

Meaningful Participation in a Global Climate Regime

by Bryant Walker Smith

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Editors' Summary

An effective climate regime must be global rather than merely international and must recognize the significant involvement of actors other than states. This Article first examines the role of statism in the existing international climate regime and challenges several assumptions that underlie the demand for the global South's "meaningful participation" in that regime. It then demonstrates how the global South is already participating in a *global* climate regime through the activities of private economic actors from around the world. It finally proposes approaches for reconciling these two important regimes in the agreement that succeeds the Kyoto Protocol.

During international climate negotiations in 1997, the United States announced that it would not "assume binding obligations unless key developing countries meaningfully participate" in the climate regime.¹ This ambiguous condition,² which reflected the U.S. political reality at the time,³ has since come to euphemize if not epitomize the global North's chief climate demand of the global South.⁴

Scholars have explored whether a demand that developing countries undertake binding emissions limits is justified by principles of law, equity, effectiveness, and efficiency.⁵ Such an inquiry tends to implicitly accept the state-oriented approach that has dominated the climate dialogue and, to a surprisingly lesser extent, the climate regime. That statist approach, while central to Westphalian international law, has in the context of climate change privileged legal output over practical impact, discouraged the decoupling of economic growth and emissions, and narrowed the set of tools and actors available to address this global problem.

The thesis of the Article is this: "Meaningful participation" in a *global* climate regime is already occurring in the global South. That participation helps to satisfy the existing if limited international legal obligations undertaken by developing states and merits greater recognition in future legal regimes. Moreover, that participation constitutes a form of global governance separate from the United Nations Framework Convention on Climate Change (UNFCCC) and, regardless of its legal status, deserves greater attention in practical efforts to address climate change. In short, an

1. *Summary of the Meeting of the UNFCCC Subsidiary Bodies: 20-31 October 1997*, EARTH NEGOTIATIONS BULL. (Int'l Inst. for Sustainable Dev., Winnipeg, Can.), Nov. 3, 1997, at 3, available at <http://www.iisd.ca/download/pdf/enb1266e.pdf>.
2. A policy paper circulated within the George W. Bush Administration derisively characterizes this condition as "illusory." See Christopher C. Horner, *Post-Hague "Kyoto" Strategy for Incoming Administration*, at 4, available at http://georgewbush-whitehouse.archives.gov/ceq/foia/kyoto/kyoto_appeal_45.pdf:
The incoming [Bush] administration needs to promptly set forth a set of principles that will guide the U.S. in its participation in all future discussions under the UNFCCC. These must include the Hagel/Byrd requirement of no economic harm to the U.S., and like participation by developing countries (not the illusory "meaningful participation by key developing countries" as [the Clinton] Administration unilaterally revised the Hagel/Byrd restriction). Also, until an understanding of Kyoto's terms is reached, these must include reaffirming the UNFCCC's "voluntariness" aspect.
3. See LAVANYA RAJAMANI, DIFFERENTIAL TREATMENT IN INTERNATIONAL ENVIRONMENTAL LAW 226-27 (2006) (discussing the Byrd-Hagel Amendment).
4. See Press Release, President Bush Discusses Climate Change, Apr. 16, 2008 ("So the United States has launched—and the G8 has embraced—a new process that brings together the countries responsible for most of the world's emissions. We're working toward a climate agreement that includes the meaningful participation of every major economy—and gives none a free ride."). Variants of the demand have also been applied to the United States. See, e.g., Summary of Online Submissions: European NGOs, at 2, <http://ec.europa.eu/environment/climat/pdf/stakeholders/consultation/ngo.pdf> ("The EU is in a position to pressure the US into more meaningful participation in combating climate change.").
5. For an excellent discussion, see RAJAMANI, *supra* note 3, at 225-36.

effective climate regime must be global rather than merely international and must contemplate the significant involvement of actors other than states.

Developing that argument entails several steps. Following this introduction, Part One introduces the international climate regime that both reflects and diverges from the statist approach. Part Two challenges several conceptions that are central to the statist demand that the governments of developing countries undertake greater commitments. Part Three explores the private economic actors that can “meaningfully participate” in climate efforts. Part Four applies these lessons to the climate regime. Part Five concludes.

I. Statism in the International Climate Regime

A. Overview of the Regime

The UNFCCC remains important as the most explicit source of climate-related obligations on developing-country parties and on industrialized-country parties like the United States and Australia that declined to ratify the subsequent Kyoto Protocol.⁶ Most industrialized countries, however, have since assumed firmer obligations under that protocol. The UNFCCC seeks “to achieve . . . stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”⁷ In spite of language that wavers atop the hazy zenith of a sandy mountain of ambiguity,⁸ the convention does present some important bases of obligation and treatment.

The UNFCCC embraces the principle of “common but differentiated responsibilities.”⁹ While this supports differentiation among industrialized countries,¹⁰ it primarily continues the compromise between developing and industrialized countries that emerged from the 1972 Stockholm Convention. All industrialized countries—those that self-identify as “developed” in Annex I—are to “take the lead” in the mitigation of and adaptation to climate change.¹¹ Accordingly, the “effective implementation” of developing country commitments depends on the fulfillment of financial and technological commitments by industrialized countries and is subservient to goals of development and poverty eradication.¹² Critically, the convention recognizes that both the

developing world’s energy consumption and its share of global emissions will need to grow.¹³

Both developing-country and industrialized-country parties, “taking into account” their individual characteristics, make ten broad commitments.¹⁴ They agree to “promote and cooperate” in research, technology, information exchange, and education and to “cooperate in preparing for adaptation to the impacts of climate change.” They also commit to developing “national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol,” an international agreement that addresses the depletion of the stratospheric ozone layer.¹⁵

Parties further agree to implement programs to mitigate climate change, to promote the sustainable management of greenhouse gas (GHG) sinks and reservoirs (such as biomass, forests, and oceans), and to “take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions.” These obligations in particular implicate domestic action. Finally, the parties agree to share their GHG inventories and general mitigation strategies with the international community.¹⁶

The UNFCCC also establishes a plenary Conference of the Parties (COP) that meets annually to monitor implementation of the convention. At COP-1 in 1995, the parties moved toward binding emission reduction commitments for industrialized countries while explicitly disavowing similar binding commitments for developing countries.¹⁷ Two years later at COP-3, the parties adopted the Kyoto Protocol.

The Kyoto Protocol deals almost exclusively with the largely industrialized countries identified in the amended Annex I of the UNFCCC.¹⁸ While reaffirming commitments contained in the convention, it creates no new substantive commitments for non-Annex I parties.¹⁹ Instead, these developing countries are potential beneficiaries of one of the protocol’s provisions, the Clean Development Mechanism (CDM).

Under the protocol, Annex I parties agree to cap or reduce certain anthropogenic GHG emissions—what the protocol calls “quantified emission limitation and reduction commitments.”²⁰ These parties must make “demonstrable progress” toward their individual commitments by

6. This subsection is adapted from a previous paper. See generally Bryant Walker Smith, *Air Pollution as an Asset: China’s Use of the Kyoto Protocol’s Clean Development Mechanism* 9-12 (2007) available at http://works.bepress.com/bryant_walker_smith/4/.

7. United Nations Framework Convention on Climate Change art. 20, May 9, 1992, 1771 U.N.T.S. 107, available at <http://unfccc.int/resource/docs/convkp/conveng.pdf> [hereinafter UNFCCC].

8. See, e.g., *id.* art.4(2)(a)-(b).

9. *Id.* art. 4.

10. See *id.*

11. *Id.* art. 3(1). Developed-country parties listed in Annex II undertake greater obligations toward developing countries than those parties listed only in Annex I.

12. *Id.* art. 7 (emphasis added). In the event of failure of industrialized-country parties to meet their obligations, the convention appears to excuse a developing-country party’s nonfulfillment rather than negate the actual obligation.

13. *Id.* pmbl.

14. See *id.* art. 4.

15. See Montreal Protocol on Substances That Deplete the Ozone Layer, Sept. 16, 1989, 1522 U.N.T.S. 3, available at http://www.unep.ch/ozone/Publications/Handbooks/MP_Handbook_2006.pdf.

16. See UNFCCC, *supra* note 7, arts. 4, 12.

17. See RAJAMANI, *supra* note 3, at 217.

18. Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 11, 1997, 37 I.L.M. 22, available at <http://unfccc.int/resource/docs/convkp/kpeng.pdf> [hereinafter Kyoto Protocol]. See generally Deborah E. Cooper, *The Kyoto Protocol and China: Global Warming’s Sleeping Giant*, 11 GEO. INT’L ENVTL. L. REV. 401 (1999); Anita M. Halvorssen, *The Kyoto Protocol and Developing Countries—The Clean Development Mechanism*, 16 COLO. J. INT’L ENVTL. L. & POL’Y 353 (2005).

19. Kyoto Protocol, *supra* note 18, art. 10.

20. *Id.* art. 3. While the protocol allows some Annex I countries to actually increase their emissions over 1990 levels, this Article uses “reduction” to refer to both reduction and limitation of emissions.

2005, reach these commitments by 2008, and maintain them through 2012.²¹ The protocol further specifies that the COP shall, no later than 2005, “initiate the consideration of” commitment periods subsequent to the initial period of 2008-12.²²

Although the protocol emphasizes domestic emission reduction as the primary mechanism by which Annex I countries will meet their commitments, it also provides considerable flexibility through three “supplemental” mechanisms.²³ Emission trading enables an Annex I country that has not reached its assigned amount of emissions to sell its surplus—with some restrictions—to other Annex I countries that might otherwise exceed their assigned amounts.²⁴ Joint implementation enables an Annex I country to obtain emission reduction units (ERUs) from an emission reduction project in another Annex I country.²⁵ The CDM, which is the only mechanism of the three to involve non-Annex I parties, enables an Annex I country to obtain certified emission reductions (CERs) from an emission reduction project in a country that is party to the protocol but not identified as an Annex I country.²⁶

B. Statist and Nonstatist Elements

The UNFCCC and its Kyoto Protocol are agreements among sovereign states. The UNFCCC text explicitly reaffirms “the principle of sovereignty of States in international cooperation”²⁷ and emphasizes without explanation the principles of international law that “States have . . . the sovereign right to exploit their own resources . . . and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.”²⁸ Although its preamble refers to “countries,” its operative provisions refer almost entirely to “Parties.”

Accordingly, the UNFCCC imposes the entirety of its obligations on states alone,²⁹ speaks almost exclusively to national and supranational entities,³⁰ creates subsidiary bodies “compris[ing] government representatives,”³¹ and assumes the conceptual integrity of “national inventories of anthropogenic emissions.”³² One of the paragraphs on technology

transfer, an area in which the private sector might be a primary driver, is revealing:

The developed country *Parties* and other developed *Parties* included in Annex II shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other *Parties*, particularly developing country *Parties*, to enable them to implement the provisions of the Convention. In this process, the developing country *Parties* shall support the development and enhancement of endogenous capacities and technologies of developing country *Parties*. *Other Parties and organizations in a position to do so may assist in facilitating the transfer of such technologies.*³³

A single ambiguous reference to organizations follows seven references to Parties, and even that reference might contemplate merely international organizations. The closest that the UNFCCC text comes to subnational cognizance is its reference to “relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors.”³⁴

The Kyoto Protocol’s text goes somewhat further toward acknowledgment of nonstate participation. The COP shall “seek and utilize, where appropriate, the services and cooperation of . . . non-governmental bodies.”³⁵ The protocol’s technology transfer provision also demonstrates a slight shift; parties shall cooperate in the “creation of an enabling environment for the private sector.”³⁶

The provisions for the CDM and joint implementation are the most dramatic shift, even though the text largely downplays the significant private involvement in these mechanisms. “A Party included in Annex I may authorize legal entities to participate, under its responsibility, in actions leading to the generation, transfer or acquisition” of ERUs.³⁷ Participation under the CDM “may involve private and/or public entities”³⁸ and has in fact involved numerous private entities.³⁹

Nonetheless, the binding emissions caps that are the key feature of the Kyoto Protocol perpetuate the regime’s statism. As two scholars have noted, the caps constitute an output-to-input approach that focuses international attention on the actual emissions rather than on the emissions-generating activities.⁴⁰ In the eyes of the regime, the state becomes the polluter. The next two sections disaggregate this conception of the state by exploring the private actors that are polluters and hence participants.

21. *Id.* art. 3.

22. *Id.*

23. The protocol also allows countries to jointly fulfill their individual commitments if they have agreed to do so by their dates of ratification. *See id.* art. 4. This mechanism was intended for and used only by the European Union. Interestingly, it is *not* explicitly supplemental to domestic action.

24. *Id.* art. 17.

25. *Id.* art. 6.

26. *Id.* art. 12. Substantively, a CER is an ERU by a different name.

27. UNFCCC, *supra* note 7, pmb1.

28. *Id.*

29. Or “regional economic integration organizations”—that is, the European Union. *See id.* art. 1(6).

30. *See, e.g., id.* pmb1. (“Conscious of the valuable analytical work being conducted by many States on climate change and of the important contributions of the World Meteorological Organization, the United Nations Environment Programme and other organs, organizations and bodies of the United Nations system, as well as other international and intergovernmental bodies, to the exchange of results of scientific research and the coordination of research.”).

31. *Id.* arts. 9(1), 10(1).

32. *See, e.g., id.* art. 4(1)(a).

33. *Id.* art. 4(5) (emphasis added).

34. *Id.* art. 4(1)(c).

35. *Id.* art. 13(4)(i).

36. *Id.* art. 10(c).

37. Kyoto Protocol, *supra* note 18, art. 6(3).

38. *Id.* art. 12(9).

39. *See* UNFCCC web page, CDM: Project Activities, <http://cdm.unfccc.int/Projects/registered.html> (last visited July 30, 2009).

40. *See* Thomas C. Heller & P.R. Shukla, *Development and Climate: Engaging Developing Countries*, in *BEYOND KYOTO: ADVANCING THE INTERNATIONAL EFFORT AGAINST CLIMATE CHANGE* 111, 114, 125 (Pew Center on Global Climate Change 2003), available at <http://www.pewclimate.org/docUploads/Beyond%20Kyoto.pdf>.

II. Challenging Statism

A. State and Country

This Article distinguishes between “state” as the entity recognized as sovereign in international law and “country” as the collection of land, resources, people, and activity over which that state’s sovereignty is presumed if not actually effected. This approach mirrors the UNFCCC’s implicit distinction between “country” (in the preamble) and “Party” (in the articles). This distinction also lays the groundwork for the discussion of the meaningful participation of nonstate actors within a country and for the attribution of those actions to the state.

In the Westphalian system, states are the sole shapers and subjects of international law; each of these sovereigns is equal on the world stage and omnipotent on the domestic stage. That system is an artificial one in its assertions of both equality and omnipotence. As discussed below, however, artificial assertions are not inherently objectionable; rather, they warrant careful scrutiny for the frameworks that they construct.

As to the notion of equality, states are equal as sovereigns but unequal as powers. The early 20th century view that “[a]ll States, whether great or small, have equal rights and duties in matters of international law”⁴¹ evolved into a late 20th century view that the “unequal rights and duties” of states result from “the exercise of their equal sovereignties.”⁴² Rather than provide the original source of power, international law reflects, magnifies, constrains, and perpetuates power. Accordingly, both the favorable treatment that industrialized countries have accorded themselves since their colonial days and the more recent favorable treatment of developing countries—embodied in the principle of common but differentiated responsibilities—are applications of rather than challenges to the notion of sovereign equality.⁴³

As noted above, the UNFCCC imposes different obligations on parties based on their level of development. Its use of self-identification framed and then delayed a key question for the regime: What is a developing country? At the outset, categorization and the nomenclature that it employs tend both to exaggerate and to obscure difference, and although “developing country” is a term of convenience that even this Article adopts, it is imprecise in several regards.

First, the term does not specify which characteristics of “countrydom” are developing. Developing countries might be developing their land. They might be developing their industry, as juxtaposition with the term “industrialized country” suggests. They might be developing robust and efficient markets that facilitate and profit from that industry. They might be developing a strong state to regulate, supplement, or simply enable those markets. Or in the absence of a strong state and robust markets, they might be developing alternate mechanisms that mimic both, as the discussion on conglomerates below suggests.

Second, developing countries share more differences than similarities. Although the United States primarily meant China and, to a lesser extent, India in its reference to “key developing countries,” climate change actually implicates several types of key countries. Although they are generally not discussed in this Article, the least-developed countries (LDCs) and small island states matter because they stand to suffer the most from climate change. Populous countries matter because of their sheer size; India’s overall emissions are large even though its per capita emissions are small.⁴⁴ Industrializing countries matter because their emissions are rising rapidly.⁴⁵ Equatorial countries matter because changes in their land use could contribute significantly to climate change.⁴⁶ Oil-rich countries matter because of the particular severity of their governments’ carbon addiction. “Critical moment” countries matter because they are at the point most conducive to pursuing an alternate path of development or to leapfrogging in technology and infrastructure.⁴⁷

Third, few if any countries (developing or otherwise) are internally uniform. If the international system is concerned only with the actions of the singular state, domestic diversity may be irrelevant. But if the system is concerned with the actions of the country, that diversity is critical. One example is the disputed association between per capita income and some conception of environmental awareness.⁴⁸ If that association holds, the behavior of private firms and subnational governments may depend more on the region than on the country in which they are located.

B. Border and Beneficiary

Climate change is the epitome of the borderless problem. Under the standard formulation, local activities cause global changes that have local impacts. This formulation predetermines the response: The states in which the local activities occur must take steps to address them. However, the purely geographic attribution of emissions is both incomplete and imprecise. Moreover, it implies that international interdependence exists only in the realm of consequence and not in the realm of causation.

The Kyoto Protocol failed to address one of the most concrete examples of this interdependence in causation: international air and sea travel. Under the protocol, emissions from air and sea transport do not count toward any state’s emissions targets.⁴⁹ Although these emissions are significant and rapidly growing,⁵⁰ the statist model is ill-disposed to attri-

44. The Climate Analysis Indicators Tool (CAIT), developed by the World Resources Institute, provides a useful collection of climate-related data. References to CAIT in this Article imply a search of that database. See World Resources Institute, Climate Analysis Indicators Tool (CAIT), <http://cait.wri.org/cait.php>.

45. See *id.*

46. See *id.*

47. See Simone Pulver, *Introduction: Developing-Country Firms as Agents of Environmental Sustainability?*, 42 *STUD. COMP. INT’L DEV.* 191, 198 (2007).

48. See *id.* at 197.

49. See Kyoto Protocol, *supra* note 18, art. 2(2) & Annex A.

50. See European Federation for Transport and Environment, *Bunker Fuels and the Kyoto Protocol: How ICAO and the IMO Failed the Climate Change Test*, June 2009, 5.

41. RAJAMANI, *supra* note 3, at 2 (quoting Pitt Cobbett).

42. *Id.* at 2 (quoting Colin Warbrick).

43. See generally *id.*

bute emissions from an airplane that takes off in one country, travels through the airspace of several others, and finally lands in yet another (even without considering the nationalities, origins, and destinations of that airplane's passengers). The European Union has integrated certain aviation emissions into its trading scheme and envisions the regulation of shipping emissions, but action at the international level has been more limited.⁵¹

The potential incongruity between geography and responsibility extends beyond ships and planes. Under a statist model that focuses exclusively on domestic production, the consumption of imported goods or overseas services is a carbon-free act. This distinction between production and consumption matters. Although China recently surpassed the United States to become the world's largest emitter of carbon dioxide (CO₂), net exports from China accounted for 23% of that country's 2004 emissions, an amount comparable to all of Japan's emissions.⁵² Because "China's trade surplus has continued to rise more rapidly than growth in emissions or the economy," this percent has likely increased since 2004.⁵³

These emissions might fairly be described as the result of "activities within [the] jurisdiction or control"⁵⁴ of multiple states. Although production (and hence emission) occurs in one country, the demand, strategic direction, and capital that drive that production may all come from other countries. Each of these activities is a necessary but not sufficient condition for the actual release of GHGs.

Related to this issue is the shift of some kinds of economic activity from the global North to the global South. On one hand, the relocation of manufacturing from the United States to China might well produce a net increase in total direct emissions: The Chinese economy is more GHG-intensive than the U.S. economy⁵⁵ (and, more to the point, the manufacture in China of a product generally involves more direct emissions than the manufacture in the United States of an equivalent product), shipping distances and hence emissions are greater, and the lower prices that result from lower manufacturing costs encourage greater consumption.

On the other hand, the relocation of service industries from the United States to India might well produce a net decrease in total emissions if the alternative is greater immigration into the United States to maintain the industry domestically: The per capita emissions of India are considerably lower than those of the United States.⁵⁶ In

any event, considerable differences also exist in the GHG efficiency of countries (and regions and sectors) in the global North; a global market determined solely by GHG efficiency would compel the "bankruptcy" of countries like Australia and Canada.⁵⁷

The globalization of pollution plays out in the context of the broader phenomenon of globalization and the debate over that phenomenon's winners and losers. At the outset, it may be empirically incorrect to equate the "export of pollution" and the "export of jobs." Whereas lower labor costs often do drive a shift in manufacturing, lower environmental standards apparently do not: "Strict environmental policy does not lead to the relocation of 'dirty industries' into developing countries with re-imports of the products into industrialized countries."⁵⁸ If the price of compliance with more stringent emissions limits remains a small part of overall cost, then emissions might increase as certain economic activities shift to developing countries, but those activities will not shift to developing countries solely because emissions can increase.

Although free trade is believed to increase overall wealth, the resulting shifts in economic activity can create individual economic losers such as factory workers in the global North who are deprived of their jobs along with the prospect of reemployment in the same sector. The shifts can also create environmental losers such as communities that are exposed to more local or regional pollution. The greenhouse picture, however, is more complex. If emissions shift but do not increase, then there are no localized losers. And if emissions shift and increase, then the most adversely affected are likely to be in small island states and other vulnerable areas that neither gained nor lost the source of the emissions.

One of the implications of this balancing is that if the cost of emissions is internalized to the source of those emissions, consumers may be indifferent between emission reductions that occur in their own country and emission reductions that occur outside their country. More concretely, emission reductions in China could also impose "costs" on U.S. consumers in the form of higher prices.

The statist approach's emphasis on territorial emissions supplants this broader discussion of cost and benefit with the implicit assumption (or inevitable implication) that states necessarily suffer losses by reducing "their" emissions. This exerts "a disciplining effect on state managers and policy makers, producing the 'competition state,' whose primary goal is to be an attractive location for MNC [multinational corporation] activity."⁵⁹ Viewed in this light, the call for "meaningful participation" is merely a demand for mutual (perceived) handicap. As the next section illustrates, however, both the range of participants and the range of participation can be much more complex.

51. See Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community; Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community; International Maritime Organization, Climate change on the agenda as U.N. agency leaders meet at IMO, Briefing 19, 8 May 2009, available at http://www.imo.org/Newsroom/mainframe.asp?topic_id=1773&doc_id=11336.

52. See Tao Wang & Jim Watson, *Who Owns China's Carbon Emissions?*, TYNDALL BRIEFING NOTE (Tyndall Centre for Climate Change Research, Norwich, U.K.) No. 23, Oct. 2007, 1.

53. *Id.*

54. UNFCCC, *supra* note 7, pmb1.

55. See CAIT, *supra* note 44.

56. See *id.*

57. See *id.*

58. See Martin Jänicke & Klaus Jacob, *Lead Markets for Environmental Innovations*, 4 GLOBAL ENVTL. POL. 29, 31 (2004), available at http://muse.jhu.edu/journals/global_environmental_politics/v004/4.1janicke.pdf.

59. David L. Levy & Aseem Prakash, *Bargains Old and New: Multinational Corporations in Global Governance*, 5 BUS. & POL. 131, 138 (2003).

III. Private Economic Actors as Meaningful Participants

A. MNCs

I. Variation Among and Within Firms

Like countries, MNCs defy simplistic characterization. And like countries, significant differences exist both among firms and within each particular firm that shape corporate responses to climate change. Before exploring those responses, this subsection explores the notion of an MNC.

MNCs are a significant global force. Some 65,000 MNCs operated some 850,000 affiliates around the world in 2005. Of the world's 100 largest economic entities on the basis of value added in 2000, 29 were MNCs.⁶⁰ As the largest MNC and the 45th largest economic entity, ExxonMobil had a value added that was comparable to the gross domestic product (GDP) of Pakistan (and yet was equal to only one-half of 1% of the GDP of the United States). Taken alone, the 100 largest MNCs accounted for 4.3% of world GDP in 2000, up from 3.5% in 1990. When suppliers and other associated enterprises are included, the contribution is likely much higher.

General Electric (GE), whose value added in 2000 was comparable to the GDP of Kuwait or Nigeria, acts like a state in other respects.⁶¹ The conglomerate has its own self-described “minister of foreign affairs” and has adopted a “company-to-country marketing approach” that targets the governments and government-owned businesses of rapidly developing countries.⁶² It emphasizes infrastructure, transport, security, health-care, and financial services. While only 15% of GE's revenue came from developing countries in 2005, GE expects this to surpass 30% by 2010.

For such truly global companies—GE derives about one-half of its revenue from outside the United States⁶³—the question of national identity might seem anachronistic.⁶⁴ Indeed, some authors argue that “[g]lobal, stateless corporations with ownership and management spread across multiple countries are . . . increasingly dissociated from any particular home country.”⁶⁵ Nonetheless, the “home-country effect” remains highly significant in determining corporate character and strategy.⁶⁶ A study of the two European and two American “supermajors” in the oil industry, for example, identified each company's domestic experiences with regula-

tion, regulators, and the public as key to explaining the variation in response to climate change.⁶⁷

If home country remains relevant, then the growing number of MNCs based in the developing world deserves particular attention. The number of such MNCs in the Fortune 500 grew from 26 in 1988 to 61 in 2005.⁶⁸ Of the 100 MNCs with the most *foreign* assets in 2005, two are from Hong Kong, two are from Korea, and one is from each of Malaysia, Mexico, and Singapore (with the remaining 93 from industrialized countries).⁶⁹

The characteristics of these so-called emerging MNCs⁷⁰ also merit attention. MNCs from the global South may have corporate governance structures that “differ from the public company model of widespread ownership” and are more likely to be either state-owned or perceived as state-owned.⁷¹ They may have close linkages with MNCs from the global North, in some cases “to the point of being asked to follow their customers and invest overseas.”⁷² Their expansion may take them directly into the North as they acquire well-known and well-established firms, brands, and—critically—technologies.⁷³ Conversely, their expansion may take them (and their technology) into countries whose small size and lack of development are unappealing to MNCs from the global North.⁷⁴ What standards such firms bring with them is less clear.⁷⁵

In addition to variation among firms, significant variation exists within each firm; just as states are not singular monoliths, firms consist of many parts and people. As a study of Petroleos Mexicanos (Pemex) concluded, “firm greening is a strategic choice promoted by [certain] firm managers in a competitive environment of other choice possibilities.”⁷⁶ Similarly, GE Infrastructure can finance energy projects in developing countries but must nonetheless defer to GE Capital on whether a customer seeking such financing poses an “acceptable risk.” The head of GE Infrastructure noted this dynamic: “If a customer asks for financing, we will bring everything we have to bear to try to get it.”⁷⁷

2. Participation by Firms

MNCs from the global North and the global South have a significant physical and economic presence in developing countries. GE, for example, imposes environmental require-

60. Press Release, U.N. Conference on Trade & Dev. (UNCTAD), Are Transnationals Bigger Than Countries? (Dec. 8, 2002). “For firms, value added can be estimated as the sum of salaries and benefits, depreciation and amortization, and pre-tax income.” *Id.*

61. *Id.*

62. Claudia H. Deutsch, *G.E. Becomes a General Store for Developing Countries*, N.Y. TIMES, July 16, 2005.

63. *Id.*

64. See David L. Levy & Ans Kolk, *Strategic Response to Global Climate Change: Conflicting Pressures on Multinationals in the Oil Industry*, 4 BUS. & POL. 275, 278-79.

65. *Id.*

66. *Id.* at 289.

67. *Id.* at 289-91.

68. Dilek Aykut & Andrea Goldstein, *Developing Country Multinationals: South-South Investment Comes of Age*, in INDUSTRIAL DEVELOPMENT FOR THE 21ST CENTURY: SUSTAINABLE DEVELOPMENT PERSPECTIVES (United Nations, 2007), at 85, 85, available at http://www.un.org/esa/sustdev/publications/industrial_development/1_3.pdf.

69. UNCTAD, WORLD INVESTMENT REPORT: TRANSNATIONAL CORPORATIONS, EXTRACTIVE INDUSTRIES AND DEVELOPMENT 229 tbl. A.I.13 (2007) (listing the world's top 100 nonfinancial TNCs, ranked by foreign assets, 2005), available at http://www.unctad.org/sections/dite_dir/docs/wir2007/top100_en.pdf.

70. Aykut & Goldstein, *supra* note 68, at 85.

71. *Id.* at 95-96, 101.

72. *Id.* at 96.

73. See *id.* at 97.

74. See *id.* at 98.

75. See *id.* at 99-101.

76. Pulver, *supra* note 47, at 201.

77. Deutsch, *supra* note 62.

ments on its suppliers, invests in new plants in developing countries, promises to improve the green credentials of its products and operations, and is seeking a large share of the “\$80 billion that it expects China to spend on fuel-efficient, low-pollutant products.”⁷⁸ On the other hand, GE sees developing-country markets as an opportunity to extend the life of otherwise obsolete product lines that may not be as efficient as their successors. “[O]lder aircraft sell well in Russia, while India is a prime market for lower-end X-ray machines.”⁷⁹

By virtue of their significant presence, MNCs play an important role in the response (or lack thereof) to climate change. Even though MNCs often “adapt their political strategies to meet host country conditions,”⁸⁰ there are at least two reasons why the responses of global firms to climate change are likely to be more global in nature.

First, those responses are not exclusively a political strategy. “[T]he tight linkage required between market and non-market strategies makes it difficult to pursue diverse political strategies if the market environment demands a global product and technology strategy.”⁸¹ Consistency across markets can also reduce transaction costs and limit the advantage of domestic producers.

Second, an MNC facing a high-profile global issue like climate change may be compelled to adopt a consistent companywide position:

The cost of failing to do so became evident for Shell in the mid-1990s, when Shell Europe moved toward acceptance of the need for internationally agreed greenhouse gas emission controls while Shell U.S. was still a member of the Global Climate Coalition (GCC), the industry association which lobbied aggressively against any such measures. This inconsistency complicated the company’s efforts to pursue a particular political strategy, and became a severe liability when it was publicized by environmental NGOs, leading Shell U.S. to leave the GCC in 1998.⁸²

Although the global character of an MNC’s response does not diminish the importance of government generally, it does diminish the importance of any one particular government. And critically, the combination of the global response, the home-country effect described above, and the continuing if declining dominance of MNCs from the global North suggests a diminished importance for the governments of developing countries.

The direct effect of international conferences, negotiations, and treaties—that is, international governance—on the responses of MNCs is less clear. These activities focus international attention on an issue, which in turn creates more pressure on an MNC to adopt a unified position across the countries in which it operates. Such activities also routinely bring together the same individuals, who “come to view climate science and the threats and opportunities arising

from regulation and new technologies in similar ways.”⁸³ These individuals include “senior managers responsible for climate-related strategy” as well as corporate scientists who were “drafted to participate in writing and reviewing” reports of the Intergovernmental Panel on Climate Change.⁸⁴ The result could be greater solidarity among all the participants or merely greater solidarity among the MNC participants in opposition to the others.

MNCs also play a nuanced and varying role in the formation of international law. They are “neither omnipotent ogres nor gentle giants pursuing the common interest.”⁸⁵ Notably, the “organizational, political, and discursive influence of US energy-related businesses was much greater” at home than at the international climate change negotiations.⁸⁶ The influence of these firms was limited by the involvement of more than 140 states and the guidance of international institutes that enjoyed some autonomy and legitimacy.⁸⁷ While this disparity of influence may have facilitated agreement at the international level, it may have impaired the acceptance and implementation of that agreement at the domestic level.

MNCs have a complex view of international regimes. Market-enabling regimes and provisions like the CDM can “reduce transaction costs and provide collective goods . . . such as standards, multilateral recognition, and enforcement of Intellectual Property Rights (IPRs),” but might also threaten domestic market dominance or otherwise place certain firms at a disadvantage.⁸⁸ In contrast, regulatory regimes and provisions like binding emissions caps can “raise final product prices, limit demand, and impose compliance costs on MNCs” but might also “impose asymmetrical costs across firms.”⁸⁹ MNCs are more concerned with the “regulatory costs they bear in relation to their market competitors” than with “regulation per se,” and they adjust their political strategy accordingly.⁹⁰

Global interaction beyond the context of international law also shapes MNC behavior. A study of the oil industry noted convergence in the climate strategies of the four supermajors, which it attributed to “institutional pressures that shape managerial expectations and perceptions” and that “stem from participation in a common global industry and issue arena.”⁹¹ Global interaction shifted and refined the initial positions that the home-country effect inspired.

MNCs often respond by setting private standards for themselves, their suppliers, and their industry in a way that “bypasses government altogether.”⁹² One study referred to the widespread inclusion of environmental standards in private agreements for supply, acquisition, credit, and insurance as “the new Wal-Mart effect.” This study, which examined 74 firms in eight sectors, found that:

83. *Id.* at 282.

84. *Id.*

85. Levy & Prakash, *supra* note 59, at 147.

86. *Id.* at 138.

87. *See id.*

88. *Id.* at 134.

89. *Id.* at 136.

90. *Id.*

91. Levy & Kolk, *supra* note 64, at 293.

92. Vandenbergh, *supra* note 78, at 915.

78. *Id.* See Michael P. Vandenbergh, *The New Wal-Mart Effect: The Role of Private Contracting in Global Governance*, 54 UCLA L. Rev. 913, 924 (2007).

79. Deutsch, *supra* note 62.

80. Levy & Kolk, *supra* note 64, at 277.

81. *Id.* at 278; see also Jänicke & Jacob, *supra* note 58, at 32.

82. Levy & Kolk, *supra* note 64, at 277.

over half of those firms impose environmental requirements on their [first-tier] suppliers. The firms that impose these supply chain requirements are often the largest firms in their sectors, and they represent more than 78 percent of the total sales of the top firms in the sectors studied.⁹³

The most common requirement appears to be compliance with the environmental law of the supplier's host country.⁹⁴ One study "found an association between those Chinese firms that have a large proportion of exports and environmental compliance" and another association "between firms that have a large proportion of exports to developed countries and environmental law compliance."⁹⁵

The relationship between domestic law compliance provisions and the state itself is complex. Such provisions do not impose new standards but, depending on their enforcement, may help move environmental law from paper to practice. In this regard the contracting MNC supplements the enforcement function of the state. If the contracting MNC demands compliance, the supplier may have an incentive to ensure that the state applies domestic law in a similar fashion to its competitors.

Other provisions require compliance with global standards. For example, as of 2007, most Japanese and U.S. automobile manufacturers contractually or functionally required their first-tier suppliers to achieve International Organization for Standardization 14001 certification.⁹⁶ (Curiously, most of their European competitors did not.)⁹⁷ In the context of maritime pollution, private insurance agreements now serve "as a means of enforcing a public international law requirement" that had been largely ignored in the past.⁹⁸

Explanations for the adoption of environmental standards in private contracting vary and include a "complex mix of social, economic, and legal influences."⁹⁹ Large firms, which are more likely to be the target of nongovernmental organization (NGO) campaigns, may respond to consumer pressure. Among other reasons, they may also impose environmental compliance costs on their suppliers in a way that increases costs for their smaller competitors. "By increasing the price of goods to all buyers, the large firm may reduce the competitive disadvantage it would otherwise face by insisting on more expensive environmental performance by its suppliers."¹⁰⁰

B. Developing-Country Firms

In addition to the developing-country MNCs described above, two types of developing-country firms merit particular attention for the relationship they have with the state: conglomerates and state-controlled economic actors.

Although conglomerates like GE have become the exception in the global North, they remain much more common

in the global South.¹⁰¹ Companies must internalize the costs of market services that "developing" states do not provide, and conglomerates are well-positioned to do so:

In a country that lacks a functioning stockmarket, a conglomerate can channel cash from one business to another. If educational levels are low, it picks the brightest, trains them in one subsidiary and transfers them to another. If property, contract and liability laws are confusing and the courts venal, it substitutes the group's reputation in transactions.¹⁰²

As markets become more efficient and government becomes more effective, conglomerates lose their appeal. Some developing-country conglomerates like the Ayala Corporation of the Philippines are successfully adjusting to changing market conditions by partnering with, hiring from, selling shares to, and outright acquiring firms from the global North.¹⁰³ Each of these transactions also has the potential to import environmental ideas and values.

Whereas conglomerates supplement the states that fall short of the modern ideal, state-controlled firms extend the state deeper into the market. Pemex, Mexico's national oil company, adopted a "cooperative corporate policy on climate change" beginning in the late 1990s.¹⁰⁴ That policy included regional leadership, internal emissions reductions, and an internal emissions trading system. The decision to adopt a cooperative approach, which closely followed similar moves by British Petroleum (BP) and Shell Oil, but remained anomalous among state-owned developing-country oil companies, "was the result of entrepreneurial efforts by managers within the company's environment division."¹⁰⁵ It also illustrates the disaggregated nature of both firms and states. Environmental managers overcame internal skepticism¹⁰⁶ and aligned the company with Mexico's environment ministry rather than with its energy ministry.¹⁰⁷

Pemex's leadership, while exceptional, is promising. Nonetheless, the broader environmental movement often views developing-country firms as part of the problem and rarely views them as part of the solution.¹⁰⁸ Tellingly, "the three international texts that define the scope and focus of the global sustainable development agenda"—the *Report of the World Summit on Sustainable Development*, the 1992 Rio Earth Summit's *Agenda 21*, and *Our Common Future* from the Brundtland Commission—"all mention multinational corporations but overlook the developing-country private sector in their catalogue of actors central to achieving sus-

93. *Id.* at 916-17.

94. *See id.* at 932, 937.

95. *Id.* at 955.

96. *See id.* at 930-31.

97. *See id.* at 931.

98. *Id.* at 941.

99. *Id.* at 947.

100. *See id.* at 950.

101. *See* Conglomerates in Developing Countries: Monsters Still, but Prettier, *ECONOMIST*, Jan. 4, 2002, available at http://www.economist.com/business/displaystory.cfm?story_id=E1_JNNGQV. Whereas "a century ago America's biggest companies were all conglomerates, run by 'robber barons' not unlike today's tycoons in poor countries," today these firms are far more likely to be specialized. *Id.*

102. *Id.*

103. *See id.*

104. Simone Pulver, *Importing Environmentalism: Explaining Petroleos Mexicanos' Proactive Climate Policy*, 42 *STUD. COMP. INT'L DEV.* 233, 234 (2007).

105. *Id.* at 235.

106. *See id.* at 249.

107. *See id.* at 251.

108. *See* Pulver, *supra* note 47, at 191 & 194.

tainable development goals.”¹⁰⁹ (The UNFCCC, as noted, mentions neither.)

This dismissal of developing-country firms, while not lacking in empirical support, is nonetheless an incomplete view of a complex and changing reality. Under some circumstances, developing-country firms can profit from or alongside their adoption of environmentally sensitive strategies.¹¹⁰ Moreover, these firms are part of the global picture. “Hege-monic forces of globalization, such as trade liberalization and increased foreign direct investment,” shape the environmental performance of developing-country firms, which in turn shape the “trajectories of both domestic and global environmental systems.”¹¹¹

As with MNCs, there are multiple theories to explain the broader “greening” of developing-country firms.¹¹² Domestic pressures are likely to be targeted at more local environmental concerns.¹¹³ Nonetheless, domestic pressure to reduce local pollution, increase energy efficiency, improve technology, and reduce raw material consumption can also reduce emissions of GHGs. Transnational explanations include the “trading up” associated with export orientation, the transfer of technology through trade and investment, the promulgation of international or global standards, and “the international flow of environmental norms.”¹¹⁴

In the case of Pemex, three “facilitating conditions” were crucial to the success of the environmental managers: domestic policy space, a close relationship with the climate science community, and compatibility with existing business objectives.¹¹⁵ The first condition did not require active government support: Pemex continued its cooperative policy despite the disregard of climate change by new administrations in Mexico and the United States¹¹⁶ such that it “was driving rather than reacting to national regulation.”¹¹⁷ The third condition motivated the transnational importation of norms from BP and Shell. As one executive noted: “We would like to be much more like a first world company than a third world company.”¹¹⁸

C. Sector- and Issue-Based Alliances

At the global level, larger economic actors form sector-specific and issue-specific associations.¹¹⁹ Their frequent interaction within and beyond these institutional frameworks contributes to a substantial transnational flow of knowledge and norms. The international climate regime, although it both contemplates and facilitates these flows, constitutes only one part of this larger global network.

Alliances among economic actors take many different forms. The International Chamber of Commerce describes its World Council as “the equivalent of the general assembly of a major intergovernmental organization.”¹²⁰ The Organization of the Petroleum Exporting Countries (OPEC) is a formal state-based organization.¹²¹ The International Aluminum Institute (IAI), whose members “represent 80% of world aluminum production”¹²² and 98% of U.S. aluminum production, was the first sector-specific group to commit to “voluntary GHG targets at the international level.”¹²³

The oil industry’s four supermajors—and their chief environmental players—interact frequently and monitor each other closely. “Key managers responsible for climate strategy in each of the [supermajors] were on first name terms.”¹²⁴ Some of this interaction occurs through participation in a variety of industry associations and environment-focused groups within those associations as well as through attendance at international meetings of the UNFCCC’s subsidiary bodies. But this interaction can also be much less structured. Although BP “got cold shouldered by some of our colleagues within the industry” following its embrace of precautionary action in 1997,¹²⁵ other firms paid attention. Shell closely followed BP’s announcement with action of its own—and, as noted above, so did Petromex.¹²⁶ Texaco “looked at how BP and Shell were inventorying their emissions . . . and took the best pieces of their protocols.”¹²⁷

Broader norms percolate in what the director of the Business Council for Sustainable Energy described as a “process of osmosis.”¹²⁸ The need for precautionary action and the viability of ecomodernism, for example, have both spread from European oil companies directly into the wider industry—migrating globally rather than (and perhaps not even) internationally.¹²⁹ The Global Climate Coalition, which aggressively opposed binding emissions reductions and included all of the supermajors and many other companies in 1996, was defunct within five years of BP’s defection.¹³⁰

None of this is to suggest that the positions of industry alliances or their constituent firms toward climate change are particularly progressive in either absolute or relative terms. Rather, the critical lesson is that significant interfirm and intrafirm structures exist in a global framework that rivals

109. *Id.* at 194.

110. *Id.* at 192.

111. *Id.*

112. *See id.* at 197.

113. *See id.*

114. *Id.* at 198-200.

115. *See* Pulver, *supra* note 104, at 235.

116. *See id.* at 243.

117. *Id.* at 241.

118. *Id.* at 246.

119. *See* Levy & Prakash, *supra* note 59, at 145.

120. International Chamber of Commerce, How ICC Works, <http://www.iccwbo.org/id96/index.html> (last visited July 30, 2009).

121. *See* OPEC, About Us, <http://www.opec.org/aboutus> (last visited July 30, 2009).

122. International Aluminum Institute, <http://www.world-aluminium.org> (last visited July 30, 2009).

123. TIMOTHY HERZOG ET AL., TARGET: INTENSITY: AN ANALYSIS OF GREENHOUSE GAS INTENSITY TARGETS 12-13 (2006), available at http://pdf.wri.org/target_intensity.pdf. The steel sector appears to have started toward a similar commitment in late 2007. *See* World Steel Association, A global sector approach to CO₂ emissions reduction for the steel industry, <http://www.worldsteel.org/?action=storypages&cid=226> (last visited July 30, 2009).

124. Levy & Kolk, *supra* note 64, at 294.

125. *Id.* at 295.

126. *See id.* at 294.

127. *Id.*

128. *Id.* at 295.

129. *See id.* at 294.

130. *See id.* at 295; SourceWatch, Global Climate Coalition, http://www.source-watch.org/index.php?title=Global_Climate_Coalition (last visited Apr. 28, 2009).

the international framework of the climate regime. Technology is transferred incidental to private economic transactions. Norms—whether environmentally friendly, benign, or hostile—diffuse through economic and personal interactions. Conglomerates supply capacity lacking in their home states, and developing-country firms are capable of driving domestic regulation. Private economic actors are meaningful participants in a global climate regime.

IV. Implications for International Environmental Law

A. International Law Context

This Article has challenged in several ways the statism inherent in the global climate regime. First, the attribution of emissions to the global South may be overinclusive while the attribution of emissions to the global North may be underinclusive. Second, this state-based attribution inculcates protectionist attitudes that result in incorrect labeling of the winners and losers. Third, the focus on states as both the polluters and the police discounts the potential if not actual “meaningful participation” of other transnational actors, particularly private economic actors.

Underlying these challenges is a twofold descriptive critique of the Westphalian principle of territorial sovereignty: Territory imperfectly divides global networks, and sovereignty imperfectly divides global power. This tension between the world’s actual and theoretical ordering predates the recent globalization, as trading companies, pirates, hierarchical religions, and non-European peoples existed before the 20th century (and even before 1648).¹³¹

Even though the theory-practice tension is not new, it is magnified by three phenomena of modern international law.¹³² First, states are limited in the power they can exercise over their subjects: International human rights law, customary international law, and bilateral investment treaties all affect how a state can treat its citizens and its investors. Second, states are limited in the power they can exert on other states: Customary international law and international economic law restrict a state’s recourse to war or even to trade measures to vindicate its interests. Third, international law has extended into realms like environmental protection that simply do not command the full exercise of the power that the state retains: As the UNFCCC itself acknowledges, “economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties.”¹³³

The climate change regime implicates all three of these phenomena in a way that renders a wholly statist approach inadequate. Recognizing the inadequacy of a purely inter-

national approach to a global problem, this section first considers the existing regime and then recommends possible principles for a future regime.

B. Application to the International Climate Regime

Although the UNFCCC seeks “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system,” it does not impose this as an obligation on the parties.¹³⁴ Nonetheless, as the preamble to the UNFCCC makes clear, the climate change regime exists in the context of broader principles of public international law. States have the “responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.”¹³⁵

Scholars have explored whether a state can incur responsibility under international law for the significant effects of GHG emissions that occur within its boundaries.¹³⁶ Although the primary responsibility could be conceptualized in different ways—as an obligation of result, as an obligation to exercise due diligence over domestic actors, or as an attribution to the sovereign of activities within that sovereign’s jurisdiction or control—a reasonable conclusion is that such effects can constitute a breach of a state’s primary obligations under international law. Under this view, the UNFCCC enhances but does not replace these obligations, and the Kyoto Protocol is analogous to a repayment plan that does not change the underlying debt.

Other activities under a state’s control that result in the release of GHGs—that is, consumption, the import of goods, and the export of capital—might similarly be attributed to the state. In other words, both conceptually and legally, industrialized countries may be at least partially responsible for a larger share of global emissions than their national inventories would suggest. Conversely, the responsibility of developing countries for those emissions that occur within their territories may be diminished.

A related issue is the extent to which beneficial activities occurring within a state’s jurisdiction or control can be attributed to that state. Annex II parties might plausibly argue that the significant but private North-to-South investment described above constitutes “the transfer of, or access to, environmentally sound technologies and know-how.”¹³⁷ They might argue as well that the steps they have taken as sovereigns to facilitate that investment—participation in the

134. *Id.* art. 2.

135. *Id.* pmb.; see also Rio Declaration on Environment and Development princ. 2, June 14, 1992, U.N. Doc. No. A/CONF.151/5/Rev.1, 31 I.L.M. 874, 876, available at <http://www.unep.org/Documents/Multilingual/Default.asp?DocumentID=78&ArticleID=1163>.

136. See Eric A. Posner, *Climate Change and International Human Rights Litigation: A Critical Appraisal*, Jan. 2007 (working paper), 2-7, available at <http://ssrn.com/abstract=959748>; see also Trail Smelter case, summarized at <http://american.edu/TED/TRAIL.HTM> and discussed in Frank Bierman & Klaus Dingwerth, *Global Environmental Change and the Nation State*, 4 GLOBAL ENV. POL. 1, 12 (2004).

137. Kyoto Protocol, *supra* note 18, art. 4(4).

131. See The Avalon Project: Treaty of Westphalia, http://avalon.law.yale.edu/17th_century/westphal.asp (last visited July 30, 2009).

132. As legal assertions, these phenomena are subject to the same descriptive critique applied to sovereign equality. However, the phenomena are not absolute and can have a large effect on the design of an international legal regime even if they have a more modest effect on actual state behavior.

133. UNFCCC, *supra* note 7, art. 4(7).

World Trade Organization (WTO) regime and the network of bilateral investment treaties—amount to the provision of “new and additional financial resources.”¹³⁸

The success of these arguments depends in part on the nature of the obligations: What kind of state action do they require? That, in turn, goes to the heart of the demand for “meaningful participation.” The acceptance of binding emissions caps is only one form of participation, and such an output-to-input approach tends to prioritize the concern of the global North (developing-country emissions) over the concern of the global South (developing-country economic activity).¹³⁹ In contrast, an input-to-output approach would shift the locus from emissions to activities and from states to their constituent parts. The next subsection explores the role that states would play in such a global regime.

C. A Nuanced Role for States in a Global Climate Regime

A global climate regime would move beyond Westphalia’s statism to explicitly embrace public as well as private actors, activities, and obligations. Because the global response to climate change already involves expansive private networks that transfer technologies, norms, and expectations, this shift would be much more radical in theory than in practice.

As to that theory, a treaty-based structure like the UNFCCC could play one of two important roles in the broader regime. It could serve as an umbrella for that regime; instead of (or in addition to) guaranteeing national performance, states would commit to enforcing certain global standards. Alternately, it could exist as the state-based element of a broader regime that would still be sanctioned and supervised by general principles of international law; states would act to the extent of their jurisdiction to prevent harm that emanated from or accrued to them. Regardless, states would continue to play a central, but not exclusive, role in such a regime and might even assume greater input-based commitments.

138. *Id.* art. 4(3).

139. See Thomas C. Heller & P.R. Shukla, *Development and Climate: Engaging Developing Countries*, in *BEYOND KYOTO*, *supra* note 40, at 111, 114. More broadly, state obligations might be categorized based on their relationship to the ultimate purpose of a regime, in this case the prevention of “dangerous anthropogenic interference with the climate system.” There are at least four such categories: attainment, performance, contribution, and assessment. (1) The customary international law mandate to “do no (significant) harm” is an obligation of attainment: Satisfaction of the obligation implies attainment of the purpose. Harm to the climate system would amount to a tragedy of the commons where attribution to individual actors may not be straightforward. See Professor Werksman’s discussion paper, *supra* note 136. However, assuming resolution of causation, a state that harms the climate system through the activities of those under its control or jurisdiction thwarts the purpose of—and hence violates—the obligation. (2) The Kyoto Protocol’s emissions caps are obligations of performance: A state must ensure that certain national indicators reach or exceed an *ex ante* target that is itself a benchmark toward attainment of the regime’s purpose. (3) Many of the “softer” obligations that the UNFCCC and Kyoto Protocol impose on developing—as well as industrialized—country—parties are obligations of contribution: A state must work to bring about certain conditions that are consistent with eventual attainment of the purpose. (4) National inventory and reporting requirements are obligations of assessment: A state must provide data that help to shape the regime or measure its success.

This subsection briefly sketches some of these possible commitments. One key state commitment could be to an international scheme that would internalize a greater proportion of the cost of emissions. Under such a scheme, each state might impose a carbon tax that would reflect either its historic contribution or its level of economic development.

Following the historical-contribution-based approach, each country’s carbon tax would reflect both present and pre-1990 emissions as well as the purchasing power of its currency. To obtain the historical portion, total pre-1990 emissions would be apportioned into a certain number of future years, the current year’s portion would be divided by the estimated emissions for the current year, and this number would then be used to scale the carbon tax.¹⁴⁰ Revenue from “historical surcharge” might then be channeled as aid to developing countries.

Following the development-based approach, the tax level would correlate to the country’s per capita GDP. For example, fully industrialized countries might commit to a tax of US\$50 per ton of carbon in 2012 that would rise by 10% every year.¹⁴¹ Developing countries would then determine their level of taxation in reference to the U.S. per capita GDP of \$47,000 (or some other agreed benchmark).¹⁴² Since China’s per capita GDP is about 11.5% that of the United States, it would commit to an initial tax of US\$5.75 per ton of carbon (converted back to its currency on the basis of purchasing power parity).¹⁴³ India’s tax would be about one-half that.¹⁴⁴ The methodology would falter only on oil-exporting countries like Kuwait and Saudi Arabia that have per capita GDPs out of proportion to their level of development.¹⁴⁵

States that declined to participate in such a regime would risk the application of a border adjustment to products exported from their territory. Assuming WTO compatibility, this border adjustment could reflect the possibly higher level of the importing state’s carbon tax. In this way, the regime would be cooperative, coercive, and contemplative of unilateral state action.

The inclusion of a carbon tax imposed by states may seem a curious digression for an Article that challenges the statist nature of the current regime. However, a global tax based on a standard methodology—even if that methodology produced different levels of taxation in different countries—would represent a subtle softening of the Kyoto Protocol’s strict territoriality. That is, states would enforce global standards rather than guarantee particular domestic outcomes.

Universal taxation would also provide a basis for output-based measures that could be structured on the sectoral rather than national level. Particular proposals for these caps vary but generally take the emissions of industrial sectors as

140. See CATT, *supra* note 44.

141. Compare with Rep John D. Dingell’s (D-Mich.) withdrawn proposal for a U.S. tax on carbon content. See Representative John D. Dingell, Carbon Tax Summary, <http://www.house.gov/dingell/carbonTaxSummary.shtml> (last visited July 30, 2009).

142. See CIA—The World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2004rank.html> (last visited July 30, 2009).

143. *See id.*

144. *See id.*

145. *See id.*

the starting point for determining emission reductions and limitations. Some contemplate voluntary targets based on emissions intensity rather than absolute emissions, where emissions intensity is the quantity of CO₂ (or the equivalent in other GHG) emitted per unit of production (such as dollar of GDP or kilogram of steel).¹⁴⁶ Similarly, Japan's unsuccessful proposal at an April 2008 G20 summit would have derived national caps from sectoral data.¹⁴⁷ This proposal encountered resistance from Great Britain because it would not have imposed absolute caps and from China because it could have disadvantaged less carbon-efficient manufacturers in developing countries.¹⁴⁸

One possible approach in combination with universal taxation might provide more reassurance to both states. Key industrial sectors, acting through their global associations, would accept binding global emissions targets based on either absolute emissions or emissions intensity that would then be distributed as credits to firms or facilities. Unlimited intrasector trading would be permitted, but the sale of credits to facilities in other sectors would only be permitted if the selling sector achieved its target. While this restriction might limit the liquidity of the credit market, it would incentivize the transfer of technology among firms in a sector in order to achieve the sectoral target and hence the ability to sell excess credits. The regulatory focus would shift from states to the entities that actually emit GHGs.

V. Conclusion

This Article has developed the demand for "meaningful participation" in two ways. First, it has argued for a broader understanding of participation in a global arena that includes actors other than states. Second, it has argued for a rethinking of what kind of participation might actually be meaningful. Recombining these two strands suggests that meaningful participation in a global climate regime is already occurring in the global South.

Any shift away from a system dominated by state-based emission caps raises a concern that the regime will suffer from diminished effectiveness.¹⁴⁹ There are at least two responses. First, although those caps are central to the existing international climate regime, they are only one part of the existing global climate regime. A key component of the shift is merely recognition of this broader regime and greater understanding of its relationship to the UNFCCC. Second, the criterion of impact is a lofty metric by which to measure an infant climate regime. The UNFCCC by no means solves climate change, and even the Kyoto Protocol does not mandate emissions cuts at a level that would have any meaningful effect on future climate patterns. Instead, the international climate regime seeks to focus attention on a critical issue, engage as many (state) actors as possible, and establish frameworks, expectations, and behaviors that may eventually result in action commensurate with the scale of the problem.

As a descriptive matter, these same processes occur in the private sphere whenever firms in the global North or global South transfer technologies, strategies, norms, and values among themselves and among the countries in which they act. International law can and should go beyond the mere attribution of these activities to the states in which they occur. By embracing a global climate regime that reflects the realities of transnational economic dynamics and actors, states can better address this "common concern of humankind."¹⁵⁰

146. See Jake Schmidt, *A Sectoral Approach Beyond 2012*, ENVTL. FIN., Apr. 2006, at 33, available at http://www.environmentalmarkets.org/galleries/default-file/ef4ema_p33.pdf; ICC, Discussion Paper, *Sectoral Approaches: An International Chamber of Commerce Issue Discussion Paper* (Dec. 8, 2007).

147. See Chisa Fujioka, *Britain Dismisses Japan Climate Change Plan*, ENVTL. NEWS NETWORK, Mar. 14, 2008, <http://www.enn.com/pollution/article/32874>.

148. See *id.*

149. See, e.g., Fujioka, *supra* note 147.

150. UNFCCC, *supra* note 7, pmbl.