meadows et al., *The Limits to Growth: The Club of Rome’s Project on the Predicament of Mankind* (1972).

<sup>43</sup>See also Carlarne and Colavecchio, *supra* note 12, at 114.

<sup>44</sup>See Maljean-Dubois, *supra* note 1, at 151–2; Rajamani and Bodansky, *supra* note 19, at 5.

### 2.1 The principle of CBDR

References to the principle of CBDR can be found in the UNFCCC,<sup>45</sup> the Kyoto Protocol,<sup>46</sup> the Paris Agreement<sup>47</sup> and its subsequent decisions.<sup>48</sup> The term ‘common’ formulates a collective responsibility of all contracting parties for climate protection.<sup>49</sup> The term ‘differentiated’ signifies that the states’ contributions to climate protection are not the same.<sup>50</sup>

The term ‘responsibilities’ can refer to current, historical, and future responsibilities for emissions.<sup>51</sup> Apart from the general term ‘responsibility’ included in the principle of CBDR, the 3<sup>rd</sup> preambular recital of the UNFCCC mentions historical and current emissions explicitly.

Current emissions can be measured by local monitoring stations but also by satellite data, which allows for overall monitoring of emissions worldwide.<sup>52</sup> As regards current emissions, it appears possible to isolate terrestrial and seasonal factors to measure emissions and also to assign these factors to specific states.<sup>53</sup> Emissions can be assigned to the producer of goods or services (current approach)<sup>54</sup> or (also) to the consumer.<sup>55</sup>

Historical responsibility becomes relevant if it not only confirms other criteria for differentiation (e.g., current emissions) but if it *changes* the legal obligations of a contracting party. A predominance of historical emissions is neither formulated nor excluded by international climate agreements. Data on historical emissions are not always available and might not have the same quality and reliability as of current emissions,<sup>56</sup> as monitoring has been and still is improving. The concentration of CO<sub>2</sub>-equivalents in the atmosphere reflects historical emissions only to the extent they remain in the atmosphere for a longer period whereas the origin of those emissions is uncertain. That climate effects can be delayed<sup>57</sup> also means that emissions that are no longer measurable in the atmosphere can have caused climate effects.<sup>58</sup> In any case, emissions caused long ago are more difficult to measure and to assign to individual states than current emissions. This is further complicated if the borders of states change. Furthermore, it is unclear whether all greenhouse gas emissions or only the most relevant shall be included in the calculation. It is also unclear whether a certain extent of emissions per capita must be excluded from this calculation to

<sup>45</sup>UNFCCC, 6<sup>th</sup> preambular recital, Arts. 3(1), 4(1). Art. 7(2)(b), (c) refer to ‘differing circumstances, responsibilities and capabilities’. The principle of CBDR was first included in the Report of the United Nations Conference on Environment and Development, Annex I, Rio Declaration on Environment and Development, UN Doc. A/CONF.151/26 (Vol I) (1992) (‘Rio Declaration’), principle 7.

<sup>46</sup>Kyoto Protocol, Art. 10(1). The Doha Amendment entered into force as from 31 December 2020. One hundred and forty-seven of the 192 parties of the Kyoto Protocol had ratified the Doha Amendment by then. Kyoto Protocol, Arts. 20(4), 21(7). The Doha Amendment refers to the principle of CBDR in footnotes 7, 9, 11.

<sup>47</sup>Paris Agreement, 3<sup>rd</sup> preambular recital, Arts. 2(2), 4(3), 4(19).

<sup>48</sup>Dec. 1/CP.21, para. 27; Dec. 3/CMA.1, 3<sup>rd</sup> preambular recital; Chile Madrid Time for Action, Dec. 1/CMA.2, UN Doc. FCCC/PA/CMA/2019/6/Add.1 (2020) (‘Dec. 1/CMA.2’), para. 6.

<sup>49</sup>This is also expressed by the term ‘common concern of humankind’ in UNFCCC, 1<sup>st</sup> preambular recital and Paris Agreement, 11<sup>th</sup> preambular recital.

<sup>50</sup>See Rajamani, *supra* note 6, at 143; Carlarne and Colavecchio, *supra* note 12, at 117.

<sup>51</sup>See also *supra* note 36. Referring responsibility also to slavery or colonialism, C. C. Ngang, ‘Differentiated Responsibilities under International Law and the Right to Development Paradigm for Developing Countries’, (2017) 11 *Human Rights & International Legal Discourse* 270, at 273–4. Apart from the missing reference to climate change, it seems difficult to refer these historical developments to concrete criteria for differentiation.

<sup>52</sup>P. Vetter, W. Schmid and R. Schwarze, ‘Spatio-Temporal Statistical Analysis of the Carbon Budget of the Terrestrial Ecosystem’, (2016) 25 *Statistical Methods & Applications* 143.

<sup>53</sup>See also *ibid.*

<sup>54</sup>See World Bank, *supra* note 41, ‘World Bank Open Data, CO2 emissions (kt) 2014’.

<sup>55</sup>S. J. Davis and K. Caldeira, ‘Consumption-Based Accounting of CO2 Emissions’, (2010) 107 *Proceedings of the National Academy of Sciences* 5687.

<sup>56</sup>IPCC Working Group II, *Climate Change 2014: Impacts, Adaptation, and Vulnerability, Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (2014), at 421.

<sup>57</sup>IPCC Working Group I, *Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (2013), at 57.

<sup>58</sup>*Ibid.*, at 165, 288; see IPCC Working Group II, *supra* note 56, at 379, 382, 395.

cover basic needs. In that case, it might be difficult to define these minimum needs, even more if accounting for changes of the population which would require further historical data to monitor the net emissions of a state.

To overcome these uncertainties, a reference period could be defined. The industrial revolution, the global awareness about climate change problems,<sup>59</sup> the beginning of negotiations, the conclusion, or ratification of the first multilateral climate agreement, or a certain standard for monitoring emissions could mark the starting point. For example, the conclusion of the UNFCCC in 1992 would be a reasonable starting point.<sup>60</sup> However, this reference period would ignore a major part of historical emissions making them almost congruent with current emissions, which reduces the added value of historical emissions as a separate criterion.

The inclusion of developing countries into the Paris Agreement reveals that potential emissions also matter. However, the question is again whether future emissions have an added value affecting the rules of differentiation. The strong correlation with current emissions and capabilities to face climate change problems as well as the uncertainties to monitor potential emissions might reduce their relevance as a separate criterion.<sup>61</sup>

Considering the aim and purpose of the principle of CBDR, responsibility could also be understood in the sense of *taking responsibility* implying various criteria of differentiation, not only the responsibility for emissions. The different qualifiers of the principle of CBDR support this perspective.

Article 3(1) UNFCCC deals with general principles of the UNFCCC aiming at the protection of the climate system for present and future generations.<sup>62</sup> As a qualifier, Article 3(1) adds the term ‘and respective capabilities’. The 6<sup>th</sup> preambular recital of the UNFCCC adds the respective ‘social and economic conditions’. Both capabilities and conditions can be *pre-defined* by a neutral criterion. ‘Social and economic conditions’ are not limited to climate-based criteria but could also include non-climate related criteria. Article 4(1) UNFCCC and Article 10(1) Kyoto Protocol use the qualifier ‘and their specific national and regional development priorities, objectives and circumstances’, which is even more open to individual criteria.

The Paris Agreement and the Rulebook always add the qualifier ‘and respective capabilities, in the light of different national circumstances’<sup>63</sup> The term ‘respective capabilities and circumstances’ also appears frequently without the principle of CBDR.<sup>64</sup> As for Article 3(1) UNFCCC, capabilities and circumstances can be defined by neutral criteria. The Paris Agreement neither refers the CBDR to ‘priorities’ nor to national or regional objectives as Article 4(1) UNFCCC and Article 10(1) Kyoto Protocol do.

The Paris Rulebook specifies the term ‘circumstances’ in the context of NDCs: geography, climate, economy, sustainable development, and poverty reduction.<sup>65</sup> This list is neither mandatory (‘as appropriate’) nor conclusive (‘inter alia’) but open. The criteria might be changed or complemented. To explain how a party has progressed, the following ‘circumstances’ are specified:

<sup>59</sup>P. Bou-Habib, ‘Climate Justice and Historical Responsibility’, (2019) 81 *The Journal of Politics*, at 1299.

<sup>60</sup>*Ibid.*, at 1307.

<sup>61</sup>W. Nordhaus, ‘Projections and Uncertainties about Climate Change in an Era of Minimal Climate Policies’, (2018), 10(3) *American Economic Journal: Economic Policy* 333.

<sup>62</sup>Future generations were not mentioned in the Kyoto Protocol, but the 11<sup>th</sup> preambular recital of the Paris Agreement refers to intergenerational equity. See also Section 2.2, *infra*.

<sup>63</sup>See also *supra* notes 6, 47, 48.

<sup>64</sup>UNFCCC, Art. 7(2)(b); Paris Agreement, 3<sup>rd</sup> and 5<sup>th</sup> preambular recital, Arts. 4(4), 4(6), 13(3), 13(12), 15(2).

<sup>65</sup>Information to Facilitate Clarity, Transparency and Understanding of Nationally Determined Contributions, Referred to in Decision 1/CP.21, Paragraph 28, Dec. 4/CMA.1 Annex I, UN Doc. FCCC/PA/CMA/2018/3/Add.1 (2019) (‘Dec. 4/CMA.1 Annex I’), para. 4(a)(ii)(a.); Further Guidance in Relation to the Adaptation Communication, Including, inter alia, as a Component of Nationally Determined Contributions, referred to in Article 7, Paragraphs 10 and 11, of the Paris Agreement, Dec. 9/CMA.1, UN Doc. FCCC/PA/CMA/2018/3/Add.1 (2019) (‘Dec. 9/CMA.1’), 5<sup>th</sup> preambular recital; Setting a New Collective Quantified Goal on Finance in Accordance with Decision 1/CP.21, Paragraph 53, Dec. 14/CMA.1, UN Doc. FCCC/PA/CMA/2018/3/Add.2 (2019), para. 2.

the government structure, population profile, and sector details.<sup>66</sup> These criteria are rather descriptive and partly not climate-based. It is unclear whether this list applies beyond the context of NDCs, how they affect the rules of differentiation, how relevant each criterion is in comparison to others, and how often they need to be updated. Therefore, the contracting parties define whether they apply them or not and also their respective weight.

Finally, the principle of CBDR remains an open principle<sup>67</sup> seeking to include various criteria for differentiation but not quantifying them or going into detail as regards their specific weight. Without a clear measure for differentiation, the legal force of the principle remains limited.<sup>68</sup> What can be said is that differentiation depends on verifiable criteria and that climate-based criteria and capability play an important role. However, with the terms ‘circumstances’ and ‘priorities’ added as qualifiers, the principle of CBDR has become more open to individual and even to non-climate related criteria.

## 2.2 Equity

The terms ‘equity’ and ‘equitable’ appear in the UNFCCC,<sup>69</sup> the Paris Agreement,<sup>70</sup> and its subsequent decisions.<sup>71</sup> The term ‘equity’ stems from the Latin term *aequitas* originally meaning ‘equality’<sup>72</sup> and is based on Western legal traditions. It is connected with the idea of universality owing to its Latin origin<sup>73</sup> but is also an open term that depends on political, ethical, and cultural values.<sup>74</sup> In the English language, equity is a ‘quality of being fair and impartial’<sup>75</sup> or ‘free and reasonable conformity to accepted standards of natural right, law, and justice without prejudice, favoritism, or fraud and without rigor entailing undue hardship’.<sup>76</sup> Hence, equity requires a

<sup>66</sup>Modalities, Procedures and Guidelines for the Transparency Framework for Action and Support Referred to in Article 13 of the Paris Agreement, Dec. 18/CMA.1 Annex, UN Doc. FCCC/PA/CMA/2018/3/Add.2 (2019) (‘Dec. 18/CMA.1 Annex’), para. 59.

<sup>67</sup>See Prost and Camprubí, *supra* note 3, at 387–8.

<sup>68</sup>A. C. Abeysinghe and G. Arias, ‘CBDR as a Principle of Inspiring Actions Rather than Justifying Inaction in the Global Climate Change Regime’, in O. C. Ruppel, C. Roschmann and K. Ruppel-Schlichting (eds.), *Climate Change: International law and Global Governance*, vol. II (2013), 235, at 238.

<sup>69</sup>UNFCCC, Arts. 3(1), 4(2)(a) second sentence, 11(2). The Kyoto Protocol refers to the general principles of the UNFCCC in the 4<sup>th</sup> preambular recital.

<sup>70</sup>Paris Agreement, 3<sup>rd</sup>, 8<sup>th</sup>, 11<sup>th</sup> preambular recital, Arts. 4(1), 14(1).

<sup>71</sup>Dec. 1/CP.21, para. 103; Dec. 3/CMA.1, 3<sup>rd</sup> preambular recital; Dec. 4/CMA.1 Annex I, para. 6; Modalities, Work programme and Functions of the Forum under the Paris Agreement on the Impact of the Implementation of Response Measures, Dec. 7/CMA.1, UN Doc. FCCC/PA/CMA/2018/3/Add.1 (2019) (‘Dec. 7/CMA.1’), para. 4(f); Dec. 9/CMA.1, 5<sup>th</sup> preambular recital; Matters Relating to Article 14 of the Paris Agreement and Paragraphs 99–101 of Decision 1/CP.21, Dec. 19/CMA.1, UN Doc. FCCC/PA/CMA/2018/3/Add.2 (2019) (‘Dec. 19/CMA.1’), para. 10; Modalities and Procedures for the Effective Operation of the Committee Referred to in Article 15, Paragraph 2, of the Paris Agreement, Dec. 20/CMA.1 Annex, UN Doc. FCCC/PA/CMA/2018/3/Add.2 (2019) (‘Dec. 20/CMA.1 Annex’), paras. 5, 11; Dec. 1/CMA.2, 1<sup>st</sup> preambular recital; Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts and its 2019 Review, Dec. 2/CMA.2, UN Doc. FCCC/PA/CMA/2019/6/Add.1 (2020) (‘Dec. 2/CMA.2’), 5<sup>th</sup> preambular recital, para. 40; Rules of Procedure of the Katowice Committee of Experts on the Impacts of the Implementation of Response Measures, Dec. 4/CMA.2 Annex I, UN Doc. FCCC/PA/CMA/2019/6/Add.1 (2020) (‘Dec. 4/CMA.2 Annex I’), para. 11; Workplan of the Forum on the Impact of the Implementation of Response Measures and its Katowice Committee of Experts on the Impacts of the Implementation of Response Measures, Dec. 4/CMA.2 Annex II, UN Doc. FCCC/PA/CMA/2019/6/Add.1 (2020), No. 9.

<sup>72</sup>See also P. B. Gove, *Webster’s Third New International Dictionary of the English Language Unabridged* (1986), at 815. Critically, M. White, ‘Equity – A General Principle of Law Recognised by Civilised Nations’, (2004), 4 *Queensland University of Technology Law and Justice Journal* 103, at 104, 111.

<sup>73</sup>See White, *supra* note 72, at 104, 107.

<sup>74</sup>M. Akehurst, ‘Equity and General Principles of law’, (1976) 25 ICLQ 801, at 809–10.

<sup>75</sup>J. Pearsall and P. Hanks, *The New Oxford English Dictionary of English* (2001), at 623.

<sup>76</sup>See Gove, *supra* note 72, at 769. Rightness is also emphasized by White, *supra* note 72, at 105–6.



comparison between two entities by specific criteria based on which equal treatment is necessary.<sup>77</sup> Such criteria could, for example, be the original positions, rights, opportunities, or outcomes.<sup>78</sup>

Both the UNFCCC and the Paris Agreement use the terms ‘equity’ and ‘equitable’ in the context of general aims of the agreement, mitigation targets, financial contributions, to formulate different obligations for developed and developing countries, or within the group of developing countries.<sup>79</sup> Article 4(1) Paris Agreement requires that states aim to reach the maximum of greenhouse gas emissions worldwide as soon as possible, recognizing that developing countries will take longer before peaking. Equity refers to equal access to development and the eradication of poverty.<sup>80</sup> The term ‘equity’ is also used for appropriate geographical representation for different mechanisms of the Paris Agreement.<sup>81</sup> Moreover, rules on transparency include equity as a qualifying requirement.<sup>82</sup>

The UNFCCC requires to protect the climate for present, and future generations and included them under its central principles.<sup>83</sup> These provisions either use the term ‘should’ or are indeterminate and, therefore, unbinding. In contrast, the Paris Agreement includes ‘intergenerational equity’ in the preamble.<sup>84</sup> ‘Intergenerational equity’ seeks to maintain resources for future generations.<sup>85</sup> In contrast to other provisions of the same recital, intergenerational equity was not referred to as a right. An explanation for not using the term ‘rights’ for future generations might be the difficulty to specify the right holder and the claimant for future generations.<sup>86</sup> Besides, the reach for such rights and the comparison with the rights of current generations<sup>87</sup> would be controversial.<sup>88</sup> How could the freedoms of different generations be compared in a world of causal uncertainties, technological, and irreversible environmental effects? How can we find a measure for intergenerational equity if we do not even agree on measures for equity in the current global society?<sup>89</sup> These questions get more complicated if the population or state borders change<sup>90</sup> or if we included the ecocentric dimension considering the preservation of nature as an own value.<sup>91</sup>

<sup>77</sup>T. M. Franck, *Fairness in International Law and Institutions* (1995), at 19.

<sup>78</sup>J. Konow, ‘Which Is the Fairest One of All?: A Positive Analysis of Justice Theories’, (2003) 41 *Journal of Economic Literature* 1188, at 1194–5.

<sup>79</sup>UNFCCC, Art. 4(2); Paris Agreement, Art. 4(1). See also Sections 3.1, 3.2, *infra*.

<sup>80</sup>Paris Agreement, 8<sup>th</sup> preambular recital; Dec. 9/CMA.1, 5<sup>th</sup> preambular recital. The term ‘sustainable development’ is used in the 8<sup>th</sup> preambular recital, Arts. 2(1), 4(1), 6(1), (2), (4)(a), (8), (9), 7(1), 8(1), 10(5) of the Paris Agreement, in paras. 55, 109 of Dec. 1/CP.21.

<sup>81</sup>UNFCCC, Art. 11(2); Dec. 1/CP.21, para. 103; Dec. 7/CMA.1, para. 4(f), (g); Dec. 20/CMA.1 Annex, paras. 5, 11; Dec. 2/CMA.2, para. 40; Dec. 4/CMA.2 Annex I, para. 11.

<sup>82</sup>Paris Agreement, Art. 14(1); Dec. 19/CMA.1, para. 10.

<sup>83</sup>UNFCCC, Art. 3(1). The 11<sup>th</sup> and 23<sup>rd</sup> preambular recital of the UNFCCC refer to different UNGA resolutions dealing with present and future generations.

<sup>84</sup>Paris Agreement, 11<sup>th</sup> preambular recital.

<sup>85</sup>See also the frequent mention of the term ‘sustainable development’. See *supra* note 80. On intergenerational equity and sustainable development, E. Brown Weiss, ‘Implementing Intergenerational Equity’, in M. Fitzmaurice, D. M. Ong and P. Merkouris (eds.), *Research Handbook on International Environmental Law* (2010), 100, at 114; B. Lewis, ‘The Rights of Future Generations within the Post-Paris Climate Regime’, (2018) 7 TEL 69, at 76.

<sup>86</sup>See Carazo, *supra* note 27, at 117; Brown Weiss, *ibid.*, at 85, at 110–13.

<sup>87</sup>The discount rate lowers the relevance of future utility compared to current utility based on the assumption of progress. See, for example, Nordhaus, *supra* note 61, at 336, 340, 342, 347, 349–55. Critically, H. Kim, ‘An Extension of Rawls’s Theory of Justice for Climate Change’, (2019) 11 *International Theory* 160, at 162; Dellink et al., *supra* note 36, at 415.

<sup>88</sup>E. Brown Weiss, ‘Intergenerational Equity: A Legal Framework for Global Environmental Change’, in E. Brown Weiss (ed.), *Environmental Change and International Law: New Challenges and Dimensions* (1992), 385, at 393–5.

<sup>89</sup>See also Sections 2.3, 2.4, *infra*.

<sup>90</sup>The discount rate lowers the relevance of future utility compared to current utility based on the assumption of progress. See, for example, Nordhaus, *supra* note 61, at 336, 340, 342, 347, 349–55. Critically Kim, *supra* note 87, at 162; Dellink et al., *supra* note 36, at 415.

<sup>91</sup>See also Brown Weiss, *supra* note 88, at 395.

Edith Brown Weiss's approach to 'intergenerational equity'<sup>92</sup> seeks to avoid the difficulties to represent future generations and make their rights comparable to present generations. She considers intergenerational equity to require the conservation of *options* (the diversity of the natural and cultural resource base), *quality* (maintaining the conditions of the planet between the generations), and *access* (maintaining the legacy of previous generations). These requirements cover the procedural and distributional dimension of equity.<sup>93</sup> Referring intergenerational equity to climate change, Brown Weiss includes these principles for both mitigation and adaptation.<sup>94</sup>

The Paris Agreement directly mentions the requirement for biodiversity (*options*) and includes the preservation of a certain quality of a stable climate (*quality*), for example by formulating the 2 °C target.<sup>95</sup> Both requirements are also implied by the frequent mention of the term 'sustainable development'.<sup>96</sup> However, the Paris Agreement does not formulate the rights of future generations (*access*). Brown Weiss's criteria are only partly applicable. Furthermore, the central principles of Article 2 Paris Agreement refer only to equity without the intergenerational dimension.<sup>97</sup>

The negotiating history confirms the focus of equity on development and procedural aspects: Article 3(1) UNFCCC specified equity referring to the responsibility for climate change and the state of development.<sup>98</sup> Negotiators considered equity to require the developed countries to lead,<sup>99</sup> which was reflected in the annex structure of the UNFCCC and the Kyoto Protocol but which is also formulated in the Paris Agreement.<sup>100</sup>

The Paris Agreement refers to resolutions of the UN General Assembly (UNGA) that also include the term 'equity':<sup>101</sup> the Sustainable Development Goals (SDGs)<sup>102</sup> and the Addis Ababa Action Agenda.<sup>103</sup> As their relevance for climate agreements is limited,<sup>104</sup> they support existing interpretations rather than opening new dimensions of equity.

<sup>92</sup>See Brown Weiss, *ibid.*

<sup>93</sup>*Ibid.*, at 401–5; see Brown Weiss, *supra* note 85, at 102–3, 113.

<sup>94</sup>E. Brown Weiss, 'Climate Change, Intergenerational Equity and International Law: An Introductory Note', Reprint: 'In Fairness to Future Generations International Law, Common Patrimony, and Intergenerational Equity', (1989/2008) 15(1-2) *Vermont Journal of Environmental Law* 615, at 625.

<sup>95</sup>See also Lewis, *supra* note 85, at 76.

<sup>96</sup>See *supra* note 80.

<sup>97</sup>On the human rights perspective of intergenerational equity, see Huang, *supra* note 9, at 48–9. Critically, Lewis, *supra* note 85, at 76–8.

<sup>98</sup>Draft Report of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change on the Work of its Second Session, Held at Geneva from 19 to 28 June 1991, UN Doc. A/AC.237/L.7 (1991), para. 30(a).

<sup>99</sup>Compilation of Possible Elements for a Framework Convention on Climate Change, UN Doc. A/AC.237/Misc.2/Rev.1 (1991), at 23–7.

<sup>100</sup>UNFCCC, Art. 3(1) and the Annexes; Kyoto Protocol, Annex B; Paris Agreement, 16<sup>th</sup> preambular recital, Arts. 2(2), 4(4), 9(3); Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21, Dec. 4/CMA.1, UN Doc. FCCC/PA/CMA/2018/3/Add.1 (2019) ('Dec. 4/CMA.1'), para. 5. On the leadership role see Bodansky et al., *supra* note 2, at 28; Maljean-Dubois, *supra* note 1, at 156–7; Voigt and Ferreira, *supra* note 1, at 61, 65, 67.

<sup>101</sup>Transforming Our World: The 2030 Agenda for Sustainable Development, UN Doc. A/Res/70/1 (2015) ('SDGs'). Referring to the SDGs, Dec. 1/CP.21, 4<sup>th</sup> preambular recital; Preparations for the Implementation of the Paris Agreement and the First Session of the Conference of the Parties Serving as the Meeting of the Parties to the Paris Agreement, Dec. 1/CP.24, UN Doc. FCCC/CP/2018/10/Add.1 (2019), para. 10; Report of the Adaptation Committee, Dec. 9/CP.24, UN Doc. FCCC/CP/2018/10/Add.1 (2019) ('Dec. 9/CP.24'), paras. 6, 14, 14(b); Report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts, Dec. 10/CP.24, UN Doc. FCCC/CP/2018/10/Add.1 (2019), para. 5(c). Although being non-binding recommendations (Arts. 10, 11 of the UN Charter), resolutions of the UNGA can clarify the terms of differentiation as far as climate agreements refer to them.

<sup>102</sup>See also F. Sindico, 'Paris, Climate Change, and Sustainable Development', (2016) 6 *Climate Law* 130.

<sup>103</sup>Addis Ababa Action Agenda of the Third International Conference on Financing for Development, UN Doc. A/RES/69/313 (2015) ('Addis Ababa Action Agenda'). Reference to this resolution is made in Dec. 1/CP.21, 4<sup>th</sup> preambular recital.

<sup>104</sup>Dec. 9/CP.24, para. 14(b).

The SDGs use ‘equity’ or ‘equitable’ 13 times: synonymously for equality,<sup>105</sup> with the term ‘non-discriminatory’,<sup>106</sup> with the term ‘fair’,<sup>107</sup> and ‘just’<sup>108</sup> but without specifying differences between these terms. ‘Equity’ is used in the context of access to education, human and gender rights, equality of chances to development, an appropriate sharing of benefits of genetic resources, and equal access to water.<sup>109</sup> The Addis Ababa Action Agenda uses ‘equity’ eight times: in the context of equality of chances, non-discrimination, economic growth and sustainable development, and adequate geographical representation.<sup>110</sup> Both resolutions refer to future generations.<sup>111</sup> The two UNGA resolutions define ‘equity’ by procedures and equal rights. Only equal access to resources implies distributional aspects.<sup>112</sup>

Finally, the term ‘equity’, as used in international climate agreements, subsequent decisions, and further applicable rules of international law, is defined by procedural and substantive rules aiming at equality of neutral criteria: participation, geographical representation, development prospects, and a proportionate share in the atmosphere. Several of these criteria might become relevant but their weight is not pre-defined.

### 2.3 ‘Climate justice’

The term ‘climate justice’ was included for the first time in the 13<sup>th</sup> preambular recital of the Paris Agreement.<sup>113</sup> The term ‘justice’ (Latin *justitia*) is defined as ‘impartial adjustment of conflicting claims’, ‘conformity to truth, fact, or reason’,<sup>114</sup> ‘quality of being fair and reasonable’,<sup>115</sup> and ‘morally right and fair’.<sup>116</sup> Compared to ‘equity’, the term ‘justice’ is more universal (whether or not a consensus on its meaning is found).<sup>117</sup> Justice can refer to moral foundations of conduct, political institutions, distribution, or minimum standards for individual rights.<sup>118</sup>

The 13<sup>th</sup> preambular recital of the Paris Agreement prescribes ‘noting the importance for *some* of the *concept* of “climate justice”’.<sup>119</sup> Using the term ‘concept’ in singular could mean that there is only one concept of ‘climate justice’. Though the vague specification of actors makes it a relative term. ‘Some’ could either refer to persons or contracting parties including public or private actors. ‘Climate justice’ is no principle under Article 2 Paris Agreement but mentioned in the preamble and in a non-binding manner.<sup>120</sup> It is put in quotation marks which further weakens the normative loading the term originally has. Still, the term must be defined.

<sup>105</sup>SDGs, Goals 4, 4(1), 6(1), 9(1), paras. 7, 25.

<sup>106</sup>*Ibid.*, Goal 17(10), para. 68.

<sup>107</sup>*Ibid.*, Goals 2(5), 15(6).

<sup>108</sup>*Ibid.*, para. 8.

<sup>109</sup>*Ibid.*, Goals 2(5), 4, 6, 9(1), 15(6), 17(1), paras. 7, 8, 25, 68.

<sup>110</sup>Addis Ababa Action Agenda, paras. 6, 7, 10, 29, 78, 79, 105.

<sup>111</sup>SDGs, 6<sup>th</sup> preambular recital, paras. 18, 53; Addis Ababa Action Agenda, para. 64. Using ‘intergenerational equity’, Addis Ababa Action Agenda, paras. 7, 10.

<sup>112</sup>In other fields of international law, equity can aim at defining the proportionate share of a resource. See, for example, *Gabcikovo-Nagymaros Project (Hungary v. Slovakia)*, Merits, Judgment of 25 September 1997, [1997] ICJ Rep. 7, at 56, para. 85.

<sup>113</sup>The term ‘just’ also refers to structural changes in work life. See Paris Agreement, 10<sup>th</sup> preambular recital; Modalities, Work Programme and Functions under the Paris Agreement of the Forum on the Impact of the Implementation of Response Measures, Dec. 7/CMA.1 Annex, UN Doc. FCCC/PA/CMA/2018/3/Add.1 (2019), para. 2(b).

<sup>114</sup>See Gove, *supra* note 72, at 1228.

<sup>115</sup>See Pearsall and Hanks, *supra* note 75, at 993.

<sup>116</sup>*Ibid.*, at 992. See also Adam Smith’s reference to ‘right and wrong’: A. Smith, *The Theory of Moral Sentiments* (1759), at 502.

<sup>117</sup>See also Carlarne and Colavecchio, *supra* note 12, at 124–5.

<sup>118</sup>C. R. Beitz, ‘International Liberalism and Distributive Justice: A Survey of Recent Thought’, (1999) 51 *World Politics* 269, at 270.

<sup>119</sup>Emphases added.

<sup>120</sup>See also *supra* note 27.

John Rawls considers justice as the ideal of an institution or rule.<sup>121</sup> In contrast, Amartya Sen considers justice as an improvement of an unjust situation referring to institutions and actions.<sup>122</sup> We will concentrate on these two theorists. Rawls' theory has gained a lot of attention across various disciplines,<sup>123</sup> also in the climate context,<sup>124</sup> whereas Sen complements and criticizes it, offering an approach that suits the Paris Agreement. Both theories distinguish the substantive (distributional) and the procedural level of differentiation, which is decisive to understand the relationship between 'climate justice', 'equity', and 'fairness'.

Rawls considers justice to become relevant because the collaboration of persons generates social advantages.<sup>125</sup> He constructs an original position where people of one community are equally represented and negotiate on their ideal institutions without knowing their role and welfare in life ('veil of ignorance').<sup>126</sup> Bargaining advantages and customs are blended out to find consensus on allocation rules.<sup>127</sup> Rawls assumes that an inclusive society (which is smaller than the global society) can achieve consensus on ideal institutions and allocation rules by balancing.<sup>128</sup> He considers the society to agree on a precise rule for allocation under uncertainty: The least advantaged members of society must have the greatest benefit ('maximin rule').<sup>129</sup> Depending on the circumstances, he considers this rule to be apt to be put into practice.<sup>130</sup>

However, this theory does not directly apply to international relations,<sup>131</sup> for which Rawls formulated a more cautious approach.<sup>132</sup> For international justice, he suggests rules that are close to existing international law: the equality of states, respect of peoples' independence, the exclusion of the right to war or intervention, the right of self-defence, the guarantee of basic human rights, the *pacta sunt servanda* rule, and minimum support in case of a famine or drought.<sup>133</sup> Distributional aspects are explicitly left aside by this catalogue.<sup>134</sup> Only where peoples suffer from 'unfavourable conditions' making it impossible to fulfil the requirements for the own society, shall other societies offer support,<sup>135</sup> but even in a crisis, mutual assistance depends on the feasibility for the supporter.<sup>136</sup> Beyond that, co-operation is voluntary.<sup>137</sup> Rawls limits distributional rules because not all societies are deemed liberal,<sup>138</sup> the global society is not considered a community with common values and sources of authority and, therefore, not expected to agree on and comply with a common distributional rule.<sup>139</sup>

<sup>121</sup>J. Rawls, *A Theory of Justice* (1971). Rawls is aware of the role also of single actions for justice but considers institutions and rules to be the most relevant issue. *Ibid.*, at 7, 9.

<sup>122</sup>A. K. Sen, *The Idea of Justice* (2009), at 10, 15, 398–400.

<sup>123</sup>See, for example, Konow, *supra* note 78, at 1195–9; Beitz, *supra* note 118, at 271–80, 283, 288, 292–5; J. E. Vinuales, 'Balancing Effectiveness and Fairness in the Redesign of the Climate Change Regime', (2011) 24 *LJIL* 223, at 232, 235.

<sup>124</sup>See Kim, *supra* note 87.

<sup>125</sup>See Rawls, *supra* note 121, at 4, 10, 11, 112–13.

<sup>126</sup>J. Rawls, 'Justice as Fairness: Political not Metaphysical', (1985) *Philosophy & Public Affairs* 223, at 235.

<sup>127</sup>See Rawls, *supra* note 121, at 7, 35; Rawls, *supra* note 126, at 235–7, 244, 342–3.

<sup>128</sup>See Rawls, *supra* note 121, at 17, 35, 37–8, 112–13.

<sup>129</sup>*Ibid.*, at 17, 29; Rawls, *supra* note 126, at 227.

<sup>130</sup>See Rawls, *supra* note 121, at 238, 343.

<sup>131</sup>The limited scope and non-universality of Rawls' 'Theory of Justice' concentrating on closed societies is partly misunderstood or ignored. See T. W. Pogge, 'Moral Universalism and Global Economic Justice', (2002) 1 *Politics, Philosophy & Economics* 29, at 42; Franck, *supra* note 77, at 13–14, 23; Sen, *supra* note 122, at 90, 143.

<sup>132</sup>J. Rawls, 'The Law of Peoples', (1993) 20 *Critical Inquiry* 36.

<sup>133</sup>See Rawls, *supra* note 132, at 46–7, 52.

<sup>134</sup>*Ibid.*, at 62; see also Beitz, *supra* note 118, at 276; Pogge, *supra* note 131, at 42.

<sup>135</sup>See Rawls, *supra* note 132, at 62.

<sup>136</sup>*Ibid.*, at 47. Criticizing Rawls' support requirement for being vague and suggesting that societies 'must do what they can to assist', Beitz, *supra* note 118, at 275.

<sup>137</sup>See Rawls, *supra* note 132, at 47.

<sup>138</sup>*Ibid.*, at 37, 44–5.

<sup>139</sup>*Ibid.*, at 39, 63.

Rawls's requirements for international relations could apply to the climate context. Ecologic limits challenge the minimum conditions for international peace and basic human rights (at least, in the long-run). The duty of assistance in a crisis might become relevant with climate change. However, the latter would not imply re-distribution or support of mitigation but rather support for adaptation.

Some authors seek to extend the 'Theory of Justice' beyond Rawls's original intention including distributional justice for international relations.<sup>140</sup> Compared to Rawls' time, global interactions have become more intense, for example through trade, capital, and labour flows,<sup>141</sup> communication, and culture.<sup>142</sup> This generates global social advantages (e.g., comparative advantages) but also external effects (e.g., climate change). Neither stops at national borders and can cause global redistribution effects.<sup>143</sup> Digital media make it easier to exchange common global values and more difficult to hide information. These interdependencies speak for extending distributional justice to international relations and could require pursuing distributional justice even if non-liberal societies are part of international co-operation. At least, liberal societies could *improve* on justice, combining it with conditional co-operation. In this way, Rawls's 'Theory of Justice' could apply to international 'climate justice'.

Amartya Sen uses a comparative approach to justice (non-ideal theory), which is based on the social choice theory.<sup>144</sup> It aims at the reduction of injustice in situations where the best solution for a problem is not identified or available, which he considers to be mostly the case.<sup>145</sup> This approach allows for incomplete solutions making justice more feasible.<sup>146</sup> Sen uses Adam Smith's concept of an impartial spectator:<sup>147</sup> Arguments must prevail against an open and inclusive global public reasoning.<sup>148</sup> All arguments on the ideal solution, information on existing social problems, and living conditions, must be considered while being as independent as possible from one's own characteristics and positions.<sup>149</sup>

Sen seeks to improve the *capabilities* (chances) of a society,<sup>150</sup> not necessarily the achievements (results).<sup>151</sup> Means to capabilities are, *inter alia*, income,<sup>152</sup> healthcare, the nature of education, social organization, and social cohesion.<sup>153</sup> Sen argues that people with strong capabilities to reduce injustice should use them,<sup>154</sup> whereas vulnerable people need more support than others.<sup>155</sup> Still, improvements in capabilities are not pursued at all costs.<sup>156</sup>

<sup>140</sup>See, for example, Beitz, *supra* note 118; Pogge, *supra* note 131.

<sup>141</sup>See Beitz, *supra* note 118, at 277.

<sup>142</sup>See Sen, *supra* note 122, at 143, 172, 243, 251–3, 373. On collective identities, see Smith, *supra* note 116, at 188.

<sup>143</sup>See Beitz, *supra* note 118, at 279.

<sup>144</sup>See Sen, *supra* note 122, at 106–13. Applying Sen's theory to climate issues, Schlosberg, *supra* note 18, at 452–6; S. Fesmire, 'Pragmatist Ethics and Climate Change', in D. E. Miller and B. Eggleston (eds.), *Moral Theory and Climate Change: Ethical Perspectives on a Warming Planet* (2020), 215.

<sup>145</sup>See Sen, *supra* note 122, at 259, 266–7.

<sup>146</sup>*Ibid.*, at 383, 392.

<sup>147</sup>See Smith, *supra* note 116, at 183, 309, 502, 527.

<sup>148</sup>Sen, *supra* note 122, at 19, 44–5, 70, 117, 122–3, 128, 136–7, 305–9, 324, 402, 404 (footnote), 405; A. Sen, 'Reason and Justice: The Optimal and the Maximal', (2017) 92 *Philosophy* 5, at 18. See also Schlosberg, *supra* note 18, at 450–2.

<sup>149</sup>See Sen, *supra* note 122, at 140, 157, 161.

<sup>150</sup>'Capabilities' include the freedom to do things a person has a reason to value and the actual opportunities of living. Sen, *supra* note 122, at 231–3.

<sup>151</sup>*Ibid.*, at 228–31, 235–8, 249, 265, 287, 310–14.

<sup>152</sup>*Ibid.*, at 226, 234, 253f.

<sup>153</sup>*Ibid.*, at 226–7, 234, 253.

<sup>154</sup>*Ibid.*, at 206–7, 271.

<sup>155</sup>For example, a person with disabilities needs more resources than healthy persons. Hence, income is not the only indicator for capabilities. This logic can be transferred to all disadvantaged members of societies. See Sen, *supra* note 122, at 255–8, 262. These arguments become particularly relevant for adaptation. See Schlosberg, *supra* note 18, at 458. On people with disabilities, see also Paris Agreement, 11<sup>th</sup> preambular recital; Dec. 1/CP.21, 7<sup>th</sup> preambular recital.

<sup>156</sup>See Sen, *supra* note 122, at 295, 298.

The comparison of possible alternative choices cannot be measured by only one criterion such as utility or happiness (non-commensurability).<sup>157</sup> In contrast to Rawls, Sen accepts a *plurality* of impartial reasons that might be compared with each other, e.g., efforts, talents, or needs.<sup>158</sup> To reduce injustice, ‘a broad range of not fully congruent weights’ (selective rankings) can be sufficient.<sup>159</sup>

What do these theories tell us about ‘climate justice’? With Rawls’s theory (applied to the global case), all relevant actors fairly represented in negotiations can achieve a consensus on ‘climate justice’ as interactions of the global society are possible today. However, consensus on one balanced principle of justice remains hard to find, in the original position as in practice.<sup>160</sup> Rawls’s approach does not formulate ‘climate justice’ as open and cautious as the Paris Agreement does.

Sen’s approach to justice is closer to the Paris Agreement.<sup>161</sup> His approach upholds a plurality of impartial reasons and lowers injustice step-by-step. Even a little progress in preventing injustice contributes to ‘climate justice’ if side-effects do not outweigh it. For example, financial transfers to vulnerable or developing countries for climate purposes can improve on ‘climate justice’ even if missing core aims of the Paris Agreement. Sen’s focus on capabilities corresponds to the growing relevance of this term in international climate agreements.<sup>162</sup>

The negotiating history confirms the procedural approach to ‘climate justice’. In the climate negotiations before Paris, the initiative ‘The People’s Demands for Climate Justice’ was launched which might have influenced the consideration of the term ‘climate justice’ for the draft of the Paris Agreement.<sup>163</sup> The draft used the term in the context of the distribution of the climate budget and for the idea of a climate justice tribunal.<sup>164</sup> Criteria of differentiation were historical responsibilities, the ecological footprint, capabilities, the state of development, and the population.<sup>165</sup>

The SDGs use ‘just’ and ‘justice’ seven times,<sup>166</sup> the Addis Ababa Action Agenda once.<sup>167</sup> The terms are formulated as general aims for global societies, to emphasize the equality of chances, sustainable development, and the rule of law.<sup>168</sup> They are also used together with ‘fair’<sup>169</sup> and ‘equity’,<sup>170</sup> confirming overlaps between these terms but not clarifying their differences. The SDGs recognize the reduction of injustice as one form of justice<sup>171</sup> which suits the approach suggested by Sen.

Finally, the term ‘climate justice’ of the Paris Agreement aims at inclusion of arguments but does not specify criteria for burden-sharing, or differentiation, or their weight. The approach of Sen aiming at a successive reduction of injustice and the inclusion of all actors into the discussion about justice fits the term ‘climate justice’, but even this procedural approach remains unbinding.

<sup>157</sup>*Ibid.*, at 239–41, 272–90, 298, 395; see also Smith, *supra* note 116, at 452.

<sup>158</sup>*Ibid.*, at 11–16, 57, 65–6, 90, 201, 105, 243, 251, 394–6, 397 (footnote).

<sup>159</sup>*Ibid.*, at 398–400; see also Sen, *supra* note 148, at 5, 17–18.

<sup>160</sup>See Sen, *supra* note 122, at 57, 68, 70, 77, 80–2, 90–1, 108. Criticizing the empirical relevance of the maximin rule, Konow, *supra* note 78, at 1196.

<sup>161</sup>Referring to global warming, Sen, *supra* note 148, at 18.

<sup>162</sup>See Sen, *supra* note 122, at 249; Section 3.1, *infra*.

<sup>163</sup>Action Aid International et al., ‘The People’s Demands for Climate Justice’, available at [peoplesdemands.org](http://peoplesdemands.org); see Carlarne and Colavecchio, *supra* note 12, at 123.

<sup>164</sup>Draft Paris Outcome: Revised Draft Conclusions Proposed by the Co-Chairs, UN Doc. FCCC/ADP/2015/L.6 (2015) (‘Draft Paris Agreement’), Art. 3(1)(e), Art. 11 Option 2 and paras. 21, 112; Carlarne and Colavecchio, *supra* note 12, at 121–2.

<sup>165</sup>Draft Paris Agreement, para. 21.

<sup>166</sup>SDGs, 8<sup>th</sup> preambular recital, Goal 16, paras. 3, 8, 35.

<sup>167</sup>Addis Ababa Action Agenda, para. 18.

<sup>168</sup>See *supra* notes 166, 167.

<sup>169</sup>See *supra* note 167.

<sup>170</sup>SDGs, para. 8.

<sup>171</sup>*Ibid.*, para. 35.

## 2.4 Fairness

The terms ‘fairness’ or ‘fair’ are also new in the context of international climate agreements. After being used in the Lima Call for Climate Action (CP.20),<sup>172</sup> the term ‘fair’ was included in subsequent decisions to the Paris Agreement.<sup>173</sup>

The term ‘fair’ comes from the Old High German word *fagar* originally meaning ‘pleasing’ or ‘attractive’. In Middle English, the term had a meaning similar to equitable.<sup>174</sup> Fairness is defined as ‘acceptable and appropriate in a particular situation’,<sup>175</sup> ‘just and appropriate in the circumstances’,<sup>176</sup> and ‘conforming to an established commonly accepted code of rules of a game or competitive activity’.<sup>177</sup> The term is characterized by ‘honesty and justice’ and applies ‘to judgments . . . or acts resulting from judgments and signif[ies] freedom from improper influence’.<sup>178</sup> It aims at ‘treating people equally without favouritism or discrimination’<sup>179</sup> and finding the ‘right balance of claims or considerations that is free from undue favouritism’.<sup>180</sup> Compared to the terms ‘equity’ and ‘justice’, ‘fairness’ is more relative to empirical perceptions and focused on procedures.<sup>181</sup>

This also suits the interpretations of Rawls and Sen. Rawls considers fairness as a procedural rule dependent on the consensus of an inclusive society regarding institutions and rules that enable them to communicate and interact to achieve benefits from co-operation.<sup>182</sup> Sen defines fairness as a synonym for impartiality, the condition to choose between alternatives the least unjust one.<sup>183</sup> Konow distinguishes impartiality from self-interest, self-serving biases, or spite but also from altruism, reciprocity, kinship, and friendship.<sup>184</sup> We consider fairness as an open term of differentiation based on impartiality within a group of people at a given time.

One study discussing the term ‘fair’ in the context of international environmental law is the study by Thomas Franck.<sup>185</sup> In contrast to Rawls and Sen, Franck considers ‘fairness’ to comprise both procedural and distributional rules.<sup>186</sup> Franck also includes under ‘fairness’ what we discussed under ‘justice’. He analyses the quality of specific sources of international environmental law. His procedural approach of all-inclusiveness of actors corresponds to the approaches of Rawls and Sen. Franck’s relativistic elements are also culture and history/time.<sup>187</sup> As for Rawls and Sen, common perceptions of reference groups (communities) lead to a similar legal and moral perception.<sup>188</sup>

As we do not seek to evaluate the law by normative criteria but only want to clarify the wording of the positive law that employs normative terms, we will not follow Franck’s methodology. Using *different* terms for distributional and procedural differentiation (as Rawls and Sen

<sup>172</sup>Para. 14 of the Lima Call for Climate Action remained relevant after Lima. Lima Call for Climate Action, Dec. 1/CP.20, UN Doc. FCCC/CP/2014/10/Add.1 (2015). The draft in the Annex of Dec. 1/CP.20 also contained further references to fairness in paras. 16(1) Option 2, 35(2)(k) 76 Option 2, Option a(a), (b), 76(5)(d), 85 Option 1(c).

<sup>173</sup>Dec. 1/CP.21, para. 27; Long-term Climate Finance, Dec. 3/CP.24, UN Doc. FCCC/CP/2018/10/Add.1 (2019), para. 11; Dec. 4/CMA.1, para. 9; Dec. 4/CMA.1 Annex I, para. 6; Dec. 2/CMA.2, para. 40.

<sup>174</sup>See Sen, *supra* note 122, at 72 (footnote).

<sup>175</sup>A. S. Hornby, *Oxford Advanced Learner’s Dictionary of Current English* (2005), at 548.

<sup>176</sup>See Pearsall and Hanks, *supra* note 75, at 659.

<sup>177</sup>See Gove, *supra* note 72, at 815.

<sup>178</sup>*Ibid.* Also referring to judgments and evaluations, Murphy, *supra* note 11, at 72–3.

<sup>179</sup>See Pearsall and Hanks, *supra* note 75, at 659.

<sup>180</sup>See Gove, *supra* note 72, at 815.

<sup>181</sup>See White, *supra* note 72, at 103.

<sup>182</sup>See Rawls, *supra* note 121, at 142–3, 343–5; see also *supra* Section 2.3. Referring to Rawls’ but also including distributional aspects, Franck, *supra* note 77, at 7, 10–15, 23–5, 47; Soltau, *supra* note 9, at 7, 133, 177–227.

<sup>183</sup>See Sen, *supra* note 122, at 9, 54, 62–3, 293–5.

<sup>184</sup>See Konow, *supra* note 78, at 1189–92, 1202.

<sup>185</sup>See Franck, *supra* note 77.

<sup>186</sup>*Ibid.*, at 7, 25, 47.

<sup>187</sup>*Ibid.*, at 13f., 23.

<sup>188</sup>*Ibid.*, at 10–15, 23.

suggest) facilitates the understanding of the different levels of the terms of differentiation of the Paris Agreement.

Inclusively specifying fairness is complicated because less developed countries, vulnerable groups, and states that have fewer resources to formulate their expectations have less capacity whereas future generations are not represented at all.<sup>189</sup> Making the fairness perceptions of *all* contracting parties transparent might be the first step to an inclusive global fairness approach.

In Paragraph 27 of Decision 1/CP.21 and in the 9<sup>th</sup> preambular recital of Decision 4/CMA.1, the contracting parties agree:

that the information to be provided by Parties communicating their nationally determined contributions . . . *may* include, *as appropriate* . . . how the Party considers that its nationally determined contribution is *fair* and ambitious, in the light of its *national circumstances*, and how it contributes towards achieving the objective of the Convention as set out in its Article 2[.]<sup>190</sup>

The terms ‘may’ and ‘as appropriate’ make the inclusion of fairness criteria voluntary.

In contrast, Paragraph 6 Annex I to Decision 4/CMA.1 defines binding criteria for the NDCs<sup>191</sup> to improve on clarity, transparency, and understanding including information about:

**How the Party considers that its nationally determined contribution is *fair* and ambitious in the light of its *national circumstances*:**

- (a) How the Party considers that its nationally determined contribution is *fair* and ambitious in the light of its *national circumstances*;
- (b) *Fairness* considerations, including reflecting on *equity*;
- (c) How the Party has addressed Article 4, paragraph 3, of the Paris Agreement;
- (d) How the Party has addressed Article 4, paragraph 4, of the Paris Agreement;
- (e) How the Party has addressed Article 4, paragraph 6, of the Paris Agreement.<sup>192</sup>

These requirements are mandatory; in contrast to other procedural rules formulated in Annex I, Paragraph 6 does not use the term ‘as appropriate’.

In both quotations, the term ‘fair’ is combined with the term ‘ambitious’, which aims at a reflection on how each NDC contributes to the overall climate protection target (1.5–2 °C). Ambition seems to be no criterion of differentiation. However, as states are affected by climate change to a different extent<sup>193</sup> and as self-differentiation is decisive in the Paris Agreement, reflections on ambition imply reflections on differentiation.<sup>194</sup>

The term ‘fair’ is combined with the term ‘national circumstances’, which corresponds to the qualifier of the principle of CBDR. The term ‘national circumstances’ aims at the definition of neutral criteria to justify the own contributions and expectations towards other states. These criteria can but do not have to be climate-based.<sup>195</sup>

The term ‘including’ in Paragraph 6 of Annex I to Decision 4/CMA.1 leads to the conclusion that equity is a form of fairness while not all fairness criteria are also equity criteria. The term ‘fair’

<sup>189</sup>J. Dator, ‘What Is Fairness?’, in J. Dator, D. Pratt and Y. Seo (eds.), *Fairness, Globalization, and Public Institutions: East Asia and Beyond* (2006), 19, at 27–8. See also *supra* note 62.

<sup>190</sup>Emphases added.

<sup>191</sup>Dec. 4/CMA.1, para. 7.

<sup>192</sup>Dec. 1/CP.21, para. 27; Dec. 4/CMA.1, para. 9 (emphases added).

<sup>193</sup>See *supra* note 34.

<sup>194</sup>See also *supra* note 33.

<sup>195</sup>See *supra* Section 2.1.



seems to depend more on individual circumstances and acceptance than the term ‘equity’ which is (also) based on pre-defined criteria.

Paragraph 6(c), (d), and (e) of Annex I to Decision 4/CMA.1 also specifies the term ‘fair’ as it is listed under the headline ‘How the Party considers that its nationally determined contribution is fair and ambitious in the light of its national circumstances’. These rules refer to mitigation targets and the requirement to track progress (‘ratchet mechanism’) and emphasize capabilities as a criterion for differentiation.

Paragraph 11 Decision 3/CP.24 uses the term ‘fair’ in the context of workshops, long-term climate finance, and gender-balance. It aims at inclusiveness in international climate events.

In the negotiating history of international climate agreements and in subsequent decisions, the term ‘fair’ is used in the context of trade as a means of technology transfer,<sup>196</sup> access to a possible future market mechanism,<sup>197</sup> an adequate representation in the Climate Technology Centre and Network,<sup>198</sup> and an adequate distribution of financial resources.<sup>199</sup> This confirms the high relevance of inclusiveness in procedures and institutions.

The Lima Climate Call for Action (2014) used the term ‘fair’ in the context of national mitigation targets and together with the term ‘equitable’.<sup>200</sup> Australia, Bolivia, Chile, the Dominican Republic, Fiji, Indonesia, Mexico, the Philippines, South Africa, South Korea, and Switzerland agreed to the terms ‘fair’ and ‘equitable’ being mentioned together. Trinidad and Tobago as well as the USA opted against this.<sup>201</sup> In the end, the term ‘fair’ was not used together with ‘equitable’ but later, in the context of the NDCs, it was.<sup>202</sup> This speaks for parallel but non-identical meanings of the two terms (*effet utile*).

UNGA resolutions mentioned in the Paris Agreement also refer to the terms ‘fair’ and ‘fairness’. The SDGs use the term ‘fair’ twice, always combined with the term ‘equitable’.<sup>203</sup> They use the term ‘fair’ for an appropriate sharing of the benefits of genetic resources. The Addis Ababa Action Agenda uses the term eight times: in the context of the rule of law and equal chances to sustainable development, taxation, the shared responsibility for the prevention of debts, and transparency.<sup>204</sup> Parallels to the Paris Agreement are the closeness of fairness to equity and the focus on procedural aspects.

Finally, in the context of the decisions to the Paris Agreement, fairness is a procedural rule to establish a representative and open discourse on differentiation to discuss substantive criteria for differentiation. The contracting parties of the Paris Agreement might explain why they consider their NDC as fair, formulate expectations towards other states, or define criteria for fairness. They might include climate- and non-climate-based circumstances in these considerations, possibly comparing them with other states’ circumstances. Individual concepts of fairness become more transparent to facilitate a common understanding one day.

<sup>196</sup>Framework for Meaningful and Effective Actions to Enhance the Implementation of Article 4, Paragraph 5, of the Convention, Dec. 4/CP.7 Annex, UN Doc. FCCC/CP/2001/13/Add.1 (2002), paras. 12, 14.

<sup>197</sup>The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, Dec. 1/CP.16, UN Doc. FCCC/CP/2010/7/Add.1 (2011) (‘Dec. 1/CP.16’), para. 80(a). In this decision, the term ‘equitable’ was also used in the same context.

<sup>198</sup>Rules of Procedure of the Advisory Board of the Climate Technology Centre and Network, Dec. 25/CP.19 Annex II, UN Doc. FCCC/CP/2013/10/Add.3 (2014), para. 3.

<sup>199</sup>Work Programme on Results-based Finance to Progress the Full Implementation of the Activities Referred to in Decision 1/CP.16, Paragraph 70, Dec. 9/CP.19, UN Doc. FCCC/CP/2013/10/Add.1 (2014), para. 5.

<sup>200</sup>Elements for a Draft Negotiating Text, Dec. 1/CP.20 Annex, UN Doc. FCCC/CP/2014/10/Add.1 (2015), para. 16(1) Option 2.

<sup>201</sup>B. Antonich et al., ‘Summary of the Lima Climate Change Conference 1-14 December 2014’, (2014) 12(619) *Earth Negotiations Bulletin*, available at [enb.iisd.org/download/pdf/enb12619e.pdf](http://enb.iisd.org/download/pdf/enb12619e.pdf), at 28, 31, 34; B. Antonich et al., ‘Lima Highlights: Friday, 5 December 2014’, (2014) 12(613) *Earth Negotiations Bulletin*, available at [enb.iisd.org/download/pdf/enb12613e.pdf](http://enb.iisd.org/download/pdf/enb12613e.pdf), at 4.

<sup>202</sup>See Dec. 4/CMA.1 Annex I, para. 6; Dec. 2/CMA.2, para. 40.

<sup>203</sup>SDGs, Goals 2(5), 15(6).

<sup>204</sup>Addis Ababa Action Agenda, paras. 18, 22, 26, 36, 28, 98, 99, 101.

### 2.5 The terms in other authentic treaty languages

Another perspective is provided by comparing the authentic language versions of the Paris Agreement and subsequent decisions.<sup>205</sup> Like the English version, the Arabic version uses different terms for ‘climate justice’ (‘العدالة المناخية’), ‘equity’ (‘الإنصاف’), and ‘fair’ (‘منصفة’). The Arabic term for ‘fair’ (‘منصفة’) used in Decision 1/CP.21 depends on individual approaches to differentiation as it is the case for the English term.<sup>206</sup>

In contrast, the Chinese version uses a separate term for justice (公正) but a common term for ‘equity’ and ‘fair’ (公平). The French version also does not differentiate between the terms ‘fair’ and ‘equity’ but uses the terms *équité* and *équitable* for both terms.

The Spanish version uses *justicia* and *justa* for both ‘justice’ and ‘fair’ and *equidad* for equity. *Equidad* is used for both ‘equality’ and ‘equity’ in the Spanish language, which confirms that ‘equity’ refers more to equality than the other terms of differentiation.

In the Russian version, ‘justice’, ‘equity’, and ‘fair’ are translated by the same term: *справедливость*. This term can be used for individual and general approaches to differentiation. Using only *справедливость* is not intuitive because the Russian language also has other terms for justice (*правосудие*) and equity (*равноправие*).<sup>207</sup>

That the three English terms do not always have an equivalent in the other languages does not mean the respective *concept* of differentiation behind them is unknown.<sup>208</sup> For example, the French term *équité* could be understood in both specifications of the English terms (equity and fairness). The Russian term *справедливость* can also include both the substantive and the procedural aspect of differentiation.

Legally, ‘[t]he terms of the treaty are presumed to have the same meaning in each authentic text’.<sup>209</sup> The English version of the treaty has no prevalent role but can be the starting point, as the Paris Agreement and the subsequent decisions were negotiated in English. If reconciliation of the terms in all authentic languages is not possible,<sup>210</sup> the terms are brought into consistency by the other means of legal interpretation, in particular by looking at the aim and purpose of the agreement.<sup>211</sup>

All but the Russian version distinguish at least two terms of differentiation. The aim of this distinction might be to distinguish the procedural and substantive level of differentiation whereas the agreements focus on procedural rules of differentiation.

### 2.6 Result: Procedural approach to differentiation

The terms of differentiation have strong parallels and fine differences. Differentiation is mandatory but self- rather than pre-defined. The principle of CBDR is the broadest concept implying unequal efforts of all parties that depend on climate- and non-climate related circumstances.

‘Equity’ is the term most frequently used. Procedural criteria for equity specified so far are the broad participation of all contracting parties and equal geographical representation. Substantive criteria are less specified. Capability is one common criterion, but individual criteria can be added as long as applied in a non-discriminatory way.

Compared to the other terms, ‘climate justice’ has the strongest claim to pre-defined criteria for differentiation. However, as used in the Paris Agreement, it also aims at inclusion of arguments rather than prescribing pre-defined criteria for the one and only concept of differentiation.

<sup>205</sup>The authentic language versions are defined in UNFCCC, Art. 26; Kyoto Protocol, Art. 28; Paris Agreement, Art. 29.

<sup>206</sup>We thank Donia Mahabadi for the translation of the Arabic version.

<sup>207</sup>We thank Nicole Hoppe and Kostyantyn Vdovenko for the translation of the Russian version.

<sup>208</sup>This point was made clear by John Rawls in discourse with Amartya Sen. See Sen, *supra* note 122, at 72–3.

<sup>209</sup>VCLT, Art. 33(3).

<sup>210</sup>See Villiger, *supra* note 25, at 459, para. 10.

<sup>211</sup>VCLT, Art. 33(4).

The term ‘fair’ depends on the moral convictions of a reference group based on impartial reasoning, whatever these convictions may be. In the climate context, this requires global public reasoning on differentiation.

Finally, all terms of differentiation used in the Paris Agreement and subsequent decisions, aim at a procedural approach to differentiation: Ideas and arguments for differentiation of all parties shall be made transparent to all parties. The communication of the NDCs facilitates the discourse on further and more concrete criteria and arguments of procedural and substantive differentiation.

### 3. Operationalization

International climate agreements use criteria, categories, parameters, and arguments for differentiation with or without referring explicitly to the terms of differentiation.<sup>212</sup> As implicit rules of differentiation are the context for *all* terms of differentiation, they are discussed together. This section analyses capabilities, vulnerability, and responsibility.

#### 3.1 Capabilities: The continued relevance of the categories ‘developed countries’ and ‘developing countries’

The state of development (capability) is used within and outside the principle of CBDR.<sup>213</sup> A high development correlates with a high share in global emissions and the capability to face climate change problems. Therefore, developed countries are considered to be particularly responsible for climate protection whereas the need of developing countries to progress is recognized.<sup>214</sup> Accordingly, countries of Annex I of the UNFCCC and Annex B of the Kyoto Protocol had to reduce emissions; non-Annex I and non-Annex B countries did not have to mitigate.<sup>215</sup>

The Paris Agreement requires developed and developing countries to contribute to climate protection. The role of the previous annexes for the Paris Agreement remains controversial.<sup>216</sup> The Agreement seeks to ‘enhance the implementation of the Convention, including its objective’,<sup>217</sup> but the bottom-up approach of NDCs<sup>218</sup> lowers the relevance of the annexes. Still, the Paris Agreement uses the terms ‘developed country’ and ‘developing country’ frequently<sup>219</sup> but without specifying them further.<sup>220</sup> It also refers to ‘other countries’,<sup>221</sup> which seems to include all but developed countries. The added value of the term ‘other countries’ (instead of ‘developing countries’) could be to include emerging countries with less (binding) obligations than developed countries.<sup>222</sup> The obligations of ‘other parties’ are formulated as soft law adding the terms ‘voluntarily’,<sup>223</sup> ‘should’,<sup>224</sup> and ‘invite’.<sup>225</sup>

<sup>212</sup>See *supra* note 13.

<sup>213</sup>Paris Agreement, Arts. 13(12), 15(2).

<sup>214</sup>On the leadership role, Paris Agreement, Arts. 4(4), 9(3); see also *supra* note 100.

<sup>215</sup>UNFCCC, 3<sup>rd</sup>, 10<sup>th</sup>, 20<sup>th</sup>, 21<sup>st</sup>, 22<sup>nd</sup> preambular recital, Art. 3(2), Annex I.

<sup>216</sup>See Bodansky et al., *supra* note 2, at 222; Rajamani and Guérin, *supra* note 9, at 88; Tørstad and Sælen, *supra* note 9, at 650–1; Rajamani, *supra* note 10, at 494, 506, 513.

<sup>217</sup>Paris Agreement, Art. 2(1).

<sup>218</sup>See Voigt and Ferreira, *supra* note 1, at 65–7.

<sup>219</sup>‘Developed countries’ are mentioned in Paris Agreement, 16<sup>th</sup> preambular recital, Arts. 4(4), 9(1), (3)(5), (6), (7), 13(9). ‘Developing countries’ are used in Paris Agreement, 5<sup>th</sup> preambular recital, Arts. 4, 4(1), (4), (5), (6), (15), 5(2), 6(6), 7(2), (3), (6), (7)(d), (10), (13), (14)(a), 9(1)(3), (4), (5), (7), (9), 10(5), (6), 11(1), (2), (3), (4), 13(2), (3), (9), (10), (11), (12), (13), (14), (15).

<sup>220</sup>See Rajamani and Guérin, *supra* note 9, at 88.

<sup>221</sup>Paris Agreement, Art. 9(2), (5), 13(9), Art. 9(7).

<sup>222</sup>See Maljean-Dubois, *supra* note 1, at 156; cf. Rajamani and Guérin, *supra* note 9, at 86.

<sup>223</sup>Paris Agreement, Art. 9(2), (5).

<sup>224</sup>*Ibid.*, Art. 13(9).

<sup>225</sup>*Ibid.*, Art. 9(7).

Article 4(4) Paris Agreement recommends that developed countries lead.<sup>226</sup> They should submit absolute emission reduction targets. Developing countries are encouraged to move towards emission reduction or limitation targets. Article 4(1) of the Agreement requires recognition that peaking will take longer for developing countries than for developed countries. Article 4(15) Paris Agreement requires considering the concerns of developing countries in the implementation process of the Agreement.

In the UNFCCC and the Kyoto Protocol, developing countries received financial and technology transfers without paying for them.<sup>227</sup> The Paris Agreement also recognizes the need to support developing countries; including financial transfers, technology exchange, and capacity building<sup>228</sup> with developed countries in the leadership role to offer this support.<sup>229</sup>

Reporting is also less strict for developing countries. Article 13(9) and (10) Paris Agreement prescribes transparency for both developed and developing countries. However, the specifications of the Paris Rulebook are less restrictive for developing countries as regards the guiding principles of modalities, procedures, and guidelines.<sup>230</sup> These lower requirements are also reflected in the obligation for developed countries to assess uncertainties quantitatively whereas developing countries can use qualitative criteria.<sup>231</sup> The national circumstances can lower the transparency requirements for developing countries.<sup>232</sup> Consequently, only developing countries are encouraged to formulate their needs as regards the transparency requirements.<sup>233</sup>

Developing countries shall be supported in formulating their NDCs,<sup>234</sup> research, collecting and identifying adaptation needs, the assessment of vulnerability, and monitoring.<sup>235</sup> However, in contrast to the requirements on financial transfers, the requirements of general support of Articles 4(5) and 7(13) Paris Agreement use the passive voice, i.e., they do not oblige a specific group of countries to pay.<sup>236</sup> Hence, this support might come from both developed and developing countries. The extent of support is also open.<sup>237</sup>

As for the qualifiers of the principle of CBDR,<sup>238</sup> the terms ‘circumstances’,<sup>239</sup> and ‘priorities’<sup>240</sup> are employed if developing countries shall have lower obligations than developed countries. The term ‘circumstances’ still requires that conditions can be based on objective criteria. The term ‘priorities’ implies more discretion. Both terms also allow for the inclusion of non-climate related criteria.<sup>241</sup>

The operationalization of differentiation also depends on the discretion of the respective groups of countries. Climate agreements and subsequent decisions maintain discretion for *all* contracting parties using the terms ‘sovereignty’, ‘nationally determined’, ‘nationally appropriate’, ‘country-driven’, or

<sup>226</sup>See also *supra* note 214.

<sup>227</sup>UNFCCC, Arts. 3(5), 4(3), (4), (5), (7), (8), (9), 5(b), (c), 6(b)(ii), 8(2)(c), 9(2)(d), 11(5), 12(4), (7), Annex II.

<sup>228</sup>Paris Agreement, Arts. 3, 4(5), 7(13).

<sup>229</sup>*Ibid.*, Art. 9(3).

<sup>230</sup>Modalities, Procedures and Guidelines for the Transparency Framework for Action and Support Referred to in Article 13 of the Paris Agreement, Dec. 18/CMA.1, UN Doc. FCCC/PA/CMA/2018/3/Add.2 (2019), 4<sup>th</sup> preambular recital; see Dec. 18/CMA.1 Annex, paras. 3, 5, 10(d), (e), 118.

<sup>231</sup>See Dec. 18/CMA.1 Annex, para. 29.

<sup>232</sup>UNFCCC, Art. 12(5); Paris Agreement, Arts. 4(6), 13(3); Dec. 18/CMA.1 Annex, para. 3(a), 11.

<sup>233</sup>See Dec. 18/CMA.1 Annex, para. 143.

<sup>234</sup>Paris Agreement, Art. 4(5).

<sup>235</sup>*Ibid.*, Art. 7(13).

<sup>236</sup>See also *ibid.*, Art. 3.

<sup>237</sup>See also H. Winkler, ‘Mitigation (Article 4)’, in D. Klein et al. (eds.), *The Paris Agreement on Climate Change: Analysis and Commentary* (2017), 141, at 152.

<sup>238</sup>See *supra* Section 2.1.

<sup>239</sup>See *supra* note 38.

<sup>240</sup>See *supra* note 39.

<sup>241</sup>Paris Agreement, 10<sup>th</sup> preambular recital.

‘party-driven’.<sup>242</sup> Partly, developing countries have more discretion than developed countries.<sup>243</sup> Finally, ‘developed country’ and ‘developing country’ (capability) remain decisive criteria for differentiation but with an unclear assignment of the parties to these categories.

### 3.2 Vulnerability

Vulnerability is used to subdivide the category of developing countries but also to address all other contracting parties<sup>244</sup> and persons in vulnerable situations.<sup>245</sup> The vulnerability of a country can affect its mitigation targets, requirements on transparency and capacity, contributions to funding, and the right to receive funding.<sup>246</sup>

The Paris Agreement recommends assessing a party’s vulnerability as appropriate.<sup>247</sup> There is no pre-defined measure for vulnerability. It distinguishes categories of countries concerning their vulnerabilities: LDCs<sup>248</sup> (vulnerable because of low development), SIDS<sup>249</sup> (vulnerable because of the geographical situation), and developing countries that are particularly vulnerable.<sup>250</sup> These categories are neither specified nor is a threshold defined for changing the category.<sup>251</sup>

The UN Committee for Development Policy uses income, population, and economic vulnerability to define LDCs.<sup>252</sup> The list currently includes 47 states as LDCs.<sup>253</sup> A list of 28 SIDS was defined with the SDGs<sup>254</sup> and by the UN Conference on Trade and Development.<sup>255</sup> As the Paris Agreement neither refers to these lists nor enables the UNGA to define the terms, these lists are non-binding to the parties of the Paris Agreement.<sup>256</sup> Parties can define to which category they belong.<sup>257</sup> Nonetheless, a categorization based on objective parameters might facilitate the recognition of the development status by other states more than self-definition.

<sup>242</sup>UNFCCC, 8<sup>th</sup> and 9<sup>th</sup> preambular recital, Art. 12(5); Doha Amendment, footnote 12; Paris Agreement, Arts. 13(3), 14(3); Dec. 1/CP.21, para. 91; Modalities and Procedures for the Operation and use of a Public Registry Referred to in Article 4, Paragraph 12, of the Paris Agreement, Dec. 5/CMA.1 Annex, UN Doc. FCCC/PA/CMA/2018/3/Add.1 (2019), para. 1(b); Dec. 9/CMA.1, para. 2(a); Modalities and Procedures for the Operation and use of a Public Registry Referred to in Article 7, Paragraph 12, of the Paris Agreement, Dec. 10/CMA.1 Annex, UN Doc. FCCC/PA/CMA/2018/3/Add.1 (2019), para. 1(d); Matters Referred to in Paragraphs 41, 42 and 45 of Decision 1/CP.21, Dec. 11/CMA.1, UN Doc. FCCC/PA/CMA/2018/3/Add.1 (2019), paras. 3, 10; Dec. 18/CMA.1 Annex, paras. B(3)(a), 148(VII)(A), 22, 150(c), 192; Dec. 20/CMA.1 Annex, para. I(4); Local Communities and Indigenous Peoples Platform, Dec. 2/CP.24, UN Doc. FCCC/CP/2018/10/Add.1 (2019), 5<sup>th</sup> preambular recital; Dec. 19/CMA.1, paras. 3(c), 14.

<sup>243</sup>Paris Agreement, Arts. 9(3), (4), 11(2); Types of Information to be Provided by Parties in Accordance with Article 9, Paragraph 5, of the Paris Agreement, Dec. 12/CMA.1 Annex, UN Doc. FCCC/PA/CMA/2018/3/Add.1 (2019) (‘Dec. 12/CMA.1 Annex’), paras. (j), (l); Technology Framework under Article 10, Paragraph 4, of the Paris Agreement, Dec. 15/CMA.1 Annex, UN Doc. FCCC/PA/CMA/2018/3/Add.2 (2019), para. 25(c); Dec. 18/CMA.1 Annex, para. 121(p). The discretion is emphasized only for LDCs and SIDS in Dec. 1/CP.21, para. 91; Dec. 18/CMA.1, para. 4; Dec. 18/CMA.1 Annex, para. 11; Dec. 1/CP.21, para. 65 emphasizes country-driven strategies of all contracting parties and reminds of support of developing countries.

<sup>244</sup>Paris Agreement, Art. 7(1).

<sup>245</sup>*Ibid.*, 9<sup>th</sup> and 11<sup>th</sup> preambular recital, 7<sup>th</sup> preambular recital, Arts. 7(5), (9)(c); Dec. 1/CP.21.

<sup>246</sup>UNFCCC, Art. 4(9); Paris Agreement, 6<sup>th</sup> preambular recital, Arts. 4(6), 9(9), 11(1).

<sup>247</sup>Paris Agreement, Art. 7(9)(c).

<sup>248</sup>*Ibid.*, 6<sup>th</sup> preambular recital, Arts. 9(9), 11(1), 13(3). See also UNFCCC, Arts. 4(9), (6), 12(5).

<sup>249</sup>Paris Agreement, Arts. 4(6), 9(4), (9), 11(1), 13(3).

<sup>250</sup>Paris Agreement, 5<sup>th</sup> preambular recital, Arts. 6(6), 7(2), (6), 9(4), 11(1).

<sup>251</sup>The Paris Agreement and the Paris Rulebook use LDCs and SIDS as examples for particularly vulnerable developing countries. See Paris Agreement, Art. 11(1); see Dec. 12/CMA.1 Annex, para. (j).

<sup>252</sup>UN Committee for Development Policy, *Handbook on the Least Developed Country Category: Inclusion, Graduation and Special Support Measures* (2018), available at [www.un.org/development/desa/dpad/wp-content/uploads/sites/45/2018CDPhandbook.pdf](http://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/2018CDPhandbook.pdf), at 13, Box I.4.

<sup>253</sup>United Nations, Committee for Development Policy, ‘List of Least Developed Countries (as of December 2018)’, available at [www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/Ldc\\_list.pdf](http://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/Ldc_list.pdf).

<sup>254</sup>United Nations, ‘Sustainable Development Goals, Knowledge Platform’, available at [sustainabledevelopment.un.org/topics/sids/list](http://sustainabledevelopment.un.org/topics/sids/list).

<sup>255</sup>UNCTAD, ‘UNCTAD’s Unofficial List of SIDS’, [unctad.org/en/pages/aldc/Small%20Island%20Developing%20States/UNCTAD%20B4s-unofficial-list-of-SIDS.aspx](http://unctad.org/en/pages/aldc/Small%20Island%20Developing%20States/UNCTAD%20B4s-unofficial-list-of-SIDS.aspx).

<sup>256</sup>See *supra* note 101.

<sup>257</sup>L. Rajamani, *Differential Treatment in International Environmental Law* (2006), at 165.

Formulating the emissions targets in their NDCs, only LDCs and SIDS may communicate strategies that reflect their ‘special circumstances’.<sup>258</sup> The term ‘special’ emphasizes their vulnerability and makes their NDCs more open to individual criteria.<sup>259</sup> LDCs and SIDS shall receive more financial support for both mitigation and adaptation than other developing countries.<sup>260</sup> As regards obligations on transparency, LDCs and SIDS may provide the information required in Article 13 Paris Agreement at their discretion.<sup>261</sup> Moreover, LDCs shall be supported in capacity building.<sup>262</sup> However, without specifying the extent of support or the responsible supporters, the effect of the support provisions is questionable.

### 3.3 Responsibility

Responsibility matters beyond the principle of CBDR.<sup>263</sup> In the sense of international climate agreements, responsibility can include current, historical, or future emissions.<sup>264</sup> Climate agreements contain procedural rules referring to the responsibility for emissions, e.g., obligations on monitoring and accounting. These formulate general obligations for *all* contracting parties and are not criteria of differentiation.<sup>265</sup> Those differentiations made in the context of accounting refer to capability, as discussed above, rather than to responsibility.<sup>266</sup>

Flexible mechanisms as formulated in the Kyoto Protocol<sup>267</sup> and planned in Article 6 Paris Agreement<sup>268</sup> indirectly include responsibility as a criterion for differentiation. They imply financial transfers from those who emit more than they agreed to do to others that over-achieve their emissions targets. Prohibiting double-counting<sup>269</sup> also emphasizes the responsibility for emissions. As the new market mechanism under Article 6 Paris Agreement has not been established so far, this reference to responsibility also remains open.

Responsibility is indirectly included in rules on adaptation.<sup>270</sup> Although the reasons for adaptation support could be manifold, it implies the dimension of (past) emissions. This logic also applies to the Warsaw International Mechanism for Loss and Damage<sup>271</sup> and the Adaptation Committee.<sup>272</sup> Still, although adaptation support can imply a certain recognition of responsibility, its relative weight remains unclear as adaptation support is neither binding nor quantified so far.<sup>273</sup>

Another criterion for responsibility is per capita emissions.<sup>274</sup> However, as the parameter is only mentioned in the preamble of the UNFCCC but not in the Paris Agreement, it is unlikely to dominate capabilities and vulnerability which are frequently mentioned.<sup>275</sup>

<sup>258</sup>Paris Agreement, Art. 4(6).

<sup>259</sup>On the term ‘circumstances’ see *supra* Sections 2.1, 3.1.

<sup>260</sup>Paris Agreement, Art. 9(4), (9).

<sup>261</sup>*Ibid.*, Art. 13(3).

<sup>262</sup>*Ibid.*, Art. 11(1).

<sup>263</sup>*Cf. supra* Section 2.1.

<sup>264</sup>*Ibid.*

<sup>265</sup>Paris Agreement, Arts. 4(13), (14), 13(7)(a); Dec. 1/CP.21, paras. 31(a), (c), (d), 37.

<sup>266</sup>Paris Agreement, Art. 4(6).

<sup>267</sup>Kyoto Protocol, Arts. 6, 12, 17.

<sup>268</sup>The Paris Agreement has formulated the framework for a new flexible mechanism in Art. 6 Paris Agreement but it is not yet established. E. Davies, ‘Recommendations for an International Carbon Currency Market under Article 6 of the Paris Agreement’, (2018) 12 CCLR 132.

<sup>269</sup>Paris Agreement, Art. 6(2), (5); Dec. 1/CP.21, paras. 93(d), (f), 108.

<sup>270</sup>Paris Agreement, Arts. 7(7), 9(1).

<sup>271</sup>*Ibid.*, Art. 8.

<sup>272</sup>Dec. 1/CP.21, paras. 42, 45, 46, 50, 127, 131.

<sup>273</sup>Contracting parties ‘shall set a new collective quantified goal from a floor of USD 100 billion per year’ by 2020. Dec. 1/CP.16, para. 98; Dec. 1/CP.21, paras. 54, 115; Chile Madrid Time for Action, Dec. 1/CP.25, UN Doc. FCCC/CP/2019/13/Add.1 (2020), para. 11. Criticizing this sum for not being part of the differentiation, Rajamani and Guérin, *supra* note 9, at 89.

<sup>274</sup>UNFCCC, 3<sup>rd</sup> preambular recital.

<sup>275</sup>See *supra* Sections 3.1, 3.2.

Finally, the responsibility for emissions is interrelated with the maintenance of carbon sinks in a party's own country. The recent controversy on Brazil's rainforest makes clear that it is not self-evident for developing and emerging countries to give priority to the preservation of the own forests instead of using this territory for other purposes (as many developed countries did).<sup>276</sup> Maintaining carbon sinks is related to responsibility and might speak for additional financial transfers. The Kyoto Protocol compensated for the maintenance of carbon sinks, even though the relevance of these certificates was limited.<sup>277</sup> The Paris Agreement only contains a recommendation to conserve forests in Article 5(1) and (2). Whether the new mechanism under Article 6 Paris Agreement will include compensation is uncertain.<sup>278</sup>

### 3.4 Result: Dominance of capability

The Paris Agreement comprises elements of procedural rather than substantive equality. Of the criteria operationalizing differentiation, capability is the most relevant, followed by vulnerability, responsibility, and open categories of differentiation marked by the terms 'national circumstances' or 'priorities'. However, the weight of these categories or a precise threshold above which a country switches to another category is not yet defined. A reason for this ranking of operationalizing criteria is that capability implies less redistribution and lower costs for developed countries than the other two criteria.<sup>279</sup>

## 4. Result

Narrowing down the rules of differentiation is considered the key to ambitious climate commitments.<sup>280</sup> The vagueness of the terms and criteria of burden-sharing and differentiation in the Paris Agreement might be one reason for the emissions gap.<sup>281</sup>

With the Paris Agreement and the Rulebook, the rules of differentiation have become even more open than they were in the UNFCCC and the Kyoto Protocol. This implies both risk and opportunity for the flexible approach of the Paris Agreement. The Paris Agreement and the Rulebook introduce 'climate justice' and 'fairness' as new terms of differentiation and continue to refer to the principle of CBDR and 'equity'. However, all four terms broaden rather than narrow the rules of differentiation. Differentiation is mandatory but self- rather than pre-defined. All terms focus on a transparent and open discourse about the criteria of procedural and substantive differentiation that are free of discrimination.

Of the criteria operationalizing differentiation, capabilities (state of development) and vulnerability are most recognized in the Paris Agreement. Yet, their relative weight compared to other criteria is not specified or quantified. The criterion of responsibility is less mentioned. It can be referred to the open principle of CBDR and is implied by the rules on adaptation, loss and damage, and the flexible mechanism. Current (or recent) emissions appear to be decisive for responsibility, but historical and future responsibility cannot be excluded from being relevant. As responsibility

<sup>276</sup>The Brazilian president Bolsonaro: 'We preserve more [rainforest] than anyone. No country in the world has the moral right to talk about the Amazon. You destroyed your own ecosystems.' See Z. Sullivan, 'The Real Reason the Amazon Is on Fire', *Time*, 26 August 2019, available at [time.com/5661162/why-the-amazon-is-on-fire](https://www.time.com/5661162/why-the-amazon-is-on-fire).

<sup>277</sup>Kyoto Protocol, Art. 3(3), (4); Report of the Conference of the Parties on its Seventh Session, Held at Marrakesh from 29 October to 10 November 2001, UN Doc. FCCC/CP/2001/13/Add.1 (2002) (Marrakesh Accords); Land use, Land-use Change and Forestry, Dec. 2/CMP.7, UN Doc. FCCC/KP/CMP/2011/10/Add.1 (2012).

<sup>278</sup>These questions were negotiated in 2020. See Matters Relating to Article 6 of the Paris Agreement, Dec. 9/CMA.2, UN Doc. FCCC/PA/CMA/2019/6/Add.1 (2020); Terms of Reference for the Review of the Doha Work Programme on Article 6 of the Convention, Dec. 15/CP.25, UN Doc. FCCC/CP/2019/13/Add.2 (2020).

<sup>279</sup>A. Lange et al., 'On the Self-Interested Use of Equity in International Climate Negotiations', (2010) 54 *European Economic Review* 359, at 363–4, 370.

<sup>280</sup>See *supra* notes 15, 16.

<sup>281</sup>Transparency and co-ordination problems are other reasons the Paris Agreement addresses without dissolving them.

has strong correlations with capabilities and negative correlations with vulnerability, the added value of responsibility is uncertain. Hence, if the contracting parties take capabilities and vulnerability into account at all, compliance with the rules operationalizing differentiation seems easy.

The Paris Agreement and the Rulebook also use the open terms ‘circumstances’ and ‘priorities’ more frequently than previous agreements. These open terms and the strong discretion of contracting parties to define their own criteria for differentiation correspond to the bottom-up structure and the co-operative spirit of the Agreement. However, they make the rules of differentiation become even less clear.

Possible specifications of qualitative criteria, categories, arguments, and quantitative parameters of differentiation and their relative weight were offered across the disciplines.<sup>282</sup> These normative studies provide guidance for the political debate and raise the pressure on individual parties, but they do not have much legal weight. From the perspective of the open rules for differentiation of international climate agreements, it cannot be said which contracting party did not contribute sufficiently.

The Paris Agreement and the Rulebook missed the opportunity to clarify the terms and criteria for differentiation in detail. Apart from procedural requirements, contracting parties define the criteria almost free of legal constraints. This seems to be the price for including many states into the Paris Agreement and makes it hard to consider it as a treaty that goes beyond what states politically are willing to do. It is easy to hide behind open legal terms of differentiation and vague criteria for specification rather than filling them. In case of non-compliance with the Paris Agreement, individual contracting parties cannot be blamed but only *all* contracting parties as a group.

## 5. Outlook

The controversy about differentiation goes far beyond international law. Discussions about what is just (philosophy), what maximizes welfare or utility, is efficient, and incentive-based (economics) *de facto* affect the legal discourse on differentiation.<sup>283</sup> Where economic studies provide quantifiable measures, these could be included in future agreements or decisions. However, its underlying normative assumptions must be made transparent. Other disciplines should not foreclose valid legal interpretations and should be aware of the discretion the contracting parties maintain.

The contracting parties of the Paris Agreement represent an interpretative community. They could define terms or criteria of differentiation in subsequent agreements, decisions, or in the NDCs. As a timely and detailed specification seems unlikely, contracting parties could alternatively continue to establish further procedural rules on *how* to narrow these criteria down step-by-step. The requirement to formulate individual approaches to fairness and ambition in the NDCs<sup>284</sup> is the first step in this direction. Whether this facilitates harmonization of the criteria for differentiation remains to be seen.

Besides, the contracting parties could be obliged to *refer* to criteria, or to *react* to statements or arguments about differentiation of other NDCs,<sup>285</sup> or to justify the refusal of criteria. This would deepen the discourse on criteria and facilitate harmonization in the long-run.

<sup>282</sup>See *supra* note 11.

<sup>283</sup>See also Franck, *supra* note 77, at 368.

<sup>284</sup>See also *supra* Section 2.4.

<sup>285</sup>U. Will, ‘The Specification of Rules of Differentiation in the NDCs to the Paris Agreement’, available at [www.europa-uni.de/de/forschung/institut/recap15/downloads/recap15\\_DP031.pdf](http://www.europa-uni.de/de/forschung/institut/recap15/downloads/recap15_DP031.pdf), Section IV.