

## Article 4: Mitigation

8-10,000 words, including footnotes

- 1. In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.**
- 2. Each Party shall prepare, communicate and maintain successive nationally determined contributions that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.**
- 3. Each Party's successive nationally determined contribution will represent a progression beyond the Party's then current nationally determined contribution and reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.**
- 4. Developed country Parties should continue taking the lead by undertaking economywide absolute emission reduction targets. Developing country Parties should continue enhancing their mitigation efforts, and are encouraged to move over time towards economy-wide emission reduction or limitation targets in the light of different national circumstances.**
- 5. Support shall be provided to developing country Parties for the implementation of this Article, in accordance with Articles 9, 10 and 11, recognizing that enhanced support for developing country Parties will allow for higher ambition in their actions.**
- 6. The least developed countries and small island developing States may prepare and communicate strategies, plans and actions for low greenhouse gas emissions development reflecting their special circumstances.**
- 7. Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans can contribute to mitigation outcomes under this Article.**
- 8. In communicating their nationally determined contributions, all Parties shall provide the information necessary for clarity, transparency and understanding in accordance with decision 1/CP.21 and any relevant decisions of the Conference of the Parties serving as the meeting of the Parties to this Agreement.**
- 9. Each Party shall communicate a nationally determined contribution every five years in accordance with decision 1/CP.21 and any relevant decisions of the Conference of the Parties serving as the meeting of the Parties to this Agreement and be informed by the outcomes of the global stocktake referred to in Article 14.**
- 10. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall consider common time frames for nationally determined contributions at its first session.**
- 11. A Party may at any time adjust its existing nationally determined contribution with a view to enhancing its level of ambition, in accordance with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to this Agreement.**
- 12. Nationally determined contributions communicated by Parties shall be recorded in a public registry maintained by the secretariat.**
- 13. Parties shall account for their nationally determined contributions. In accounting for anthropogenic emissions and removals corresponding to their nationally determined contributions, Parties shall promote environmental integrity, transparency, accuracy,**

completeness, comparability and consistency, and ensure the avoidance of double counting, in accordance with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to this Agreement.

14. In the context of their nationally determined contributions, when recognizing and implementing mitigation actions with respect to anthropogenic emissions and removals, Parties should take into account, as appropriate, existing methods and guidance under the Convention, in the light of the provisions of paragraph 13 of this Article.

15. Parties shall take into consideration in the implementation of this Agreement the concerns of Parties with economies most affected by the impacts of response measures, particularly developing country Parties.

16. Parties, including regional economic integration organizations and their member States, that have reached an agreement to act jointly under paragraph 2 of this Article shall notify the secretariat of the terms of that agreement, including the emission level allocated to each Party within the relevant time period, when they communicate their nationally determined contributions. The secretariat shall in turn inform the Parties and signatories to the Convention of the terms of that agreement.

17. Each party to such an agreement shall be responsible for its emission level as set out in the agreement referred to in paragraph 16 of this Article in accordance with paragraphs 13 and 14 of this Article and Articles 13 and 15.

18. If Parties acting jointly do so in the framework of, and together with, a regional economic integration organization which is itself a Party to this Agreement, each member State of that regional economic integration organization individually, and together with the regional economic integration organization, shall be responsible for its emission level as set out in the agreement communicated under paragraph 16 of this Article in accordance with paragraphs 13 and 14 of this Article and Articles 13 and 15.

19. All Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies, mindful of Article 2 taking into account their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

## 1. Introduction

Article 4 contains the detailed provisions of the Paris Agreement relating to the mitigation of climate change. These provisions are aimed at realizing the global mitigation objective stated in Article 2(1)(a), and they are based on the concept of nationally determined contribution introduced in Article 3. Article 4 is supplemented by Article 5, which contains more specific provisions on sinks and reservoirs of greenhouse gases, and Article 6, on the international transfer of mitigation outcomes. The implementation of Article 4 is supported by Articles 9, 10 and 11, containing provision on finance, technology and capacity building for, among others, mitigation action. Article 13's enhanced transparency framework, Article 14's global stocktake and Article 15's implementation and compliance mechanism all aim at monitoring and promoting effective climate action, including mitigation action.

Article 4, which includes 19 paragraphs, is the longest article of the Paris Agreement.<sup>1</sup> It defines a collective aim as well as procedural and substantive obligations; other provisions seek to define essential features of nationally determined contributions, often relying on further

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<sup>1</sup> With 859 words, article 4 is slightly longer than article 7 (817 words), the second longest article of the treaty.

decisions of implementation to be adopted by the Conference of the Parties serving at the Meeting of the Parties to the Paris Agreement (CMA).

## 2. Collective aim (para. 1)

Article 2(1)(a) defines the mitigation objective of the Paris Agreement in relation to two temperature goals (2°C and 1.5°C). Article 4(1) explains what this objective entails for the evolution of global greenhouse gas emissions and sinks of greenhouse gases, namely:

- (1) “Global peaking of greenhouse gas emissions as soon as possible”
- (2) “Rapid reductions thereafter”
- (3) “A balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century.”

This explanation fairly reflects the general understanding based on the work of scientists and economists on the most likely mitigation scenarios.<sup>2</sup> Beyond this, however, the explanation is imprecise. Whereas Article 2(1)(a) mentions two temperature goals, Article 4(1) only refers to “the long-term temperature goal set out in Article 2.” No more than Article 2(1)(a) does Article 4(1) determine what these two alternative temperature goals mean, for instance:

- (1) The relation between the two temperature goals;
- (2) The time horizon (e.g. whether the temperature goals apply beyond the 21<sup>st</sup> Century);
- (3) The permissibility of a temporary temperature overshoot;
- (4) The requisite likelihood that mitigation pathways will achieve these temperature goals (despite some scientific uncertainty on the future reaction of the climate system);
- (5) The definition of the “pre-industrial levels” used as benchmark.<sup>3</sup>

The collective aim defined in Article 4(1) is sufficient, at present, to indicate a direction of travel: whatever response is given to the five questions above, more mitigation is clearly needed to achieve this aim. Article 4(1) define a closer objective – “global peaking” – but it does not associate it with a well-defined time frame.

More significantly, perhaps, Article 4(1) is the first treaty provision to recognize the need to stop net greenhouse gas emissions on the long-term, namely in the second half of the century. It is silent, however, on the methods that could or should be used to achieve net zero emissions. This silence is consistent with the principle of sovereignty of States in international cooperation to address climate change:<sup>4</sup> it belongs in principle to each State to determine what would be the most desirable way (consistent with its international law obligations) to implement its mitigation commitments. Nevertheless, both the Article 2(1)(a) mitigation objective and its explanation in Article 4(1) have been read as an implicit recognition of the need for negative emissions technologies (NETs) such as bioenergy with carbon capture and storage (BECCS).<sup>5</sup> In addition to drastic reductions, NETs may be necessary to balance continuing emissions by

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<sup>2</sup> See e.g. M. Allen et al., “Summary for Policymakers” in V. Masson-Delmotte et al. (eds), *Global Warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty* (IPCC, 2018) 3, at 13.

<sup>3</sup> See generally M.R. Allen et al., “Framing and Context” in *ibid* 49, at 56-67.

<sup>4</sup> United Nations Framework Convention on Climate Change 1992 (1771 UNTS 107)10th Preambular paragraph.

<sup>5</sup> Charlotte Streck, Paul Keenlyside and Moritz von Unger, ‘The Paris Agreement: A New Beginning’ (2016) 13 *Journal for European Environmental & Planning Law* 3, 10–11.

sources in certain sectors in order to achieve net zero GHG emissions. Delays in achieving a global peak in global greenhouse gas emissions and rapid reductions thereafter may also create a greater need for net negative emissions in the second half of the century, if the Article 2 mitigation goals are to be achieved.<sup>6</sup>

### 3. The determination of national commitments

This section comments on provisions of Article 4 that govern the determination of national commitments.

#### 3.1. The obligation to communicate NDCs (para. 2, first sentence; para. 9)

Article 3 introduces the concept of “nationally determined contributions to the global response to climate change,” referring among others to Article 4. By contrast to the Kyoto Protocol, where quantified emissions limitation and reduction commitments were negotiated and integrated in Annex to the treaty, the Paris Agreement relies on a “bottom-up approach” whereby each State is to decide the ambit of its contribution.

Accordingly, the first sentence of Article 4(2) establishes a procedural obligation for each Party to “prepare, communicate and maintain successive nationally determined contributions that it intends to achieve.” This obligation lies at the centre of the architecture of Article 4, and of the Paris Agreement more generally. It is supplemented by numerous other provisions of Article 4 regarding the content of this communication.

Article 4(9) adds that each Party must communicate an NDC every five years. Decision 1/CP.21 requested Parties whose NDC contains a time frame up to 2025 to communicate a new NDC by 2020,<sup>7</sup> and Parties whose NDC contains a time frame up to 2030 to communicate or update these NDCs by 2020.<sup>8</sup> Thus, while some Parties will communicate their second NDC by 2020, others, invited to *update* their first NDC in 2020, will communicate their second NDC by 2025. The distinction is important because rules regarding the clarity, transparency and understanding of NDCs as well as account for NDCs, adopted as part of the Paris Rulebook, are only binding starting with the Parties’ second NDC.<sup>9</sup>

Decision 1/CP.21 requires NDCs to be submitted to the secretariat “at least 9 to 12 months in advance” of the following CMA “with a view to facilitating the clarity, transparency and understanding of these contributions, including through a synthesis report prepared by the secretariat.”<sup>10</sup> With CMA3 expected to take place in November 2020, this suggests that new NDCs are to be communicated before November 2019 to February 2020.

Article 4(9) further suggests that NDCs must “be informed by the outcomes of the global stocktake referred to in Article 14.”<sup>11</sup> With global stocktake due to take place during the CMA in 2023 and every five years thereafter,<sup>12</sup> States should have 12 to 15 months to build upon the

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<sup>6</sup> Allen et al. (n 2) 14.

<sup>7</sup> ‘Decision 1/CP.21, Adoption of the Paris Agreement’ para 23.

<sup>8</sup> *ibid* 24.

<sup>9</sup> See ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ paras 7, 14.

<sup>10</sup> ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 25.

<sup>11</sup> See also ‘Paris Agreement’ art. 14(3).

<sup>12</sup> *ibid* art. 14(2).

outcomes of the global stocktake before communicating their new NDC by the deadline indicated in decision 1/CP.21.

The Paris Agreement does not require a State to communicate an NDC before or when it ratifies, accepts or approves the treaty.<sup>13</sup> Prior COP decisions invited the Parties to the UNFCCC to communicate their intended NDC (INDC) during the negotiation process that would lead to the adoption of the Paris Agreement.<sup>14</sup> Thus, at least 147 Parties representing 86% of global greenhouse gas emissions voluntarily communicated their INDCs before the Paris Agreement was adopted.<sup>15</sup> While the Paris Agreement itself does not mention INDCs, decision 1/CP.21 provided that a Party's INDCs would be recognized as its first NDCs when that Party joins the Paris Agreement, unless that Party decides otherwise.<sup>16</sup> Many Parties let the UNFCCC Secretariat report their INDCs as their first NDCs. However, some other States, which had not communicated an INDC, ratified the Paris Agreement without communicating their first NDC, thus exploiting a formal loophole in the system of obligations established under the Paris Agreement. As of mid-2019, five Parties to the Paris Agreement remain without NDC.<sup>17</sup> As States are to communicate a new NDC every five years, this situation should only be transitory.<sup>18</sup>

### **3.2. The invitation to communicate long-term strategies (para. 19)**

Article 4(19) recommends that Parties “strive to formulate and communicate long-term low greenhouse gas emissions development strategies.” This provision provides legal basis for the communication of successive long-term strategies in parallel to the communication of successive medium-term commitments as NDCs. Accordingly, Decision 1/CP.21 invites mid-century strategies to be communicated to the UNFCCC Secretariat by 2020 and requests the Secretariat to publish them on the UNFCCC website.<sup>19</sup> COP24 reiterated this invitation.<sup>20</sup> Yet, by contrast to NDCs, the communication of long-term strategies is not an obligation (it is a

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<sup>13</sup> See ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 22, which ‘invites’ (but does not require) Parties to communicate their first NDC ‘no later than when the Party submits its respective instrument of ratification, acceptance, approval or accession to the Paris Agreement.’

<sup>14</sup> See ‘Decision 1/CP.19, Further Advancing the Durban Platform’ para 2(b); ‘Decision 1/CP.20, Lima Call for Climate Action’ para 9.

<sup>15</sup> UNFCCC Secretariat, ‘Synthesis Report on the Aggregate Effect of the Intended Nationally Determined Contributions’ para 8.

<sup>16</sup> ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 22.

<sup>17</sup> Those are St Kitts and Nevis, St Lucia, Brunei Darussalam, Senegal and the Philippines. Other States that communicated their first NDC after the entry into force of the Paris Agreement for them are Sri Lanka, Argentina, Venezuela, Nicaragua, Benin, Syria, Uruguay, Palestine and Ecuador. Ecuador was the longest Party to communicate its first NDC, 555 days after ratification (525 days after entry into force). A few other States communicated their first NDC during the period between ratification and entry into force (Turkmenistan, New Zealand, Montenegro, Monaco, Cuba, Indonesia, Bahrain, North Korea and Bahamas).

<sup>18</sup> The situation of States failing to communicate NDCs every five years could be addressed by the implementation and compliance mechanism established under Article 14. See ‘Decision 20/CMA.1, Modalities and Procedures for the Effective Operation of the Committee to Facilitate Implementation and Promote Compliance Referred to in Article 15, Paragraph 2, of the Paris Agreement’ Annex, para. 22(a)(i).

<sup>19</sup> ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 35.

<sup>20</sup> ‘Decision 1/CP.24, 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’ para 21. Decision 1/CP.24, para. 21

mere recommendation) and no guidance has been negotiated or agreed upon regarding, for instance, the features of these long-term strategies or the timing of future updates or additional communications, if any.

About a dozen strategies have been communicated as of mid-2019. Those communicated by developed States generally adopt the objective of reducing their GHG emissions by at least 80% by 2050, compared with 1990, and discuss potential pathways to achieve this objective.<sup>21</sup> By contrast, the strategies communicated by developing countries vary significantly: while Mexico aims at a reduction of its GHG emissions by 50% by the same year (compared with 2000),<sup>22</sup> Fiji and the Marshall Islands announced respectively an “aim” and an “aspiration” to achieve net zero carbon emissions by the same year.<sup>23</sup>

The long-term strategies could play an important role in promoting consistency between the medium-term commitments included in successive NDCs and the long-term mitigation objectives of the Paris Agreement. However, whether the long-term strategies will live up to that aspiration will ultimately depend on State practice, as neither the Paris Agreement nor the decisions on its implementation currently tasks any institutions or processes to assess whether a Party’s successive NDCs are in line with its long-term strategy. For instance, there is no requirement that NDCs contain any information to assess their consistency with the Party’s long-term strategy.<sup>24</sup> Likewise, there is no mention of long-term strategies in Article 13 on the enhanced transparency framework or in its modalities, procedures and guidelines adopted at CMA1.3,<sup>25</sup> and long-term strategies are not among the sources of input for the Global Stocktake under Article 14, as defined by CMA1.3 decision.<sup>26</sup> However, future reviews of CMA decisions could conceivably facilitate an assessment of the consistency of a Party’s NDC with its long-term strategy. Meanwhile, this assessment could be done through domestic political and legal processes, including litigation, where the Party’s own statement on its long-term strategy could facilitate an assessment of its medium-term commitment.<sup>27</sup>

### **3.3. Differentiation (paras. 3 (second clause) and 4-6)**

Article 4(3) suggests that each Party’s NDC “will ... reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.” The word “will” does not indicate an obligation, but rather an expectation. Despite its vagueness, Voigt suggested that the reference to the State’s “highest possible ambition” could be a “potent tool,” indicating a high standard of due diligence.<sup>28</sup>

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<sup>21</sup> See e.g. the communications of Japan at 1; UK at 5; US at 7; Germany at 6; Canada at 3.

<sup>22</sup> Communication of Mexico, at 4.

<sup>23</sup> See communications of Fiji at 4; Marshall Island at 7 (para. 7).

<sup>24</sup> ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) Annex I. Long-term strategies would be particularly relevant in assessing how the Party considers its NDC ‘fair and ambitious’ under para. 6 and how the NDC contributes towards achieving the objective of the Convention under para. 7.

<sup>25</sup> ‘Decision 18/CMA.1, Modalities, Procedures and Guidelines for the Transparency Framework for Action and Support Referred to in Article 13 of the Paris Agreement’ in particular section III.

<sup>26</sup> ‘Decision 19/CMA.1, Matters Relating to Article 14 of the Paris Agreement and Paragraphs 99–101 of Decision 1/CP.21’ paras 35–36.

<sup>27</sup> See discussion in Benoit Mayer, ‘Interpreting States’ General Obligations on Climate Change Mitigation: A Methodological Review’ (2019) 28 *Review of European, Comparative & International Environmental Law* 107, 115–117.

<sup>28</sup> Christina Voigt, ‘The Paris Agreement: What Is the Standard of Conduct for Parties?’ 18 *QIL* 21.

Beyond this, however, the Paris Agreement leaves it essentially to the Parties to determine their contribution to global mitigation action. The principle of common but differentiated responsibilities and respective capabilities can be interpreted in various, conflicting ways, and States tend to prefer the interpretation most favourable to their economic interests, resulting generally in a lack of ambition.<sup>29</sup>

Article 4(4) provides some guidance on the mitigation targets that NDCs could contain, albeit in an entirely non-binding language. This provision recommends economy-wide absolute emission reduction targets for developed country Parties, while it encourages developing country Parties to “move over time towards economy-wide emission reduction or limitation targets.” While NDCs, including those communicated by developing States, contain economy-wide targets,<sup>30</sup> most of these targets – especially those communicated by developing States – are not absolute emission reduction targets (i.e. a reduction in net GHG emissions below a base year). Instead, they consist for instance in a reduction from a business-as-usual scenario, an intensity target, or simply a set of policies and actions.<sup>31</sup>

The recognition that Parties have different capacities implies that some may require support in order to achieve implement greater mitigation action. Accordingly, Article 4(5) provides that such support “shall be provided to developing country Parties,” recognizing that enhanced support “will allow for higher ambition.” This provision, phrased in the passive form, does not indicate which States are to provide such support and how much support should be provided.<sup>32</sup> Article 9 requires developed country Parties to provide financial support and encourages other Parties to do the same,<sup>33</sup> whereas Articles 10 and 11, on technology development and transfer and capacity-building, do not clearly define any obligations. The provision of support is required not only for the implementation of NDCs, but also for their preparation and communication, as confirmed by a subsequent CMA decision.<sup>34</sup> Accordingly, CMA encouraged the operating entities of the Financial Mechanism as well as “other organizations in a position to do so” to provide support for capacity-building.<sup>35</sup>

Article 4(6) recognizes the specific situation of the least developed countries (LDCs) and small island developing States (SIDSs), on ground of their limited capabilities and, possibly, their

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<sup>29</sup> See e.g. Yann Robiou du Pont and others, ‘Equitable Mitigation to Achieve the Paris Agreement Goals’ (2017) 7 *Nature Climate Change* 38; Megan Mills-Novoa and Diana M Liverman, ‘Nationally Determined Contributions: Material Climate Commitments and Discursive Positioning in the NDCs’ 0 *Wiley Interdisciplinary Reviews: Climate Change* e589.

<sup>30</sup> See Michal Nachmany and Emily Mangan, ‘Aligning National and International Climate Targets’ 4 noting that 156 countries, representing 95% of global GHG emissions, have an economy-wide target under their NDC.

<sup>31</sup> See UNFCCC Secretariat, ‘Aggregate Effect of the Intended Nationally Determined Contributions: An Update’ 4-5 (para. 9).

<sup>32</sup> It should however be read in the context of United Nations Framework Convention on Climate Change art. 4(3), requiring Annex II Parties to provide financial support to developing the full agreed incremental cost of mitigation and adaptation action in developing country Parties.

<sup>33</sup> See Article 9(1) and (2).

<sup>34</sup> ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) fifth preambular paragraph (“Recognizing that Parties have different starting points, capacities and national circumstances and highlighting the importance of capacity-building support for developing country Parties for the preparation and communication of their nationally determined contributions”). See generally United Nations Framework Convention on Climate Change arts. 4(3).

<sup>35</sup> ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) paras 2–3.

disproportionate exposure and vulnerability to the impacts of climate change. Accordingly, these States are authorized to “prepare strategies, plans and actions for low greenhouse gas emissions development reflecting their special circumstances.” This provision may be construed as implicitly exempting LDCs and SIDSs from the recommendation, contained in Article 4(4), that developing countries “move over time towards economy-wide emission reduction or limitation targets.” It could also be viewed as excluding LDCs and SIDSs from the expectation, expressed in Article 4(3), that a Party’s NDC would reflect “its highest possible ambition.” Yet, Article 4(6) does not express or necessarily imply an exemption from the procedural obligation to prepare, communicate and maintain successive NDCs expressed in the first sentence of Article 4(2).<sup>36</sup> Thus, the bifurcation in Article 4(6) does not relate to any obligation applicable to LDCs and SIDSs under the Paris Agreement.

### 3.4. The principle of progression (paras. 3 (first clause) and 11)

Article 3 defines an all-encompassing principle of progression applicable generally to “the efforts of the Parties.” With regard to climate change mitigation, progression could relate to the ambition of the NDC, measured as overall limitation or reduction in net GHG emissions,<sup>37</sup> and to the features of the communication (e.g. the type of target, its scope and methodology, and the inclusion of information to promote clarity, transparency and understanding or facilitate accounting). Article 4(3), which suggests that each Party’s successive NDCs “will represent a progression beyond” the Party’s current NDC, could be understood to refer to both the substance and the form of the NDC.<sup>38</sup> However, as in Article 3, the verb “will” in Article 4(3) indicates an expectation, not an obligation.<sup>39</sup> Article 4(11) recognizes a right for a Party to “adjust” its NDC at any time “with a view to enhancing its level of ambition.” Thus, while Article 4(11) has direct legal effects (by permitting adjustments), it only refers to progression with regard to the ambition of the NDC.

The expectation of progression in the features of NDCs is reflected in other provisions. For instance, in Article 4(4), developing country Parties are “encouraged to move over time towards economy-wide emissions reduction or limitation targets.” Decision 4/CMA.1 requires Parties to “strive” to continue to include in any NDC any source, sink or activity that it had previously included in its previous NDCs.<sup>40</sup>

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<sup>36</sup> Some LDCs and SIDSs, having joined the Paris Agreement, were yet to communicate their NDC as of mid-2019): Senegal, Saint Kitts and Neve and Saint Lucia. Benin communicated its NDCs close to one year after the Paris Agreement had entered into force in its regard.

<sup>37</sup> As mitigation measures in one country may result in increasing emissions elsewhere, an assessment of ambition limited to emissions occurring within the territory of the State is incomplete and may be misleading.

<sup>38</sup> See Harald Winkler, ‘Mitigation (Article 4)’, *Daniel Klein et al (eds), The Paris Agreement on Climate Change: Analysis and Commentary* (Oxford University Press 2017) 148.

<sup>39</sup> Confusion has been frequent in the literature. See e.g. Jorge E Viñuales, ‘The Paris Agreement on Climate Change’ (2016) 59 *German Yearbook of International Law* 11, 26, mischaracterizing Article 4(3) as an ‘obligation of progression in the level of ambition.’ See also Peter Lawrence and Daryl Wong, ‘Soft Law in the Paris Climate Agreement: Strength or Weakness?’ (2017) 26 *Review of European, Comparative & International Environmental Law* 276, 280 construing the first clause in Article 4(3) as ‘a non-binding obligation.’ An obligation is, by definition, binding.

<sup>40</sup> ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) Annex II, para. 3.

Progression with regard to the ambition of an NDC may be difficult to assess – all the more in the absence of any dedicated process or institution – for developing country Parties that do not have an economy-wide absolute emission reduction target. For instance, assessing whether the substitution of an intensity target by an absolute emission target would result in greater mitigation outcome would require a prediction of the State’s economic development. Likewise, a comprehensive understanding of the State’s current and predictable emissions sector by sector would be necessary to assess progression when an NDC is extended to additional sectors (for instance to LULUCF). As a consequence, progression in relation to the ambition of an NDC is likely to be more relevant in the context of economy-wide, unconditional absolute emission reduction target of developed and some developing country Parties, than in relation to the NDCs of other developing country Parties.

Article 4(11) deals with the rather uncontroversial hypothesis of a Party to the Paris Agreement willing to enhance its ambition. A far more controversial hypothesis would regard the hypothesis of a Party seeking to reduce its ambition.<sup>41</sup> The question, of great practical importance for the effectiveness of the Paris Agreement, arose in particular in the months following the election of US President Trump, is not specifically addressed in the Paris Agreement. Since the treaty does not explicitly exclude downward adjustment, some have argued that such adjustments were permissible.<sup>42</sup> This interpretation would imply that Article 4(11) mentions only one aspect (upwards) of a broader right to adjust an NDC (either upwards or downwards).

Yet, this interpretation of the Paris Agreement would betray the expectation of progression reflected in Article 3 and Article 4(3). Rajamani and Brunnée suggested that downward adjustments would “contravene the spirit of the Paris Agreement”<sup>43</sup> and “run afoul of the normative expectations” established by the treaty.<sup>44</sup> An absolute right of a Party to make downward adjustments in its NDC would be inconsistent with the object of purpose of the Paris Agreement, as it would prevent Parties from relying on other Parties’ pledge that they will seek to achieve the mitigation outcomes announced in their NDCs.

Such an interpretation would also go against a general principle of treaty interpretation according to which treaty provision should be assumed to have effective legal implications (“*effet utile*”).<sup>45</sup> Reading Article 4(11) as permitting upward adjustments when in fact any adjustment is permitted would mean that this provision has no effective legal implications.

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<sup>41</sup> An adjustment which does not affect the NDC’s ambition would appear uncontroversial. Canada’s “revised submission” of its NDC on 11 May 2017 constitutes such a neutral adjustment. While adding information on measures of implementation, Canada let its overall target entirely unchanged.

<sup>42</sup> C2ES, ‘Legal Issues Related to the Paris Agreement’ <<https://www.c2es.org/site/assets/uploads/2017/05/legal-issues-related-paris-agreement.pdf>>.

<sup>43</sup> Lavanya Rajamani and Jutta Brunnée, ‘The Legality of Downgrading Nationally Determined Contributions under the Paris Agreement: Lessons from the US Disengagement’ (2017) 29 *Journal of Environmental Law* 537, 537.

<sup>44</sup> *ibid* 549. It is far from clear what “normative expectations” means: legal systems must, by nature, draw a clear line between what is or is not permitted – between the conduct that a Court would or would not endorse as lawful. An expectation is not a source of rights and obligations, unless a legal system recognizes, for instance, legitimate expectations as a source of obligations under specified circumstances.

<sup>45</sup> This would be contrary to an interpretation of the principle of effectiveness (*effet utile*). See e.g. Matthias Herdegen, ‘Interpretation in International Law’, *Max Planck Encyclopedia of Public International Law* (Oxford University Press 2013) para 30.

Accordingly, Article 4(11) should rather be read as defining an exception, and, thus, implying that downward adjustments are not generally permissible. The limitation to this reasoning is that the drafters of the Paris Agreement, while implying that downward adjustments may not be permissible, did not include an explicit prohibition of such adjustments.

Therefore, the most plausible interpretation of the silence of the Paris Agreement on downward adjustments is that such adjustments, which may be permissible, must not be made arbitrarily.<sup>46</sup> On the one hand, the text of Article 4(11), interpreted in good faith in the light of the object and purpose of the Paris Agreement,<sup>47</sup> leaves no room to arbitrary downward adjustments. *A posteriori*, the US's renouncement to such a downward adjustment of its NDC (preferring a withdrawal to the Paris Agreement) lends support to an interpretation of the Paris Agreement as excluding arbitrary downward adjustments.<sup>48</sup> On the other hand, as downward adjustments are not explicitly excluded, they are arguably permissible under some circumstances.<sup>49</sup> These circumstances include in particular the doctrine of a fundamental change of circumstances (*rebus sic stantibus*),<sup>50</sup> which would authorize for instance a downward adjustment when a Party is unexpectedly faced with a rapid economic development or a large intake of population. Such circumstances may make it far more difficult than first expected for the Party to achieve the objective it had communicated.<sup>51</sup> From a policy perspective, allowing a downward adjustment in such circumstances would be essential to promote consistent participation and compliance, and, thus, the integrity of the Paris Agreement.

### 3.5. Joint NDCs (paras. 16-18)

Article 4(16) allows Parties to act jointly under Article 4(2) (i.e. in communicating their NDCs and taking measures to implement them).<sup>52</sup> An agreement must be reached and communicated to the Secretariat, including on the emission level allocated to each Party. According to Article 4(17), each Party must be responsible for its emission level as set out in this agreement. Under Article 4(18), a regional economic integration organization which is itself a Party to the Paris Agreement (such as the EU) is jointly responsible for its emission level as set out in the agreement along with each of its Member States.

Paragraphs 16-18 do not apply to the communication of a long-term low greenhouse gas emission development strategies under Paragraph 19. Article 20 allows regional economic integration organization to become Party to the Paris Agreement and, when their Member States are also Parties, to “decide on their respective responsibilities for the performance of their obligations under this Agreement.”<sup>53</sup> This provision allows a regional economic integration organization Party to the Paris Agreement to communicate a regional long-term

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<sup>46</sup> See, by analogy, ILC, ‘Guiding Principles Applicable to Unilateral Declarations of States Capable of Creating Legal Obligations, with Commentaries Thereto’ Principle 10.; *Nuclear Tests (Australia v. France)*, *I.C.J. Reports 1974*, p. 253, at para. 51.

<sup>47</sup> See Vienna Convention on the Law of Treaties 1969 art. 31(1).

<sup>48</sup> See *ibid* art. 31(3)(b).

<sup>49</sup> These circumstances may fall short of force majeure. Compare Rajamani and Brunnée (n 43) 548.

<sup>50</sup> See ILC (n 46) Commentary, para. 3; Vienna Convention on the Law of Treaties art. 62; Wolff Heintschel von Heinegg, ‘Treaties, Fundamental Change of Circumstances’, *Max Planck Encyclopedia of Public International Law* (Oxford University Press 2006).

<sup>51</sup> See section 5.1 below on the interpretation of the substantive obligation established in the second sentence of Article 4(2).

<sup>52</sup> On the substantive obligations under article 4(2), see below...

<sup>53</sup> ‘Paris Agreement’ (n 11) art. 20(2).

strategy (as the EU intends to do).<sup>54</sup> Beyond the scope of a regional economic integration organization Party to the Paris Agreement, however, long-term strategies are to be communicated by individual States.

### **3.6. Registry (para. 12)**

Article 4(12) decides that NDCs communicated by Parties shall be recorded in a public registry maintained by the Secretariat. Accordingly, Decision 1/CP.21 requested the Subsidiary Body for Implementation “to develop modalities and procedures for the operation and use” of this public registry for consideration and adoption at CMA1.<sup>55</sup> It also requested the Secretariat to make available an interim public registry meanwhile.<sup>56</sup> Decision 5/CMA.1 contains the modalities and procedures for the implementation of Article 4(12). It promises, in particular, an “intuitive, easy-to-use web-based platform.”<sup>57</sup> The new registry will be publicized following confirmation by the CMA at its second session in December 2019.<sup>58</sup>

## **4. The features of NDCs**

This section reviews the requirements of the Paris Agreement and relevant COP and CMA decisions regarding the characteristics of NDCs.

### **4.1. Time frames (para. 10)**

Article 4(10) requires the CMA to “consider common time frames” for NDCs. The comparability of INDCs was impeded by the fact that, while most INDCs applied up to 2030, others adopted different time frames, for instance up to 2025.<sup>59</sup> Decision 1/CP.21 does not provide for further consistency,<sup>60</sup> and negotiations were unable to achieve a substantive agreement at CMA1.3. Negotiations on the implementation of Article 4(10) were still on-going as of mid-2019.

### **4.2. Clarity, transparency and understanding (para. 8)**

Article 4(8) requires that, in communicating their NDCs, the Parties “provide the information necessary for clarity, transparency and understanding” in accordance with decision 1/CP.21 and any relevant CMA decision. This builds on previous decisions calling on the Parties to the UNFCCC to communicate INDCs “in a manner that facilitates the clarity, transparency and understanding of the intended contributions.”<sup>61</sup> The three concepts – clarity, transparency and understanding – are closely related, but they introduce some nuance. Clarity relates to the

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<sup>54</sup> EU Commission, A Clean Planet for All: A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy, COM(2018) 773 final (28 November 2011), in particular second last paragraph.

<sup>55</sup> ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 29.

<sup>56</sup> *ibid* 30.

<sup>57</sup> ‘Decision 5/CMA.1, Modalities and Procedures for the Operation and Use of a Public Registry Referred to in Article 4, Paragraph 12, of the Paris Agreement’ Annex, para. 1(g).

<sup>58</sup> *ibid* 5.

<sup>59</sup> UNFCCC Secretariat (n 31) para 15.

<sup>60</sup> See ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) paras 23–24. and discussion above, notes 7-8 and accompanying text.

<sup>61</sup> ‘Decision 1/CP.19, Further Advancing the Durban Platform’ (n 14) para 2(b); ‘Decision 1/CP.20, Lima Call for Climate Action’ (n 14) para 13.

objective information content of the NDC, whereas transparency and understanding refer to the potential and actual ability of readers to make sense of this information. Thus, while the State communicating an NDC can ensure clarity and transparency, understanding depends in part on the receivers, namely other States and observers.

Clarity, transparency and understanding in Parties' commitments were a particular concern under the bottom-up architecture of the Paris Agreement because negotiating Parties were unable to agree on a unique way to present nationally determined contributions.<sup>62</sup> Allowing flexibility to Parties in defining their contributions makes it more difficult to compare these contributions, while unclear methodologies and assumptions may hinder the assessment of their implementation. Article 4(8) aims to ensure that a Party's NDCs are communicated in such a way that observers can easily understand what the Party commits to. Likewise, Article 13 establishes a "framework for transparency of action" in order "to provide a clear understanding of climate change action..., including clarity and tracking of progress towards achieving Parties' individual [NDC] under Article 4."<sup>63</sup>

Decision 1/CP.21 does not specify the obligation of States under Article 4(8), but only mentions some elements that Parties "may include, as appropriate, inter alia."<sup>64</sup> It lists the seven elements that follow:

1. "Quantifiable information on the reference point (including, as appropriate, a base year);"
2. "Time frames and/or periods of implementation;"
3. "Scope and coverage;"
4. "Planning processes;"
5. "Assumptions and methodological approaches including those for estimating and accounting for anthropogenic [GHG] emissions and, as appropriate, removals;"
6. Information on "how the Party considers that its [NDC] is fair and ambitious, in the light of its national circumstances;" and
7. Information on how the NDC "contributes towards achieving the objective of the Convention."<sup>65</sup>

Decision 1/CP.21 also requests the AWG-PA to develop further guidance on the implementation of Article 4(8) for consideration and adoption by CMA1.<sup>66</sup> Consistently, decision 4/CMA.1 provides further guidance on clarity, transparency and understanding in its Annex I.<sup>67</sup> In three pages, Annex I provides more specific requirements about the type of information which may be communicated for each of the seven elements listed in decision 1/CP.21, leaving a significant degree of flexibility to the Parties. However, while decision 1/CP.21 used a merely permissive language ("may"), decision 4/CMA.1 "strongly encourages"

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<sup>62</sup> Meinhard Doelle, 'The Heart of the Paris Rulebook: Communicating NDCs and Accounting for Their Implementation' (2019) 9 *Climate Law* 3, 6.

<sup>63</sup> 'Paris Agreement' (n 11) art. 13(1) and (5).

<sup>64</sup> 'Decision 1/CP.21, Adoption of the Paris Agreement' (n 7) para 27. See also 'Decision 1/CP.20, Lima Call for Climate Action' (n 14) para 14.

<sup>65</sup> 'Decision 1/CP.21, Adoption of the Paris Agreement' (n 7) para 27.

<sup>66</sup> *ibid* 28.

<sup>67</sup> 'Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21' (n 9) paras 6–10.

States to provide such information in relation to their first NDC (e.g. when updating it) and creates an obligation for States to provide such information from their second NDC onward.<sup>68</sup>

### 4.3. Accounting (paras. 13-14)

Article 4(13) requires the Parties to account for their NDCs. When accounting for emissions and removals, Parties must “promote environmental integrity, transparency, accuracy, completeness, comparability and consistency, and ensure the avoidance of double counting,” following relevant CMA guidance. Article 4(14) extends these concepts to accounting for the impact of mitigation measures. Decision 1/CP.21 requested the AWG-PA to elaborate the guidance required to implement Article 4(13),<sup>69</sup> with the understanding that such guidance would only be binding from the second NDC onward.<sup>70</sup> Decision 4/CMA.1 provides such guidance in its Annex II,<sup>71</sup> confirming that it is only binding from the second NDC onward.<sup>72</sup> Article 4(13)-(14) are supplemented by the enhanced transparency framework under Article 13<sup>73</sup> and decision 18/CMA.1. Article 6 and the forthcoming decision on its implementation may provide further rules on environmental integrity and the avoidance of double counting.

Completeness, transparency, comparability, accuracy, consistency and the avoidance of double-counting have long been requirements for national communications under the UNFCCC.<sup>74</sup> As implemented under Decision 4/CMA.1, completeness relates to the requirement that Parties “account for all categories of anthropogenic emissions and removals corresponding to their [NDC]” while also striving to include all categories of emissions and removals in their NDCs.<sup>75</sup> In order to promote comparability between the NDCs of different Parties as well as accuracy and avoidance of double counting, Parties are to use methodologies and common metrics assessed by the Intergovernmental Panel on Climate Change and adopted by the CMA under the enhanced transparency framework.<sup>76</sup> Methodological consistency is required between the communication of NDCs and reports on their implementation, including the greenhouse gas inventories under the enhanced transparency framework.<sup>77</sup> Transparency calls for clear explanation for any departure from non-binding guidance;<sup>78</sup> Parties are, in

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<sup>68</sup> The obligation derives from the use of the word “shall” in Article 4(8) and in decision *ibid* 7. See discussion in Doelle (n 62) 7. ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) para 9., which repeats the permissive language of decision 1/CP.21, can only be understood as an oddity: it is unnecessary to specify that something that has become recommended or binding remains permissible.

<sup>69</sup> ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 31.

<sup>70</sup> *ibid* 32.

<sup>71</sup> ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) para 13.

<sup>72</sup> *ibid* 14.

<sup>73</sup> See in particular ‘Paris Agreement’ (n 11) art. 13(5), (7).

<sup>74</sup> See e.g. decision 9/CP.2, “Communications from Parties included in Annex I to the Convention: guidelines, schedule and process for consideration” (19 July 1996), 5<sup>th</sup> Preambular paragraph; ‘Decision 2/CP.17, Outcome of the Work of the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention’ Annex II, para. 1(b).

<sup>75</sup> ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) Annex II, para. 3.

<sup>76</sup> *ibid* Annex II, para. 1.

<sup>77</sup> *ibid* Annex II, para. 2.

<sup>78</sup> See e.g. *ibid* Annex II, para. 2(2).

particular, to provide “an explanation of why any categories of anthropogenic emissions or removals are excluded.”<sup>79</sup>

#### **4.5. Co-benefits (para. 7)**

It has been a long-standing approach under the UNFCCC to recognize as mitigation action any policies or measures that result in mitigation outcomes, whether or not these policies or measures had climate change mitigation as their primary objective.<sup>80</sup> Accordingly, the decision on the implementation of the enhanced transparency framework requires each Party to “provide information on actions, policies and measures that support the implementation and achievement of its NDC,”<sup>81</sup> whether or not such actions, policies and measures were primarily intended to support the implementation and achievement of its NDC. For instance, policies and measures aimed at reducing local air pollution out of concerns of public health can result in incidental mitigation outcomes, as often sources of local air pollution are also sources of greenhouse gas emissions. Economic diversification in countries with an economy highly reliant on fossil fuels and certain adaptation actions (e.g. ecosystem-based adaptation) may also have mitigation co-benefits.

Accordingly, Article 4(7) recognizes that “mitigation co-benefits resulting from Parties’ adaptation actions and/or economic diversification plans can contribute to mitigation outcomes under this Article.” This language is echoed in decision 1/CP.21, which recognize “the social, economic and environmental value of voluntary mitigation actions and their co-benefits for adaptation, health and sustainable development.”<sup>82</sup> Highlighting the potential co-benefits of adaptation action and economic diversification does not exclude the possibility for a Party to report mitigation outcomes of any other actions (e.g. measures to reduce local air pollution). Rather, these provisions seem intended to highlight possible ways for some Parties to achieve significant mitigation outcomes at a relatively low cost. Decision 4/CMA.1 echoes these provisions by requiring Parties to provide information on mitigation co-benefits as part of the NDC.<sup>83</sup>

#### **4.6. Impacts of response measures (para. 15)**

Article 4(15) requires Parties to “take into consideration ... the concerns of Parties with economies most affected by the impacts of response measures, particularly developing country Parties.” This reflects a provision of the UNFCCC on the need to give “full consideration” to the “specific needs and concerns” of developing countries whose economy are highly depending on fossil fuels.<sup>84</sup> Yet, the obligation under Article 4(15) does not point to any

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<sup>79</sup> *ibid* Annex II, para. 4.

<sup>80</sup> See e.g. ‘Decision 9/CP.2, Communications from Parties Included in Annex I to the Convention: Guidelines, Schedule and Process for Consideration’ Annex, para. 20; ‘Guidelines for the Preparation of National Communications by Parties Included in Annex I to the Convention, Part II: UNFCCC Reporting Guidelines on National Communications’ para 13.

<sup>81</sup> ‘Decision 18/CMA.1, Modalities, Procedures and Guidelines for the Transparency Framework for Action and Support Referred to in Article 13 of the Paris Agreement’ (n 25) Annex, para. 80.

<sup>82</sup> ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 108. See also *ibid* 111(b), 127(b); ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) paras 10, 16.

<sup>83</sup> ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) Annex I, paras. 3(d) and 4(d).

<sup>84</sup> United Nations Framework Convention on Climate Change art. 4(8)(h).

specific action or omission that Parties would have to carry out in order take those concerns “into consideration.”

Relatedly, Decision 1/CP.21 decides that the forum on the impact of the implementation of response measures, established under the UNFCCC by the Cancun Agreements,<sup>85</sup> “shall continue” and “shall serve the Agreement.”<sup>86</sup> The same decision called on the subsidiary bodies to take on a stream of negotiations<sup>87</sup> which led to the adoption of decision 7/CMA.1 on modalities, work programme and functions of the forum on the impact of the implementation of response measures.<sup>88</sup> The forum seeks in particular to promote cooperation on understanding the impacts of mitigation action and ways to address them.<sup>89</sup>

#### **4.7. On-going and future processes for a better characterization of the features of NDCs**

Clarifying the features of NDCs remains a work-in-progress three-and-a-half years after the adoption of the Paris Agreement, and it will remain so for the foreseeable future. As Doelle noted, the guidance provided in decision 4/CMA.1 remains insufficient as the decision “does little to make either the NDC commitments themselves or the accounting of their implementation more consistent or comparable.”<sup>90</sup> A review of this decision is to be initiated at CMA10 (2027), with a view to adopting a new decision at CMA11 (2028).<sup>91</sup> A broader thread of negotiations regarding “further guidance on features” of NDCs, initiated by decision 1/CP.21,<sup>92</sup> was suspended by decision 4/CMA.1,<sup>93</sup> with a view of resuming consideration of the topic at CMA7 (2024).<sup>94</sup> There is hope that a decision on common time frames could be adopted at CMA2 in December 2019,<sup>95</sup> although this decision may also need to be reviewed over time to promote further harmonization and consistency in NDCs.

#### **5. Substantive obligations relating to the NDCs**

Article 4 provides detailed procedural obligations relating to the communication of NDCs. By contrast, the article contains very little language regarding possible substantive obligations. Such substantive obligations may arise in relation to NDCs, which are the focus of the discussions that follow. They may also arise in relation to the Parties’ long-term low greenhouse gas emission development strategies under Article 4(19), a question which is yet to be explored in the literature.<sup>96</sup>

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<sup>85</sup> ‘Decision 1/CP.16, The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention’ para 93.

<sup>86</sup> ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 33.

<sup>87</sup> *ibid* 34.

<sup>88</sup> ‘Decision 7/CMA.1, Modalities, Work Programme and Functions of the Forum under the Paris Agreement on the Impact of the Implementation of Response Measures’.

<sup>89</sup> *ibid* Annex, para. 1; ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 34.

<sup>90</sup> Doelle (n 62) 17.

<sup>91</sup> ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) para 18.

<sup>92</sup> ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 26.

<sup>93</sup> ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) para 19.

<sup>94</sup> *ibid* 20.

<sup>95</sup> See SBI 50, Draft conclusions proposed by the Chair: Common time frames for nationally determined contributions referred to in Article 4, Paragraph 10, of the Paris Agreement (25 June 2019), para. 3.

<sup>96</sup> While there is no explicit basis under the Paris Agreement for any obligation to arise in relation to long-term low greenhouse gas emissions strategies, obligations could arise from these strategies as

Scholarly discussions since the adoption of the Paris Agreement have featured various, often conflicting positions, regarding the legal force of NDCs. The discussion has sometimes been clouded by the introduction of concepts with limited analytical value, such as a perplexing distinction between “binding obligations” and “non-binding obligations,”<sup>97</sup> or the obscure notion of “good faith expectation.”<sup>98</sup> Elsewhere, the question, albeit central to a legal analysis of the Paris Agreement, was simply eluded.<sup>99</sup> The result is that, in the not-so-far-fetched hypothesis of litigation on a State’s alleged failure to implement its NDC,<sup>100</sup> a judge would find in the current literature very little to decide whether a State’s NDC creates any legal obligations under international law and, if so, what are the nature and content of these obligations.<sup>101</sup>

The analysis that follows distinguishes between two sources of international law. Firstly, under the second sentence of Article 4(2), the Parties to the Paris Agreement have an obligation of conduct to implement their NDC. Secondly, NDCs may constitute an autonomous source of international legal obligations as unilateral declarations capable of creating legal obligations.

### **5.1 The obligation of conduct under article 4(2), second sentence**

The second sentence of Article 4(2) provides that “Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions,” referring to the Parties’ successive NDCs. This convoluted sentence has been interpreted in various, often inconsistent ways. There has been a general sense that the Paris Agreement does not establish

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unilateral declarations capable of creating legal obligations. The analysis would be similar to that developed in section 5.2, with regard to NDCs. Even without recognizing these strategies as sources of international law, they may be used as benchmark to assess the level of ambition displayed in successive NDCs, including possibly in domestic litigation. See discussion in Mayer, ‘Interpreting States’ General Obligations on Climate Change Mitigation’ (n 27) 117.

<sup>97</sup> Lawrence and Wong (n 39). The distinction is perplexing because an obligation is, by definition, binding.

<sup>98</sup> Lavanya Rajamani, ‘Ambition and Differentiation in the 2015 Paris Agreement: Interpretative Possibilities and Underlying Politics’ (2016) 65 *International & Comparative Law Quarterly* 493, 497–498.

<sup>99</sup> See generally Harro van Asselt, ‘The Paris Agreement on Climate Change: Analysis and Commentary’, Edited by Daniel Klein, María Pía Carazo, Meinhard Doelle, Jane Bulmer and Andrew Higham Oxford University Press, 2017, 480 Pp, £80 Hb, £34.99 Pb ISBN 9780198789338 Hb, 9780198803768 Pb’ (2019) 8 *Transnational Environmental Law* 379, 381, noting that this previous commentary on the Paris Agreement contains ‘virtually no discussion ... of the legal character and implications of the Paris Agreement’s nationally determined contributions themselves.’

<sup>100</sup> See e.g. ‘Sarah Thomson v Minister for Climate Change Issues, Judgment of Mallon J (High Court of New Zealand, CIV 2015-485-919, [2017] NZHC 733)’ para 38.; Carvalho v Parliament and Council, Order of the General Court (CJEU, Case T-330/18)’ para 5; *Cleveland National Forest Foundation v. San Diego Association of Governments*, Supreme Court of California, 3 Cal. 5<sup>th</sup> 497, 515; 397 P.3d 989, 1000 (simply alluding to the Paris Agreement in support of the need to mainstream considerations for climate change mitigation at all levels).

<sup>101</sup> An analysis of the provision of the Paris Agreement on a “spectrum” of bindingness, for instance, would not help a judge to determine whether a Party has undertaken a legal obligation, a question requiring a strictly binary treatment (i.e. “yes” or “no”), prior to determining, as the case may be, the nature and content of any existing obligation. Compare Lavanya Rajamani, ‘The 2015 Paris Agreement: Interplay Between Hard, Soft and Non-Obligations’ (2016) 28 *Journal of Environmental Law* 337; Lawrence and Wong (n 39).

any legal obligation for its Parties to take measures of any sort.<sup>102</sup> This interpretation is inconsistent with the terms of the treaty: the word “shall,” in the second sentence of Article 4(2), clearly suggests the existence of an obligation.

Bodansky contended that the second sentence of Article 4(2) should to be read effectively as two distinct sentences, where the first one recalling the general obligation for Parties to “pursue domestic mitigation measures” (an obligation already expressed in the UNFCCC), while the second sentence merely states a hope or an aspiration that these measures would achieve the objective of NDCs.<sup>103</sup> Yet, it is not clear why the sentence should be cut in two; a comma does not mark a transition between two sentences, and, in any case, this comma is absent from two of the six equally authentic original languages of the Paris Agreement.<sup>104</sup> Thus, the aim expressed in the second half of the sentence (achieving the objectives of Parties’ successive NDCs) should be read as qualifying the obligation contained in its first half (pursue domestic mitigation measures).

The second sentence of Article 4(2) is most convincingly interpreted as creating an obligation of conduct (sometimes referred to as “obligation of means,” as opposed to an “obligation of result”) – an obligation to exercise due diligence towards an intended outcome, without necessarily guaranteeing the achievement of the outcome.<sup>105</sup> The concept of obligation of conduct comes from civil law traditions, where it refers for instance to the obligation of a medical doctor towards a patient: the doctor must endeavour to treat her patient to the best of her abilities (obligation of conduct), but she is not liable merely on the ground that her patient does not recover (which would amount to an obligation of result).

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<sup>102</sup> Raymond Cléménçon, ‘The Two Sides of the Paris Climate Agreement: Dismal Failure or Historic Breakthrough?’ (2016) 25 *The Journal of Environment & Development* 3, 8. Likewise, ICJ Judge James Crawford endorsed the understanding that the Paris Agreement “does not impose or inflict substantive obligations,” though immediately noting that the second sentence of Article 4(2) establishes an “obligation of means” (which is a substantive obligation). See James Crawford, ‘The Current Political Discourse Concerning International Law’ (2018) 81 *The Modern Law Review* 1, 21.

<sup>103</sup> Daniel Bodansky, ‘The Legal Character of the Paris Agreement’ (2016) 25 *Review of European, Comparative & International Environmental Law* 142, 150. Bodansky nuanced his position in Daniel Bodansky, ‘The Paris Climate Change Agreement: A New Hope?’ (2016) 110 *American Journal of International Law* 288, 304. See generally United Nations Framework Convention on Climate Change art. 4(1)(b).

<sup>104</sup> See Article 29. There is no comma in the Arabic and French versions.

<sup>105</sup> See e.g. Voigt (n 28); Benoit Mayer, ‘International Law Obligations Arising in Relation to Nationally Determined Contributions’ (2018) 7 *Transnational Environmental Law* 251; Benoit Mayer, ‘Obligations of Conduct in the International Law on Climate Change: A Defence’ (2018) 27 *Review of European, Comparative & International Environmental Law* 130. Annalisa Savaresi, ‘The Paris Agreement: A New Beginning?’ (2016) 34 *Journal of Energy & Natural Resources Law* 16 (“unequivocally ... the obligation of means to pursue domestic mitigation action”). Winkler (n 38) 146 (“Article 4.2 contains strong obligations of conduct, although obligations of result [the implementation and achievement of emissions reductions] were not included in the Agreement.”). See also Streck, Keenlyside and von Unger (n 5) 13 (“while countries determine their NDC individually, without assuming a legal obligation or liability vis-à-vis the result, they do have an obligation to pursue mitigation actions with the “aim of achieving the objectives” of their NDCs”).

An obligation of conduct is not necessarily a “weak” obligation.<sup>106</sup> No more than a medical doctor can fulfil her obligation by prescribing a tablet of aspirin to her patient without investigating his medical situation, can a Party satisfy its obligation of conduct by simply placing a symbolic solar panel on the roof of a presidential palace. The mitigation measures necessary for a Party to fulfil its obligation under the second sentence of Article 4(2) must have a reasonable likelihood to achieve the mitigation objectives contained in the NDC, based on what the Party knows or should know. That means, as Voigt suggested, that the Parties to the Paris Agreement must pursue the measures “that are necessary, meaningful and, indeed, effective to function as a means to this end.”<sup>107</sup> In other words, Parties are required to pursue “the reasonable measures which a well-administered government could be expected to adopt under similar circumstances.”<sup>108</sup>

Commentaries on the Paris Agreement have, by and large, interpreted the second sentence of Article 4(2) as one of its main weaknesses. Rajamni and Brunnée, for instance, noted that “since Parties do not have an obligation of result in relation to the NDCs, a party could fall short of its NDC without the consequences that attach to breaches of a legal obligation under the law of state responsibility.”<sup>109</sup> This would be true only, however, if the Party had fallen short of its commitment *in spite of pursuing necessary measures*, for instance if the policies and measures implemented over the time frame of the NDC had not achieved as much emission reduction as expected due. This could happen for instance if the Party’s economy benefited from a surprisingly strong economic growth or endured abnormal season patterns resulting in greater power demand during the target year.<sup>110</sup> Even then, the Party would have to justify its inability to rely on mechanisms that provide some flexibility, such as the international transfer of mitigation outcomes, to make up for such unexpected hurdles to realizing its objectives on climate change mitigation.

By contrast, a Party to the Paris Agreement could breach its obligation of conduct by failing to take relevant measures even if the mitigation objective of its NDC was nevertheless to realize.<sup>111</sup> In fact, as it is not necessary to assess the achievement of the objective in order to assess compliance with the obligation of conduct, the assessment of compliance could be performed well before conclusive evidence regarding the achievement of the objective, thus bridging the gap which allowed Canada to avoid a finding of non-compliance during the first commitment period of the Kyoto Protocol.<sup>112</sup> There is, for example, a strong argument that the

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<sup>106</sup> Mayer, ‘Obligations of Conduct in the International Law on Climate Change’ (n 105). Contra Lawrence and Wong (n 39) 280 (implying that an obligation of conduct is less explicit and less binding than an obligation of result); Bodansky, ‘The Paris Climate Change Agreement’ (n 103) 304.

<sup>107</sup> Voigt (n 28) 20.

<sup>108</sup> *ibid* 19, citing AV Freeman, ‘Responsibility of States for Unlawful Acts of their Armed Forces’ (1955-II) 88 *Recueil des Cours de l’Academie de Droit International* 263, 277-278.

<sup>109</sup> Rajamani and Brunnée (n 43) 80. See also Daniel Bodansky, Jutta Brunnée and Lavanya Rajamani, *International Climate Change Law* (Oxford University Press 2017) 231 (noting that, although this provision establishes ‘binding obligations, they are obligations of conduct rather than result’).

<sup>110</sup> Such events would not necessarily fulfil the narrow conditions to constitute circumstances precluding wrongfulness such as force majeure. See ILC, *Draft Articles on the Responsibility of States for Internationally Wrongful Acts* (2001), art. 23 and Commentary.

<sup>111</sup> See e.g., *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v. Nicaragua) and *Construction of a Road in Costa Rica along the San Juan River* (Nicaragua v. Costa Rica), Judgment, 16 Dec. 2015, ICJ Reports 2015, p. 665, para. 156, recognizing that an obligation of conduct can be breached even when the result is achieved.

<sup>112</sup> See Kyoto Protocol Compliance Committee, Facilitative Branch, Report on the Meeting (22–23 Oct. 2012), CC/FB/12/2012/3, 9 Nov. 2012, available at:

US has acted in breach of its obligation of conduct under the second sentence of Article 4(2) since 2017, as the federal government under the Trump administration revoked most of the measures which had been taken for the purpose of implementing the US's NDC.<sup>113</sup> This argument would arguably remain unaffected if the efforts of non-state actors, or even subnational authorities, were able to achieve the mitigation objectives of the US's NDC,<sup>114</sup> as an obligation of conduct has generally been interpreted as requiring a chain of instructions originating from the highest competent national authorities.<sup>115</sup>

In summary, the Paris Agreement imposes an obligation on its parties to take adequate measures towards the realization of the mitigation targets contained in their NDCs. This obligation is potentially demanding, depending on the level of ambition contained in each NDC. The obligation, however, is limited to the climate change mitigation targets themselves; the Party has no obligation to implement the specific mitigation measures that some NDCs mention. As this is an obligation of conduct (an obligation to take relevant measures), the responsibility of a Party to the Paris Agreement would not automatically be engaged based on the finding that the target was not achieved; but its responsibility could immediately be engaged for failure to take adequate steps towards achieving that target, regardless of whether the target was ultimately achieved.

## 5.2 NDCs as unilateral declarations capable of creating legal obligations

Besides obligations arising from the Paris Agreement, NDCs (and other declarations made to announce or confirm the same commitments) may be binding per se.<sup>116</sup> Unilateral declarations have long been recognized as a source of international law.<sup>117</sup> According to the Guiding Principles applicable to unilateral declarations of States capable of creating legal obligations adopted by the International Law Commission in 2006, declarations can create legal obligations if they are publicly made and manifest the will to be bound.<sup>118</sup> Such declarations can be

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[https://unfccc.int/files/kyoto\\_protocol/compliance/facilitative\\_branch/application/pdf/cc-fb-12-2012-3\\_report\\_on\\_the\\_meeting.pdf](https://unfccc.int/files/kyoto_protocol/compliance/facilitative_branch/application/pdf/cc-fb-12-2012-3_report_on_the_meeting.pdf). The Kyoto Protocol established an obligation of result – the obligation to achieve quantified emission limitation or reduction commitments. See ‘Kyoto Protocol’ art. 3(1); Mayer, ‘Obligations of Conduct in the International Law on Climate Change’ (n 105) 134.

<sup>113</sup> While the US has expressed its intention to withdraw from the Paris Agreement, this withdrawal will not be effective before 2020.

<sup>114</sup> See the Letter of M.R. Bloomberg to the UN Secretary-General and Executive Secretary of the UNFCCC, Dec. 2017, available at <https://www.americaspledgeonclimate.com/about>

<sup>115</sup> See, e.g., *LaGrand (Germany v. United States of America)*, Judgment, ICJ Reports 2001, p. 466, para. 111; *Difference relating to Immunity from Legal Process of a Special Rapporteur of the Commission on Human Rights*, Advisory Opinion, ICJ Reports 1999, p. 62, para. 62.

<sup>116</sup> See Mayer, ‘International Law Obligations Arising in Relation to Nationally Determined Contributions’ (n 105) 262–270; Viñuales (n 39) 27.

<sup>117</sup> See e.g. *Legal Status of Eastern Greenland (Denmark v. Norway)*, Judgment, 1933, P.C.I.J., Series A/E, No. 53, p. 71, at para. 192; *Nuclear Tests*, n. 46, para. 43; *Case concerning Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*, Judgment of 27 June 1986, I.C.J. Reports 1986, p. 132, at para. 261, and *Case concerning the Frontier Dispute (Burkina Faso v. Republic of Mali)*, I.C.J. Reports 1986, p. 573, at para. 39. See generally P. Saganek, *Unilateral Acts of States in Public International Law* (Brill, 2016), chapters 10 and 11; E. Suy, *Les actes juridiques unilatéraux en droit international public* (LGDJ 1962).

<sup>118</sup> ILC (n 46) principle 1.

formulated orally or in writing,<sup>119</sup> but they must be “stated in clear and specific terms.”<sup>120</sup> They may be addressed to one or several States or to the international community as a whole.<sup>121</sup> While the emphasis has traditionally been on declarations of States, there is no reason to exclude that an international organization (such as the EU) could, while carrying out its functions, also commit to obligations through unilateral declarations.<sup>122</sup>

NDCs appear to meet most of the conditions under which unilateral declarations create international obligations. They are made publicly and, presumably, by the competent national authority. Considerable efforts have been made to ensure that NDCs are stated in clear and specific terms,<sup>123</sup> ensuring that, as far as possible, achievement of the mitigation objectives contained in the NDCs would be verifiable. That NDCs were adopted in the context of a treaty regime is no hurdle: the ICJ has repeatedly recognized unilateral declarations as capable of creating legal obligations in relation to statements recognizing the Court’s jurisdiction under article 36 of its Statute.<sup>124</sup>

The critical question is whether NDCs manifest the will of the party to be bound. The circumstances surrounding the communication of the NDCs, including both their content and their context, may help to answer this question on a case-by-case basis.<sup>125</sup> In many cases, the objectives of NDCs were announced before their formal communication to the UNFCCC Secretariat, and reiterated subsequently, through a series of oral and written statements by top government officials.<sup>126</sup> Just like NDCs themselves, these related declarations may legal effects, notwithstanding their form, as long as they are publicly made in clear and specific terms

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<sup>119</sup> *ibid* Principle 5. See generally *Case concerning the Temple of Preah Vihear (Cambodia v. Thailand), Preliminary Objections, Judgment of 26 May 1961, I.C.J. Reports 1961*, p. 17, at 31; *Nuclear Tests*, n. 46, para. 45.

<sup>120</sup> *ibid* Principle 7. See also *Nuclear Tests*, n. 46, para. 43; *Armed Activities on the Territory of the Congo (New Application: 2002) (Democratic Republic of the Congo v. Rwanda), Jurisdiction and Admissibility, Judgment, I.C.J. Reports 2006*, p. 6, at paras. 50 and 52.

<sup>121</sup> *ibid* Principle 6. See also *Nuclear Tests*, n. 46, para. 50.

<sup>122</sup> See, by analogy, *Reparation for injuries in the service of the United Nations, Advisory Opinion, I.C.J. Reports 1949*, p. 174, at 179.

<sup>123</sup> See ‘Paris Agreement’ (n 11) art. 4(8); ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) Annex I. See also, prior to the adoption of the Paris Agreement, ‘Decision 1/CP.19, Further Advancing the Durban Platform’ (n 14) para 2(b); ‘Decision 1/CP.20, Lima Call for Climate Action’ (n 14) paras 13–14.

<sup>124</sup> See, e.g., *Fisheries Jurisdiction (Spain v. Canada), Jurisdiction of the Court, Judgment, I. C.J. Reports 1998*, p. 432, at para. 46; *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria), Preliminary Objections, Judgment of 11 June 1998, I.C.J. Reports 1998*, p. 293, at para. 30.

<sup>125</sup> See *Case concerning the Frontier Dispute*, n. 117, para. 40. See also *Armed Activities on the Territory of the Congo*, n. 120 above, para. 53: ‘to assess the intentions of the author of a unilateral act, account must be taken of all the circumstances in which the act occurred.’

<sup>126</sup> For a prominent example, see the U.S.-China Joint Announcement on Climate Change (Beijing, 12 Nov. 2014), available at <https://obamawhitehouse.archives.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change>. See also Remarks by President Obama and President Xi Jinping in Joint Press Conference (Beijing, 12 Nov. 2014), available at <https://obamawhitehouse.archives.gov/the-press-office/2014/11/12/remarks-president-obama-and-president-xi-jinping-joint-press-conference>; and Remarks by President Obama at G20 Press Conference (Brisbane, 16 Nov. 2014), available at <https://obamawhitehouse.archives.gov/the-press-office/2014/11/16/remarks-president-obama-g20-press-conference-november-16-2014>.

and manifest the will to be bound.<sup>127</sup> Taken as a whole, these repeated statements form a context which may confirm, or possibly exclude, the will of the state to be bound.<sup>128</sup> While some States may have expressed strong objections to being bound by the contribution they communicated,<sup>129</sup> others have not. The EU, in particular, has repeatedly and emphatically manifested its commitment to a “binding target” under its NDC.<sup>130</sup>

More generally, NDCs could be argued to involve, by their very nature, a will to be bound. NDCs are essentially an attempt at solving a collective action problem: the Parties recognize that every State is better off if all States cooperate to mitigate climate change.<sup>131</sup> The reason for a State to communicate its NDC to the UNFCCC Secretariat is to give others confidence that it will seek to implement the commitment on climate change mitigation contained in this NDC, thus encouraging other States to take similar steps. If nothing else, good faith should command that each Party fulfil the promises made through its NDC with the intention that other States make similar promises.<sup>132</sup> The limitation to this argument, however, is that such commitments could be legal, but they may also be purely political.

The global context in which the Parties to the UNFCCC were invited to communicate their NDCs can also help to assess the Parties’ will to be bound. While the COP decisions calling upon Parties to communicate their INDCs were “without prejudice to the legal nature of the contributions,”<sup>133</sup> this caveat appears to relate to the nature of the obligation (for example whether it is an obligation of result or an obligation of conduct) rather than to the very existence of an obligation: NDCs were always framed as outcomes that Parties intended to pursue or to achieve.<sup>134</sup> Under these circumstances, “without prejudice to” would not exclude the possibility of an individual party expressing an individual will to be bound.

Overall, the context of NDCs includes the text of the Paris Agreement, which was adopted by a consensus among the Parties to the UNFCCC. As noted before, the first sentence of Article 4.2 of the Paris Agreement calls upon each party to prepare, communicate and maintain the successive NDCs “that it intends to achieve.” As Rajamani justly notes, this provision does not create any substantive obligation.<sup>135</sup> Rather, this provision reflects a common understanding of the nature of NDCs as declarations of what Parties *intend to achieve*. By analogy, in the *Nuclear Tests* case, the ICJ concluded that an intention to be bound was implied by a public communication of an “intention to achieve” an outcome, particularly given that this communication was made with full knowledge that other States were interested in this outcome.

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<sup>127</sup> See *supra* n. 118-121.

<sup>128</sup> See by analogy *Nuclear Tests*, n. 46, paras. 36-41.

<sup>129</sup> See for instance the first NDC of Turkmenistan (21 October 2016), at 1, noting that “INDC is not an obligation,” thus arguably expressing that Turkmenistan did not manifest the intention to be bound.

<sup>130</sup> See for instance the first NDC of the European Union (5 October 2016), paras. 1 and 3; Council of the European Union, ‘Outcome of the Council Meeting: 3373<sup>rd</sup> Council Meeting, Environment’ document 6932/15 (6 Mar. 2015), at 3.

<sup>131</sup> See generally E.A. Posner and D.A. Weisbach, *Climate Change Justice* (Princeton University Press 2010).

<sup>132</sup> See, by analogy, *Nuclear Tests*, n. 46, para. 46.

<sup>133</sup> ‘Decision 1/CP.19, Further Advancing the Durban Platform’ (n 14) para 2(c); ‘Decision 1/CP.20, Lima Call for Climate Action’ (n 14) para 8.

<sup>134</sup> ‘Decision 1/CP.19, Further Advancing the Durban Platform’ (n 14) para 2(b); ‘Decision 1/CP.20, Lima Call for Climate Action’ (n 14) paras 8–9; ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 27.

<sup>135</sup> Rajamani (n 101) 354.

In that case, the French government had “made public its *intention to cease* the conduct of atmospheric nuclear tests,”<sup>136</sup> without explicitly declaring an intention to be bound by this declaration. The ICJ held that, through a series of unilateral declarations of its “intent,” on which other States were likely to rely, France had undertaken an obligation to cease its nuclear tests.<sup>137</sup>

Unilateral declarations are generally interpreted restrictively,<sup>138</sup> as it is not the case that everything said on behalf of a state is meant to create an obligation. However, other factors militate in favour of a broader interpretation of NDCs. Many states recognize, albeit often implicitly, that their NDCs reflect something more than a purely voluntary action, for example, by referring to the party’s “international responsibility”<sup>139</sup> as a basis for determining its action on climate change mitigation, or insisting that their commitment represent their fair share in necessary global efforts.<sup>140</sup> These statements allude to the fact that NDCs (or, for that matter, the Paris Agreement) do not take place in a normative or legal vacuum: States already have general international law obligations which imply an obligation to prevent excessive greenhouse gas emissions, for instance under the no-harm principle<sup>141</sup> or under international human rights law.<sup>142</sup> They also have a more specific, albeit vague, obligation to take measures to mitigate climate change under the UNFCCC.<sup>143</sup> NDCs communicate each party’s vision of what they consider to be the fair way of implementing these obligations. Inasmuch as NDCs confirm and implement States’ pre-existing obligations, they should more easily be presumed to manifest a will to be bound.<sup>144</sup>

The obligations arising from NDCs may differ in nature and content from those arising from the second sentence of Article 4(2). NDCs can create obligations of conduct, but also obligations of result; these obligations may be conditional and unconditional; they may apply

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<sup>136</sup> *Nuclear Tests*, n. 46, para. 41.

<sup>137</sup> *Ibid.*

<sup>138</sup> ILC (n 46) principle 7. See also *Nuclear Tests*, n. 46, para. 51; *Armed Activities on the Territory of the Congo*, n. 120, paras. 50 and 52.

<sup>139</sup> First NDC of China (3 September 2016) at 5. See also eg Intended Nationally Determined Contributions of the Philippines (1 Oct. 2015) at 1.

<sup>140</sup> See e.g. NDC of the United States (3 September 2016) at 1. All Parties to the UNFCCC and later to the Paris Agreement were invited to provide information on how they consider their contribution to be “fair and ambitious,” in light of its national circumstances. See ‘Decision 1/CP.20, Lima Call for Climate Action’ (n 14) para 14; ‘Decision 1/CP.21, Adoption of the Paris Agreement’ (n 7) para 27; ‘Decision 4/CMA.1, Further Guidance in Relation to the Mitigation Section of Decision 1/CP.21’ (n 9) Annex I, para. 6.

<sup>141</sup> See e.g. Rio Declaration on Environment and Development, A/Conf.151/26 (Vol. I) (June 1992) principle 2; and generally Benoît Mayer, ‘The Relevance of the No-Harm Principle to Climate Change Law and Politics’ (2016) 19 *Asia Pacific Journal of Environmental Law* 79.

<sup>142</sup> See the interpretation of the European Convention of Human Rights as implying an obligation for the Netherlands on climate change mitigation in Court of Appeal of the Hague, *The State of the Netherlands (Ministry of Infrastructure and the Environment) v Urgenda Foundation*, C/09/456689, HA ZA 13-1396 (9 October 2018). See generally Benoit Mayer, ‘The State of the Netherlands v. Urgenda Foundation: Ruling of the Court of Appeal of The Hague (9 October 2018)’ (2019) 8 *Transnational Environmental Law* 167; Mayer, ‘Interpreting States’ General Obligations on Climate Change Mitigation’ (n 27).

<sup>143</sup> See in particular United Nations Framework Convention on Climate Change art. 4.1(b) and 4.2(a).

<sup>144</sup> On a construction of the UNFCCC regime as a collective effort to promote compliance with the no-harm principle, see Benoit Mayer, ‘Construing International Climate Change Law as a Compliance Regime’ (2018) 7 *Transnational Environmental Law* 115.

to one State or to several States acting jointly. Obligations may arise from NDCs in relation to States or other entities with international personality even if those persons are not Parties to the Paris Agreement,<sup>145</sup> or prior to the entry into force of the Paris Agreement, and the revocation of NDCs may follow rules different from those applicable to the withdrawal from the Paris Agreement.<sup>146</sup> The content of obligations arising from NDCs may also extend beyond objectives on climate change mitigation, including for instance commitments regarding financial support, transfer of technology and capacity building.

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<sup>145</sup> Taiwan, for instance, has communicated a nationally determined contribution, even though Taiwan, whose status is uncertain, is not a Party to the Paris Agreement. See “Submission by Republic of China (Taiwan) Intended Nationally Determined Contribution” (2015), available at [https://ghg.tgpf.org.tw/files/team/Submissiom\\_by\\_Republic\\_of\\_China\\_\(Taiwan\)INDC.pdf](https://ghg.tgpf.org.tw/files/team/Submissiom_by_Republic_of_China_(Taiwan)INDC.pdf).

<sup>146</sup> Thus, while the United States may withdraw from the Paris Agreement by 2020, following the rules established in Article 28(1)-(2), it may remain bound by the NDC, arguably until 2025 (the time frame of the US’s NDC). On revocation of unilateral declarations, see generally ILC (n 46) principle 10, according to which a unilateral declaration ‘cannot be revoked arbitrarily’.