

# “Hot Air” as Precedent for Developing Countries? Equity Considerations

*Christine Batruch\**

## I.

### INTRODUCTION

In June 1992, the world's nations met at the Rio Earth Summit Conference to discuss the various challenges facing the global environment.<sup>1</sup> One of the outcomes of the conference was the adoption of the United Nations Framework Convention on Climate Change (UNFCCC), a global agreement addressing climate change.<sup>2</sup>

The main objective of the UNFCCC is to stabilize greenhouse gas emissions, which are recognized as having a negative impact on climate change, and to prevent dangerous man-made interference with the climate system.<sup>3</sup> Under the UNFCCC, the Parties undertook general commitments to reach this stabilization objective and agreed to be guided by a number of principles, including equity, in fulfilling the terms of the Convention.<sup>4</sup>

In December 1997, the Conference of the Parties, which is the Supreme Body under the UNFCCC, met in Kyoto, Japan to establish specific commitments.<sup>5</sup> Under the Kyoto Protocol, devel-

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\* Assistant Professor, International Academy of the Environment, Switzerland. The author would like to thank Michael J. Grubb for his helpful suggestions and comments.

1. Edith Brown Weiss, *The United Nations Conference on Environment and Development: Introductory Note*, 31 I.L.M. 814 (1992).

2. United Nations Conference on Environment and Development: Framework Convention on Climate Change, May 9, 1992, 31 I.L.M. 849 [hereinafter UNFCCC].

3. *Id.* at 854.

4. *Id.* at 854-856. By November 1998, 176 countries had ratified the Convention. *A Brief History of the FCCC and the Kyoto Protocol*, EARTH NEGOTIATIONS BULL., Nov. 16, 1998, at 1 (International Inst. for Sustainable Dev., Winnipeg, Man., Can.).

5. Conference of the Parties to the Framework Convention on Climate Change: Kyoto Protocol, December 10, 1997, 37 I.L.M. 22 (1998) [hereinafter Kyoto Protocol].

oped countries and countries with economies in transition<sup>6</sup> agreed to limit or reduce their greenhouse gas emissions by certain amounts, called assigned amounts. Emissions are to be reduced in reference to a particular year, called a base year. The first commitment period is between 2008 and 2012.<sup>7</sup>

The assigned amounts of most developed countries entails a reduction of their emissions.<sup>8</sup> The assigned amounts of countries with economies in transition, like Russia and Ukraine, represents in theory, a stabilization at 1990 levels of emissions (i.e., zero growth from 1990 levels). However, such assigned amounts in fact may allow Russia and Ukraine to increase their emissions because, since 1990, their economic downfall has resulted in an approximately 30% reduction in their greenhouse gas emissions.<sup>9</sup> Therefore, while ostensibly assuming commitments to stabilize their level of greenhouse gas emissions, countries with economies in transition, like Russia and Ukraine, have effectively been given surplus emission allocations. This surplus allocation, which has come to be known as “hot air,” is defined here as the difference between the assigned amounts for the first commitment period and the lower emission levels that would exist during that period in the absence of climate related policies and measures.<sup>10</sup>

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6. These are the eleven countries noted in Annex I of the UNFCCC and the thirteen noted in Annex B of the Kyoto Protocol as “countries that are undergoing the process of transition to a market economy”. Annex I and Annex B also list developed countries. In the following discussion the terms ‘countries with economies in transition’ or ‘transition economies’ will be used to characterize countries noted in Annex I and Annex B.

7. Kyoto Protocol, *supra* note 5, at 33 (article 3).

8. See Annex B of the Kyoto Protocol, *supra* note 5, at 42, for the full list of countries and their assigned amounts.

9. The thirteen countries with economies in transition have agreed to assume different quantified emission limitation or reduction commitment levels, ranging from 0% for Russia and Ukraine to 8% for some central European countries like Bulgaria or Romania under the Kyoto Protocol (Annex B). Since the bulk of the emissions have taken place and will likely take place in the future in Russia and Ukraine, these two countries are used as references throughout the text. See also Michael J. Grubb, *International Emissions Trading under the Kyoto Protocol: Core issues in implementation*, 71 *RECEIL* 140, at 142 (1998).

10. The concept of “hot air” is controversial; economies in transition consider it natural to have the same base year as other Annex I Parties and don’t consider to have been granted any surplus or windfall, as they predict economic recovery. The question as to whether there will be any “hot air” left by the time of the first commitment period remains open. For the purpose of this discussion, however, the fact that *at the time of establishing* targets for transition economies it was believed that there would be “hot air” is a sufficient basis to make a claim based on precedent. We therefore assume that there is hot air and examine its possible implications on future target setting.

There are two main reasons why hot air granted to countries with economies in transition could have serious implications on the achievement of the UNFCCC stabilization objective and might therefore slow down the process of combating climate change.<sup>11</sup> First, it could enable those countries to increase their emissions from current levels, instead of reducing them.<sup>12</sup> Second, once the negotiation process begins for developing countries,<sup>13</sup> developing countries could rely upon the granting of hot air to countries with economies in transition as a precedent.<sup>14</sup> While the total emissions in developing countries are still relatively low, their emissions are expected to surpass those of the developed world by 2020 under a normal growth scenario.<sup>15</sup> Delaying or limiting developing countries' reduction commitments would cause an increase in greenhouse emissions, thereby seriously compromising the stabilization objective of the UNFCCC.

The purpose of this article is to determine whether, on the basis of equity which is a guiding principle under the UNFCCC,<sup>16</sup> developing countries could claim surplus emission allocations by using the hot air obtained by countries with economies in transition as precedent.

Section I examines the role of equity in relation to the UNFCCC and the negotiation process that preceded the adoption of the UNFCCC and the Kyoto Protocol. Section II discusses the rationale behind granting hot air to countries with economies in transition and its possible implications. Section III analyzes whether hot air given to countries with economies in transition can be relied upon as a precedent by developing coun-

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11. Article 2 of the UNFCCC, *supra* note 2, at 854.

12. In the early 1990s, these emissions already represented 26% of world greenhouse gas emissions in the Commonwealth of Independent States and Eastern Europe. Thomas E. Drennen, *Economic Development and Climate Change: Analyzing the International Response 142* (1993) (unpublished Ph.D. dissertation, Cornell University) cited in Henry Shue, *After You: May action by the rich be contingent on action by the poor?* 1 *IND. J. GLOBAL LEGAL STUD.* 343, 365 (1994).

13. The developing countries have not yet assumed quantified emission reductions, but it is foreseen that in the future, as other Parties to the UNFCCC, they will assume such commitments, as it is stated that developed countries should take the lead, not that they shall be the only countries to reduce emissions.

14. The definition for precedent used in this paper is taken from Black's Law Dictionary, *Abridged Fifth Edition*, 1983: "a course of conduct once followed which may serve as a guide for future conduct."

15. See Shue, *supra* note 12, at 365 and Walter V. Reid and Jose Goldemberg, *Are Developing Countries Already Doing as Much as Industrialized Countries to Slow Climate Change?* 26 *ENERGY POL'Y* 233 (1997).

16. Article 3 of the UNFCCC, *supra* note 2, at 854.

tries. The analysis examines the similarities and differences between countries with economies in transition and developing countries in the context of climate change, and the arguments that can be made in favor of, or against, developing countries obtaining their own hot air. Section IV discusses emission allocation methodologies and suggests an equitable methodology. The article concludes by assessing the possible impact of granting hot air upon the fulfillment of the UNFCCC stabilization objective.

## II.

### SOURCES OF EQUITY

#### A. *Origins Of Equity In Common Law*

Equity has both moral and legal foundations.<sup>17</sup> Out of moral concerns of fairness, the legal system devised a mechanism whereby a just result could be achieved when the formal application of a rule did not ensure that result. What in moral terms is called fairness, in law is termed equity. The close linkage between law and ethics is explained by Henry Shue, recognized for his writings on fairness in the context of international agreements: “[t]here are elemental moral standards that laws, treaties, and other human agreements must satisfy in order to deserve compliance - in order to be morally as well as legally binding.”<sup>18</sup> Thus, while ethics is the yardstick for measuring the acceptability of a given action, law is a means to ensure it.

Equity in common law arose from the recognition that the application of a strict rule of law could have an unjust result. Judges in courts of law came to rely on concepts such as unjust enrichment, estoppel and acquiescence to attain justice in the application of the law, where the observance of formal rules of law did not necessarily lead to that result.<sup>19</sup>

The practice of referring to notions of justice in the application of law came to be known as equity. Thomas M. Franck states:

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17. For an interesting discussion of the philosophical basis of equity, see Tariq Banuri et al., *Equity and Social Considerations*, in CLIMATE CHANGE 1995-ECONOMIC AND SOCIAL DIMENSIONS OF CLIMATE CHANGE-CONTRIBUTIONS OF WORKING GROUP III TO THE SECOND ASSESSMENT REPORT OF THE IPCC 85 (James P. Bruce et al eds., 1995).

18. Shue, *supra* note 12, at 362.

19. Unjust enrichment is the notion that one cannot enrich oneself unfairly at the expense of another; estoppel means the duty to refrain from engaging in inconsistent conduct vis-à-vis others; and acquiescence is when absence of protest may preclude one party from challenging the claim of another. See Black's Law Dictionary, Abridged Fifth Edition, 1983 for full definitions.

“[equity] embodies a set of principles designed to analyse the law critically without seeming to depart too radically from the traditional preference for normativity in the exercise of authority, nor to present too bold a challenge to the community’s expectations of legitimacy of legal rules and processes.”<sup>20</sup>

The use of equity in domestic law inspired its use at the international level. In both cases it was meant to afford legitimacy to actions by the courts in furtherance of their enforcement role. As seen above, equity in domestic law developed as an instrument of adjudication and plays mainly a *post facto* role in the resolution of a dispute brought before a court. In contrast, as explained below, equity in international law has a statutory origin and affects both the process and the outcome of law-making.<sup>21</sup>

### B. *Equity in International Law*

According to the Statute of the International Court of Justice (ICJ), “general principles of law recognized by civilized nations,” such as principles of equity are considered to be a subsidiary source of international law.<sup>22</sup> Subsequent decisions of the ICJ, which adjudicates matters of international law, including international environmental law, also refer to principles of equity in disputes between countries.<sup>23</sup>

While equity is commonly invoked in disputes between parties involving implementation of treaty obligations, or in situations in which no treaty exists, the role of equity is not limited to the adjudication process. Equity can also be invoked in the process of negotiation *prior* to the adoption of a treaty, or when negotiating amendments or protocols to a treaty. Equity has been a consideration in international environmental treaties in a number of ways: as a guiding principle for the implementation of treaty obligations; as a determining factor in differentiating parties’ obligations under a treaty; and as a method of ensuring the fair

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20. THOMAS M. FRANCK, *FAIRNESS IN INTERNATIONAL LAW AND INSTITUTIONS* 47 (1995). See also his discussion on the extension of common law equity to international law. *Id.* at 48.

21. For an interesting discussion on this aspect see Farhana Yamin, *Principles of Equity in International Environmental Agreements with Special Reference to the Climate Change Convention*, in *PAPERS PRESENTED AT THE IPCC WORKING GROUP III WORKSHOP ON EQUITY AND SOCIAL CONSIDERATIONS RELATED TO CLIMATE CHANGE, NAIROBI, KENYA, JULY 1993* 357 (1993).

22. Article 38 of the Statute of the International Court of Justice (1945).

23. See Farhana Yamin, *supra* note 21.

representation and participation of all parties in the institutions of a treaty.<sup>24</sup>

In the context of climate change, experts at the Intergovernmental Panel on Climate Change (IPCC), the organization whose assessment report on climate change in 1990 provided the basis for negotiations on climate change, confirm that equity concerns arise at the procedural and the consequential level, thus impacting both the process and the outcome.<sup>25</sup>

### C. *Rationale for Equity in the UNFCCC*

Global warming has been described as a moral issue, because it affects the quality of life across generations and within the same generation.<sup>26</sup> Since there will be a variety of economic and ecological impacts on different countries, it has been argued that not resorting to equity considerations would be morally unacceptable when determining the rights and responsibilities of all the parties involved in the effort to combat climate change.<sup>27</sup> Stated differently, "those living in desperate poverty ought not to be required to restrain their emissions, thereby remaining in poverty, in order that those living in luxury should not have to restrain their emissions."<sup>28</sup>

This concern for fairness was reflected in the negotiations leading to the adoption of the UNFCCC, when developing countries insisted on a fair allocation of responsibilities and obligations among the Parties.<sup>29</sup> They were successful in this respect because equity figures prominently in the UNFCCC, as a guiding principle, as a means to determine the commitments of each Party, and as a means of ensuring proper representation in the Convention's financial mechanism.<sup>30</sup> As noted by Michael Grubb, a respected scientist and prolific author on climate change, the inclusion of

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24. See generally articles 3.1, 4.2(a), and 11.2 of the UNFCCC, *supra* note 2, at 854, 856, and 864.

25. *Summary for Policymakers*, *supra* note 17, at 47.

26. See *Distributive Justice and the Control of Global Warming*, in *THE NORTH AND THE SOUTH AND THE ENVIRONMENT* 102 (V. Bhaskar and Andrew Glyn eds. 1995).

27. *Id.*

28. Henry Shue, *Subsistence Emissions and Luxury Emissions*, in *FOUNDATIONS OF ENVIRONMENTAL LAW AND POLICY* 322, 323 (Richard L. Revesz ed., 1997).

29. See the discussion of the negotiation process in Daniel Bodansky, *The United Nations Framework Convention on Climate Change: A commentary*, 18 *YALE J. INT'L LAW* 451, 474-78.

30. See articles 3.1 (guiding principles), 4.2(a) (commitments), 11.2 (financial mechanism) of the UNFCCC, *supra* note 2, at 854, 856, and 864.

equity was a *quid pro quo* for the wide participation of developing countries, which was felt to be necessary both because of the global nature of the problem and because emissions in the developing countries are expected to rise sharply in the future.<sup>31</sup> Equity under the UNFCCC can thus also be seen as a legal response to the moral concern regarding the means to combat climate change. Its inclusion in the UNFCCC stems as much from the moral perspective that fairness should guide international relations as from the development of international law as outlined above.

Equity, as an moral obligation, is likely to guide the discussions and negotiations on what the responsibilities the Parties to the Convention should assume based on their past, present, and future emissions and their ability to address the issue. Equity, as a source of law, will likely be relied upon in disputes about the implementation of the UNFCCC, as is the case in resolving resource allocation issues under the Law of the Sea.<sup>32</sup> The case law that will emerge from disputes related to the UNFCCC will further establish the meaning of equity in that context and will thus constitute a benchmark for future negotiations.

#### D. *The Meaning of Equity Under the UNFCCC*

Equity is mentioned in Article 3.1 of the UNFCCC under the heading "Guiding Principles" in conjunction with the principle of common but differentiated responsibilities. Specifically, article 3.1 states that:

The Parties should protect the climate system for the benefit of present and future generations of humankind, *on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities*. Accordingly, the developed countries should take the lead in combating climate change and the adverse effects thereof.<sup>33</sup>

Equity, through the principle of common but differentiated responsibilities, allows the establishment of categories of countries according to their historical contributions to the problem, present and future production, and capacity for reduction of hot air. Equity also leads to different responsibilities according to coun-

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31. Michael J. Grubb, *Seeking Fair Weather: Ethics and the international debate on climate change*, 71 INT'L AFF. 463, 464 (1995).

32. See discussion of the ICJ cases on the Law of the Sea in Tariq Banuri et al., *supra* note 17, at 89.

33. Article 3.1 of the UNFCCC, *supra* note 2, at 854 (emphasis added).

tries' level of development.<sup>34</sup> The notion that global warming is a "common concern of humankind" is affirmed in the Preamble of the UNFCCC, which implies that Parties share responsibilities to curb climate change. However, the fact that developed countries are responsible for the largest share of emissions,<sup>35</sup> both historically and currently, justifies giving them the leadership role in combating the problem.

The rationale behind the principle of common but differentiated responsibilities is that because countries have contributed unequally to the global degradation of the atmosphere in the past, their response to the problem in the future must also be varied.<sup>36</sup> In Subrata Roy Chowdhury's words: "contribution for amelioration must also be commensurate with different levels of financial resources and technologies that the developed countries command."<sup>37</sup> One may expand on this statement and posit that it is on this basis that unequal commitments to limit or reduce emissions were agreed to when negotiating the UNFCCC, and that they will be agreed upon in future legal instruments.

### III.

#### HOT AIR IN THE KYOTO PROTOCOL

##### A. *Rationale for Hot Air*

The UNFCCC established three groups of countries based on the commitments they must assume to fulfill the stabilization objective and the benefits they may obtain from becoming parties to the UNFCCC: developed countries, countries with economies in transition and developing countries.<sup>38</sup>

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34. See the differentiation of commitments in article 4 of the UNFCCC, *supra* note 2.

35. Shue, *supra* note 12, at 365.

36. Subrata Roy Chowdhury, *Common but differentiated State Responsibility in International Environmental Law: From Stockholm (1972) to Rio (1992)*, in SUSTAINABLE DEVELOPMENT AND GOOD GOVERNANCE 322, 333-34 (Konrad Ginther et al. eds., 1995).

37. *Id.* at 334.

38. While this is the main distinction contained in the UNFCCC, there are further ones regarding countries which are particularly affected by climate change, such as small island countries or countries with low-lying coastal areas, etc. in article 4.8. This categorization, followed under the general system of the United Nations, is not always satisfactory because differences between countries characterized as developing countries among themselves can be greater than between categories. For the purpose of this discussion, when referring to developing countries (i.e. the Group of 77 plus China under the UNFCCC) the author's focus is on the least developed countries.

Under the UNFCCC, developed countries are expected to stabilize their emissions and assist other countries in meeting their commitment by offering financing and/or technology transfers.<sup>39</sup> Countries with economies in transition are partly treated like developed countries because they are expected to stabilize their greenhouse gas emissions, but are also treated like developing countries because they assume no financial obligations towards developing countries and can benefit from technology transfers from developed countries.<sup>40</sup> Developing countries have assumed no stabilization commitments, only reporting obligations and should obtain both financial assistance and technology transfers from developed countries.<sup>41</sup>

The distinction between developed and developing countries, as far as commitments are concerned, was confirmed in 1995 when the Conference of the Parties gave the Ad hoc Group on the Berlin Mandate (AGBM) the task of elaborating a protocol or other legal instrument which would establish quantified emissions limitation or reduction objectives.<sup>42</sup> The AGBM specifically stated that there would be no new commitments for developing countries in the first commitment period.<sup>43</sup> The main objective of the Kyoto Protocol was to set quantified emission reductions for developed countries and countries with economies in transition.<sup>44</sup>

The justification for granting hot air to countries with economies in transition under the Kyoto Protocol can therefore be found in the equitable philosophy and structure adopted under the UNFCCC. The justification is to treat countries with different economic potentials differently.<sup>45</sup>

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39. Article 4.2(a) and 4.3 of the UNFCCC; *supra* note 2, at 856-58.

40. In particular see articles 4.2(a) and 4.3 of the UNFCCC, *supra* note 2, at 856-58.

41. See articles 4.1 and 4.7, as well as the Preamble and article 12 of the UNFCCC, *supra* note 2, at 855, 858.

42. See article II 2 (b) of *Report of the Conference of the Parties on its First Session, Part Two: Action taken by the Conference of the Parties at its first session, Addendum, Framework Convention on Climate Change, Conference of the Parties, First Sess., Berlin Mar. 28- Apr. 7, 1995, U.N. Doc. FCCC/CP/1995/Add.1.*

43. *Id.*

44. *Id.*

45. Compare the commitments of developed and transition countries under article 4.2 of the UNFCCC with those assumed by developing countries in the same article. Similarly, note that only developed and transition countries assumed assigned amounts, i.e. quantified emission targets, under article 3 of the Kyoto Protocol.

## B. *Significance of Hot Air*

In the Kyoto Protocol, the idea that countries can claim special treatment by differentiating their commitments is taken one step further, as assigned amounts are established even among developed countries (in Annex B).<sup>46</sup> In the case of economies in transition, like Russia and Ukraine, the difference is significant. When the Kyoto Protocol was negotiated, it was known that their actual emissions were almost 30% below their 1990 levels.<sup>47</sup> Therefore, by agreeing to a 0% increase in the level of greenhouse gas emissions compared to 1990 levels, countries like Russia and Ukraine would in fact be able to substantially increase (up to 30%) their emissions from current levels. The difference between a country's assigned amount and what the emissions would likely be in the absence of climate related abatement measures, became known as hot air.<sup>48</sup>

There are conflicting perceptions of the accuracy of the projected economic and environmental situations faced by transition economies. Therefore, the amount of hot air by the first commitment period is uncertain.<sup>49</sup> In fact, some people question whether there will be any hot air at all.<sup>50</sup> There seems to have been a general consensus in Kyoto that economies in transition were facing a temporary economic downturn and that some form of economic recovery was to be expected before the beginning of the first commitment period.<sup>51</sup> Nonetheless, there remains a great deal of uncertainty regarding a number of related issues, such as the level of emissions at the time of establishing assigned amounts, the pace of economic recovery and its impact on emission levels, the level of emissions by the time of the first commitment period in a "business-as-usual" scenario, and the level of

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46. The fact that some developed countries have negotiated surplus emissions could also be relied upon by developing countries as a precedent to claim their own surplus. The important distinguishing factor in the case of the European Union is that the surplus allocations were granted in the context of a bubble, article 4 of the Kyoto Protocol, where there is an overall reduction objective of 8%, thus not threatening attainment of the UNFCCC objective.

47. See Michael J. Grubb and Christiaan Vrolijk, *Defining and Trading Emission Commitments: The implications of flexibility*, 10 ENERGY AND ENV'L PROG. CLIMATE CHANGE BRIEFING, ROYAL INST. INT'L AFF. 4 (1997).

48. See Michael J. Grubb, *supra* note 9, at 142.

49. Discussion with Michael J. Grubb, who was present at the negotiations leading to the adoption of the Kyoto Protocol (June 10, 1998).

50. See Robert Hamwey and Andrea Baranzini, *How Big is the Total Carbon Off-set Market After Kyoto?* In publication ENERGY POLICY (1999).

51. See *supra* text accompanying note 45.

emissions by the time of the first commitment period with the adoption of climate related policies and measures.

Countries with economies in transition contended that, with economic recovery, their actual levels of emissions would return to prior higher levels.<sup>52</sup> Since their projections for economic recovery were still tentative, it was difficult to assess how rapidly and to what extent prior levels would be achieved. Faced with these uncertainties and the concern that one could not further constrain countries that were facing economic hardship, negotiators apparently sought an equitable solution. To support their actions, they could have relied on article 4.6 of the UNFCCC, which allows a "certain degree of flexibility" for those countries to implement their commitment.<sup>53</sup> The negotiation process resulted in granting hot air to countries with economies in transition, a gesture that Grubb characterized as granting those countries a "safety margin."<sup>54</sup>

Whether or not there will be any hot air by the end of the first commitment period is an important question with respect to possible impacts on climate change.<sup>55</sup> If there is hot air left, it will allow developed countries to fulfill part of their reduction commitments by buying off the surplus allocations from countries with economies in transition, instead of actually reducing their own emissions.<sup>56</sup> In terms of precedent setting, however, it is important that the international community apparently recognized that certain countries would experience hardships in assuming commitments and that their special circumstances merited differentiated treatment. It is on this basis that developing countries could try to seek at least as advantageous a treatment and obtain surplus emissions allocations. The next section discusses the extent to which developing countries can successfully rely on the granting of hot air as a precedent for giving special treatment to countries with different past, present, and future emission levels and development paths.

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52. Discussion with Yaroslav Movchan, Deputy Minister at the Ministry of Environmental Protection and Nuclear Safety of Ukraine (July 22, 1998).

53. Article 4.6 of the UNFCCC, *supra* note 2, at 858.

54. Grubb, *supra* note 9, at 142.

55. See the discussion in Robert Hamwey and Andrea Baranzini, *supra* note 50.

56. *Id.*

## IV.

## HOT AIR AS A PRECEDENT

A. *Background*

To date, only developed countries and countries with economies in transition have agreed to assume targets for the limitation and reduction of greenhouse gas emissions.<sup>57</sup> There are two main reasons why these countries, and not developing countries, accepted assigned amounts. First, developed and transition countries' targets relate to their past and present contributions to global warming. Thomas E. Drennen offers some figures that shed light on this issue: in the early 1990s, developed countries emitted 48.5% of the carbon while they constituted 15.7% of the world population, whereas developing countries (the Group of 77 which excludes China) with 51.9% of the population emitted 14.9%.<sup>58</sup> Transition economies with 8.8% of world population had carbon emission levels of 26.2%.<sup>59</sup> These figures indicate that the industrialized world emitted approximately 10 times more than developing countries on a per capita basis.<sup>60</sup> The historical responsibility of developed countries is thus well established.

Second, equity in the UNFCCC required a differentiation between countries on the basis not only of historical responsibility for the problem but present capability of addressing it.<sup>61</sup> During the negotiation process leading to the adoption of the UNFCCC, the developing countries made clear that there would not be any agreement unless the respective roles of the parties were acknowledged and the resulting differentiation of responsibilities entrenched.<sup>62</sup> By adopting the distinction between countries, the UNFCCC validated this viewpoint.

If the Kyoto Protocol had secured real reduction commitment levels from developed countries and countries with economies in transition, and these countries had started to fulfill their responsibility to "take the lead in combating climate change" as per art.

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57. See article 4 of the UNFCCC, *supra* note 2, at 855 and article 3 of the Kyoto Protocol, *supra* note 5, at 35. Note that until the Kyoto Protocol is signed and ratified by at least 55 Parties representing 55% of the reduction target, as per article 24, the commitments do not have legal force.

58. See Drennen, *supra* note 4, at 365.

59. *Id.*

60. *Id.*

61. Tariq Banuri et al., *supra* note 17, at 90.

62. Daniel Bodansky, *supra* note 29, at 474.

3.1, developing countries would probably have had to face the next step in the UNFCCC process and begun discussions regarding their own assigned amounts. Even without that clear commitment from developed countries, there were serious attempts to get developing countries to agree to voluntary commitments in Kyoto.<sup>63</sup> However, the proposed provision for voluntary commitments by developing countries, which appeared in the Draft Kyoto Protocol,<sup>64</sup> was deleted because developing countries questioned the efforts made by developed countries and did not want to discuss this issue until after the first commitment period.<sup>65</sup> An underlying concern of developing countries in this respect must have been that if some developing countries voluntarily assumed commitments, the solidarity of the Group of 77 would be eroded and its bargaining position weakened.<sup>66</sup>

Presently, while developing countries have expressed their willingness to assume voluntary commitments outside the purview of the Kyoto Protocol,<sup>67</sup> it is only through amendments to the Kyoto Protocol, or more likely through the adoption of a new protocol, that assigned amounts for developing countries will be set.<sup>68</sup>

The acceptance at Kyoto of commitments representing increases in emissions for transition economies (and a limited number of developed countries), can be seen as an indication that there will be no real action by the developed world to combat climate change. As a result, developing countries might conclude that no new commitments can be required from them at this stage of the process. The pressure for them to assume commitments, however, is unlikely to fade. Should the pressure become too strong, developing countries may argue that surplus

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63. The latest attempt took place during the 4<sup>th</sup> Meeting of the Conference of the Parties, which took place in Buenos Aires from November 2-13, 1998 as a follow-up to Kyoto, the Argentinian chair tried to include this item in the agenda of the, but was countered by developing countries. See EARTH NEGOTIATIONS BULL., *supra* note 4, at 11.

64. See article 10, *Final Draft by the Chairman of the Committee of the Whole*, U.N. Doc. FCCC/CP/1997/CRP.4.

65. See *A Brief History of the FCCC and the Kyoto Protocol*, *supra* note 4.

66. *Id.*

67. Argentina indicated it was prepared to make voluntary commitments during and after the Buenos Aires meeting despite the fact that the item was deleted from the meeting agenda. See generally *A Brief History of the FCCC and the Kyoto Protocol*, *supra* note 4.

68. Note that as a result developing countries are barred from participating in the emissions trading instrument of article 17 of the Kyoto Protocol.

allocations in the form of hot air to countries with economies in transition, constitutes as a precedent upon which they will base a claim for surplus emission allocation levels.

How then can one determine whether the hot air granted to economies in transition can successfully be used by developing countries as precedent to obtain their own hot air? As stated by H. Peyton Young:

[E]very distributive rule begins with some conception of equality, that is, a conception of when two claimants look the same for the purposes of the distribution. Of course, since two claimants never really do look the same, we must decide which characteristics are "salient" to the problem at hand . . . . Once the salient characteristics have been identified, fairness requires that claimants who look alike should be treated alike. This is the *impartiality* principle.<sup>69</sup>

Based on the impartiality principle, it is necessary to identify the relevant similarities and differences between developing countries and transition economies in the context of the UNFCCC. These differences and similarities can then be used to decide whether or not, they should be treated alike in terms of types of commitments that will be required under a future protocol.

#### B. *Developing Countries and Transition Economies: Similarities and Differences*

There is little uniformity within the categories of countries established under the UNFCCC. In fact, in some instances, there are greater differences among countries of the same group than between the groups.<sup>70</sup> It is thus difficult to group together countries from the Pacific Rim, which have shown impressive growth patterns, with some of the least developed countries in Sub-Saharan Africa. Therefore, the objective in this section is to identify characteristics which may be more applicable to one group than the other, notwithstanding the fact that these characteristics may also be applicable to some countries in the other group.

Common characteristics among developing countries and transitional economies are: economic constraints, lack of appropriate technology, varied political stability, a limited contribution to the present greenhouse gas emissions problem, and uncertainty as to future emissions. The main difference between the two groups is past emissions, which, as we have seen, were very high for transi-

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69. H. PEYTON YOUNG, *EQUITY: IN THEORY AND PRACTICE* 163 (1994).

tion economies and, on a per capita basis, low for developing countries.<sup>70</sup>

Despite similarities in the present circumstances, another difference between the two groups is the fact that it may be easier for economies in transition to return to earlier economic prosperity than for developing countries to achieve it. Indeed, for the least developed countries in particular, difficulties in addressing climate change could be largely due to limited economic means, lack of technological know-how, and insufficient infrastructure.<sup>71</sup> In the case of transition economies, their difficulties are mainly due to an economic crisis brought upon by the break-up of their previous political structure. Thus, for developing countries the issue is how to achieve economic development while taking into account environmental concerns, and for transition economies it is a case of returning to earlier economic well-being while ameliorating their environmental situation.

If the economic stability of countries with economies in transition, and thus their ability to combat climate change, was limited at the time of target negotiations, the negotiators did not expect this state of affairs to last long.<sup>72</sup> The fact that transition economies' hot air was perceived as a temporary phenomenon that could be eliminated by economic recovery in the next decade,<sup>73</sup> is another important difference which may be one of the main rationales behind the granting of hot air. It may be a sufficient enough reason to justify not granting hot air to developing countries on the basis of the impartiality principle.

Can developing countries nevertheless rely on hot air as a precedent for target setting? This would depend on the strength of arguments other than "similarity" available to them on that issue.

### C. *Hot Air in the Kyoto Protocol and as Precedent for Hot Air in a Future Protocol*

There are various arguments that could be made in favor of giving developing countries surplus emissions allocations based on the precedent set by the transition economies. First, the fact that the Conference of the Parties recognized that countries with

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70. See Shue, *supra* note 12, at 365.

71. This is an issue, which has underlined the negotiations preceding the adoption of the UNFCCC and resulted in the inclusion of special provisions (art 4.5) on technology transfer.

72. Movchan, *supra* note 52.

73. See Robert Hamwey and Andrea Baranzini, *supra* note 50.

economies in transition needed surplus entitlements to compensate for their economic difficulties could be extrapolated to say that developing countries will require surplus in their future commitments given their own economic difficulties. Indeed, if economies in transition received preferential treatment based on temporary economic circumstances, one could argue that developing countries should receive at least as favorable treatment, if not more, given their endemic economic problems. However, one must note that developing countries did obtain benefits under the UNFCCC, which were not available to the economies in transition, such as financial assistance to fulfill their reporting obligations and to cover the costs of their adaptation measures.<sup>74</sup> Furthermore, developing countries' main equity claims such as technology transfer, exemption from commitments, and financial assistance were included in the UNFCCC, and fair representation in the Convention's financial mechanism was subsequently accommodated.<sup>75</sup>

Second, it could be further argued that if economies in transition were granted hot air in exchange for taking on commitments, developing countries should be entitled to their own hot air when they assume their own commitments. It could be argued that the distinguishing factor in this case is that hot air was a *quid pro quo* for the immediate assumption of commitments. Since developing countries have not yet agreed to assigned amounts, one could argue that they could, potentially if not realistically, emit an unlimited amount of greenhouse gas up until at least the end of the first commitment period or until they assume limitation or reduction targets.<sup>76</sup> This grace period could be considered equivalent to economies in transition's "safety margin" (i.e., their hot air).

A third argument for extending the hot air precedent to developing countries is based on a lack of historical responsibility. Economies in transition made their claim for surplus entitlements based on past emissions levels, while also claiming limited responsibility for those emissions levels, since they were dictated by a foreign authority.<sup>77</sup> Developing countries could contend

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74. Articles 4.3 and 4.4 of the UNFCCC, *supra* note 2, at 855-59.

75. Articles 4.5, 4.3 and 11 of the UNFCCC, *supra* note 2, at 858, 864. The Global Environment Fund, constituted of both developed and developing countries was chosen as the financial mechanism under the UNFCCC.

76. Deborah Adams, *Greenhouse Gas Controls: The future of tradeable permits*, FINANCIAL TIMES ENERGY PUBLISHING 31, 33 (1997).

77. Movchan, *supra* note 52.

likewise that since they did not contribute significantly to the problem in the past, they have a limited responsibility and thus should be awarded surplus entitlements. This hot air could be seen both as a reward for lack of contribution to the problem in the past, and compensation for “unused” potential greenhouse gas emissions. This would further provide developing countries the means to use surplus allowances at a time they needed such allowances for developmental purposes. The fact that for the next decade and a half they need not limit their emissions, however, could again be considered a form of surplus entitlement.

There is yet another argument in favor of granting developing countries hot air: the need to move towards a per capita emissions allocation, which, as will be discussed in Section IV-B below, is a more equitable allocation methodology. Developing countries’ 0.87tC/yr (annual tons of carbon per capita) in 1988 is to be contrasted to transition economies’ emissions of 4.25tC/yr.<sup>78</sup> While high past emissions have served as the basis upon which transition economies obtained hot air,<sup>79</sup> low emission levels could be used *a contrario* to mean that the allocation methodology that best suits the category of the country negotiating assigned amounts should be used. In the case of developed countries and countries with economies in transition, clearly the methodology that accounts for past emissions patterns is the most favorable while for developing countries the per capita methodology would be fairer.

There are a number of claims that could be made by developing countries to obtain surplus emission allocations based on the transition economies’ hot air precedent. Although a distinguishing factor is that the nature of the allocation to transition economies is related to temporary difficult economic circumstances, the argument that economic circumstances have been taken into consideration while setting assigned amounts weighs particularly heavily in favor of the developing countries. The delineating factor as to whether a precedent has been established, however, may be the basis upon which allocations of emissions are made. The next section will therefore look at some of the proposed methodologies for emissions allocations and identify the methodology that best responds to equity considerations.

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78. See Bhaskar, *supra* note 13, at 105.

79. It is clear that past emissions were the allocating criterion, since commitments were set on the basis of a percentage of base year emissions.

## V.

## EMISSIONS ALLOCATION METHODOLOGIES

A. *Traditional Allocation Methodologies*

The debate in the literature over the correct methodology for allocating emission rights has been useful in negotiating the adoption of the UNFCCC and the Kyoto Protocol, and been helpful in developing a system for allocating tradable permits.<sup>80</sup> The basic questions underlying the debate are: what is a fair allocation, who can emit how much, and on what basis? Adams puts the question quite squarely when she states that “the two parameters that have to be considered when making the initial allocation are: what would be equitable, and what would be politically acceptable?”<sup>81</sup>

These questions are no longer purely theoretical because the adoption of the Kyoto Protocol, which used the grandfathering methodology to attribute quantified emissions reduction and limitation targets,<sup>82</sup> means that one methodology has become a reality. The discussion on allocation methodologies is, however, not moot. The choice of one criterion behind an allocation in a particular legal instrument, in this case the Kyoto Protocol, does not foreclose the possibility of adopting another criterion in a future protocol, because the parties undertaking the commitments are different. One can also make the argument, as suggested above, that the parties involved ought to choose the methodology which best suits them.

Although there have been many proposals as to possible criteria for allocating emission rights, three in particular have captured most of the attention: grandfathering, emissions quotas proportional to Gross Domestic Product (GDP), and equal per capita emission quotas.

## 1. Grandfathering

The basic tenet behind grandfathering is the notion that a property right is established through use. This means that the entitlement to emit in the future is equivalent to current emis-

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80. For an extensive review of the different positions, see Adams, *supra* note 76.

81. See Adams, *supra* note 76. See also her discussion of the different types of allocations of tradeable permits which can be assimilated to emissions entitlement by analogy, at 31 and Grubb, *supra* note 31, at 484.

82. Adams, *supra* note 76.

sions, which are reduced proportionally, in order to meet the stabilization objective of the UNFCCC.<sup>83</sup>

The grandfathering approach favors developed countries and economies in transition, also called Annex I Parties, which negotiated their assigned amounts in Kyoto, insofar as they had the lion's share of emissions in 1990. Although not stated as such, the grandfathering approach is certainly one of the bases for granting hot air to transition economies, since it considers previous emission patterns in determining an emissions cap.

Grandfathering, however, can be seen as inequitable, since it gives preferential treatment to high emitting countries and penalizes low emitters like developing countries and countries that have already made efforts to lower their emissions. In addition, grandfathering may provide a negative incentive to developing countries, which do not yet have assigned amounts, to increase emissions in order to benefit from a higher emissions level. From an equity standpoint, and in light of the stabilization requirement of the UNFCCC, grandfathering is not a viable option in the future.

## 2. Emission Quotas Proportional to GDP

A second criterion for allocating emission rights is emissions quotas proportional to GDP. This criterion posits that all production should be required to be equally clean in terms of emissions, wherever it takes place.<sup>84</sup> The problem with using emission quotas proportional to GDP is that it puts a burden on developing countries to have clean emissions, which they might not be able to afford. Indirectly, it may force developing countries to obtain technological know-how through the flexibility instrument of the clean development mechanism (CDM) of the Kyoto Protocol.<sup>85</sup> It is not clear whether this type of constraint is acceptable. Furthermore, it ignores past responsibilities and the leadership role required of developed countries in the UNFCCC.

## 3. Equal Per Capita Emission Quotas

The basic tenet behind equal per capita emission quotas is that the environment belongs equally to all human beings, and every-

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83. *Id.* at 31.

84. *Id.* at 35.

85. Article 12 of the Kyoto Protocol, *supra* note 5, at 865.

one is entitled to an equal share.<sup>86</sup> This criterion favors the developing world insofar as it has the largest population. There has been some debate as to whether a base year for the calculation of entitlement should be selected or whether entitlement should be based on present population.<sup>87</sup> It has also been suggested that this criterion may provide an incentive for population growth, even though the likelihood that a developing country might change its population policy in view of possible benefits in terms of the UNFCCC seems remote. The methodology for this criterion would require first establishing the objective reduction to be achieved, and then the entitlements could be distributed in such a manner as to reach the target. A problem arises in that an acceptable level of emissions for the developed countries might constitute excessive emissions by these countries and thus result in increases rather than decreases in overall greenhouse gas emissions. This would also be contrary to the spirit of the UNFCCC.

#### B. *Equitable Emissions Entitlement Methodology*

The per capita emission quota criterion has been refined further by many authors.<sup>88</sup> Termed the “natural” debt by Smith, this criterion is based on the assumption that “[i]nternational agreements to limit climate change will be easier to negotiate if they are perceived to be equitable. Hence, they must begin with the premise that every human being has the same equal right to atmospheric resources.”<sup>89</sup> This criterion would allow every human being, past or future, to emit the same quota of carbon on an annual basis.<sup>90</sup> The global carbon budget is defined as the cumulated carbon emissions from 1800 to 2100 to form a 1990 emissions scenario, which gives the per capita emissions rate. As a result, increased allocations devolve onto developing countries whereas developed countries must proportionately reduce their

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86. This criterion was discussed by Michael J. Grubb in the context of climate change as early as 1989 in *The Greenhouse Effect: Negotiating targets*, ROYAL INST. INT'L AFF. (1989).

87. See *supra* note 76 and M. den Elzen, et al., *Allocating Constrained Global Carbon Budgets: Inter-regional and inter-generational equity for a sustainable world*, 4 INT'L J. GLOBAL ENERGY ISSUES 287 and K.R. Smith, *The Natural Debt: North and South*, in CLIMATE CHANGE: DEVELOPING SOUTHERN HEMISPHERE PERSPECTIVES 423 (T.W. Giambelluca and A. Henderon-Sellers eds., 1996).

88. *Id.*

89. Smith, *supra* note 87, at 440.

90. Adams, *supra* note 76, at 33.

own emissions. Adams states that, "these regional emissions debts and credits increase the future per capita budget for the developing regions to 0.2-0.8tC/y per capita, whereas North America and the EU end up with a negative future carbon budget of 0.4-1.5tC/y per capita."<sup>91</sup>

What this theory implies is that there should be a process whereby global emissions contract and eventually converge on the basis of per capita entitlement. This means that the per capita emissions from developed countries should contract, while emissions from developing countries are allowed to increase, until such a point where they converge. The level of convergence should be acceptable not only to the parties, but should favor the ultimate goal of emissions stabilization.

In Smith's words, "[t]he challenge facing humanity, therefore, is to find ways by which the many benefits accompanying economic development can be attained by the Southern Ecosphere without a simultaneous emission of the amounts of greenhouse gases that has accompanied such economic development in the North, and to reduce dramatically the emissions from the Northern Ecosphere at the same time."<sup>92</sup>

This review of the different methodologies demonstrates that what is equitable and what is politically feasible is often at odds. As Rayner explains, background allocation is a key element of policy negotiation in climate change. Models of procedural equity like Coase's model of social costs and Rawls' criterion for social welfare can assist negotiators,<sup>93</sup> but at the end of the day, policy-makers will have to determine a feasible and equitable way of attaining the UNFCCC stabilization objective.

## VI.

### CONCLUSION

*The discussion above demonstrates that equity considerations have their place in the negotiation and implementation of the UNFCCC and the Kyoto Protocol. Developing countries, which did not contribute to the greenhouse gas problem in the past and still play a relatively minor role in this sphere, were able to claim differentiated treatment based on equity. This was reflected in a*

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91. *Id.* at 34.

92. Smith, *supra* note 87, at 424.

93. See Michael Thompson and Steve Rayner, *Cultural Discourse*, in HUMAN CHOICE AND CLIMATE CHANGE, VOL. I., THE SOCIETAL FRAMEWORK 265, 306-09 (Steve Rayner and Elizabeth Malone eds., 1998).

*number of provisions under the UNFCCC, and later in international agreements like the Kyoto Protocol.*

Since emission levels of the developing countries will likely surpass those of the developed world in a business-as-usual scenario by the year 2020, there is mounting pressure on them to commit to some target level in the future. Such commitments remain a contentious issue in the negotiation process because the Parties agreed that no commitments would be demanded of the developing countries until the developed world demonstrated clear leadership. In addition, because scenarios of economic growth for developing countries vary greatly, it is difficult to ascertain what target levels would be fair. Finally, great difficulties remain in securing an agreement on the allocation methodology to be used to establish quantified emission limitation and reduction targets for developing countries.

In this context, the granting of hot air to countries with economies in transition could help the developing world negotiate low emission targets. The fact that economic performance of countries in transition was considered when determining their level of commitments tends to support the right of developing countries to make a similar claim. However, there are important differences between the two types of countries, namely past emission levels and the timing of assumption of commitments. Nonetheless, equity requires that the issue of hot air be resolved by considering the developing countries' right to economic development as recognized under the UNFCCC, and acknowledging that greenhouse gas emissions are an unavoidable part of economic development.