

Climate change, sustainable development and the clean development mechanism

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I. Introduction

The reality of climate change is today beyond doubt. Our planet will become more dangerous and less hospitable in the coming decades. For millions of people this means hunger, poverty, loss of livelihoods, forced displacement, conflict, and even loss of statehood. In short, climate change constitutes a systematic denial of fundamental human rights.

As we look at 25 years of progress since the Declaration on the Right to Development, we can also look into the future and identify a role for the right to development in addressing the climate change crisis. In so doing, we may legitimately ask whether the right to development can be central to enabling and guiding a non-carbon, sustainable development path in a climate-constrained world.

The planet's atmosphere is already saturated with greenhouse gases that will cause dangerous interference with the global climate. In other words, there is no more space in the atmosphere to increase emissions of greenhouse gases without further damaging the climate system. This is a simple statement with profound implications. If emissions cannot continue to increase without causing severe global environmental and social harm, then by necessity development must

follow a sustainable, non-carbon path. In this regard, only a significant technological leap will enable our global society to address the moral imperatives of development in a way that avoids further environmental destruction of our only planet. Without a doubt, given historical responsibility and current capabilities, the industrialized countries bear the obligation to provide the financial and technological support to make this leap possible.

At the same time, the actions required to address climate change represent an unparalleled opportunity to generate new levels of development. In this regard, the right to development highlights the need for development models that are integrated with the underlying ecology. The right to development also provides an ethical vision that can direct and sustain the economic transformation demanded by climate change.

Certain core elements of the right to development acquire special importance in the climate change context, namely respect for all human rights, equity and international cooperation. Issues of international cooperation are addressed below in the context of climate change and human rights and the United Nations Framework Convention on Climate Change (UNFCCC). As to respect for human rights, the Declaration on the Right to Development places the human person at the centre of development, and provides that the development process must respect all human

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rights and fundamental freedoms and contribute to the realization of rights for all (preamble and arts. 1, 2 (1) and 6). Also, the realization of the right to development may not justify violations of other human rights.¹ This is the basis for a human rights-based approach to development,² which is particularly relevant in the climate change context.³

The right to development also requires that consideration of the core elements of equity and justice determine the structure of the development process. For example, poverty has to be eradicated and the structure of production has to be adjusted through development policy.⁴ In this sense, UNFCCC recognizes equity as one of the central principles that must guide the actions of States parties to achieve its objective and implement its provisions (art. 3).

The emphasis on equity in the right to development provides a direct linkage with the notion of sustainable development, and this linkage is particularly relevant in the climate change context. Sustainable development has been conceptualized by the United Nations Commission on Sustainable Development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains two key concepts: (a) the concept of “needs”, in particular the essential needs of the world’s poor, to which overriding priority should be given; and (b) the idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs.⁵ Sustainable development is thus central to the climate change regime in general, and has been explicitly incorporated as one of the objectives of the clean development mechanism (CDM), established by the Kyoto Protocol to UNFCCC. Fur-

ther, sustainable development calls for the integration of environmental, social and economic issues in the development process, which is essential for an adequate and effective response to climate change and highlights the linkages between the right to development and sustainable development.

In our age of globalization, when time is compressed in electronic transactions to create a culture of the instant, we need a moral compass that can provide direction to the necessary transformation of the economy. The right to development, and the indivisibility of human rights in the process of development, establishes the ethical vision necessary for our age to effectively address climate change. Confronting climate change requires nothing less than the fundamental transformation of the economic patterns and structures that have been set up since the dawn of industrialization. Can the nation State structure of governance successfully address the fundamental challenge confronting humanity in our time? Or will climate change negotiations and implementation remain locked in a zero-sum game that is running out the clock? This is where the right to development provides the indispensable moral compass that can guide the needed economic transformation. In this sense, the right to development expresses a common ethos, an articulating principle and a transcendent goal for our global society if it is to survive and thrive in a climate-constrained planet.

Economic transformation, and particularly the transition to a sustainable economy, is one of the two themes of the United Nations Conference on Sustainable Development (Rio+20) process, which highlights the need to reconceptualize the relations between the economy and the environment. It posits that the environment is the infrastructure of society, and not a mere input into economic systems. The transition towards a sustainable economy has direct implications for development models that ignore biological tenets. It also has clear and direct implications for human rights, including resource rights, livelihoods and, of course, development. In this regard, the right to development, and its emphasis on a participatory and accountable development process guided by respect for and promotion of rights, provides essential guiding principles. It is thus central to the success of the sustainable economy and governance discussions involved in the Rio+20 process.

Against this background, this chapter explores the linkages between the right to development and climate change, focusing on CDM as a case study of

¹ The Vienna Declaration and Programme of Action states: “While development facilitates the enjoyment of all human rights, the lack of development may not be invoked to justify the abridgement of internationally recognized human rights” (part I, para. 10).

² See “Fifth report of the Independent Expert on the right to development, Mr. Arjun Sengupta, submitted in accordance with Commission resolution 2002/69: frameworks for development cooperation and the right to development” (E/CN.4/2002/WG.18/6), para. 46. The Working Group on the Right to Development, at its sixth session in 2005, recognized the “multifaceted nature of the right to development [and] agreed that a rights-based approach to economic growth and development contributes to the realization of the right to development while it does not exhaust its implications and requirements at both the national and international levels”. See “Report of the Working Group on the Right to Development on its sixth session” (E/CN.4/2005/25). See also S. Nwauche and J.C. Nwobike, “Implementing the right to development”, *SUR—International Journal on Human Rights*, Issue 2 (2005), p. 96.

³ See Marcos Orellana, “A rights-based approach to climate change mitigation” in *Conservation with Justice: A Rights-based Approach*, Thomas Greiber, ed. (Gland, Switzerland, International Union for Conservation of Nature, 2009), p. 37.

⁴ Arjun Sengupta, “On the theory and practice of the right to development,” *Human Rights Quarterly*, vol. 24 (2002), p. 849.

⁵ Report of the World Commission on Environment and Development: our common future (A/43/427, annex), chap. 2, para. 1.

a global partnership and technology transfer. CDM is a mechanism of the Kyoto Protocol that aims to help developing countries move to cleaner technology and reduce their greenhouse gas emissions while helping industrialized countries achieve their legally binding targets as established in the Protocol. CDM is also designed to achieve cost-effective emissions reduction and promote sustainable development in developing countries by encouraging investments that achieve emission reductions additional to what would otherwise have occurred. In doing so, CDM exemplifies an international partnership between the global South and the industrialized North that seeks to promote sustainable development and mitigate climate change.

The present chapter is structured as follows: section II will discuss the broad aspects of human rights and climate change, followed in section III by the relationship between climate change and the Millennium Development Goals. The framework for international cooperation and climate change consisting of the United Nations Framework Convention on Climate Change, the Kyoto Protocol and financial arrangements for climate change will be presented in section IV. Section V analyses and critiques CDM, including a discussion of the relevance of the right to development in the implementation of a rights-based approach to the mechanism. Finally, section VI will assess CDM in the light of the right to development criteria developed by the high-level task force on the implementation of the right to development and suggest steps to improve it. The chapter concludes with a discussion of how the right to development can effectively address the climate change crisis.

II. Human rights and climate change

The impacts of climate change on human rights underscore the human face of climate change. The Human Rights Council has affirmed that climate change “poses an immediate and far-reaching threat” for the “full enjoyment of human rights”.⁶

Pursuant to Council resolution 7/23, its first on climate change and human rights, the Office of the United Nations High Commissioner for Human Rights (OHCHR) prepared in 2009 a comprehensive report on the relationship between climate change and human rights (A/HRC/10/61, hereinafter “OHCHR report”). As the report explains, “looking at climate change vulnerability and adaptive capacity in human

rights terms highlights the importance of analysing power relationships, addressing underlying causes of inequality and discrimination, and gives particular attention to marginalized and vulnerable members of society”. It concludes that “global warming will potentially have implications for the full range of human rights”, and particularly the rights to life, adequate food, water, health, adequate housing and the right to self-determination. Moreover, the study found that most at risk are the rights of already vulnerable people, such as indigenous peoples, minorities, women, children, the elderly, persons with disabilities and other groups especially dependent on the physical environment.

The World Bank estimates that even with a 2° C increase from pre-industrial levels, existing greenhouse gas concentrations will cause irreversible climate change that will drive between 100 and 400 million people into hunger, and between 1 and 2 billion more people may no longer have enough clean water.⁷ Levelling at 2° C looks more and more unlikely, however. In the words of Secretary-General Ban Ki-moon in his speech to World Climate Conference 3, held in Geneva in September 2009, “our foot is stuck on the accelerator and we are heading towards an abyss”. At the same meeting, the Chair of the Intergovernmental Panel on Climate Change recalled the moral and legal obligations “to ensure that we prevent by every means these abrupt and irreversible changes”. In this regard, the Deputy High Commissioner for Human Rights, in her address to the thirteenth Conference of the Parties to UNFCCC (COP 13), held in Bali, Indonesia, in December 2007, had stated that human rights obligations introduced an accountability framework that was an essential element of the promotion and protection of human rights.

A framework of accountability is indispensable for development given that climate change aggravates the vulnerability of groups already marginalized, facing discrimination or living in poverty. As noted by the Independent Expert on human rights and extreme poverty in her preface to a 2010 study commissioned to advise her on this matter,⁸ “climate change disproportionately affects those living in extreme poverty, further undermining their ability to live their lives in dignity”.

⁷ World Bank, *World Development Report 2010: Development and Climate Change* (Washington, D.C., 2010).

⁸ Thea Gelbspan, “Exposed: the human rights of the poor in a changing global climate”, *Dialogue on Globalization* (Friedrich-Ebert-Stiftung Geneva, March 2010), p. 3.

⁶ Resolution 7/23; see also resolution 10/4.

The Charter of the United Nations and several treaties recognize the role of international cooperation and assistance in achieving universal respect for human rights.⁹ United Nations treaty monitoring bodies have also emphasized the role of international cooperation and assistance in the realization of economic, social and cultural rights. In particular, the Committee on Economic, Social and Cultural Rights has emphasized that, in accordance with the Charter, well-established principles of international law and the provisions of the Covenant, international cooperation for development is an obligation of all States.¹⁰ Similarly, the Declaration on the Right to Development identifies international cooperation as a key element to assist developing countries to secure the enjoyment of basic human rights.¹¹ In this light, the OHCHR analytical study on climate change and human rights concluded that measures to address climate change should be informed and strengthened by international human rights standards and principles. The study also noted that climate change is a truly global problem that can only be effectively addressed through international cooperation, as climate change disproportionately affects poorer countries with the weakest capacity to protect their populations.

Increased attention to the human dimension of climate change, including in the current negotiations, can improve the likelihood that climate change-related measures respect human rights. Accordingly, understanding and addressing the human consequences of climate change lie at the very heart of the climate change challenge. Moreover, linking the climate change negotiations and structures to existing human

rights norms enables States to use indicators and mechanisms anchored in the well-established human rights system to address the challenges posed by the changing climate and response measures.

III. Climate change and the Millennium Development Goals

The impacts of climate change have direct implications for the efforts of the international community to achieve the Millennium Development Goals. At the same time, as the Secretary-General has observed, the Goals should also contribute to the capacities needed to tackle climate change by providing opportunities for broader improvements in economies, governance, institutions and intergenerational relations and responsibilities.¹² Capturing these opportunities, however, will require “a global new deal capable of raising investment levels and channelling resources towards massive investment in renewable energy, and building resilience with respect to unavoidable climate changes”.¹³ In this regard, the clean development mechanism established by the Kyoto Protocol is an example of a mechanism deployed to raise investments and channel resources to the global South. CDM thus provides a valuable case study for further exploring the links between climate change and the Millennium Development Goals.

The relationship between climate change and the Millennium Development Goals involves both threats and opportunities and works in both directions, with each impacting the other in positive and negative ways.¹⁴ The United Nations Development Programme (UNDP) has analysed the ways in which climate change affects the Goals, concluding that climate change threatens to exacerbate current challenges to their achievement.¹⁵ In this regard, major issues of concern for the Goals resulting from climate change include population displacement, forced migration, conflict and security risks, food insecurity and the human rights impacts of climate change response measures.¹⁶

⁹ Article 1 (3) of the Charter states: “The Purposes of the United Nations are: ... To achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion”; Article 55 (b) states: “With a view to the creation of conditions of stability and well-being which are necessary for peaceful and friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples, the United Nations shall promote ... solutions of international economic, social, health, and related problems, and international cultural and educational cooperation”; Article 56 states: “All Members pledge themselves to take joint and separate action in cooperation with the Organization for the achievement of the purposes set forth in Article 55”. Article 2 (1) of the International Covenant on Economic, Social and Cultural Rights states: “Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and cooperation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.” The importance of international assistance and cooperation to the realization of human rights is also reflected in other international and regional human rights treaties such as the Convention on the Rights of the Child and the Convention on the Rights of Persons with Disabilities.

¹⁰ General comment No. 3 (1990) on the nature of States parties’ obligations, para. 14.

¹¹ See Margot E. Salomon, *Global Responsibility for Human Rights: World Poverty and the Development of International Law* (Oxford and New York, Oxford University Press, 2007), pp. 3-6.

¹² “Keeping the promise—a forward-looking review to promote an agreed action agenda to achieve the Millennium Development Goals by 2015: report of the Secretary-General” (A/64/665), para. 37.

¹³ *Ibid.*, para. 39.

¹⁴ See United Nations Millennium Campaign, “Seal a JUST deal: the MDG path to a climate change solution” (2010).

¹⁵ See, for example, UNDP, “What will it take to achieve the Millennium Development Goals?: an international assessment” (June 2010).

¹⁶ See Marcos A. Orellana, Miloon Kothari and Shivani Chaudhry, “Climate change in the work of the Committee on Economic, Social and Cultural Rights” (Friedrich-Ebert-Stiftung Geneva, Housing & Land Rights Network – Habitat International Coalition and Center for International Environmental Law, May 2010).

More particularly, climate change impacts have obvious repercussions on Millennium Development Goal 7 regarding environmental sustainability with respect to access to safe drinking water and basic sanitation, as well as biodiversity loss. Climate change impacts on agricultural production and water availability are also relevant for goal 1 regarding extreme poverty¹⁷ and hunger eradication.¹⁸ Millennium Development Goal 2 regarding universal primary education is affected given the potential destruction of schools and other infrastructure, as well as pressures on family livelihoods that may keep children from school. Goal 3 regarding gender equality is affected by the increased degradation of natural resources, upon which women are particularly dependent. Goals 4, 5 and 6 regarding child mortality, maternal health and combating malaria, HIV and other diseases are affected by increased vulnerability to poor health due to reduced food and water security, in addition to the spread of waterborne, vector-borne and airborne diseases. Finally, goal 8 regarding global partnerships and technology transfer also directly concerns climate change and the clean development mechanism, as examined by the high-level task force on the implementation of the right to development.

Development assistance, both technical and financial, has an important role to play in supporting countries in achieving the Millennium Development Goals. The report of the Secretary-General on progress in achieving the Goals observes that the switch to low greenhouse gas-emitting, high-growth pathways to meet the development and climate challenges is both necessary and feasible, but will require much greater international support and solidarity (A/64/665, para. 38).

IV. International cooperation and climate change

To respond to growing scientific concern, the international community, under the auspices of the United Nations, has come together to tackle the climate change problem. Its efforts have led to the development of UNFCCC and the Kyoto Protocol, as well as a number of financial arrangements to address the costs associated with climate change.

A. United Nations Framework Convention on Climate Change

UNFCCC was signed and adopted at the United Nations Conference on Environment and Development, held in Rio de Janeiro, Brazil, in 1992 and entered into force in 1994. The Convention acknowledges that the global nature of climate change calls for the widest possible cooperation by all countries.¹⁹ The ultimate objective of UNFCCC, stated in article 2, is to achieve “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”.

Development considerations play a central role in the design and implementation of the Convention, the preamble to which affirms that “responses to climate change should be coordinated with social and economic development in an integrated manner with a view to avoiding adverse impacts on the latter”. More significantly, the ultimate objective stated in article 2 should be achieved within a time frame sufficient, inter alia, “to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner”. Furthermore, the Convention articulates, in articles 3 and 4, the principle of “common but differentiated responsibilities and respective capabilities”, underscoring that industrialized countries are to “take the lead in combating climate change”.

In discussions at UNFCCC meetings, States often equated the right to development with the right to pollute. In order to meet pressing development imperatives, developing countries have largely resisted any quantifiable limitations on emissions. To some extent this position assumes that development calls for a fossil fuel-based energy policy. And since energy is the lifeblood of modern economies, this myth is aggravating paralysis with respect to the Convention. The right to development is not a right to pollute. Instead, the right to development highlights the need for a technological leap forward that can bypass the destructive environmental impacts of industrialization. Such an advance can only be achieved through the deployment of climate-friendly technologies that can enhance local resilience to climatic changes and reduce greenhouse gas emissions in economic activity.

¹⁷ See Gelbspan, “Exposed” (see footnote 8).

¹⁸ See Columbia Law School Human Rights Institute, *Climate Change and the Right to Food: A Comprehensive Study*, Heinrich Böll Stiftung Publication Series on Ecology, vol. 8 (Berlin, Heinrich Böll Foundation, 2009).

¹⁹ In this vein, the duty to cooperate in the climate change context requires States to negotiate and implement international agreements under the auspices of UNFCCC, which features the necessary membership and expertise. See John H. Knox, “Climate change and human rights law”, *Virginia Journal of International Law*, vol. 50, No. 1 (2009), p. 213.

The right to development could thus help to unlock negotiations by stressing technology transfer in the necessary economic transformation. A first step lies in the conceptual strength of the right to development, i.e., arguing for equitable distribution of wealth and social justice, which could help overcome the distorted conceptualization of the right to development as a right to pollute. A second step lies in reinvigorating the technology transfer dimensions of the Bali Action Plan adopted at COP 13.²⁰ Thirdly, industrialized countries must face their responsibility for causing the climate crisis and provide financial, technological and other support to enable the technology leap in the developing world. In this regard, the principle of “common but differentiated responsibilities” can synergize with the right to development in highlighting the need for effective technology transfer mechanisms that can open development paths that reduce emissions and enhance resilience.

Evaluating the effectiveness of international cooperation in addressing climate change is a complex undertaking. From one perspective, the fact that States have negotiated and are implementing two major international treaties on the topic, namely UNFCCC and the Kyoto Protocol, in addition to undertaking a significant negotiating effort over the past several years to define the post-Kyoto climate framework, would suggest that they have clearly sought to cooperate. From another angle, if the duty to cooperate requires effective solutions to the climate change problem, then the fact that the actual and impending consequences of climate change are increasing in intensity owing to the failure to arrive at a binding agreement providing for effective mitigation, adaptation and other climate measures could be regarded as a failure of States to cooperate effectively.

B. Kyoto Protocol

In line with the objective and principles of UNFCCC, the Kyoto Protocol was finalized in 1997 and entered into force in 2005. Under the Protocol, 37 industrialized countries and countries in transition to a market economy, plus the European Union, made legally binding commitments to reduce their overall emissions of the six major greenhouse gases²¹ by at least 5 per cent below 1990 levels in the commitment period 2008-2012. As the emission reduction targets of the Protocol expire in 2012, the next step remains unknown and is subject to ongoing international negotiations.

The fifteenth Conference of the Parties to UNFCCC (COP 15) and the fifth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 5) took place in Copenhagen from 7 to 18 December 2009. Despite two years of intense negotiations, the Parties were unable to reach agreement on all the issues.²² Instead, the main outcomes from the negotiations include a number of decisions by the Conference of the Parties which, *inter alia*, provided the mandate to continue negotiations, and the Copenhagen Accord,²³ a non-binding political agreement drafted by certain Heads of State outside the UNFCCC process. In the final hours of COP 15, the parties “took note of” rather than “adopted” the Copenhagen Accord, which introduces significant ambiguity regarding its legal status and implementation.

Similarly, the sixteenth Conference of the Parties to UNFCCC (COP 16), which took place in Cancun, Mexico, from 29 November to 10 December 2010, resulted in a set of decisions adopted by the Parties, not a legally binding treaty. The Parties again “took note of” their pledges to mitigate climate change. While the Parties agreed that urgent action was needed, they did not reach an agreement on the rules and targets for a second commitment period of the Kyoto Protocol, which will be further negotiated at the Conference of the Parties scheduled to be held in Bonn, Germany, in May 2012.²⁴ However, in its decision on the outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention,²⁵ established under the Bali Action Plan, the Conference of the Parties did recognize the important role of human rights in climate change. In the decision, the Conference of the Parties, noting Human Rights Council resolution 10/4, which recognizes that climate change has many direct and indirect impacts on the full enjoyment of human rights, especially for already vulnerable segments of the population, emphasized that human rights should be respected by the Parties in all climate change-related actions.

The clean development mechanism under the Kyoto Protocol has provided a mode of cooperation between industrialized and developing countries. However, the mechanism still needs to be improved

²⁰ FCCC/CP/2007/6/Add.1, decision 1/CP.13.

²¹ CO₂, CH₄, N₂O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆).

²² See Dan Bodansky, “The Copenhagen Climate Change Conference”, *American Journal of International Law*, vol. 104 (2010), p. 230.

²³ FCCC/CP/2009/11/Add.1, decision 2/CP.15.

²⁴ Editor’s note: information concerning the Bonn Climate Change Conference can be found at http://unfccc.int/meetings/bonn_may_2012/meeting/6599.php.

²⁵ FCCC/CP/2010/7/Add.1, decision 1/CP.16.

in order to secure a rights-based approach to development and further the right to development while promoting sustainable development in developing countries.

C. Financial arrangements for climate change

The costs associated with climate change, both in respect of mitigation of greenhouse gases and of adaptation to a changing climate, pose a severe challenge to the international community. Developing countries in particular generally lack the resources to address this new environmental and social threat. Consequently, developing countries are especially vulnerable to climate change since their budgets are stretched to meet basic needs such as access to food, water and housing.

International cooperation in the form of financial assistance acquires critical relevance in the light of the development challenges and vulnerabilities aggravated by climate change, especially in developing countries. While financial arrangements for climate change are numerous and dispersed,²⁶ efforts by the international community to address the costs associated with climate change have fallen short of what is necessary to ensure that progress towards achieving the Millennium Development Goals is not undermined by climate change.

UNFCCC and the Kyoto Protocol have established mechanisms to channel financial assistance to developing countries. UNFCCC assigns the Global Environment Facility as the operating entity of its financial mechanism on an ongoing basis, subject to review every four years. The Kyoto Protocol establishes two main financial arrangements. First is the operation of the market mechanisms, including CDM, creating economic incentives for the reduction of emissions of the six major greenhouse gases. Second is the specific Adaptation Fund to assist developing countries to adapt to the adverse effects of climate change. The Adaptation Fund is replenished through, inter alia, contributions from CDM.²⁷

²⁶ A number of international organizations are actively engaged in administering and/or operating climate change funds, including UNDP, the United Nations Environment Programme (UNEP) and the United Nations International Strategy for Disaster Reduction. Similarly, a number of multilateral development banks have set up dedicated funds to address climate change. Further, several industrialized countries have established climate change funds to assist climate change mitigation and adaptation in the developing world.

²⁷ Marcos Orellana, "Climate change and the Millennium Development Goals: the right to development, international cooperation and the clean development mechanism", *Sur-International Journal on Human Rights*, vol. 7, Issue 12 (June 2010). See also UNFCCC, Adaptation Fund, at

This cursory overview of international cooperation and the climate change regime shows the relevance of CDM to encouraging investment and technology transfer to developing countries. Similarly, CDM provides financial resources for the Adaptation Fund, which is critical in building community resilience in developing countries. These features highlight the significance of CDM in the interface between climate change and the Millennium Development Goals. Concerns have been raised, however, about the mechanism's environmental integrity, its ability to ensure respect for human rights as well as its actual contribution to sustainable development. In the light of its importance, CDM is analysed below in further detail.

V. The clean development mechanism

CDM was designed to achieve cost-effective emissions reduction and promote sustainable development in developing countries. It does so by encouraging investments in developing countries that achieve emission reductions additional to what would otherwise have occurred. CDM projects have so far generated more than 365 million certified emissions reductions (CERs) and are anticipated to generate more than 2.9 billion CERs within the first commitment period of the Kyoto Protocol (2008-2012). CDM has registered more than 2,500 projects.²⁸

CDM provides a clear example of an international partnership between the global South and the industrialized North to achieve the twin objectives of promoting sustainable development and mitigating climate change. CDM is thus directly relevant to Millennium Development Goal 8 regarding global partnerships and technology transfer, as well as to the other Goals directly affected by climate change. In addition, a focus on CDM also raises issues concerning investments and resource flows, technology transfer, environmental integrity and the meaning and operationalization of a rights-based approach to development, all of which are central to effective and equitable climate change mitigation and to the attainment of the Millennium Development Goals. Ultimately, analysing CDM using the right to develop-

http://unfccc.int/cooperation_and_support/financial_mechanism/adaptation_fund/items/3659.php. (The Adaptation Fund Board supervises and manages the Adaptation Fund and has 16 members and 16 alternates who meet no less than twice a year. In December 2008, the Parties to the Kyoto Protocol established rules of procedure, priorities, policies and guidelines for the Adaptation Fund.)

²⁸ CDM passed the 2,000th registered project milestone in January 2010, less than two years after its inception. For the list of registered projects, see <http://cdm.unfccc.int/Projects/registered.html>.

ment criteria exposes several flaws that limit its contribution to implementing the right to development.

This section first provides a brief background of CDM and its structure. It then analyses the mechanism's requirements, scope and actors. The last part addresses certain criticisms that have been levelled against CDM, concluding with an analysis of options for its improvement.

A. Background

Under the Kyoto Protocol, "industrialized Annex I Parties"²⁹ must reduce their net emissions of greenhouse gases by an average of 5 per cent below 1990 levels over a five-year reporting period, 2008-2012.³⁰ CDM is one of the three market-based mechanisms created by the Kyoto Protocol to assist industrialized Parties to meet their emissions reduction target.³¹ Under CDM, Annex I Parties (or private entities from those countries) may fund activities in non-Annex I Parties that result in CERs. Industrialized countries are then able to apply CERs towards their emissions targets.

CDM has a twofold purpose. First, it aims at promoting sustainable development in developing countries. Accordingly, CDM is expected to lead investments into the developing world and to the transfer of environmentally safe and sound technology.³² Second, CDM is critical to addressing greenhouse gas mitigation by assisting industrialized countries in achieving compliance with their quantified emission reduction commitments under the Kyoto Protocol. In this context, the main rationale behind CDM is cost-effectiveness, which means that CDM projects will take place where greenhouse gas emissions reductions are cheaper.³³

²⁹ Annex I Parties includes States members of the Organisation for Economic Co-operation and Development (OECD) and countries undergoing the process of transition to a market economy.

³⁰ Kyoto Protocol, art. 3 (1).

³¹ *Ibid.*, art. 12. The two other mechanisms are joint implementation and emissions trading (*ibid.*, arts. 4 and 17).

³² See FCCC/CP/2001/13/Add.2 and Corr.1, decision 17/CP.7, "Modalities and procedures for a clean development mechanism as defined in article 12 of the Kyoto Protocol", adopted by the Conference of the Parties to UNFCCC at its seventh session, held in Marrakesh, Morocco, in 2001. (Decisions 2/CP.7-24/CP.7, contained in chapter II of the report of the Conference, are referred to as "The Marrakesh Accords", the rules that govern CDM, and are contained in documents FCCC/CP/2001/13/Add.1-3 and corrigenda and addenda.) Attached to decision 17/CP.7 was a draft decision transmitted to the meeting of the Parties to the Kyoto Protocol for adoption at its first session, held in Montreal, Canada, in 2005. The draft decision was subsequently adopted as decision 3/CMP.1, contained in document FCCC/KP/CMP/2005/8/Add.1. Decision 3/CMP.1 has an annex, entitled "Modalities and procedures for a clean development mechanism", with four appendices: appendix A, "Standards for the accreditation of operational entities"; appendix B, "Project design document"; appendix C, "Terms of reference for establishing guidelines on baselines and monitoring methodologies"; and appendix D, "Clean development mechanism registry requirements".

³³ See Harro van Asselt and Joyeeta Gupta, "Stretching too far? Developing countries and the role of flexibility mechanisms beyond Kyoto", *Stanford Environmental Law Journal*, vol. 2, No. 2 (2009), p. 331.

B. Basic requirements of a clean development mechanism project

Under article 5 of the Kyoto Protocol, CDM projects have to fulfil three basic requirements:³⁴

- (a) *Voluntary participation by each Party.*³⁵ Written approval of voluntary participation is a requirement for validation;
- (b) *Real, measurable and long-term mitigation of climate change.* CDM projects must lead to real, measurable reductions in greenhouse gas emissions, or lead to the measurable absorption (or "sequestration") of greenhouse gases in a developing country.³⁶ The "project boundary" defines the area within which emissions reductions occur;³⁷
- (c) *Additionality.* The "additionality" element requires emission reductions that are additional to any that would occur in the absence of a certified project activity.³⁸ Stated differently, "additionality" requires that greenhouse gas emissions from a CDM project activity must be reduced below those levels that would have occurred in the absence of the project.³⁹ In fact, it must be shown that the project would not have been implemented without CDM.

A CDM project should also contain a "sustainability" element. All CDM projects must contribute towards sustainable development in the host country and must also be implemented without any negative environmental impacts.⁴⁰ To ensure that these conditions are met, the host country determines whether the CDM project meets its sustainable development objectives and also decides whether an environmental assessment of the project is required.⁴¹ The prerogative of the host country to define sustainable develop-

³⁴ Beyond these requirements, the Kyoto Protocol provides almost no guidance for operating CDM. To develop the necessary institutional framework to do so, the Parties have adopted a substantial body of decisions at meetings of the Parties. See Chris Wold, David Hunter and Melissa Powers, *Climate Change and the Law* (LexisNexis, 2009), p. 233.

³⁵ Decision 3/CMP.1, annex, para. 28: "Participation in a CDM project activity is voluntary."

³⁶ See "A user's guide to the CDM (clean development mechanism)", 2nd ed. (Pembina Institute for Appropriate Development, February 2003), pp. 4-5.

³⁷ See decision 3/CMP.1.

³⁸ Kyoto Protocol, art. 12 (5).

³⁹ Decision 3/CMP.1, annex, para 43: "A CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity."

⁴⁰ See decision 3/CMP.1.

⁴¹ See "A user's guide to the CDM".

ment has not been devoid of question, however, given the linkage between human rights and development and the need for external accountability of the State with respect to human rights issues.

C. Core actors of the clean development mechanism

CDM projects involve the following seven participants:

- (a) *Project proponent*. This is the entity that develops and implements a CDM project;
- (b) *CER purchaser*. This entity invests in the project and/or purchases the project's CERs;
- (c) *Stakeholders*. These include the public, or any individuals, groups or communities affected, or likely to be affected, by the proposed CDM project activities;⁴²
- (d) *Host country*. This is the developing country in which the CDM project takes place. The host country approves the project prior to its implementation;
- (e) *Executive Board*. The Board supervises implementation of CDM and reports to COP/CMP. It is comprised of 10 members representing Parties to the Kyoto Protocol. It also maintains the CDM registry for issuance of CERs, approves methodologies for measuring baselines and additionality, and accredits designated operational entities;
- (f) *Designated national authority*. The designated national authority is established by the host country and decides whether the proposed CDM is consistent with the country's sustainable development goals. The authority serves as a focal point for consideration and approval of CDM project proposals;⁴³ it accepts or rejects the CDM component of particular projects;⁴⁴
- (g) *Designated operational entities*. These entities are accredited by the CDM Executive Board as such.⁴⁵ They have varying responsibilities during different stages of the CDM

project cycle, including: reviewing and assessing the project design document; certifying the project's proposed methodology for measuring emissions reductions; validating project proposals; and verifying the emissions reductions resulting from the project that could be considered for issuance of CERs. There are two designated operational entities involved in the CDM process. The first one prepares a validation report evaluating the project design document against the requirements, which it submits to the Executive Board for registration.⁴⁶ The second one verifies and certifies the emissions reductions and provides a report to the Executive Board for issuance of CERs.

D. Stages in the clean development mechanism project cycle

Six steps must be taken to obtain CERs:⁴⁷

- (a) *Design and formulation of the proposed project participants*. Project proponents submit a project design document to the host country's designated national authority. The documents should include the technical and financial details of the project, including: the proposed baseline methodology for calculating emissions reductions; the project's estimated operational lifetime; a description of the additionality requirements; documentation of any environmental impacts; stakeholder comments; sources of funding; and a monitoring plan.⁴⁸
- (b) *Approval by the designated national authority*. The authority approves the development of the proposed CDM project. It also confirms whether a CDM project activity will contribute to the sustainable development of the host State;

⁴² Decision 3/CMP.1, annex, para. 1 (e).

⁴³ *Ibid.*, para. 29.

⁴⁴ UNDP, "The clean development mechanism: a user's guide" (New York, 2003).

⁴⁵ Decision 3/CMP.1, annex, para. 20. See also Wold, Hunter and Powers, *Climate Change and the Law*, p. 234.

⁴⁶ Mindy G. Nigoff, "Clean development mechanism: does the current structure facilitate Kyoto Protocol compliance?", *Georgia International Environmental Law Review*, vol. XVIII, No. 2 (2006), pp. 257-258. In small-scale projects the same designated operational entity can carry out both the validation (at project outset) and verification (during project operation), in order to avoid the expense of using two designated operational entities. See also UNDP, "The clean development mechanism".

⁴⁷ See Charlotte Streck and Jolene Lin, "Making markets work: a review of CDM performance and the need for reform," *European Journal of International Law*, vol. 19, No. 2 (2008).

⁴⁸ Decision 3/CMP.1, annex, appendix B. See also Wold, Hunter and Powers, *Climate Change and the Law*, p. 14.

- (c) *Validation.* The project design, expressed in the project design documents, must be evaluated by the first designated operational authority against the requirements of CDM. Validation also includes assurance that the host country agrees to the following: that the project contributes to sustainable development; that any required environmental assessment has been carried out; and that there has been adequate opportunity for public comment on the project;
- (d) *Registration.* The validated project must be formally accepted and registered by the Executive Board, based on the recommendations of the first designated operational entity;
- (e) *Verification.* Once the CDM project is under way, the monitored emissions reductions that result from it must be reviewed periodically by the second designated operational entity;
- (f) *Issuance of certification.* Upon written assurance provided by the second designated operational entity, the CDM Executive Board issues the CERs. The CERs are then assigned to the Annex I country where the CER purchaser is located.

E. Project types

CDM statistics as of January 2011⁴⁹ show more than 2,500 registered CDM projects, of which large-scale projects represent 56.46 per cent and small-scale projects represent 43.54 per cent.⁵⁰ Most CDM projects involve energy industries (renewable and non-renewable sources), energy efficiency, waste handling and disposal, agriculture, manufacturing industries, fugitive emissions from fuels (solid, oil and gas), chemical industries, afforestation and reforestation,

⁴⁹ See <http://cdm.unfccc.int/Statistics/Registration/RegisteredProjByScalePieChart.html>. Editor's note: the figures at April 2012 show a total of more than 4,000 projects.

⁵⁰ The definition of small-scale projects is provided by COP/CMP as: (a) renewable energy project activities with a maximum output capacity equivalent of up to 15 megawatts; (b) energy efficiency improvement project activities which reduce energy consumption by up to the equivalent of 15 gigawatt hours per year; and (c) other project activities that both reduce anthropogenic emissions by sources and directly emit less than 15,000 kilotons of CO₂ equivalent per year (decision 17/CP.7, para. 6 (c), amended by decision 1/CMP.2, para. 28, contained in document FCCC/KP/CMP/2006/10/Add.1). A project which is eligible to be considered as a small-scale CDM project activity can benefit from the simplified modalities and procedures (see decision 4/CMP.1, "Guidance relating to the clean development mechanism", annex II, contained in document FCCC/KP/CMP/2005/8/Add.1).

and mining production, among others.⁵¹ Brazil, China, India, Malaysia and Mexico are the major countries hosting CDM projects, accounting for approximately 80 per cent of the total number of projects.⁵²

Although CDM does not have an explicit technology transfer mandate, it contributes to technology transfer by encouraging investments that use technologies currently not available in the host countries. According to a report on technology transfer in CDM projects prepared for the UNFCCC secretariat, technology transfer is more common for larger projects involving agriculture, energy efficiency, landfill gas, nitrogen dioxide (N₂O), HFCs and wind projects.⁵³ Also, technology transfer is more common for projects that involve foreign participants. The report concludes that the technology transferred mostly (over 70 per cent) originates from France, Germany, Japan, the United Kingdom and the United States. Although technology transfer from Non-Annex I Parties is less than 10 per cent of all technology transfer, Brazil, China, India, the Republic of Korea and Taiwan, Province of China, are the main sources of equipment (94 per cent) and knowledge (70 per cent) transfers from Non-Annex I sources.

F. Critiques of the clean development mechanism

Critiques of CDM in the scholarly literature⁵⁴ concern, inter alia, governance practices, environmental integrity and contribution to sustainable development.⁵⁵ They may be summarized in the following 10 arguments:

- (a) *A rights-based approach to CDM.* The current emphasis of the clean development mechanism on emissions reductions does not ensure that its projects minimize impacts deleterious to the rights of people or conservation.⁵⁶ Measures and projects

⁵¹ See <http://cdm.unfccc.int/Statistics/Registration/RegisteredProjByScopePieChart.html>. The energy industries sector represents 60.31 per cent [editor's note: 68.77 per cent at April 2012] of the total projects registered under CDM.

⁵² See UNFCCC, "Key findings of 'analysis of technology transfer in CDM: update 2008' study" (undated).

⁵³ See Stephen Seres, "Analysis of technology transfer in CDM projects", report prepared for the UNFCCC Sustainable Development Mechanisms Programme (CDM Registration and Issuance Unit, December 2008).

⁵⁴ This section is based on the scholarly debate; it does not purport to evaluate the merits of the various critiques.

⁵⁵ Charlotte Streck, "Expectations and reality of the clean development mechanism: a climate finance instrument between accusations and aspirations" in *Climate Finance: Regulatory and Funding Strategies for Climate Change and Global Development*, Richard Stewart, Benedict Kingsbury and Bruce Rudyk, eds. (New York and London, New York University Press, 2009), p. 67.

⁵⁶ See Orellana, "A rights-based approach to climate change mitigation" (footnote 3).

adopted under CDM can have direct and indirect impacts on human communities and livelihoods. For example, dam projects may involve displacement of communities and cause irreversible environmental impacts;

- (b) *No requirement of prior informed consent.* CDM requires only that affected communities be consulted, not that they give their prior informed consent (or free, prior and informed consent in the case of indigenous and tribal peoples). This can result in a direct violation of human rights;
- (c) *No equitable geographical distribution.* There is a lack of equitable geographical distribution between the developing countries that are eligible and those that are favoured for project development. In other words, countries like Brazil, China and India are receiving the lion's share of project investment, while African countries, for instance, are languishing;⁵⁷
- (d) *Equity.* Market systems such as CDM seek technological solutions and efficiency. The inequitable distribution of access to technologies, however, reinforces power and wealth disparities.⁵⁸ In addition, market-based systems treat pollution as a commodity to be bought or sold, raising complex ethical issues;⁵⁹
- (e) *Failure to promote sustainable development or green technology transfer.* As a market mechanism, CDM searches for the cheapest emissions reductions. In that regard, while CDM has been effective in reducing mitigation costs, it has not been equally effective in contributing more broadly to sustainability.⁶⁰ The greatest amounts of CERs are being generated by projects with a low or negligible contribution to sustainable development. For example, most of the non-renewable energy projects that are

now flooding the carbon market do not score high on certain sustainable development indicators.⁶¹ Similarly, renewable energy, energy efficiency and transport project activities—smaller in scale and more diffuse by nature—are less competitive in the CDM market.⁶²

- (f) *Lack of access to remedies and jurisdiction.* There is no accountability mechanism at CDM, such as the World Bank Inspection Panel.⁶³ In addition, the CDM rules do not provide recourse to private parties to challenge Executive Board decisions. Instead, the Executive Board, as is the case with other international institutions, has immunity to enable it to exercise its functions or fulfil its purposes without the threat of litigation;⁶⁴
- (g) *Lengthy CDM process.* The bureaucratic CDM process significantly slows an already strained project pipeline. The steps along the pipeline substantially increase the transaction costs of moving from the design and formulation of a project to the issuance of CERs.⁶⁵ Moreover, the approval process is considered by some to be guided by political considerations rather than factual competence;⁶⁶
- (h) *Lack of transparency.* As they are composed of private consultants, a lack of transparency is associated with the role of the designated operational entities in verifying emissions reductions.⁶⁷ In addition, lack of transparency relates to failures of the regulatory process to guarantee the private sector's confidence in CDM;⁶⁸
- (i) *Additionality.* Most CDM projects are non-additional and therefore do not represent real emissions reductions. The

⁵⁷ According to UNEP, the number of CDM projects that are being planned or have been registered across the African region is increasing. UNEP reports that in July 2011, a total of 190 CDM projects in Africa were at different stages of validation or registration. This is an increase from 170 at the end of 2010, 90 in 2008 and just 53 in 2007. See www.grida.no/news/press/4814.aspx.

⁵⁸ Maxine Burkett, "Just solutions to climate change: a climate justice proposal for a domestic clean development mechanism", *Buffalo Law Review*, vol. 56, Issue 1 (2008), p. 234; Alice Kaswan, "Justice in a warming world," *The Environmental Forum*, vol. 26 (2009), pp. 50-51.

⁵⁹ Kaswan, "Justice in a warming world", pp. 50-51.

⁶⁰ See Streck, "Expectations and reality of the clean development mechanism" (see footnote 55).

⁶¹ See Asselt and Gupta, "Stretching too far?" (footnote 33), p. 350.

⁶² See Burkett, "Just solutions to climate change", p. 210.

⁶³ See, for example, Dana Clark, Jonathan Fox and Kay Treakle, eds., *Demanding Accountability: Civil Society Claims and the World Bank Inspection Panel* (Lanham, Maryland, Rowman and Littlefield, 2003).

⁶⁴ See Wold, Hunter and Powers, *Climate Change and the Law* (see footnote 34), p. 236, citing Ernestine E. Meijer, "The international institutions of clean development mechanism brought before national courts: limiting jurisdictional immunity to achieve access to justice", *New York University Journal of International Law and Politics*, vol. 39, No. 4 (2007), p. 873; see also Streck and Lin, "Making markets work" (footnote 47).

⁶⁵ Burkett, "Just solutions to climate change", p. 210.

⁶⁶ Streck, "Expectations and reality of the clean development mechanism", p. 71.

⁶⁷ Burkett, "Just solutions to climate change", p. 236.

⁶⁸ Streck, "Expectations and reality of the clean development mechanism", p. 71; see also Streck and Lin, "Making markets work" (footnote 47).

additionality screening is criticized for being imprecise and subjective, as well as for being unable to prevent non-additional projects from entering CDM;⁶⁹

- (j) *Limited use.* The use of CDM is limited to reducing emissions on a single-project basis; the mechanism is not designed to address whole sectors of the economy.

Despite the criticisms, CDM is mobilizing large amounts of money from the private sector for mitigation in developing countries. In addition, it can contribute to building institutional capacity and keeping developing countries engaged in the Kyoto Protocol process. CDM thus remains an important mechanism under the climate change regime for greenhouse gas mitigation and for promoting sustainable development and technology transfer. Therefore, one of the questions facing the climate change regime is how to reinvigorate and improve CDM, including enhancing its effectiveness and ensuring its social and environmental integrity. In this sense, there is room for enhancing the mechanism's role within the climate change regime, including post-2012.

G. Decisions of the Copenhagen Climate Change Conference relating to the clean development mechanism

The fifth session of the Conference of the Parties to UNFCCC serving as the meeting of the Parties to the Kyoto Protocol (CMP 5), held in Copenhagen in December 2009, provided further guidance relating to CDM, some elements of which are particularly important in informing an assessment of CDM under criteria pertaining to the right to development. CMP 5 set in motion a process of study of baseline and monitoring methodologies and additionality to increase the number of CDM projects in underrepresented project activity types or regions.⁷⁰ This is relevant to increasing investments in projects that may achieve significant sustainable development benefits and emissions reductions, as well as to channelling investments to more developing countries, including least developed countries, instead of just a few.

CMP 5 also addressed the need for a wider distribution of CDM projects in developing coun-

tries. It adopted several measures to encourage CDM projects in countries with minor CDM participation, including a request to the Executive Board to use interest accrued within the Trust Fund for the Clean Development Mechanisms (and any voluntary contributions) to provide loans to countries with fewer than 10 registered CDM projects to cover the costs of the development of project design documents, validation and the first verification of project activities.⁷¹ In addition, CMP 5 took note of the work of the Designated National Authorities Forum, given its potential contribution to achieving broader participation in CDM, including through the sharing of information and experience, and encouraged the Executive Board to follow up on issues raised by the Forum.

VI. Assessing the clean development mechanism using right to development criteria

Assessing CDM using criteria pertaining to the right to development is helpful for evaluating proposals regarding CDM reform. The task force revised the right to development criteria at its sixth session in 2010 and organized them under the three attributes of the right to development, namely: comprehensive human-centred development; participatory human rights processes; and social justice in development (A/HRC/15/WG.2/TF/2/Add.1 and Corr.1). In addition, the task force identified operational clusters of criteria within each of the attributes (A/HRC/15/WG.2/TF/2/Add.2).

This section will focus on the three attributes and their cluster of criteria in regard to CDM. The first relates to the commitment of the high-level task force to a particular concept of development, the second to rules and principles and the third to distributional outcomes. The attributes were designed and firmly rooted in, inter alia, the Declaration on the Right to Development and other human rights instruments (*ibid.*, para. 13). Special attention was given to the primary role of States in development, which, according to the Declaration, includes individual and collective action (art. 4) as well as the exercise of the right and the duty to formulate national development policies. In turn, development policies must aim at the constant improvement of the well-being of the people and of individuals on the basis of their active, free and meaningful participation in development and in the fair distribution of benefits resulting therefrom (art. 2 (3)).

⁶⁹ See Barbara Haya, "Measuring emissions against an alternative future: fundamental flaws in the structure of the Kyoto's Protocol clean development mechanism", Energy and Resources Group Working Paper ERG09-001 (University of California, Berkeley, December 2009).

⁷⁰ The decisions adopted at CMP 5 are available at http://unfccc.int/meetings/copenhagen_dec_2009/session/6252/php/view/decisions.php. See in particular decision 2/CMP.5, "Further guidance relating to the clean development mechanism", paras. 23-24.

⁷¹ Decision 2/CMP.5, paras. 48-51.

A. Comprehensive and human-centred development policy

The criteria that form human-centred development focus on the equitable distribution of the needs of the most vulnerable and marginalized segments of the international community. The attribute also promotes economic regulatory oversight to encourage competition and access to financial resources. In addition, the right to development encourages environmentally sustainable development and the use of natural resources.

As noted, most CDM projects are implemented in just a few developing countries. This situation is at odds with right to development criteria. Stressing a more equitable geographical distribution of CDM projects, in numbers and volume of investments, would enhance the mechanism's ability to contribute to the right to development and achieve right to development human-centred development policy. Similarly, the implementation of a sectoral CDM initiative, in addition to individual CDM projects, could enhance the ability of smaller developing countries to participate in CDM. As noted above, CMP 5 has taken certain steps in this direction.

Sustainable development is encouraged in the right to development, and CDM projects are intended to assist developing States in achieving sustainable development. However, the definition of sustainable development objectives is left in the hands of the host State, by design. The host State's designated national authority will determine whether a proposed CDM project contributes to its sustainable development or not. CDM regards this determination as an expression of the sovereignty of the host State, and it does not provide for international scrutiny of it. Therefore, CDM does not require that the designated national authority establish an open and participatory process when defining sustainable criteria, or when making determinations regarding the contribution of projects to sustainability. This feature of CDM hinders its ability to promote and ensure environmental sustainability, as called for by the right to development.

B. Participatory human rights processes

The right to development criteria concerning participatory human rights processes calls for particular attention to the principles of equality, non-discrimination, participation, transparency and accountability in the design of development strategies. With respect to CDM, these criteria call for attention to the ability of the mechanism to allow for participation, effective

remedies and transparency. In particular, these criteria point to the mechanism's ability to define sustainable development objectives in an inclusive and participatory process, on the one hand, and on its ability to ensure that the rights of stakeholders are respected, on the other.

The question of the mechanism's ability to ensure that CDM projects respect the rights of stakeholders calls for analysis of the procedural safeguards in the CDM project cycle, in connection with the role of the Executive Board in that regard. Current CDM modalities and procedures already contain certain tools necessary to apply certain steps of a rights-based approach, although more could be done to ensure human rights protection.⁷² Similarly, it remains possible that the CDM Executive Board will exercise its authority to supervise the mechanism to exact compliance with all terms of the CDM modalities and procedures, including the rules that can contribute to avoiding any negative social and environmental spillover from projects. In the exercise of this authority, the CDM Executive Board could conclude that no CERs shall be issued in connection with projects involving negative social and environmental spillovers, especially if such impacts involve infringements of rights.

A rights-based approach to CDM can be used to guarantee the twin principles of equality and non-discrimination, ensuring that people's rights will not be affected by CDM projects while safeguarding environmental and procedural integrity.⁷³ States are legally bound to observe their human rights obligations that stem from the sources of international human rights law, including global and regional human rights instruments. In the context of CDM, States have, *inter alia*, the obligations to:

- Guarantee the right to take part in the conduct of public affairs, directly or through freely chosen representatives,⁷⁴ at any level, without distinction as to race, colour, or national or ethnic origin;⁷⁵ language, religion, political or other opinion, national or social origin, property, birth or other status,⁷⁶ disability,⁷⁷ sex,⁷⁸ sexual orientation and gender identity⁷⁹

⁷² See Orellana, "A rights-based approach to climate change mitigation" (footnote 3), pp. 37-61.

⁷³ *Ibid.*, pp. 12-13.

⁷⁴ International Covenant on Civil and Political Rights, art. 25 (a).

⁷⁵ International Convention on the Elimination of All Forms of Racial Discrimination, art. 5 (c).

⁷⁶ International Covenant on Civil and Political Rights, art. 2 (1).

⁷⁷ Convention on the Rights of Persons with Disabilities, art. 5 (2).

⁷⁸ Convention on the Elimination of All Forms of Discrimination against Women, arts. 1, 2 and 7 (b).

⁷⁹ Committee on Economic, Social and Cultural Rights, general comments No. 14 (2000), No. 15 (2002), No. 18 (2005); Committee on the Rights of the Child, general comment No. 4 (2003); Committee against Torture,

- Guarantee the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, including the improvement of all aspects of environmental and industrial hygiene and the prevention, treatment and control of epidemic, endemic, occupational and other diseases⁸⁰
- Guarantee the rights of the child to the provision of adequate nutritious foods and clean drinking water, taking into consideration the dangers and risks of environmental pollution, and the provision of information and education on hygiene and environmental sanitation to all segments of society⁸¹
- Take special measures to safeguard the environment of indigenous and tribal peoples⁸² and provide for prior environmental impact studies of planned development activities within their territory,⁸³ conducted in cooperation and in accordance with the customs of the peoples concerned
- Protect indigenous lands⁸⁴ and resources,⁸⁵ and guarantee the rights of participation in decision-making⁸⁶ and to free, prior and informed consent⁸⁷
- Ensure that no storage or disposal of hazardous materials takes place in the lands or territories of indigenous and tribal peoples without their free, prior and informed consent⁸⁸

Other human rights obligations relevant to CDM are found in regional human rights instruments, which contain explicit obligations to guarantee a healthy and satisfactory environment.⁸⁹

The Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (the Aarhus Convention) of 1998 further elaborates obligations regarding the

procedural dimensions of the right to live in a healthy environment. In particular, it requires States parties to provide appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities. States shall also provide the opportunity to participate in decision-making processes relating to the environment. Moreover, States shall facilitate and encourage public awareness and participation by making environmental information widely available. Finally, States shall provide effective access to judicial and administrative proceedings, including redress and remedy.⁹⁰

Almost all European States in Europe are parties to the Aarhus Convention, which was negotiated under the auspices of the United Nations Economic Commission for Europe, and thus are obliged to ensure public participation during the preparation of plans and programmes relating to the environment within a transparent and fair framework, having provided the necessary information to the public (art. 7). Moreover, States parties have the obligation to promote effective public participation in the adoption of executive regulations and applicable legally binding rules that may have a significant effect on the environment, at an appropriate stage. States must also ensure sufficient time frames, the availability of draft rules for the public and opportunities for the public to comment, and must finally take into account the result of public participation (art. 8).

In addition, at the national level, 140 States have incorporated explicit references to environmental rights and/or responsibilities in their national constitutions. This figure amounts to more than 70 per cent of the countries in the world.⁹¹ Such development strengthens the argument for the recognition of the right to a healthy environment as a norm of customary law.

This compilation of human rights obligations relevant to CDM is far from exhaustive since other obligations of States regarding participatory processes in mitigation and adaptation efforts are evolving, as new political consensuses are reached and as the ongoing interpretative processes shed further light on the terms used in the treaties. Indeed, climate change has the potential to affect the vast range of

general comment No. 2 (2008); Committee on the Elimination of Discrimination against Women, general recommendation No. 28 (2010).

⁸⁰ International Covenant on Economic, Social and Cultural Rights, art. 12, and Committee on Economic, Social and Cultural Rights, general comment No. 14 (2000).

⁸¹ Convention on the Rights of the Child, art. 24.

⁸² ILO Indigenous and Tribal Peoples Convention, 1989 (No. 169), art. 4.

⁸³ *Ibid.*, art. 7 (3).

⁸⁴ United Nations Declaration on the Rights of Indigenous Peoples, arts. 10 and 25–27.

⁸⁵ *Ibid.*, arts. 23 and 26.

⁸⁶ *Ibid.*, art. 18.

⁸⁷ *Ibid.*, art. 19.

⁸⁸ *Ibid.*, art. 29.

⁸⁹ African Charter on Human and Peoples' Rights, art. 24; Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights, art. 11; and Arab Charter on Human Rights, art. 38.

⁹⁰ Rio Declaration on Environment and Development, principle 10.

⁹¹ "Analytical study on the relationship between human rights and the environment: report of the United Nations High Commissioner for Human Rights" (A/HRC/19/34 and Corr.1), para. 30.

rights recognized and protected in international human rights law.⁹²

Finally, in September 2011, a group of international law and human rights scholars and practitioners from a broad range of backgrounds adopted the Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights.⁹³ Aware of the interconnection between the rights of individuals and the extraterritorial acts and omissions of States, the experts affirmed that extraterritorial obligations encompass the acts and omissions of a State within or beyond its territory in addition to those obligations established by the Charter of the United Nations. The Maastricht Principles elaborate the scope of jurisdiction and State responsibility within the framework of the obligations to respect, protect and fulfil human rights extraterritorially. The Principles also elaborate mechanisms for accountability.

Bearing the above-mentioned rights and standards in mind, a rights-based approach involves a series of steps oriented towards adequate consideration of the rights of individuals and communities that may be adversely affected by mitigation projects. In this respect, undertaking a situation analysis, providing adequate information on the project and ensuring the participation of rights holders and other stakeholders are initial steps that align CDM projects with the right to development and enable early identification of the rights and interests that may be affected by a project. In addition, a process for taking reasoned decisions would ensure that adequate consideration is given to the rights at issue, which is central to avoid interference with protected rights as well as to balance competing rights where necessary. Moreover, mechanisms for monitoring, evaluation and adequate enforcement are important for operationalizing the rights-based approach throughout the life of a project and for learning from the experience during implementation.

The human rights-based processes also promote good governance and respect for the rule of law at the

national and international levels. The right to development criteria of rule of law and good governance call for attention to the national and international institutions active in CDM, including with respect to accountability, access to information and effective measures for redress.

At the national level, CDM can contribute to the host State's ability to establish institutional mechanisms to facilitate green investments and technology transfer. The creation of designated national authorities as a prerequisite for CDM projects reflects the mechanism's potential contribution to institutional improvement. To ensure that this contribution materializes, however, CDM must establish adequate tools to ensure the accountability of designated national authorities.

At the international level, CDM has been criticized for its inability to provide affected stakeholders with recourse where required procedures have not been properly followed. It has been noted that a grievance mechanism could allow the CDM project to address and remedy situations before disputes aggravate or entrench opposing positions or result in violence. A grievance mechanism available to the various actors participating in CDM could also lift the process to the level of an administrative procedure that meets due process standards, thereby enhancing good governance and the rule of law.⁹⁴

With respect to CDM governance, there are no mechanisms established for affected individuals to challenge Executive Board decisions. It has been suggested that CDM administrative procedures must meet international due process standards, enhance the predictability of its decisions and promote private-sector confidence in the system. In this vein, it has been proposed that a review mechanism of the decisions of the Executive Board should be established in order to give project participants and stakeholders the right to obtain review of Executive Board decisions. In this regard, CMP 5 has requested the Executive Board, as its highest priority, to continue to significantly improve transparency, consistency and impartiality in its work, including through, inter alia, publishing detailed explanations of and the rationale for decisions taken and enhancing its communications with project participants and stakeholders.⁹⁵

⁹² See Dinah L. Shelton, "A rights-based approach to conservation", in *Conservation with Justice: A Rights-based Approach*, pp. 5-36. Relevant human rights have been classified into two categories: (a) substantive rights such as the right to life, non-discrimination and equal protection of the law, privacy and home life, property, an adequate standard of living (food, medicine, clothing, housing, water), health, privacy, self-determination of peoples, a certain quality of environment, safe and healthy working conditions, freedom of religion, freedom of movement and residence, freedom of assembly and expression/opinion, as well as prohibition of forced and child labour and protection of cultural and minority rights; and (b) procedural rights such as access to information, participation in decision-making, access to justice/judicial review, due process/fair hearing, substantive redress, non-interference with international petition.

⁹³ Available at www.icj.org/dwn/database/Maastricht%20ETO%20Principles%20-%20FINAL.pdf.

⁹⁴ Charlotte Streck and Thiago Chagas, "The future of the CDM in a post-Kyoto world", *Carbon and Climate Law Review*, vol. 1, Issue 1 [2007], pp. 53, 61-62.

⁹⁵ Decision 2/CMP-5, paras. 6-15.

C. Social justice in development

The criteria concerning social justice in development call for an evaluation of, *inter alia*, the fair distribution of development benefits and burdens, both within and among countries. The criteria also aim to eradicate social injustices through economic and social reforms (see A/HRC/15/WG.2/TF/2/Add.2, annex). As noted above, CDM is a market mechanism driven by investments in the cheapest opportunities for reducing emissions. Whether these projects also contribute to social justice in development depends on the extent of participation of developing countries in the mechanism and the degree to which the developing countries participating in CDM obtain benefits and a sharing of burdens.

In addition to the discussion above concerning a rights-based approach to the determination of sustainable development criteria and contributions, CDM does not explicitly require that human rights considerations be taken into account in relation to sustainable development determinations. As mentioned above, in the mechanism's design sustainable development determinations are the prerogative of the host State, which will thus determine whether and to what extent it considers human rights. While it could be argued that this design maximizes national policy space and autonomy, it is nevertheless in opposition to the notions that human rights issues are a matter of international concern and that they are directly and indirectly implicated in sustainable development. In this regard, the right to development criterion concerning social justice in development stresses that development policies should be determined in a manner that is consistent with realizing all human rights.⁹⁶

D. Improving the attributes of the right to development

Improving the right to development attributes with climate change in mind would not only contribute to the effectiveness of global partnerships (Millennium Development Goal 8) but would also contribute to reinvigorating the developmental dimensions of the climate change regime, thereby enabling progress towards the achievement of the Goals generally. For example, a new criterion could be added regarding the scientific basis for decision-making, e.g., "adopt a science-based approach to decision-making, including application of the precautionary approach". The World Summit on Sustainable Development, held in

Johannesburg, South Africa, in 2002, endorsed such an approach. Specifically, the Plan of Implementation of the World Summit establishes science-based decision-making as the preferred approach for making regulatory decisions.⁹⁷ Moreover, the World Summit, recalling principle 15 of the Rio Declaration on Environment and Development, explicitly noted that such an approach includes the application of the precautionary principle or approach, which states that the lack of full scientific certainty will not be used as a reason for postponing cost-effective measures to prevent environmental degradation.⁹⁸ The application of a science-based approach to decision-making is particularly important with respect to climate change. In order to evaluate the effectiveness of international arrangements established to channel international cooperation to address climate change, this criterion enables the utilization of scientific evidence. It thus avoids subjective evaluations of effectiveness by focusing on whether the measures established in the climate change regime are capable, on account of the scientific evidence, of achieving the objective of UNFCCC (discussed above).⁹⁹

Similarly, a new criterion could be added regarding common but differentiated responsibilities, e.g., "recognize common but differentiated responsibilities, in view of the different contributions to global environmental degradation". The principle of common but differentiated responsibilities is central to the climate change regime and affirms that all States have common responsibilities to protect the environment and promote sustainable development but with different burdens due to their different contributions to environmental degradation and to their varying financial and technological capabilities.¹⁰⁰

On the one hand, adopting common but differentiated responsibilities as a criterion regarding the right to development would allow for an evaluation of existing and future climate change arrangements. Such inclusion would reaffirm the central importance of this principle in the climate change regime, including with respect to its sustainable development dimension, and reinvigorate the necessary financial and

⁹⁷ Plan of Implementation of the World Summit on Sustainable Development (A/CONF.199/20 and Corr.1), chap. I, resolution 2, para. 109 (f).

⁹⁸ Rio Declaration on Environment and Development, principle 15. See also the Convention on Biological Diversity and its Cartagena Protocol on Biosafety.

⁹⁹ In this connection, the Copenhagen Accord agrees that "deep cuts in global emissions are required according to science." (para. 2). It further underlines that "to achieve the ultimate objective of the Convention" and "recognizing the scientific view that the increase in global temperature should be below 2 degrees Celsius," the Parties shall enhance cooperative action to combat climate change (para. 1).

¹⁰⁰ See David Hunter, James Zalman and Durwood Zaelke, *International Environmental Law and Policy*, 3rd ed. (West Publishing, 2006).

⁹⁶ "Report of the high-level task force on the implementation of the right to development on its fifth session" (A/HRC/12/WG.2/TF/2), annex IV, criterion (k).

technological flows into developing countries. The principle has been identified by the Secretary-General as key elements of the global new deal required to address climate change and achieve the Millennium Development Goals (see A/64/665). On the other hand, right to development scholars continue to reflect on the challenges of establishing State responsibility to “undifferentiated State players of the global institutional order”.¹⁰¹ The use of a due diligence standard in situations where a single perpetrator cannot be identified has been recognized as a relevant tool to establish content for the obligations to cooperate.¹⁰² In this connection, there is room for common but differentiated responsibilities and the due diligence standard to reinforce each other with the aim of tackling the diffuse responsibility to achieve sustainable development of the international community.

VII. Conclusion

This chapter has looked into certain linkages between climate change, the right to development and sustainable development, including the Millennium Development Goals. It has analysed how climate change directly impacts on the ability of the international community to implement the right to development and to achieve the Goals. In this light, international cooperation is critical both to tackling climate change and stimulating the transition towards sustainable development.

The linkages between the right to development, sustainable development and climate change are reflected in both the United Nations Framework Convention on Climate Change and the Kyoto Protocol. UNFCCC and its Kyoto Protocol stand out as the principal legal response by the international community to the climate change threat. They provide avenues through which international cooperation occurs, including financial and technology transfers. UNFCCC notes that the largest share of historical global emissions of greenhouse gases originates in industrialized countries and recognizes that the share of global emissions originating in developing countries will grow to meet their social and development needs. The Kyoto Protocol set targets for greenhouse gas emission reductions for industrialized countries (Annex I Parties), and created three market mechanisms, including the clean development mechanism, to reduce the costs of reducing emissions.

¹⁰¹ Margot E. Salomon, *Global Responsibility for Human Rights, World Poverty and the Development of International Law* (Oxford, Oxford University Press, 2007), p. 186.

¹⁰² *Ibid.*, pp. 186-189.

CDM is unique in view of its twofold objective: mitigating climate change and contributing to sustainable development. In this regard, CDM reflects a climate change partnership whereby investments from the North are channelled to the South in order to capture opportunities for the reduction of greenhouse gas emissions where they may be most cost-effective. CDM thus promotes financial flows and technology transfer into developing countries, which, as the Secretary-General has observed, are central to channelling resources towards investment in renewable energy and building resilience with respect to unavoidable climate changes.

When examined using right to development attributes, however, CDM reveals certain weaknesses that limit its contribution to the implementation of the right to development as well as to sustainable development. Key points include the following:

- The attribute pertaining to comprehensive and human-centred development policy calls for human rights considerations to be taken into account in relation to sustainable development determinations. The projects should promote constant improvement in socioeconomic well-being as well as ensuring access to financial resources, science and technology. Furthermore, CDM projects need to respect the rights of stakeholders, which calls for strengthened procedural safeguards and Executive Board authority to supervise the mechanism to ensure exact compliance with all the terms of its modalities and procedures. In this vein, a rights-based approach should be adopted to ensure that people’s rights will not be affected by CDM projects
- The attribute pertaining to participatory human rights processes calls for CDM to ensure that the host State’s determination of whether a proposed CDM project contributes to sustainable development follows an inclusive and participatory process. The projects should ensure non-discrimination, access to information, participation and effective remedies. At the national level, CDM lacks explicit tools to ensure accountability of designated national authorities, as this is an issue within the domain of the host State. At the international level, CDM has been criticized for its inability to provide affected stakeholders with recourse where required procedures have not been properly followed

- The attribute pertaining to social justice in development calls for the eradication of social injustices through economic and social reforms. The right to development also requires that CDM projects provide fair access and sharing of the benefits and burdens of development. Currently, a few developing countries receive the lion's share of CDM investment. This situation is at odds with right to development criteria that stress equitable distribution of the benefits of sustainable development across the developing world, with particular attention to the needs of the most vulnerable and marginalized segments of the international community

The fifth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 5), held in December 2009, adopted decisions that begin to address some of these issues by providing further guidance relating to CDM. CMP 5 requested the Executive Board, as its highest priority, to continue to significantly improve transparency, consistency and impartiality in its work. CMP 5 also set in motion a process to increase CDM projects in underrepresented project activity types or regions. Moreover, CMP 5 addressed the need for a wider distribution of CDM projects in developing countries and adopted several measures to encourage CDM projects in countries with minor CDM participation.

More generally, given the linkages between the right to development, sustainable development, the Millennium Development Goals and climate change, the design and experience of CDM in channelling investments and technology transfer to developing countries provide valuable lessons in structuring

and improving global partnerships to address both climate change and sustainable development. In this regard, CDM is directly relevant to goal 8 regarding global partnerships and technology transfer, as well as to the other Goals directly affected by climate change.

The linkages explored in this chapter, coupled with the findings of the examination of CDM under right to development criteria, evidence the need for a rights-based approach to climate change, in order to ensure that climate change mitigation and adaptation does not compromise efforts directed at implementing the right to development and achieving the Millennium Development Goals, as well as to capture opportunities provided by the Goals in enhancing capacities needed to tackle climate change.

To conclude, the right to development is central to effectively addressing the climate change crisis. First, the right to development is central to development models that connect with and do not seek to replace the fundamental tenets of biology. Second, the right to development can help unlock UNFCCC negotiations by underscoring the need for a technology leap in the global and local economies, particularly in the developing world. And third, the right to development can provide the vital moral compass to guide the economic transformation required to effectively address climate change and achieve sustainable development through the integration of economic, environmental and human rights issues.

Climate change may perhaps be the most formidable test humanity has ever had to confront. Are we up to the challenge? We do not have another 25 years to figure it out.