Health in Global Climate Change Law: The Long Road to an Effective Legal Regime Protecting both Public Health and the Climate

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As this article argues, human health – despite facing a serious threat from climate change – remains an ambivalent notion in the substantive, procedural, and institutional aspects as well as the implementation of both the United Nations Framework Convention on Climate Change and the Kyoto Protocol. The article demonstrates that the climate change treaties are biased towards emission reductions largely through mitigation, and this bias is reflected in some domestic climate laws as well. Health is confined to the legal framework on adaptation, but faces challenges in the area of finance and sectoral coordination as well compliance. These challenges inhibit robust action by Parties to undertake health-related measures in the context of climate change. The article concludes by proposing reforms, including a rethinking of the global climate regime through reforms of global and domestic climate law as well as global health law. It proposes functional concepts of adaptive governance and global public goods as the basis for these reforms to bolster the standing of health in the climate legal regime.

I. Introduction

This article explores the position of health in the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and related legal instruments, assessing the implications for protecting health and tackling climate change. While previous publications have covered the nexus of health and global climate change law, no legal publications have yet focused exclusively on analyzing the texts and progressive development of the UNFCCC and the Kyoto Protocol with a view to examining whether a health mandate is present, and if so, whether this has been reflected both *de facto* and *de jure*. The analysis commences by discussing the linkages between health and climate change, and identifies health as a core issue for global climate change law. It explores the importance of a health paradigm to the progressive development and implementation of global climate change law and policy. Also, it highlights legal and institutional limitations of the UNFCCC and Kyoto Protocol in the context of public health and protection of the global climate. The article provides evidence from international climate law to support these assertions, and makes pertinent proposals for reform. Ultimately, the article affirms that the UNFCCC and the Kyoto Protocol are biased towards emission reductions largely by mitigation, a bias that is also reflected in some domestic climate legislation. Health is largely confined to the legal framework for climate adaptation, but faces challenges in the areas of finance, sectoral coordination, and compliance. These challenges inhibit robust actions by Parties to undertake measures protecting health in the context of climate change. By way of conclusion, the article proposes a rethinking of the global climate regime and reforms of global and domestic

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climate law as well as global health law. It proposes functional concepts of adaptive governance and global public goods as the basis for these reforms to bolster the role of health in the climate legal regime.

The article is divided into six parts with subsections. Part I is an introduction and lays down the roadmap for the article. Part II discusses the linkages between health and climate change, including the impact of climate change on health as well as other reasons for bolstering health in the global climate legal regime. Part III, a centerpiece of the article, examines the evolution and legal basis of health-related action within international climate change law and its implications. Part IV, in turn, focuses on the status of health in the ongoing progressive development of climate law, especially in the work to date of the UNFCCC Conference of the Parties (COP). This chapter evidences the ambivalence towards or absence of health in decisions under the UNFCCC COP and the Meeting of the Parties (CMP) of the Kyoto Protocol, both among Parties and other subsidiary bodies under the UNFCCC and Kyoto Protocol. The chapter concludes by reviewing the implications of the institutional mechanisms for health protection, especially the COP decisions. Part V focuses on specific institutional mechanisms for the implementation of the two treaties such as those relating to funding, adaptation, and reporting, and asserts that health is constrained within these mechanisms. Finally, part VI contains conclusions that can provide the basis and options for a substantial reform in climate change law.

II. The Health-Climate Change Nexus: Health and its Importance in International Climate Law

1. Health Impacts of Climate Change

Climate change has increasingly become a global health challenge. The Intergovernmental Panel on Climate Change (IPCC) has shown that the global climate is facing rapid changes.[1] Global mean temperatures are on the rise,[2] and long-term changes in climate such as extreme weather including droughts, megafloods, heat waves and cyclones[3], as well as changes in the hydrological system have been observed.[4] The IPCC has concluded that projected climate change-related exposures are likely to affect the health of millions of people, through increased deaths[5] and disease resulting from heat waves, floods, storms, fires and droughts; the increased burden of diarrheal disease, the increased frequency of cardio-respiratory diseases,[6] and increased transmission of infectious diseases such as malaria.[7] Climate change has already resulted in the increased incidence of malaria, dengue fever, yellow fever, oncoceriasis and sleeping sickness.[8] However, establishing the relationship between climate change and health faces challenges because climate change is just one among many contributors to health threats, and climate change often exacerbates existing conditions.[9]

2. The Health Paradigm in Climate Change and the Role of Human Rights

Health provides an important paradigm in the progressive development and implementation of climate change law. Climate change impacts are substantial, resulting in disputes over resources such as water which can undermine human health.[10] Developing countries face a double burden of health threats from pre-existing public health epidemics and the increased incidence of such diseases. There is a power imbalance when actions of wealthier

1 IPCC, *Climate Change 2007: The Physical Science Basis – Summary for Policymakers* (Geneva: IPCC, 2007).

2 IPCC, *Climate Change 2001: Impacts, Vulnerably and Adaptation* (Cambridge: Cambridge University Press, 2001).

3 IPCC, *Climate Change 2007: The Physical Science Basis* (Cambridge: Cambridge University Press, 2007).

4 Ibid.

5 Andrew K. Githeko and Alistair Woodward, "International Consensus on the Science of Climate and Health: The IPCC Third Assessment Report", in World Health Organization et al., *Climate Change and Human Health, Risks and Responses* (Geneva: WHO et al., 2003), 47–50.

6 World Health Organization, *Health Guidelines for Episodic Vegetation Fire Events* (Geneva: WHO, 1999).

7 Willem J.M. Martens et al., "Potential Impact of Global Climate Change on Malaria Risk", 103 *Environmental Health Perspectives* (1995).

8 Githeko et al., supra, note 5.

9 Hans-Martin Fussel, Richard J.T. Klein, and Kristie L. Ebi, "Adaptation Assessment for Public Health", in Bettina Menne and Kristie L. Ebi (eds.), *Climate Change and Adaptation Strategies for Human Health* (Darmstadt: Springer, 2006), 48.

10 Jonathan A. Patz and R. Sari Kovats, "Hotspots in Climate Change and Human Health".

countries or multinational corporations contribute to detrimental social impacts upon local communities and individuals, especially in developing as well as small island nations.[11] In the process, a causal nexus can be established in that the rights of poorer communities, individuals and developing countries are violated by the richer nations and big corporations.[12] Poorer countries have contributed least to the climate problem and possess less capacity to adapt to its consequences.[13] Thus, focusing on health promotes equity in global climate change law.[14] A human rights framework becomes pivotal in redistributing rights and obligations, and health provides an important step in the progressive development of a global climate regime that advances human development.[15] In this connection, climate change law helps integrate anthropocentric to ecocentric strategies in international and national climate law.[16] This is because climate change brings together environmentalists with businesses; the public with policy makers concerned with preserving both human and planetary health.[17] The history of environmental law-making has shown that environmental threats tend to capture the attention of the public and policymakers when they also pose threats to human health.[18] Moreover, a health-based approach to human development and climate change could persuade key recalcitrant actors such as the USA, China and India to commit to climate change mitigation. Recent climate-related disasters such as the hurricane Katrina in the US and heatwaves in Russia and other parts of Europe demonstrate the importance of health in the progressive development of the global climate change regime.

III. Health in International Climate Law and Policy: The Substantive Legal Framework

1. Health and Climate Change Law: A Historical Timeline

The development of global climate change law is closely aligned with the progressive development of international environmental law. Much of the substantial body of international environmental law seeks to protect human health from various threats caused by pollution and environmental degradation.[19] International legal rules on climate change directly relate to the objective of protecting human health.[20] The 1972 United Nations Conference on the Human Environment recognized the continued degradation of the environment and initiated coordinated international action that included explicit recognition of the health dimension of environmental issues.[21] The Report of the World Commission on Environment and Development led to the adoption of the UNFCCC as well as Agenda 21.[22] Principle 1 of the Rio Declaration recognizes that human beings are at the centre of concerns for sustainable development and are entitled to a healthy and productive life with nature. Agenda 21 provides a global framework for tackling climate change, recognizing the protection of the atmosphere and affirming the importance of the UNFCCC in this regard.[23] It shifted the notion of regarding the environment as a source of disease to that of environment as a source of health as well as expounding on the notions of equity, equality and general distributive justice, key

11 Amy Sinden, "Climate Change and Human Rights", 27 *Journal of Land Resources and Environmental Law* (2007), 255.

12 Ibid.

13 Marie-Claire Cordonier Segger and Ashfaq Khalfan (eds.), *Sustainable Development Law: Principles, Practices, and Prospects* (Oxford: Oxford University Press, 2004), 360.

14 William Onzivu, "Tackling the Public Health Impact of Climate Change: The Role of Domestic Environmental Health Governance in Developing Countries", 43 *International Lawyer* (2009), 1311.

15 Sinden, supra, note 11, 255.

16 Prue Taylor, "An Ecological Approach to International Law: Responding to Challenges of Climate Change" (London: Routledge, 1998), 237.

17 Neil Carter, *The Politics of the Environment: Ideas, Activism and Policy* (Cambridge: Cambridge University Press, 2007), 26–27 (examining the integration of eco-centric and anthropocentric approaches to environmental protection).

18 Lisa Heinzerling, "Health Regulation and Governance: Climate Change, Human Health and the Post- cautionary Principle", 96 *Georgetown Law Journal* (...), 445 at 450.

19 David Fidler, "Challenges to Humanity's Health: The Contributions of International Environmental Law to National and Global Public Health", 31 *Environmental Law Reporter* (2001), 10048

20 United Nations Framework Convention on Climate Change (UNFCCC), Rio de Janeiro, 9 May 1992, 31 *International Legal Materials* (1992), 849.

21 United Nations Conference on the Human Environment, Stockholm, 5 to 16 June 1972, Declaration of the United Nations Conference on the Human Environment, Principle 1, UN Doc. A/CONF.48/14/Rev.1(1973).

22 Agenda 21 Programme of Action for Sustainable Development, 8.28, U.N.Doc. A/CONF.151/26(1992)

23 Ibid., Para. 9.

elements of the global climate change regime.[24] An emerging consensus from the UNFCCC Parties, the IPCC and plurilateral summits suggests that an agenda for health in the progressive development and implementation of the climate regime should focus on the loss of life as a result of natural disasters and inadequate public health, healthcare systems, medical practice, disease, and disease control, especially with a view to malaria.

2. Health in Substantive International Climate Change Law

International climate change law primarily consists of the UNFCCC and its Kyoto Protocol.[25] The UNFCCC has been hailed as an international legal instrument with a great potential to advance global public health, despite its limited provisions on health.[26] First, the Convention defines adverse effects of climate change as the physical environment or biota resulting from climate change which has significant deleterious effects on ecosystems, socio-economic systems or on human health and welfare.[27] In this regard, ecocentric as well as anthropocentric considerations, including health protection in particular, are recognized as key aspects of the climate change legal regime.

Second, the Convention requires all Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, to take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions. Parties are required to employ appropriate methods such as impact assessments with a view to minimizing adverse effects on the economy, on public health, and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change.[28] Third, the obligation of Parties to promote and cooperate in scientific, technological, technical, socio-economic and other research to reduce uncertainties regarding climate change, including through the subsidiary body for scientific and technologic advice, implicates a role of the health sector.[29] Finally, the UNFCCC COP has recognized the importance of health in global climate change policy making and decided that health be included for funding under the special climate change fund, the adaptation fund and other funds relevant for efforts to tackle climate change.[30]

Despite these lofty provisions in the UNFCCC and their apparent integration of human health, the author argues that the substantive law of the UNFCCC is insufficient regarding health protection for a number of reasons: first, the ultimate objective of the climate change convention is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.[31] The body of the Convention as drafted is biased in relation to environmental concerns by focusing on mitigation at the international and domestic level with a primary focus on limiting greenhouse gas emissions associated with human activity.[32] Second, the general commitments of the Convention are vague and it can be argued that they do not establish a role for the health sector. For example, Parties are to take measures such as the development of national inventories of anthropogenic sources and removals by sinks of all greenhouse gases,[33] promote and cooperate in the diffusion of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol, and cooperate in promoting sustainable management and preparing for adaptation to the impacts of climate change.[34] Parties are also required to take climate change into account in their social policies, but

24 Xueman Wang, "Sustainable International Climate Change Law in Sustainable Development Law", in Marie-Claire Cordonier Segger and Ashfaq Khalfan (eds.), *Sustainable Development Law: Principles, Practices, and Prospects* (Oxford: Oxford University Press, 2004), 360.

25 Kyoto Protocol to the United Nations Framework Convention on Climate Change, Kyoto, 10 December 1997, in force 16 February 2005, 37 *International Legal Materials* (1998), 22.

26 Yasmin Von Schirnding, William Onzivu, and Andronico O. Adede, "International Environmental Law and Global Public Health", 80 *Bulletin of the World Health Organization* (2002), 970–971.

27 UNFCCC, supra, note 20, Article 1.

28 Ibid., Article 4(1)(f).

29 Ibid., Article 4(1)(g); Article 9(1).

30 Decision 5/CP.7, Implementation of Article 4, paragraphs 8 and 9, of the Convention (decision 3/CP.3 and Article 2, paragraph 3, and Article 3, paragraph 14, of the Kyoto Protocol), UN Doc. FCCC/CP/2001/13/Add.1, 10 November 2001.

31 UNFCCC, supra, note 20, Article 2.

32 Lisa F. Schipper, "Conceptual History of Adaptation in the UNFCCC Process", 15 *Review of European Community and International Environmental Law* (2006), 82–92.

33 UNFCCC, supra, note 20, Article 4(1)(a).

34 Ibid.

health is not expressly mentioned. For these reasons, it can be argued that general obligations such as the foregoing do not address health issues directly, but are merely incidental or peripheral to the environmental bias of the general obligations.

Third, as regards the more specific commitments relating to emission sources and sinks, health is not of relevance. However, the question can be asked whether the commitments relating to financial resources and technology transfer incorporate health related obligations. After all, Annex II Parties are to provide new and additional financing to assist developing countries in meeting the costs of adaptation. Annex II Parties are also required to facilitate environmentally sound technologies and related capacities vis-a-vis developing countries. Still, health is not explicitly mentioned, and whether the technology- and finance-related obligations promote adaptation also with a view to human health would depend on the level of health-related adaptation activities under the Convention. Fourth, a major challenge for health in both the UNFCCC and the Kyoto Protocol is that health is posited within the legal and policy frameworks for adaptation, whereas the Convention and Protocol largely focus on mitigation-related actions. There are still no attempts to spur or initiate specific health-related measures in the context of mitigation under the two treaties. To conclude, it is not surprising that current draft texts in the negotiations on a future climate regime beyond 2012 contain only indirect recognition of the health impacts of climate change and no further, more specific language on health, except that health and adaptation are relegated to a footnote, revealing disinterest in prioritizing health by Parties.[35]

IV. Health in the Progressive Development of International Climate Change Law and its Limits: The Role of Institutional Mechanisms

1. Institutional Arrangements: Conference of the Parties

The UNFCCC establishes a Conference of the Parties (COP), a secretariat, two subsidiary bodies and a financial mechanism.[36] The COP is the supreme body of the Convention, keeps its implementation under review and adopts decisions for its effective implementation.[37] It first met in 1995 and has met annually thereafter.[38] The COP has several functions, including to: examine periodically the obligations of the parties, facilitate the coordination of measures, promote and guide comparable methodologies for preparing inventories of greenhouse gas emissions, assess the implementation of the Convention by all parties and the overall effect of measures, and adopt regular reports on the implementation of the Convention. The key question is: how many of these functions have directly been exercised by the COP, particularly in its adoption of decisions for the effective implementation of the Convention and, in the case of the Meeting of the Parties (CMP), the Kyoto Protocol?

2. A Health-based Analysis of COP and CMP Decisions and Resolutions

In Berlin, at the first session of the 1995 COP, there was no direct reference to health. The parties simply referenced the "adverse effects" of climate change.[39] However, at its second session in Geneva in 1996, the COP declared that the "adverse effects" of climate change on human health were "potentially irreversible".[40] When the Kyoto Protocol was adopted in 1997, there was no reference to health; although that instrument referred to adverse consequences on society and on agriculture, it did not mention health as such,[41] In this crucial shift from

35 Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention, Text to Facilitate Negotiations Among Parties, Note by the Chair, 9 July 2010, UN Doc. FCCC/AWGLCA/2010/8, available on the Internet at <unfccc.int/resource/docs/2010/awglca11/eng/08.pdf> (last accessed on 15 November 2010).

36 UNFCCC, supra, note 20, Articles 7 to 11.

37 UNFCCC, supra, note 20, Article 7(2).

38 UNFCCC, supra, note 20, Article 7(4).

39 UNFCCC, Report of the Conference of the Parties on its First Session, Berlin, 28 March to 7 April 1995, UN Doc. FCCC/CP/1995/7/Add.1, available on the Internet at <unfccc.int/resource/docs/cop1/07a01.pdf> (last accessed on 30 June 2010).

40 UNFCCC, Report of the Conference of the Parties on its Second Session, Geneva, 8 to 19 July 1996, UN Doc. FCCC/CP/1996/15/Add.1, available on the Internet at <unfccc.int/resource/docs/cop2/15a01.pdf> (last accessed on 30 June 2010).

41 Kyoto Protocol, supra, note 25; UNFCCC, Report of the Conference of the Parties on its Third Session, Kyoto, 1 to 11 December 1997, UN Doc. FCCC/CP/1997/7/Add.1, available on the Internet at <unfccc.int/resource/docs/cop3/07a01.pdf> (last accessed on 1 July 2010).

a framework Convention to a Protocol with more specific targets, health was not included by negotiators and Parties. A core reason for this omission is that both the Convention and the Protocol focus on mitigation measures in their progressive development and implementation of the climate change legal regime. The Kyoto Protocol does not generally focus on adaptation where health issues have been addressed in the corpus of the global climate law legal regime.

At Buenos Aires in 1998, the COP established an indirect link to health by decrying "the considerable loss of life and devastation caused by Hurricane Mitch in Honduras, Nicaragua, Guatemala, El Salvador, Belize, Costa Rica and Panama."[42] At Bonn in 1999, the concept of health and loss of human life was broadened to include "medial" impacts.[43] At The Hague in 2000, direct health-related references were included in one decision and two of the three resolutions adopted at that conference.[44] The Hague pronouncements endorsed adaptation and monitoring for health, and made direct references to diseases and "disease control." But it also placed climate change and health as competitors for the resources flowing from debt relief. The finance and economic considerations seemed to undermine health in climate change.

At Marrakesh in 2001, the parties again made three direct references to health, marking the third year in a row.[45] The pronouncements shifted to synergies, mobilized climate funds for health, and added forecasting, early warning, and prevention of disease to the general adaptation, monitoring, and debt relief finance adopted at the Hague in 2000. While there were references to the role of the Food and Agriculture Organization (FAO), the World Health Organization (WHO) was not mentioned by the COP. At the COP in New Delhi in 2002, two direct links to health were adopted when the COP called for integrated objectives, and an indirect one regarding the social implications and adverse impacts on water and agriculture.[46] At the COP in Milan in 2003, health was mentioned with two direct references, but not in any substantially new way. Indirect references were again made to the adverse effects on agriculture, water and drought.[47] At the COP in Buenos Aires in 2004, the 10th session, the direct link disappeared, as it had before in Buenos Aires in 1998. The Parties mentioned only the adverse effects on agriculture, water and disasters.[48] At Montreal in 2005, the silence on health by the COP continued. But the first CMP, convening those Parties that had ratified the Kyoto Protocol, made two direct and indirect health-climate references. The FAO and other organizations such as the International Energy Agency (IEA) were noted, but again WHO was not.[49]

At Nairobi in 2006, at both the COP and CMP meetings, direct references to health disappeared altogether.[50] At Bali in 2007, the silence continued

42 UNFCCC, Report of the Conference of the Parties on its Fourth Session, Buenos Aires, 2 to 14 November 1998, UN Doc. FCCC/CP/1998/16/Add.1, available on the Internet at <unfccc.int/resource/docs/cop4/16a01.pdf> (last accessed on 1 July 2010).

43 UNFCCC, Report of the Conference of the Parties on its Fifth Session, Bonn, 25 October to 5 November 1999, UN Doc. FCCC/CP/1999/6/Add.1., available on the Internet at <unfccc.int/resource/docs/cop5/06a01.pdf> (last accessed on 1 July 2010).

44 UNFCCC, Report of the Conference of the Parties on its Sixth Session, The Hague, 13 to 25 November 2000, UN Doc. FCCC/CP/2000/5/Add.2., available on the Internet at <unfccc.int/resource/docs/cop6/05a02.pdf> (last accessed on 1 July 2010).

45 UNFCCC, Report of the Conference of the Parties on its Seventh Session, Marrakesh, 29 October to 10 November 2001, UN Doc FCCC/CP/2001/13/Add.1., available on the Internet at <unfccc.int/resource/docs/cop7/13a01.pdf> (last accessed on 1 July 2010).

46 UNFCCC, Report of the Conference of the Parties on its Eighth Session, New Delhi, 23 October to 1 November 2002, UN Doc. FCCC/CP/2002/7/Add.1, available on the Internet at <unfccc.int/ resource/docs/cop8/07a01.pdf> (last accessed on 1 July 2010).

47 UNFCCC, Report of the Conference of the Parties on its Ninth Session, Milan, 1 to 12 December 2003, UN Doc. FCCC/CP/2003/6/Add.1., available on the Internet at <unfccc.int/resource/docs/cop9/06a01.pdf> (last accessed on 1 July 2010).

48 UNFCCC, Report of the Conference of the Parties on its Tenth Session, Buenos Aires, 6 to 18 December 2004, UN Doc. FCCC/CP/2004/10/Add.1., available on the Internet at <unfccc.int/resource/docs/cop10/10a01.pdf> (last accessed on 1 July 2010).

49 UNFCCC, Report of the Conference of the Parties on its Eleventh Session, Montreal, 28 November to 10 December 2005, UN Doc. FCCC/CP/2005/5/Add.1., available on the Internet at <unfccc.int/resource/docs/2005/cop11/eng/05a01.pdf> (last accessed on 1 July 2010); Report of the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol on its First Session, Montreal, 28 November to 10 December 2005, UN Doc. FCCC/KP/CMP/2005/8/Add.1., available on the Internet at <unfccc.int/resource/docs/2005/cmp1/eng/08a01.pdf> (last accessed on 1 July 2010).

50 UNFCCC, Report of the Conference of the Parties on its Twelfth Session, Nairobi, 6 to 17 November 2006, UN Doc. FCCC/CP/2006/5/Add.1., available on the Internet at <unfccc.int/resource/docs/2006/cop12/eng/05a01.pdf> (last accessed on 1 July 2010); Report of the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol on Its Second Session, Nairobi, 6 to 17 November 2006, UN Doc. FCCC/KP/CMP/2006/10/Add.1., available on the Internet at <unfccc.int/resource/docs/2006/cmp2/eng/10a01.pdf> (last accessed on 1 July 2010).

with only indirect references to the adverse effects and social consequences of climate change. A passage on "Mechanisms for Technology Transfer" indicated that there should be collaboration with a number of organizations including the FAO, the IEA and the United Nations Development Programme (UNDP). This time, the Parties went beyond their statements of 2005, but again, reference to the WHO or a mention of health were excluded.[51] At Poznan in 2008, there was no direct link, now for the fifth consecutive year for the COP and the third consecutive year for the CMP. The conference outcome rather focused on emission reductions, the Clean Development Mechanism (CDM), land use, land use change and forestry (LULUF), avoided deforestation, and technology transfer.[52]

In December 2009, at Copenhagen, health was omitted from the decisions for the sixth year in a row, and most importantly from the Copenhagen Accord,[53] despite high levels of advocacy to include health directly as a key element of the Copenhagen conference outcomes. The Accord makes reference to the importance of strengthening adaptation programmes, especially in developing countries; decisions adopted in Copenhagen make reference to adaptation more generally,[54] allocating funding for implementation of the Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change[55] as well as the Buenos Aires Programme of Work on Adaptation. Similarly, the Kyoto Protocol's CMP did not mention health in any of its ten decisions, despite some reference to issues of adaptation.[56]

In December 2010, at Cancún, health was mentioned as a priority for adaptation in a footnote alongside agriculture and food security; infrastructure; socio-economic activities; terrestrial, freshwater and marine ecosystems; and coastal zones.[57]

3. Health and the Role of the WHO in other Institutional Arrangements: The Subsidiary Mechanisms

A multidisciplinary Subsidiary Body for Scientific and Technological Advice was established to provide information on scientific and technological matters to the conference of Parties.[58] Likewise, a subsidiary body for implementation was established to assist the conference of the Parties in the assessment and review of the implementation of the Convention.[59] At one point, agreement was reached that the Subsidiary Body for Implementation (SBI) should "address other aspects of the implementation of decision 1/CP.10 relating to adverse impacts of climate change and to the impacts of response measures in accordance with the conclusions of the SBI at its twenty-eighth session."[60] More recently, the Ad Hoc Working Group on Long Term Cooperative Action (the AWG-LCA) has also opted to focus on adverse impacts.[61] The COP-CMP processes, however, have instead focused more on the causes of climate change in the

51 UNFCCC, Report of the Conference of the Parties on its Thirteenth Session, Bali, 3 to 15 December 2007, UN Doc. FCCC/CP/2007/6/Add.1, available on the Internet at <unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf> (last accessed on 1 July 2010); Report of the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol on its Third Session, Bali, 3 to 15 December 2007, UN Doc. FCCC/KP/CMP/2007/9/Add.1, available on the Internet at <unfccc.int/resource/docs/2007/cmp3/eng/09a01.pdf> (last accessed on 1 July 2010).

52 Mary J. Mace, "United Nations Climate Change Conference, Poznan, Poland", 3 *International Energy Law Review* (2009), 72–74.

53 Decision 2/CP.15, Copenhagen Accord, UN Doc. FCCC/CP/2009/11/Add.1, 18–19 December 2009.

54 Decision 6/CP.15 (Annex), Fourth review of the financial mechanism, UN Doc. FCCC/CP/2009/11/Add.1, 18–19 December 2009.

55 Decision 12/CP.15, Programme budget for the biennium 2010–2011, UN Doc. FCCC/CP/2009/11/Add.1, 18–19 December 2009.

56 Decision 4/CMP.5, Report of the Adaptation Fund Board, UN Doc. FCCC/KP/CMP/2009/21/Add.1, 18–19 December 2009; and Decision 5/CMP.5, Review of the Adaptation Fund, UN Doc. FCCC/KP/CMP/2009/21/Add.1. 18–19 December 2009.

57 Draft decision -/CP.16, Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention, Paragraph 14(a), Advanced unedited version, available on the internet at http://unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf (last accessed on 12 January 2011).

58 UNFCCC, Article 9(1).

59 UNFCCC, Article 10(1).

60 UNFCCC, Matters Relating to Article 4, Paragraph 8 and 9, of the Convention: Progress on the Implementation of Decision 1/CP.10, UN Doc. FCCC/SBI/2009/L.13, available on the Internet at <unfccc.int/resource/docs/2009/sbi/eng/l13.pdf> (last accessed on 1 July 2010).

61 UNFCCC, Negotiating Text, Note by the Secretariat, UN Doc. FCCC/AWGLCA/2010/14, available on the Internet at <unfccc.int/resource/docs/2010/awglca12/eng/14.pdf> (last accessed on 1 July 2010).

broader economy, largely because the Kyoto Protocol focuses on mitigation while health falls under adaptation, an ancillary concern under the Protocol. The global financial crisis of 2008 and 2009 may also have motivated decision making at the CMP at Poznan, as evidenced by UN Secretary General Ban Ki-moon's focus on this issue in his address before the Parties.[62] The COP-CMP decisions focused mostly on the creation of the new Adaptation Fund, the only adaptation focus under the Kyoto Protocol. The Adaptation Fund Board established criteria for allocating funding for adaptation, which include urgency and risks arising from delay, ensuring access to the fund in a balanced and equitable manner, lessons learnt in project design and implementation, securing co-benefits where possible, multisectoral benefits and adaptive capacity to adverse effects.[63] However, the strategic priorities of the Adaptation Fund are unfavourable to health. Its priorities focus on countries that are vulnerable to adverse effects of climate change, and the Fund has specified this to include countries with low-lying coastal, arid and semi arid areas, with areas prone to national disasters, liable to drought and desertification, those with areas of high urban atmospheric pollution, and those with fragile ecosystems, including mountainous ecosystems.[64] One would have thought the pronounced health impact of climate change would qualify health to be a key strategic priority of the Fund.

One significant moment of climate and health integration occurred at a UNFCCC Expert Group Meeting on socioeconomic information under the Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change Meeting in March 2008 in Trinidad.[65] Hans-Martin Füssel made a presentation titled "Socioeconomic Information in Climate Impact, Vulnerability and Adaptation Assessment for Human Health", drawing clear links between climate change and health, and noting that the research in this area was still very limited.[66] This suggests that those involved in the process have been well aware of the scientific linkages between health and climate change. Additionally, the WHO has engaged with the UNFCCC institutional regime in a number of ways: first, the WHO has cooperated within the institutional framework of the UNFCCC by providing scientific expertise, input and advice to the Subsidiary Body of Scientific and Technological Advice and the Nairobi Work Programme, a network of stakeholders sharing information and building capacity to tackle climate change. Under the Nairobi Work Program partner, for instance, the WHO has committed itself to strengthening its scientific, normative, and policy development functions, enhancing operational programs such as combating infectious disease, improving water and sanitation services and hygiene practices, providing health support in emergencies, and supporting Ministries of Health and other health actors throughout the world.

Second, at the 2007 COP in Bali, the Ad Hoc Working Group on Long Term Cooperative Action under the Convention (AWG-LCA) was established. The AWG-LCA, among others, provided a forum for international organizations, states and non-state actors to make submissions to the UNFCCC. To date, the WHO, the FAO, the International Labour Organization (ILO), the UN High Commissioner for Refugees (UNHCR), as well as many other entities

62 Ban Ki-moon, "Opening Statement to the High Level Segment of the United Nations Climate Change Conference", Poznan, 11 December 2008, accessed at available on the Internet at <www.un.org/apps/news/infocus/sgspeeches/search_full.asp?statID=385> (last accessed on 1 July 2010).

63 Adaptation Fund Board, Draft Provisional Operational Policies and Guidelines for Parties to access Resources from the Fund, 31 March 2009, UN Doc. AFB/B.5/4 Rev.2, 8; the Strategic Priorities, Policies and Guidelines and the Draft Provisional Operational Policies and Guidelines for Parties to access resources from the Adaptation Fund are the two key documents guiding the application process.

64 Adaptation Fund Board, The Adaptation Fund: Draft Strategic Priorities, Policies and Guidelines of the Adaptation Fund, Third Meeting, Bonn, 15 to 18 September 2008, UN Doc. AFB/B.3/9, available on the Internet at <adaptation-fund.org/system/files/AFB.B.3.9_Strategic_Priorities,_Policies.pdf> (last accessed on 1 July 2010); see also Achala Chandani, Sven Harmeling, and Alpha Oumar Kaloga, "The Adaptation Fund: A Model for the Future?", August 2009, available on the Internet at <www.iied.org/pubs/pdfs/17068IIED.pdf> (last accessed on 1 September 2010).

65 International Institute for Sustainable Development (IISD), "Summary of the UNFCCC Expert meeting on Socioeconomic Information under the Nairobi Work Programme on Impacts, Vulnerable and Adaptation to Climate Change: 10 to 12 March 2008", 12 *Earth Negotiations Bulletin* (2008), available on the Internet at <www.iisd.ca/download/pdf/enb12356e.pdf> (last accessed on 12 September 2010).

66 Hans-Martin Füssel, "Socioeconomic Information in Climate Impact, Vulnerability and Adaptation Assessment for Human Health", Presentation at the UNFCCC Expert Meeting in Port of Spain, Trinidad, 10 to 12 March 2008, available on the Internet at <unfccc.int/files/adaptation/sbsta_agenda_item_adaptation/application/pdf/20080310_pik_health.pdf> (last accessed on 1 July 2010).

have put forth individual and collaborative reports.[67] The WHO submission documents the range of risks to human health within climate-related humanitarian emergencies, and proposes policy directions for consideration by international negotiators, the global health sector, and the humanitarian community. Options include strengthening public health systems, growing the capacity to address health emergencies, increasing the surveillance and control of infectious diseases, forecasting and early warning for extreme weather, and building community resilience through local public health interventions. The submission also calls for adaptation strategies that are integrated with national development planning processes that address poverty and recognize differentiated needs, including those of the most vulnerable in society. In 2009, the WHO issued a statement that welcomed the "opportunity to express suggestions in the framework of the work of the Ad Hoc Working Group on Long Term Cooperative Action (AWG-LCA) related to health issues".[68]

Finally, the WHO has continued to work with other specialized agencies and programs, such as the World Meterological Organization (WMO), the United Nations Environment Programme (UNEP), and the United Nations Development Programme (UNDP) on capacity building and project implementation. The key question, however, is how far the health sector has become engaged with the subsidiary mechanisms within the UNFCCC regime. There have been several avenues for such engagement, yet most of these are ad hoc and informal mechanisms that directly report to the Conference of Parties.

4. Climate Change Institutional Frameworks and Health: A Policy Review

The question remains why, in recent years, explicit discussion of health has virtually disappeared from the COP and CMP agendas, decisions and resolutions. Based on the UNFCCC record, a number of remarks can be made: most importantly, health has been a relevant issue since the beginning in 1992. After a slow start, the role of health peaked in 2003, but thereafter disappeared in a half decade of silence. Even at the peak of attention, the WHO was never recognized as a relevant international organization, even though several other UN bodies were. No concrete health actions were established. With regard to this particular pattern of COP and CMP attention, two potential causes stand out. First, attention has diminished and disappeared when the world has been afflicted by a global financial and ensuing economic crisis, which has diverted the attention of policymakers. Second, and less strongly, attention faded when COP and CMP were hosted by developing, emerging or transition countries, rather than by developed countries such as the Netherlands 2000 and Group of Seven (G7) members Italy in 2003 or Canada in 2005, or in Geneva, where the headquarters of the WHO and other specialized and affiliated agencies of the UN are housed. Prospects for consideration of health in Copenhagen never materialized. The COP delegations lists are largely composed of foreign, energy, transport and environment ministry officials, with poor representation of the health sector. The implication of under-representation at COPs is that crucial health issues do not feature appropriately in the COP decisions to date.

Most of the decisions and resolutions relating to health are only of indirect relevance, even though they form a body of support for a health claim in climate change policy. They identify climate change in general, and extreme weather events and ozone-affecting chemicals in particular, as causes of health problems. They identify the health effects as significant, deleterious, adverse and potentially irreversible, and also identify the impacts – such as loss of life and disease – on health in general, and on public health, medical practice, and disease control in particular. They also identify developing countries, small island states, Central America and Africa as the most affected regions. They specify the principles and instruments for minimizing

67 World Health Organization, in collaboration with the International Organization for Migration (IOM), World Vision (WV), the United Nations High Commissioner for Refugees (UNHCR), and the International Federation of Red Cross and Red Crescent Societies (IFRC), "Protecting the Health of Vulnerable People from the Humanitarian Consequences of Climate Change and Climate Related Disasters", Submission to the Sixth Session of the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention (AWG-LCA 6), Bonn, 1 to 12 June 2009, available on the Internet at <unfccc.int/resource/docs/2009/smsn/igo/047.pdf> (last accessed on 1 July 2010).

68 World Health Organization, Submission to the Ad Hoc Working Group on Long-Term Cooperative Action (AWG-LCA), available on the Internet at <unfccc.int/resource/docs/2009/smsn/igo/042.pdf> (last accessed on 1 July 2010).

adverse effects, such as adaptation, the monitoring of debt relief finance, climate funds, forecasting, early warning, prevention, the setting of integrative objectives, technology transfer, and afforestation and reforestation. The IPCC is identified as the actor responsible for health and climate linkages. As a coherent whole, this body of relevant pronouncements emphasizes areas most affected, rather than the climate-related causes of health effects or responsible actors. Nonetheless, it forms a robust and action-oriented foundation on which to build. This consensus, as a comprehensive and cumulative whole, could have been codified and reconfirmed at the Copenhagen COP15, as a component for the new climate change regime. Unfortunately, that has not been the case.

5. The Legal Status of COP Decisions: Implications for Health

Arguably, by diminishing the importance of health, the COP has in fact sought to state a diminished status of health under the UNFCCC or Kyoto Protocol. However, it can also be argued that positive COP decisions on health are of important operational significance and influence key legal outcomes in the climate change negotiations. The UNFCCC and Kyoto Protocol permit the COP to spearhead the progressive normative and institutional development of the global climate regime. It may be contended that COP decisions are soft instruments, and that their failure to make pronouncements about health is devoid of any legal consequences in international climate change law. In other words, COP decisions would not impose new obligations, as they are not legally binding.[69]

This view is not supported for a number of reasons: first, while there is some resistance, a number of developing countries favour the use of COP decisions in the progressive development and implementation of climate change treaties, and some even view them as legally binding.[70] Second, COP decisions may be considered a "subsequent agreement between Parties regarding the interpretation or application of provisions of the treaty and are relevant in legal interpretation."[71] Third, COP decisions have enriched and expanded the normative content of international climate change law by fleshing out treaty negotiations, reviewing the adequacy of existing obligations, creating institutional mechanisms for the Conventions as well as creating a launch pad for further negotiations. COP Decisions such as the Berlin and Bali mandates are frameworks that Parties do not wish to depart from.[72] The level of inclusion of health considerations in COP decisions is hence a key indicator of the role of health as a normative objective in the progressive development and implementation of climate change law. At the same time, COP decisions may not create new formal obligations, and the dearth of decisions relating to health can only be fundamentally addressed in other instruments. The use of ministerial declarations or new protocols to include any new commitments has hence been proposed.[73]

V. Health and the Implementation of Climate Change Treaties

1. Health and Climate Change Finance

Financing health needs under the climate change regime is crucial. The UNFCCC estimates that climate adaptation costs alone for the health sector will be in the range of $4 billion to $12 billion per year by 2030.[74] The Convention defines a financial mechanism for the provision of financial resources on a grant or concessional basis, including for the transfer of technology.[75] The mechanism functions

69 Jutta Brunnée, "COPing with Consent: Law Making under Multilateral Environmental Agreements", 15 *Leiden Journal of International Law* (2002), 1, at 32.

70 Lavanya Rajamani, "Addressing the 'Post-Kyoto' Stress Disorder: Reflections on the Emerging Legal Architecture of the Climate Regime", 58 *International and Comparative Law Quarterly* (2009), 803–834.

71 Article 31(3)(a) of the Vienna Convention on the Law of Treaties, 22 May 1969, in force 27 January 1980, 37 *International Legal Materials* (1998), at 17; See also Robin Churchill and Geir Ulfstein, "Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A Little Noticed Phenomenon in International Law", 94 *American Journal of International Law* (2000), 623.

72 Rajamani, supra, note 69.

73 Ibid.

74 UNFCCC, *Investment and Financial Flows to Address Climate Change* (Bonn: UNFCCC, 2007), available on the Internet at <unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/pub_07_financial_flows.pdf> (last accessed on 1 July 2010).

75 UNFCCC, supra, note 20, Article 11(1).

under the guidance of, and is accountable to,[76] the Conference of the Parties, which is responsible for its policies, programmes and priorities and eligibility criteria. The mechanism is required to have an equitable and balanced representation of all Parties within a transparent system of governance, and its operation is to be entrusted to one or more international entities. The Global Environment Facility (GEF) was initially entrusted *ad interim* to operate the mechanism from 1996.[77] In 1998, COP4 entrusted the GEF with the operation of the financial mechanism on a long-term basis, subject to review every four years.[78] UNFCCC adaptation projects, including those within the framework of National Adaptation Programmes of Action (NAPAs), are facilitated by the GEF, which acts as the financial mechanism and operates funds such as the Least Developed Country Fund and the Special Climate Change Fund. The GEF facilitates the implementation of on-the-ground projects and programs through its agencies. There have been controversies over GEF climate funding as developing countries argue that GEF is dominated the G7/G8, and focuses on funding big industrializing transition economies while ignoring adaptation needs of poorer nations.[79]

Today, there are ten GEF agencies – the original three implementing agencies (the World Bank, UNEP, and UNDP, and seven executing agencies with direct access to GEF resources.[80] The seven comprise the African Development Bank (AfDB), the Asian Development Bank (ADB), the Inter-American Development Bank (IDB), the European Bank for Reconstruction and Development (EBRD), the FAO, the International Fund for Agricultural Development (IFAD), and the United Nations Industrial Development Organization (UNIDO).[81] None of these is an agency focused on health issues.

These agencies serve as the channel between countries and the GEF for the project-approval process, and they participate in GEF governance, policy, and program development. Unfortunately, the WHO is not currently a GEF agency, and health is not among the GEF's focal areas. Therefore, implementation of health sector projects is facilitated by the GEF only through UNEP, UNDP, or the World Bank. There is some good news, however: The GEF is currently holding discussions on a variety of reforms, among them a proposal to add three more institutions with extensive field presence that comprise the World Food Programme and the WHO to the roster of GEF agencies, but this is yet to be achieved.[82]

At the 2010 UNFCC COP in Cancún, Mexico, developed countries committed to mobilize USD 100 billion per year by 2020 in order to support adaptation and mitigation in developing countries.[83] A Green Climate Fund was also established to implement this and other funding commitments. Whether this funding will effectively finance the tackling of increasing climate related public health challenges especially in developing countries is yet to be ascertained. What can be deciphered from the funding decisions is the absence of a clear and effective policy, functional and conceptual foundation underpinning the financing of efforts

76 UNFCCC, supra, note 20, Article 11(1)-(3).

77 Decision 13/CP.2, Memorandum of Understanding between the Conference of the Parties and the Council of the Global Environment Facility: annex on the determination of funding necessary and available for the implementation of the Convention, UN Doc. FCCC/CP/1996/15/Add.1., 19th July 1996.

78 Decision 3/CP.4, Review of the financial mechanism, UN Doc. FCCC/CP/1998/16/Add.1, 14 November 1998.

79 Benito Müller, "Climate of Distrust: The 2006 Bonn Climate Change Adaptation Fund Negotiations", 2006, available on the Internet at <www.oxfordenergy.org/pdfs/comment_0606-1.pdf> (last accessed on 1 July 2010).

80 Global Environment Facility, Submission to the UNFCCC Secretariat: Views on How the GEF Would Operationalize Decision-CMP.2 of the Conference of the Parties Serving as the Meeting of Parties to the Kyoto Protocol on the Adaptation, 15 June 2007, UN Doc. GEF/LDCF.SCCF.2/Inf.6, 29 May 2007, available on the Internet at <www.thegef.org/gef/sites/thegef.org/files/documents/ LDCF.SCCF_.2.Inf_.6%20Simbission%20of%20GEF%20to%20UNFCCC.pdf> (last accessed on 1 July 2010).

81 Ibid., Para 46.

82 Global Environment Facility, Highlights of the Council's Decisions, GEF Council Meeting, 28 June to 1 July 2010, Washington DC, UN Doc. GEF/38/Highlights, available on the Internet at <www.thegef.org/gef/sites/thegef.org/files/documents/C.38_Highlights.FINAL_.pdf>; idem, Broadening the GEF Partnership by Operationalizing Paragraph 28 of the GEF Instrument, GEF Council Meeting, 29 June to 1 July 2010, Washington DC, UN Doc. GEF/C.38/08, available on the Internet at <www.thegef.org/gef/sites/thegef.org/files/documents/C.38.8_Broadening_the_GEF_Partnership.pdf> (last accessed on 1 July 2010); idem, Draft Adaptation to Climate Change Programming Strategy, LDCF/SCCF Council Meeting, 24 June 2009, Washington DC, UN Doc. GEF/LDCF.SCCF.6/Inf.4, Para.29, available on the Internet at <www.thegef.org/gef/sites/thegef.org/files/documents/LDCF.SCCF%206.Inf_.4.pdf> (last accessed on 1 July 2010).

83 Draft decision -/CP.16, Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention, Paragraph 98, Advanced unedited version, available on the internet at http://unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf (last accessed on 12 January 2011).

to tackle both public and climate health. The concept of financing of global public goods provides a functional conceptual foundation for sustained funding to tackle the challenges of climate change.

2. Health and Implementation Reporting

Health reporting is a crucial means of compliance by Parties for their health-related obligations under international climate law. The UNFCCC establishes broad reporting requirements for the communication of certain information, with financial resources availed to developing country Parties. All Parties are required to communicate, to the Conference of Parties: information on implementation, a national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, a general description of steps taken or envisaged to implement the Convention, and any other relevant information including such information that is relevant for calculating global emission trends, including detailed measures and policies to fulfil commitments under the Convention.[84] Under the Kyoto Protocol, each Annex 1 Party was required to have in place, no later than 2007, a national system for the estimating of anthropogenic emissions by sources and removals by sinks of greenhouse gases. Annex I countries are required to incorporate in their annual inventory of anthropogenic emissions by sources and removals by sinks supplementary information to ensure compliance with Article 3 and demonstrate implementation of commitments under the Protocol.[85]

In practice, Parties have reported under the following headings: greenhouse inventories, policies and measures, projected greenhouse gas emissions, vulnerability assessments, climate change impacts and adaptation measures, financial resources and technology transfer, research and systematic observation.[86] Unfortunately, health does not have a specific heading either separately or under the general list, except for information about non-GHG mitigation benefits of policies and measures which include, for example, reduced emissions of other pollutants or increased health benefits.[87]

There are sparse references to health, as the reports are dominated by the environmental and energy-related issues that dominate the Convention and its Protocol. The list of reporting obligations is actually fairly specific, and includes a number of energy and environmental requirements to reduce greenhouse gases. Reporting requirements that could be interpreted as relating to health include "a general description of steps taken or envisaged to implement the Convention, and any other relevant information including that relevant for calculating global emission trends."[88] From these provisions, it is hard to conclude that there is indeed a legal requirement under the UNFCCC to report on health actions related to climate change. Even though health has been identified as a sector relevant for adaptation under the UNFCCC,[89] there are no corresponding express reporting obligations on health-related issues under the Convention or even under the decisions of the Conference of Parties.[90]

3. Health and Domestic Implementation: The Case of Adaptation

The UNFCCC and the Kyoto Protocol provide for adaptation of human systems to make them more resilient to the impacts of climate change. State Par-

84 UNFCCC, supra, note 20, Articles 4(1)(j) and 12(1).

85 Kyoto Protocol, supra, note 25, Articles 7(1) and (2).

86 See for example, UNFCCC, Guidelines for the Preparation of National Communications by Parties included in Annex I to the Convention, UN Doc. FCCC/CP/1999/7, 4th November 1999, available on the Internet at <unfccc.int/resource/docs/ cop5/07.pdf> (last accessed on 1 July 2010), 80–121.

87 Ibid, Para.24(b).

88 UNFCCC, supra, note 20, Articles 4(1)(j) and 12(1).

89 UNFCCC, supra, note 20, Article 4.1(f).

90 Decision 9/CP.2, Communications from Parties included in Annex I to the Convention: guidelines, schedule and process for consideration, UN Doc. FCCC/CP/1996/15/Add.1, 19 July 1996; Decision 10/CP.2, Communications from Parties not included in Annex I to the Convention: guidelines, facilitation and process for consideration UN Doc. FCCC/CP/1996/15/Add.1, 19th July 1996; Decision 3/CP.5Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories, UN Doc. FCCC/CP/1999/6/Add.1, 4 November 1999; Decision 4/CP.5, Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications, UN Doc. FCCC/CP/1999/6/Add.1, 4 November 1999.

ties are required to develop and implement programs that include "measures to facilitate adequate adaptation to climate change" alongside measures to reduce emissions and protect and increase sinks.[91] Parties also commit to cooperate in preparing for adaptation to the impacts of climate change,[92] and certain developed countries listed in Annex 2 agree to assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects.[93]

At the 2005 and 2006 UNFCCC COP, parties established the Kyoto Protocol Adaptation Fund,[94] dedicated to enabling concrete adaptation activities, and the Nairobi Work Program on Adaptation.[95] The Nairobi Work Program was a five-year program (2005–2010) implemented by UNFCCC Parties with the help of intergovernmental and nongovernmental organizations and others "[t]o assist all Parties, in particular developing countries, including the least developed countries and small island developing States to: improve their understanding and assessment of impacts, vulnerability and adaptation to climate change; [and] make informed decisions on practical adaptation actions and measures to respond to climate change on a sound scientific, technical and socio-economic basis, taking into account current and future climate change and variability." [96] At the 2008 COP, parties agreed upon administrative and legal arrangements necessary to fully operationalize the Adaptation Fund.[97] The Adaptation Fund Board has indicated that that it wishes "to implement adaptation activities promptly where sufficient information is available to warrant such activities, inter alia, in the areas of water resources management, land management, agriculture, health, infrastructure development, fragile ecosystems, including mountainous ecosystems, and integrated coastal zone management."[98] Adaptation is playing a key role in the negotiation of a mitigation regime as well.[99] Developing countries such as China and India insist that their willingness to commit to mitigation measures is closely tied to a strong commitment by the US and Europe to financial and technical assistance to developing countries to promote a transition to a cleaner energy economy and adaptation to the impacts of climate change.[100] The process of identifying and prioritizing adaptation efforts eligible for finance through the UNFCCC, National Adaption Programmes of Action (NAPAs), was established under the Marrakech Accords adopted at the 2001 COP.[101] In Marrakech, the international community recognized that the least developed countries are among the most vulnerable and yet have the least capacity to deal with the effects of climate change. Representatives agreed to support the development and implementation of these national programmes, which allow least developed countries to identify their urgent and immediate adaptation needs.[102]

At the December 2010 UNFCCC COP in Cancún, Mexico, the explicit mention of health as an adaptation priority represents a boost in prospects for

91 UNFCCC, supra, note 20, Art. 4.1(b).

92 UNFCCC, supra, note 20, Art. 4.1(e).

93 UNFCCC, supra, note 20, Art. 4.4.

94 UNFCCC, "Adaptation Fund", available on the Internet at <unfccc.int/cooperation_and_support/financial_mechanism/adaptation_fund/items/3659.php> (last accessed on 1 July 2010).

95 UNFCCC, Subsidiary Body for Scientific and Technological Advice, Nairobi work programme on impacts, vulnerability and adaptation to climate change, Draft conclusions proposed by the Chair, Thirty-third session, Cancún, 30 No, available on the internet at http://unfccc.int/files/adaptation/application/pdf/sbsta33_draft-conclusions.pdf (last accessed on 12 January 2011).

96 UNFCCC, "Nairobi Work Programme", available on the Internet at <unfccc.int/adaptation/sbsta_agenda_item_adaptation/items/3633.php on 1 July 2010> (last accessed on 1 July 2010).

97 Decision 1/CMP.4, available on the Internet at <unfccc.int/resource/docs/2008/cmp4/eng/11a02.pdf> (last accessed on 1 July 2010).

98 Adaptation Fund Board, Draft Provisional Operational Policies and Guidelines for Parties to Access Resources from the Adaptation Fund, August 2008, available on the Internet at <www.adaptation-fund.org/images/AFB.B.3.8_Operational_Policies_and_Guidelines_08.26.08_-_revised.1.pdf> (last accessed on 1 July 2010).

99 Lindsay F. Wiley, "Moving Global Health Law Upstream: A Critical Appraisal of Global Health Law as a Tool for Health Adaptation to Climate Change", 22 *Georgetown Environmental Law Review* (2010), 439.

100 Richard Lazarus, "Super Wicked Problems and Climate Change", 94 *Cornell Law Review* (2009), 1153, 1173–1174.

101 UNFCCC, Report of the Conference of the Parties on its Seventh Session, Marrakesh, 29 October to 10 November 2001, UN Doc FCCC/CP/2001/13/Add.4., available on the Internet at <unfccc.int/resource/docs/cop7/13a04.pdf#page=7> (last accessed on 1 July 2010).

102 Ibid.

health promotion in adaptation and mitigation in policies and actions.[103]

Despite the importance of adaptation for fighting climate change, environmental advocates are concerned that adaptation is a form of resignation on mitigation efforts and casts climate change impacts as manageable; hence, a balanced approach to climate change needs to embrace both adaptation and mitigation.[104] In fact, a focus on adaptation has in some ways moved the global response to climate change forward by prompting a more concrete discussion of climate change impacts and creating new opportunities to engage scientific and policy communities in other fields, such as agriculture and global health.[105]

4. Health and National Adaptation Programmes of Action (NAPAs)

National Adaptation Programmes of Action (NAPAs) provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to their urgent and immediate needs to adapt to climate change – those for which further delay would increase vulnerability and/or costs at a later stage.[106] NAPAs should use existing information, be action-oriented and country-driven, and be flexible and based on national circumstances.[107] To address urgent and immediate adaptation needs, NAPAs should be easily understood by both policy-level decision-makers and by the public.[108] Health is one of the priority sectors for NAPAs.[109] Despite this recognition, however, fewer than half of the countries with NAPAs have proposed a single adaptation project in the health sector. In fact, the health sector accounts for only about 7 percent of the 448 total projects, after food security (21 percent), water resources and management (16 percent), terrestrial ecosystems (15 percent), cross-sectoral cooperation (9 percent), and coastal zones and marine ecosystems (8 percent). What is more, projects in the health sector are generally among the first five priorities in any of the countries.[110]

The composition of NAPA preparation teams has significant implications for the content of NAPAs. Although according to the NAPA preparation guidelines, these teams should have representation from the major sectors (such as agriculture, water, health, and forestry), one analysis of 14 NAPAs found that the preparation teams are housed under the umbrella of either the environmental or meteorology departments.[111] Underrepresentation likely will mean that health sector issues acknowledged globally and within countries as critical will take a backseat and consequently not feature strongly in outcomes of the negotiations. Thus, to ensure that health effects of climate change are not overlooked, the health sector needs to be integrated into national climate adaptation planning.[112] As of 10 June 2010, 44 of the 49 least developed countries have prepared and submitted their NAPAs to the UNFCCC.[113] All 44 countries identify health, or the health sector, among the sectors most vulnerable to

103 Draft decision -/CP.16, Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention, Paragraph 14(a), Advanced unedited version, available on the internet at http://unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf (last accessed on 12 January 2011).

104 Wiley, "Moving Global Health Law Upstream", supra, note 97, 439.

105 Kristie L. Ebi, Joel B. Smith and Ian Burton (eds.), Integration of Public Health with Adaptation to Climate Change: Lessons Learned and New Directions (London: Taylor & Francis, 2005), xviii.

106 Decision 28/CP.7, Guidelines for the preparation of national adaptation programmes of action, 10 November 2001, available on the internet at http://unfccc.int/resource/ldc/documents/13a04p7.pdf (last accessed on 12 January 2011).

107 Ibid., Paragraphs 6 and 7.

108 Ibid.

109 Decision 5/CP.7, Implementation of Article 4, paragraphs 8 and 9, of the Convention (decision 3/CP.3 and Article 2, paragraph 3, and Article 3, paragraph 14, of the Kyoto Protocol), UN Doc. FCCC/CP/2001/13/Add.1, 10 November 2001.

110 Clive Mutunga and Karen Hardee, *Population and Reproductive Health in National Adaptation Programmes of Action (NAPAs) for Climate Change*, September 2009, available on the Internet at <www.populationaction.org/Publications/Working_Papers/August_2009_Climate/WP09-04_NAPA.pdf> (last accessed on 1 July 2010).

111 Balgis Osman-Elasha and Thomas E Downing, Lessons Learned in Preparing National Adaptation Programmes of Action in Eastern and Southern Africa, 2007, available on the Internet at <www.eurocapacity.org/downloads/ecbi_NAPA_PA_Project_2007.pdf> (last accessed on 1 July 2010).

112 Kristie L. Ebi et al, "Some Lessons Learned from Public Health on the Process of Adaptation", 11 *Mitigation and Adaptation Strategies for Global Change* (2006), 607–620.

113 Lucien Manga et al., "Overview of Health Considerations within National Adaptation Programmes of Action for Climate Change in Least Developed Countries and Small Island States", June 2010, available on the Internet at <www.who.int/phe/Health_in_NAPAs_final.pdf> (last accessed on 1 July 2010).

climate change and in need of adaptation action.[114] The WHO reviewed a total of 41 NAPAs including the following 29 from Africa: Benin, Burkina Faso, Burundi, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Eritrea, Ethiopia, Gambia, Guinea, Guinea Bissau, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Sao Tome & Principe, Senegal, Sierra Leone, Tanzania, Togo, Uganda, and Zambia. Another number of least developed countries and small island states, namely Afghanistan, Bangladesh, Bhutan, Cambodia, Kiribati, Laos, Maldives, Samoa, Solomon Islands, Tuvalu, Vanuatu and Yemen, were also reviewed. It was found that 39 of 41 NAPAs reviewed (95 %) consider health as being one of the sectors on which climate change is seen as having an impact.[115] However, only 23 % of these plans were found to be comprehensive in their health-vulnerability assessment.[116] In total, 73 % of the NAPAs include health interventions within adaptation needs and proposed actions, but only 27 % of these interventions are found to be adequate.[117] The total number of selected priority projects is 459, but only 50 (11 %) represent projects focused on health. Health is identified in the vast majority of countries as a sector on which climate change will have an impact.[118] However, the extent to which health will be affected appears to be inadequately understood and addressed. Health issues in NAPAs are handled in a manner that would not meet standard public health requirements: typically, there is a weak epidemiological analysis, lack of an evidence base, an absence of clear public health objectives, and unclear and fragmented strategies.[119] In many instances, this results in incomprehensible vulnerability assessments and inadequate adaptation actions. The proposed health adaptation projects are for the most part insufficient in terms of cope, size, and resources. The analysis not only shows that the number of projects focused on health is small (11 % of the total), the resources proposed to be assigned to them are even smaller (3 % of the total).[120] Most NAPAs were developed more than three years ago, and all now need to be reviewed, with a number of Parties revising them with new elements to include Local Adaptation Plans of Action (LAPAs). It is yet to be seen whether health will be bolstered in the newer NAPAs.

5. Climate Change Mitigation and Health

The UNFCCC and the Kyoto Protocol provide for mitigation as a key tool for tackling climate change, whose co-benefits for health are increasingly being acknowledged.[121] To achieve the objectives of UNFCCC, all Parties are required to take certain measures, taking into account their common but differentiated responsibilities and priorities, objectives and circumstances.[122] The general commitments include the development of national inventories of anthropogenic emissions by sources and removals of greenhouse gases not controlled by the Montreal Protocol,[123] to formulate and implement national and regional programmes of measures *to mitigate* climate change by addressing emission and the removal of these gases, and to facilitate adaptation to climate change.[124] The Kyoto Protocol concretizes mitigation-related commitments of Annex I parties to quantified emissions reduction and limitation targets and a timetable for their achievement. Annex I parties individually or jointly ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of greenhouse gases listed in Annex A do not exceed their assigned amounts. A list of commitments includes enhancement of energy efficiency, protection and enhancement of energy efficiency, the protection and enhancement of sinks, the promotion of sustainable forms of agriculture, increased research on and

114 For example, the NAPAs of Malawi, Kiribati and Uganda all emphasize the health-climate change linkages, see on the Internet <unfccc.int/cooperation_support/least_developed_countries_portal/submitted_napas/items/4585.php> (last accessed on 1 September 2010).

115 Manga et al., "Overview", supra, note 110.

116 Ibid.

117 Ibid.

118 Ibid.

119 Ibid.

120 Ibid.

121 Organization for Economic Cooperation and Development (OECD), *Ancillary Benefits and Costs of GHG Mitigation: Policy Conclusions* (Paris: OECD, 2002).

122 UNFCCC, supra, note 20, Article 4(1).

123 UNFCCC, supra, note 20, Article 4 1(a).

124 UNFCCC, supra, note 20, Art. 4.1 (b).

use of new and renewable forms of energy, and measures to limit or reduce emissions in the transport sector.[125] While the mitigation commitments are not health specific, several studies have shown that action to combat climate change through mitigation can lead to improvements in public health. Climate change harms human health, and mitigation strategies will reduce the harm. However, these studies demonstrate that appropriate mitigation strategies will have additional and independent beneficial effects on health. For example, use of cleaner energy or cycling can reduce asthma and heart disease respectively.[126] Unfortunately, both the UNFCCC and Kyoto Protocol have not appropriately addressed the linkage between mitigation and public health. The linkage between health and mitigation has received little or no attention in the recent climate change negotiations. The COP has not proactively adopted any measures that would recognize the role of the health sector in implementing mitigation measures to tackle both climate change and promote human health. The Bali Action Plan includes, as one option in the mitigation building block, "cooperative sectoral approaches and sector-specific actions, in order to enhance implementation of Article 4, paragraph 1(c), of the Convention".[127] The call for sector-wide approaches to advancing mitigation offers a framework for the involvement of the health sector in climate change mitigation efforts. However, this call has not been clarified or defined in part due to the various perceptions of what sector-wide approaches are, as the term has a plethora of meanings.[128] The greatest challenge is the bias at the international level in favour of environmental and energy issues, with a primary focus on limiting greenhouse gas emissions associated with human activity. One scholar attributes this to the ultimate objective of the UNFCCC, namely to "stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[129] The health sector has traditionally promoted mitigation measures such as low emissions and alternative transport as core and fundamental aspects of public health. However, the current evidence points to a lack of recognition of this linkage and involvement of the health sector by global and domestic climate change regimes.

VI. Conclusions: (Re)invigorating Health in International and Domestic Climate Change Law

From the foregoing analysis, discussion and evidence, health continues to be marginalized in international and domestic climate law despite being at the core of objectives of global climate change law and policy. The following part explores options for reform to better integrate health into the climate change legal regime.

1. Conceptual Frameworks for Reform

a. Adaptive Governance

Adaptive governance institutions are those "capable of generating long-term, sustainable policy solutions" to complex and dynamic natural resource problems through collaboration among diverse resource users and governmental agencies[130] These governance structures would continue to exploit natural resources while ensuring the sustainability of both human and natural systems, but would use collaborative management techniques.[131] Ideally, these efforts would bring together and earn support from all affected users, thereby enhancing total welfare while minimizing the costs of an adversarial system.[132] Equally important, the structures would be adaptable. This extends adaptive management's flexible, iterative approach beyond natural systems to human systems. An ideal adaptive governance

125 Kyoto Protocol, supra, note 25, Article 2(1)(a).

126 James Woodcock et al., "Public Health Benefits of Strategies to Reduce Greenhouse-gas Emissions: Urban Land Transport", Lancet, 25 November 2009, available on the Internet at <download.thelancet.com/pdfs/journals/lancet/PIIS0140673609617141.pdf> (last accessed on 1 July 2010).

127 Decision 1/CP.13, Bali Action Plan, UN Doc. FCCC/CP/2007/6/Add.1, 14–15 December 2007.

128 Keigo Akimoto et al., *Global Emission Reduction Toward Low-carbon Society by Sectoral Intensity Target Scheme* (Kyoto: Research Institute of Innovative Technology for the Earth (RITE), 2008).

129 Franklyn Lisk, "A New Challenge in Global Health Governance: Adaptation to the Effects of Climate Change in Developing Countries", Presentation at the World Civic Forum, Seoul, 5 to 8 May 2009, available on the Internet at <www.wcf2009.org/program/program_06.asp> (last accessed on 1 July 2010).

130 John T. Scholz and Bruce Stiftel (eds.), *Adaptive Governance and Water Conflict: New Institutions for Collaborative Planning* (Washington, D.C.: Resources for the Future Press, 2005), 5.

131 Ibid., pages iii and 2.

132 Ibid., pages 2 and 5.

structure would react to surprises not only from the ecological system, but also from human institutions and ecological sustainability as the *sine qua non* of adaptive governance: "[R]esolution of conflict in the human system is valuable only if it leads to sustainable use of the natural system."[133] Adaptive governance is largely the synthesis of two streams of thought – collaborative and adaptive management, and the notion that solutions to natural resource problems lie in the involvement of communities, that is, durable, cooperative institutions through which the resource users organize and govern themselves. Adaptive management is a resource management paradigm that focuses on the interaction of resource management and science and recognizes that, because science is constantly evolving, our understanding of natural systems or the effect of human interactions on these systems is rarely, if ever, complete.[134] Scientific answers are not purely objective and are largely socially constructed, especially in the field of natural resource management. Instead of using science to predict outcomes far into the future and set onetime static policies, adaptive management monitors outcomes and maintains flexibility so that policies can be altered, should predictions prove inaccurate or scientific understandings advance.

The concept of adaptive governance is relevant to strengthening the role of health. First, adaptation requires policy adjustments in social, economic, and governance systems as wider sectors are affected by climate change. Regulatory frameworks, laws, and policies that address public health, water, agriculture and other sectors need to integrate and adapt.[135] Second, the scientific base in health and climate change is bound to evolve, hence the response of international climate law and health is bound to the prerogative of health. In such a situation, adaptive governance is an appropriate framework of action. Third, issues of health and climate change involve many actors beyond States and other actors that often participate in international climate change negotiations. Communities affected by heat waves, children who suffer high burdens due to increased incidence of malaria and temperature rises, and so on can be viewed as stakeholders in adaptive governance. While adaptive management is not synonymous with climate adaptation, it provides a robust methodology for adaptation laws and policies.[136] This is because it takes a holistic, ecosystem-level approach to environmental issues, using iterative phases of implementation, monitoring, and adjustment to improve the understanding and management of natural systems. At its core, it involves synthesizing existing knowledge, exploring alternative actions, making explicit predictions of their outcomes, selecting one or more actions to implement, monitoring to determine whether outcomes match those predicted, and using these results to adjust future plans. Adaptive management is thus often expressed in the simple phrase "learning-by-doing."[137] Adaptive governance helps to strengthen global environmental governance by enhancing the role of global actors such as UNEP and the WHO in building sectoral linkages to tackle climate change. Adaptive governance provides an important tool in reinvigorating health in international climate law.

b. Global Public Goods and Financing of Climate Change Measures

The global financing commitments including those adopted in Cancún, Mexico in 2010 require a sound operational foundation to be fully realized.[138] The global public goods concept provides a useful functional conceptual foundation to ensure sustained funding to tackle the public health and other challenges of climate change. The UNDP defines a global public good as a public good with benefits that are strongly universal in terms of countries (covering more than one group of countries), people (accruing to several, preferably all population groups) and generations (extending to both current and future generations, or at least meeting the

133 Ibid, page 2.

134 J.B. Ruhl, "Thinking of Environmental Law as a Complex Adaptive System: How to Clean up the Environment by Making a Mess of Environmental Law", 34 *Houston Law Review* (1997), 933.

135 Orr Karassin, "Mind the Gap: Knowledge and Need in Regulating Adaptation to Climate Change", 22 *Georgetown International Environmental Law Review* (2010), 383.

136 Daniel Schramm and Akiva Fishman, "Legal Frameworks for Adaptive Natural Resource Management in a Changing Climate", 22 *Georgetown International Environmental Law Review* (2010), 491.

137 Ibid.

138 Draft decision -/CP.16, Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention, Paragraph 14(a), Advanced unedited version, available on the internet at http://unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf (last accessed on 12 January 2011.

needs of current generations without foreclosing development options for future generations).[139] From this definition, health is a global public good, as its promotion provides a positive externality in reduced health burdens around the whole world.[140] As a global public good, the promotion of health in international law has been pertinent.[141] The protection of the global climate has also been considered a global public good.[142] The challenge for the international community has been financing such global public goods. As argued earlier, the poorer countries have contributed least to the climate problem, but are less able to mitigate its consequences.[143] The issue with health and climate change is that, when it comes to "common but differentiated responsibilities", a principle well-recognized in international climate change law, the question arises as to whether Parties to the climate change treaties have a moral and legal duty to compensate the developing countries in health and other sectors to tackle climate change and its impacts. It would seem appropriate that richer countries recognize both a moral and legal obligation to finance public health adaptation programmes, not simply voluntary financing mechanisms. The UNDP supports this view that global public goods must be financed as a binding legal duty by the wealthier countries.[144] For example, others have argued that financing of the protection of the Amazon forests is a legal duty of the whole international community, not just Brazil, as it is key in efforts to tackle climate change. Dan Farber has asserted that there is a strong argument that richer countries must compensate poorer developing countries for contributing to climate change, including through litigation.[145] Furthermore, the costs of adaptation by developing countries must be met by sustainable financing by developed countries.[146] The UN Security Council held that there is a basis in international law for compensation of any direct loss or damage, including environmental damage and the depletion of natural resources, or injury to foreign governments, nationals, and corporations as a result of Iraq's unlawful invasion and occupation of Kuwait.[147] The implication in international law is that compensable claims would include reasonable monitoring of public health and performing medical screenings for the purpose of investigating and combating increased health risks as a result of the environmental damage.[148] The United Nations Compensation Commission (UNCC) has already set a precedent in awarding compensation for both environmental and public health claims comprising around $5 billion dollars for 109 successful claims.[149] In sum, a global public goods perspective provides a critical framework for reforming the international climate legal regime and its response to health and other social threats arising from climate change.

2. Implications for Legal Reform

a. Climate-specific Legal Reforms

At the international level, the ongoing climate change negotiations need to adequately reflect the importance of health in international climate change governance. A post-Copenhagen climate

139 Inge Kaul, Isabelle Grunberg, and Marc A. Stern (eds.), *Global Public Goods: International Cooperation in the 21st Century* (New York: Oxford University Press, 1999).

140 Richard Smith et al., *Global Public Goods for Health: Health, Economic and Public Health Perspectives* (Oxford: Oxford University Press, 2003), 7.

141 William Onzivu, "Globalism, Regionalism, or Both: Health Policy and Regional Economic Integration in Developing Countries – An Evolution of a Legal Regime?" 15 *Minnesota Journal of International Law* (2006), 111.

142 Scott Barrett, "Montreal versus Kyoto: International Cooperation and the Global Environment", in Inge Kaul, Isabelle Grunberg, and Marc A. Stern (eds.), *Global Public Goods: International Cooperation in the 21st Century* (New York: Oxford University Press, 1999).

143 Cordonier Segger et al., *Sustainable Development Law*, supra, note 13, 360.

144 UNDP, *UNDP and Governance: Experiences and Lessons Learned*, 2006, , available on the Internet at <www.pogar.org/publications/other/undp/governance/lessonslearned-e.pdf> (last accessed on 1 July 2010).

145 Daniel A. Farber, "Basic Compensation for Victims of Climate Change", 155 *University of Pennsylvania Law Review* (2007), 1605.

146 Daniel A. Farber, "Adapting to Climate Change: Who Should Pay?" 23 *Journal of Land Use and Environmental Law* (2007), 1.

147 United Nations Security Council, Resolution 687, U.N. Doc. S/RES/687, 8 April 1991, Para 16.

148 Daniel A. Farber, "Apportioning Climate Change Costs", 26 *UCLA Journal of Environmental Law and Policy* (2007/2008), 21.

149 Ibid.; see also Cymie Payne, "UN Commission Awards Compensation for Environmental and Public Health Damage from 1990-91 Gulf War", 2005, available on the Internet at <www.asil.org/insights/2005/08/insights050810.html> (last accessed on 1 July 2010).

change agreement will need to include substantive mechanisms that effectively address health issues in the context of the Convention and the Protocol. There is a need to encourage Parties to include health experts in the delegations attending climate change negotiations. The adoption by the UNFCCC COP and Kyoto CMP of relevant health-specific decisions and a Ministerial Declaration on Health and Climate Change could lay the foundation for bolstering health issues in the post-Copenhagen climate change regime. This will promote the implementation of climate action for health through both mitigation and adaptation by Parties.[150] Parties need to adopt domestic climate legislation that ensures an equal focus on both mitigation and adaptation measures, where health and broader social issues are included and addressed.

b. The Role of the WHO and Global Health Law

Global health law can provide a synergistic role in promoting the health benefits of international climate change law as well as dealing with the impact of climate change. This reflects collaborative management, which is at the core of adaptive governance. It also builds on the benefits of both health and climate change as global health goods that are an increasing priority of the international community. The constitution of the World Health Organization empowers the organization to promote global health laws and policies.[151] Several joint technical reports on climate change have been issued by the WHO, UNEP, and the WMO.[152] Accordingly, there is a realization among member states of the United Nations that climate change is not simply an environmental concern, but also a health issue.[153] In this context, on 24 May 2008, the WHO's World Health Assembly passed a key resolution on health and climate change.[154] The 193 countries represented at the 2008 World Health Assembly voiced unanimous and outspoken support for a new resolution calling for greater engagement on the issue of climate change and health. This resolution requests the WHO to further strengthen its existing program of support to countries, and to ensure that health is fully represented in the international climate change debate.[155] Similar resolutions have also been adopted by WHO regional groups in Africa, Southeast Asia, the Americas, the Western Pacific and the Eastern Mediterranean. In many ways, this Resolution finds support in and reflects requirements of the UNFCCC. Article 4, Paragraph 1 (g) of the UNFCCC provides that Parties are required to support and develop international and intergovernmental programmes and networks or organizations in furthering activities to implement their research commitments under the Convention.[156] The WHO is a major actor in global health policy, representing the interests of the health sector in global climate negotiations and providing a link to operational health programs in the field. The WHO's leadership in advocacy, capacity building, awareness raising and research, could allow inter-agency collaboration to spur effective integration of health into adaptation and mitigation efforts at both the global and country levels. The UNFCCC Parties, also members of the WHO, should provide effective mechanisms for the WHO and the health sector's full participation in the UNFCCC and related negotiations and processes as well as in the GEF. Evolving governance mechanisms within the global climate change regime need to incorporate the role of the WHO.

150 UNFCCC, supra, note 20, Article 4(2).

151 World Health Organization, Basic Documents, Constitution of the World Health Organization, Article 19(45th Edition, 2005).

152 Githeko et al., "International Consensus", supra, note 5, 47–50.

153 World Health Organization, Sixty-First World Health Assembly, Resolution WHA61.19, 24 May 2008.

154 Ibid.

155 Ibid.

156 Ibid., Article 5(a) and (b).