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**ANNUAL REPORT OF THE UNITED NATIONS HIGH COMMISSIONER
FOR HUMAN RIGHTS AND REPORTS OF THE OFFICE OF THE
HIGH COMMISSIONER AND THE SECRETARY-GENERAL**

**Report of the Office of the United Nations High Commissioner
for Human Rights on the relationship between climate change
and human rights* ****

Summary

This report discusses how observed and projected impacts of climate change have implications for the enjoyment of human rights and for the obligations of States under international human rights law.

Chapter I discusses the main features of climate change as defined in the reports of the Intergovernmental Panel on Climate Change (IPCC) and central aspects of current climate change debates under the United Nations Framework Convention on Climate Change. Chapter II outlines various implications of climate change for human rights, commenting on: (a) the relationship between the environment and human rights; (b) implications of the effects of climate change for the enjoyment of specific rights; (c) vulnerabilities of specific groups; (d) human rights implications of climate change-induced displacement and conflict; and (e) human rights implications of measures to address climate change. Chapter III relates the discussion of the impacts of climate change on human rights with relevant obligations under international human rights law, which are also summarized in annex I to the present report. Chapter IV draws conclusions on the relationship between climate change and human rights.

* Late submission.

** The annex and footnotes are circulated in the language of submission only.

CONTENTS

<i>Chapter</i>	<i>Paragraphs</i>	<i>Page</i>
Introduction	1 - 4	3
I. CLIMATE CHANGE: AN OVERVIEW	5 - 15	4
II. IMPLICATIONS FOR THE ENJOYMENT OF HUMAN RIGHTS	16 - 68	7
A. Climate change, environmental harm and human rights	16 - 19	7
B. Effects on specific rights	20 - 41	8
C. Effects on specific groups	42 - 54	15
D. Displacement	55 - 60	18
E. Conflict and security risks	61 - 64	21
F. Human rights implications of response measures	65 - 68	22
III. RELEVANT HUMAN RIGHTS OBLIGATIONS	69 - 91	23
A. National level obligations	72 - 83	24
B. Obligations of international cooperation	84 - 91	27
IV. CONCLUSIONS	92 - 99	30

Annex

Selected human rights standards and guidelines relevant to effects of climate change	32
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Introduction

1. The present report is submitted pursuant to Human Rights Council resolution 7/23 in which the Office of the United Nations High Commissioner for Human Rights (OHCHR) was requested to conduct a detailed analytical study of the relationship between climate change and human rights, taking into account the views of States and other stakeholders.
2. Written submissions were received from States, intergovernmental organizations, national human rights institutions, non-governmental organizations, and individual experts. OHCHR also organized a one-day open-ended consultation on the relationship between climate change and human rights, held on 22 October 2008 in Geneva. The inputs received during the consultation process have informed the preparation of this report.¹
3. This report seeks to outline main aspects of the relationship between climate change and human rights. Climate change debates have traditionally focused on scientific, environmental and economic aspects. As scientific understanding of the causes and consequences of climate change has evolved and impacts on human lives and living conditions have become more evident, the focus of debates has progressively broadened with increasing attention being given to human and social dimensions of climate change. Human Rights Council resolution 7/23 on human rights and climate change exemplifies this broadening of the debate.
4. Special procedures of the Human Rights Council have also addressed the human rights implications of climate change in recent statements and reports,² while the Organization of American States and the Alliance of Small Island States have recently drawn attention to the relationship between climate change and human rights.³ In addition, a growing volume of reports and studies address the interface between climate change and human rights.⁴

¹ Most of the submissions made and a summary of discussions of the consultation meeting containing various recommendations made by participants are available at <http://www2.ohchr.org/english/issues/climatechange/study.htm>.

² For example, in a joint statement on International Human Rights Day, 10 December 2008, the special procedures mandate holders of the Human Rights Council emphasized that climate change has “potentially massive human rights and development implications”.

³ AG/RES.2429 (XXXVIII-O/08), Human rights and climate change in the Americas; Male’ Declaration on the Human Dimension of Global Climate Change, 2007.

⁴ Many of these studies and reports have been submitted to the Office of the United Nations High Commissioner for Human Rights (OHCHR) and are available at: <http://www2.ohchr.org/english/issues/climatechange/submissions.htm>.

I. CLIMATE CHANGE: AN OVERVIEW

Global warming and its causes

5. The United Nations Framework Convention on Climate Change, which has near universal membership, provides the common international framework to address the causes and consequences of climate change, also referred to as “global warming”. The Convention defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”.⁵

6. The Intergovernmental Panel on Climate Change (IPCC) has greatly contributed to improving understanding about and raising awareness of climate change risks.⁶ Since the publication of its First Assessment Report (IPCC AR1) in 1990, climate science has rapidly evolved, enabling the IPCC to make increasingly definitive statements about the reality, causes and consequences of climate change. Its Fourth Assessment Report (IPCC AR4), issued in 2007, presents a clear scientific consensus that global warming “is unequivocal” and that, with more than 90 per cent certainty, most of the warming observed over the past 50 years is caused by manmade greenhouse gas emissions.⁷ Current levels of greenhouse gas concentrations far exceed pre-industrial levels as recorded in polar ice cores dating back 650,000 years, and the predominant source of this increase is the combustion of fossil fuels.⁸

7. The IPCC AR4 presents the current scientific consensus on climate change. It is based on the contributions of three working groups focusing on: the physical science basis (Working Group I); impacts, adaptation and vulnerability (Working Group II); and mitigation of climate change (Working Group III). The Synthesis Report and Summaries for Policymakers have been adopted and approved by member States at an IPCC plenary session. The findings provide the main scientific resource for this study in exploring the relationship between climate change and human rights.

⁵ United Nations Framework Convention on Climate Change (UNFCCC), art. 1, para. 2. The Intergovernmental Panel on Climate Change (IPCC) uses a similar definition, the main difference being that IPCC covers all aspects of climate change and does not make a distinction between climate change attributable to human activity and climate change and variability attributable to natural causes.

⁶ IPCC was set up jointly by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) in 1988 to provide authoritative assessments, based on the best available scientific literature, on climate change causes, impacts and possible response strategies.

⁷ Climate Change 2007 - Synthesis Report, adopted at IPCC Plenary XXVII, Valencia, Spain, 12-17 November 2007 (IPCC AR4 Synthesis Report), p. 72.

⁸ See IPCC AR4 Working Group I (WGI) Report, pp. 23-25.

Observed and projected impacts

8. Amongst the main observed and projected changes in weather patterns related to global warming are:⁹

- Contraction of snow-covered areas and shrinking of sea ice
- Sea level rise and higher water temperatures
- Increased frequency of hot extremes and heatwaves
- Heavy precipitation events and increase in areas affected by drought
- Increased intensity of tropical cyclones (typhoons and hurricanes)

9. The IPCC assessments and a growing volume of studies provide an increasingly detailed picture of how these changes in the physical climate will impact on human lives. IPCC AR4 outlines impacts in six main areas: ecosystems; food; water; health; coasts; and industry, settlement and society,¹⁰ some of which are described further below in relation to their implications for specific human rights.

Unequal burden and the equity principle

10. Industrialized countries, defined as annex I countries under the United Nations Framework Convention on Climate Change, have historically contributed most to manmade greenhouse gas emissions. At the same time, the impacts of climate change are distributed very unevenly, disproportionately affecting poorer regions and countries, that is, those who have generally contributed the least to human-induced climate change.

11. The unequal burden of the effects of climate change is reflected in article 3 of the Convention (referred to as “the equity article”). It stipulates that parties should protect the climate system “on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities”; that developed countries “should take the lead in combating climate change and the adverse effects thereof” and that full consideration should be given to the needs of developing countries, especially “those that are particularly vulnerable to the adverse effects of climate change” and “that would have to bear a disproportionate or abnormal burden under the Convention”.¹¹ Giving operational meaning to the “equity principle” is a key challenge in ongoing climate change negotiations.

⁹ With the exception of impacts on tropical cyclones, the IPCC AR4 considers these impacts *very likely* (more than 90 per cent certainty). Projections on increased intensity of tropical cyclones are considered *likely* (more than 66 per cent certainty).

¹⁰ See IPCC AR4 Synthesis Report, pp. 48-53.

¹¹ UNFCCC, art. 3, paras. 1 and 2.

Response measures: mitigation and adaptation

12. Mitigation and adaptation are the two main strategies to address climate change. Mitigation aims to minimize the extent of global warming by reducing emission levels and stabilizing greenhouse gas concentrations in the atmosphere. Adaptation aims to strengthen the capacity of societies and ecosystems to cope with and adapt to climate change risks and impacts.

13. Reaching an agreement on required global mitigation measures lies at the heart of international climate change negotiations. Article 2 defines the “ultimate objective” of the Convention and associated instruments as “the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”. A key question is to operationally define the term “dangerous”.¹²

14. Over the past decades, scientific studies and policy considerations have converged towards a threshold for dangerous climate change of a maximum rise in global average temperature of 2° C above the pre-industrial level.¹³ Staying below this threshold will significantly reduce the adverse impacts on ecosystems and human lives. It will require that global greenhouse gas emissions peak within the next decade and be reduced to less than 50 per cent of the current level by 2050. Yet, even this stabilization scenario would lead to a “best estimate” global average temperature increase of 2° C - 2.4° C above pre-industrial levels.¹⁴ Moreover, the possibility of containing the temperature rise to around 2°C becomes increasingly unlikely if emission reductions are postponed beyond the next 15 years.

15. Adaptation and the financing of adaptation measures are also central in international climate change negotiations. Irrespective of the scale of mitigation measures taken today and over the next decades, global warming will continue due to the inertia of the climate system and the long-term effects of previous greenhouse gas emissions. Consequently, adaptation measures are required to enable societies to cope with the effects of now unavoidable global warming. Climate change adaptation covers a wide range of actions and strategies, such as building sea defences, relocating populations from flood-prone areas, improved water management, and early warning systems. Equally, adaptation requires strengthening the capacities and coping mechanisms of individuals and communities.

¹² While UNFCCC does not include specific greenhouse gas reduction targets, its Kyoto Protocol assigns legally binding caps on greenhouse gas emissions for industrialized countries and emerging economies for the period 2008-2012. The Protocol entered into force in 2005 and has to date been ratified by 183 parties to UNFCCC.

¹³ See IPCC AR4 Working Group III (WGIII) Report, pp. 99-100.

¹⁴ Four other scenarios of higher stabilization levels estimate the likely temperature increases in the range of 2.8° C to 6.1° C, IPCC AR4 WGIII Report, pp. 227-228.

II. IMPLICATIONS FOR THE ENJOYMENT OF HUMAN RIGHTS

A. Climate change, environmental harm and human rights

16. An increase in global average temperatures of approximately 2° C will have major, and predominantly negative, effects on ecosystems across the globe, on the goods and services they provide. Already today, climate change is among the most important drivers of ecosystem changes, along with overexploitation of resources and pollution.¹⁵ Moreover, global warming will exacerbate the harmful effects of environmental pollution, including higher levels of ground-level ozone in urban areas. In view of such effects, which have implications for a wide range of human rights, it is relevant to discuss the relationship between human rights and the environment.

17. Principle 1 of the 1972 Declaration of the United Nations Conference on the Human Environment (the Stockholm Declaration) states that there is “a fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being”. The Stockholm Declaration reflects a general recognition of the interdependence and interrelatedness of human rights and the environment.¹⁶

18. While the universal human rights treaties do not refer to a specific right to a safe and healthy environment, the United Nations human rights treaty bodies all recognize the intrinsic link between the environment and the realization of a range of human rights, such as the right to life, to health, to food, to water, and to housing.¹⁷ The Convention on the Rights of the Child provides that States parties shall take appropriate measures to combat disease and malnutrition “through the provision of adequate nutritious foods and clean drinking water, taking into consideration the dangers and risks of environmental pollution”.¹⁸

¹⁵ See Millennium Ecosystems Assessment 2005, *Ecosystems and Human Well-being*, Synthesis, pp. 67 and 79.

¹⁶ A joint seminar on human rights and the environment organized by OHCHR and UNEP in 2002 also documented a growing recognition of the connection between human rights, environmental protection and sustainable development (see E/CN.4/2002/WP.7).

¹⁷ ILO Convention No. 169 (1989) concerning Indigenous and Tribal Peoples in Independent Countries provides for special protection of the environment of the areas which indigenous peoples occupy or otherwise use. At the regional level, the African Charter on Human and Peoples’ Rights and the San Salvador Protocol to the American Convention on Human Rights recognize the right to live in a healthy or satisfactory environment. Moreover, many national constitutions refer to a right to an environment of a certain quality.

¹⁸ Convention on the Rights of the Child (CRC), art. 24, para. 2 (c).

19. Equally, the Committee on Economic, Social and Cultural Rights (CESCR) has clarified that the right to adequate food requires the adoption of “appropriate economic, environmental and social policies” and that the right to health extends to its underlying determinants, including a healthy environment.¹⁹

B. Effects on specific rights

20. Whereas global warming will potentially have implications for the full range of human rights, the following subsections provide examples of rights which seem to relate most directly to climate change-related impacts identified by IPCC.

1. The right to life

21. The right to life is explicitly protected under the International Covenant on Civil and Political Rights and the Convention on the Rights of the Child.²⁰ The Human Rights Committee has described the right to life as the “supreme right”, “basic to all human rights”, and it is a right from which no derogation is permitted even in time of public emergency.²¹ Moreover, the Committee has clarified that the right to life imposes an obligation on States to take positive measures for its protection, including taking measures to reduce infant mortality, malnutrition and epidemics.²² The Convention on the Rights of the Child explicitly links the right to life to the obligation of States “to ensure to the maximum extent possible the survival and development of the child”.²³ According to the Committee on the Rights of the Child, the right to survival and development must be implemented in a holistic manner, “through the enforcement of all the other provisions of the Convention, including rights to health, adequate nutrition, social security, an adequate standard of living, a healthy and safe environment ...”.²⁴

¹⁹ Committee on Economic, Social and Cultural Rights (CESCR), general comments No. 12 (1999) on the right to adequate food (art. 11), para. 4, and No. 14 (2000) on the right to the highest attainable standard of health (art. 12), para. 4.

²⁰ International Covenant on Civil and Political Rights (ICCPR), art. 6; CRC, art. 6.

²¹ Human Rights Committee, general comments No. 6 (1982) on art. 6 (Right to life), para. 1, and No. 14 (1984) on art. 6 (Right to life), para. 1.

²² Human Rights Committee, general comment No. 6, para. 5. Likewise, the Committee has asked States to provide data on pregnancy and childbirth-related deaths and gender-disaggregated data on infant mortality rates when reporting on the status of implementation of the right to life (general comment No. 28 (2000) on art. 3 (The equality of rights between men and women), para. 10).

²³ CRC, art. 6, para. 2.

²⁴ Committee on the Rights of the Child, general comment No. 7 (2006) on implementing rights in early childhood, para. 10.

22. A number of observed and projected effects of climate change will pose direct and indirect threats to human lives. IPCC AR4 projects with high confidence an increase in people suffering from death, disease and injury from heatwaves, floods, storms, fires and droughts. Equally, climate change will affect the right to life through an increase in hunger and malnutrition and related disorders impacting on child growth and development; cardiorespiratory morbidity and mortality related to ground-level ozone.²⁵

23. Climate change will exacerbate weather-related disasters which already have devastating effects on people and their enjoyment of the right to life, particularly in the developing world. For example, an estimated 262 million people were affected by climate disasters annually from 2000 to 2004, of whom over 98 per cent live in developing countries.²⁶ Tropical cyclone hazards, affecting approximately 120 million people annually, killed an estimated 250,000 people from 1980 to 2000.²⁷

24. Protection of the right to life, generally and in the context of climate change, is closely related to measures for the fulfilment of other rights, such as those related to food, water, health and housing. With regard to weather-related natural disasters, this close interconnectedness of rights is reflected in the Inter-Agency Standing Committee (IASC) operational guidelines on human rights and natural disasters.²⁸

2. The right to adequate food

25. The right to food is explicitly mentioned under the International Covenant on Economic, Social and Cultural Rights, the Convention on the Rights of the Child and the Convention on the Rights of Persons with Disabilities and implied in general provisions on an adequate standard of living of the Convention on the Elimination of All Forms of Discrimination against Women and the International Convention on the Elimination of All Forms of Racial Discrimination.²⁹ In addition to a right to adequate food, the International Covenant on Economic, Social and

²⁵ IPCC AR4 Working Group II (WGII) Report, p. 393.

²⁶ United Nations Development Programme (UNDP), Human Development Report 2007/2008, *Fighting climate change: Human solidarity in a divided world*, p. 8.

²⁷ IPCC AR4 Working Group II Report, p. 317.

²⁸ Inter-Agency Standing Committee, *Protecting Persons Affected by Natural Disasters - IASC Operational Guidelines on Human Rights and Natural Disasters*, Brooking-Bern Project on Internal Displacement, 2006.

²⁹ International Covenant on Economic, Social and Cultural Rights (ICESCR), art. 11; CRC, art. 24 (c); Convention on the Rights of Persons with Disabilities (CRPD), art. 25 (f) and art. 28, para. 1; Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), art. 14, para. 2 (h); International Convention on the Elimination of All Forms of Racial Discrimination (ICERD), art. 5 (e).

Cultural Rights also enshrines “the fundamental right of everyone to be free from hunger”.³⁰ Elements of the right to food include the availability of adequate food (including through the possibility of feeding oneself from natural resources) and accessible to all individuals under the jurisdiction of a State. Equally, States must ensure freedom from hunger and take necessary action to alleviate hunger, even in times of natural or other disasters.³¹

26. As a consequence of climate change, the potential for food production is projected initially to increase at mid to high latitudes with an increase in global average temperature in the range of 1-3° C. However, at lower latitudes crop productivity is projected to decrease, increasing the risk of hunger and food insecurity in the poorer regions of the world.³² According to one estimate, an additional 600 million people will face malnutrition due to climate change,³³ with a particularly negative effect on sub-Saharan Africa.³⁴ Poor people living in developing countries are particularly vulnerable given their disproportionate dependency on climate-sensitive resources for their food and livelihoods.³⁵

27. The Special Rapporteur on the right to food has documented how extreme climate events are increasingly threatening livelihoods and food security.³⁶ In responding to this threat, the realization of the right to adequate food requires that special attention be given to vulnerable and disadvantaged groups, including people living in disaster prone areas and indigenous peoples whose livelihood may be threatened.³⁷

³⁰ ICESCR, art. 11, para. 2.

³¹ CESCR general comment No. 12 (1999) on the right to adequate food (art. 11), para. 6.

³² IPCC AR4 Synthesis Report, p. 48.

³³ UNDP Human Development Report 2006, *Beyond scarcity: Power, poverty and the global water crisis*.

³⁴ IPCC AR4 WGII Report, p. 275.

³⁵ IPCC AR4 WGII, p. 359. United Nations Millennium Project 2005, *Halving Hunger: It Can Be Done*, Task Force on Hunger, p. 66. Furthermore, according to the Human Rights Council Special Rapporteur on the right to food, “half of the world’s hungry people ... depend for their survival on lands which are inherently poor and which may be becoming less fertile and less productive as a result of the impacts of repeated droughts, climate change and unsustainable land use” (A/HRC/7/5, para. 51).

³⁶ See e.g. A/HRC/7/5, para. 51; A/HRC/7/5/Add.2, paras. 11 and 15.

³⁷ See e.g. CESCR general comment No. 12 (1999) on the right to adequate food (art. 11), para. 28.

3. The right to water

28. CESCR has defined the right to water as the right of everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses, such as drinking, food preparation and personal and household hygiene.³⁸ The Convention on the Elimination of All Forms of Discrimination against Women and the Convention on the Rights of Persons with Disabilities explicitly refer to access to water services in provisions on an adequate standard of living, while the Convention on the Rights of the Child refers to the provision of “clean drinking water” as part of the measures States shall take to combat disease and malnutrition.³⁹

29. Loss of glaciers and reductions in snow cover are projected to increase and to negatively affect water availability for more than one-sixth of the world’s population supplied by meltwater from mountain ranges. Weather extremes, such as drought and flooding, will also impact on water supplies.⁴⁰ Climate change will thus exacerbate existing stresses on water resources and compound the problem of access to safe drinking water, currently denied to an estimated 1.1 billion people globally and a major cause of morbidity and disease.⁴¹ In this regard, climate change interacts with a range of other causes of water stress, such as population growth, environmental degradation, poor water management, poverty and inequality.⁴²

30. As various studies document, the negative effects of climate change on water supply and on the effective enjoyment of the right to water can be mitigated through the adoption of appropriate measures and policies.⁴³

³⁸ CESCR general comment No. 15 (2002) on the right to water (arts. 11 and 12), para. 2. While not explicitly mentioned in ICESCR, the right is seen to be implicit in arts. 11 (adequate standard of living) and 12 (health). General comment No. 15 provides further guidance on the normative contents of the right to water and related obligations of States.

³⁹ See CEDAW, art. 14, para. 2 (h); CRPD, art. 28, para. 2 (a); CRC, art. 24, para. 2 (c).

⁴⁰ IPCC AR4 Synthesis Report, pp. 48-49.

⁴¹ Millennium Ecosystems Assessment 2005, *Ecosystems and Human Well-being*, Synthesis, p. 52.

⁴² According to the UNDP Human Development Report 2006, the root causes of the current water crisis lie in poor water management, poverty and inequality, rather than in an absolute shortage of physical supply.

⁴³ IPCC AR4 WGII Report, p. 191. UNDP Human Development Report 2006.

4. The right to health

31. The right to the highest attainable standard of physical and mental health (the right to health) is most comprehensively addressed in article 12 of the International Covenant on Economic, Social and Cultural Rights and referred to in five other core international human rights treaties.⁴⁴ This right implies the enjoyment of, and equal access to, appropriate health care and, more broadly, to goods, services and conditions which enable a person to live a healthy life. Underlying determinants of health include adequate food and nutrition, housing, safe drinking water and adequate sanitation, and a healthy environment.⁴⁵ Other key elements are the availability, accessibility (both physically and economically), and quality of health and health-care facilities, goods and services.⁴⁶

32. Climate change is projected to affect the health status of millions of people, including through increases in malnutrition, increased diseases and injury due to extreme weather events, and an increased burden of diarrhoeal, cardiorespiratory and infectious diseases.⁴⁷ Global warming may also affect the spread of malaria and other vector borne diseases in some parts of the world.⁴⁸ Overall, the negative health effects will disproportionately be felt in sub-Saharan Africa, South Asia and the Middle East. Poor health and malnutrition increases vulnerability and reduces the capacity of individuals and groups to adapt to climate change.

33. Climate change constitutes a severe additional stress to health systems worldwide, prompting the Special Rapporteur on the right to health to warn that a failure of the international community to confront the health threats posed by global warming will endanger the lives of millions of people.⁴⁹ Most at risk are those individuals and communities with a low adaptive capacity. Conversely, addressing poor health is one central aspect of reducing vulnerability to the effects of climate change.

⁴⁴ CEDAW, arts. 12 and 14, para. 2 (b); ICERD, art. 5 (e) (iv); CRC, art. 24; CRPD, arts. 16, para. 4, 22, para. 2, and 25; International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (ICRMW), arts. 43, para. 1 (e), 45, para. 1 (c), and 70. See also ICESCR arts. 7 (b) and 10.

⁴⁵ CESCR general comment No. 12, para. 8.

⁴⁶ See CESCR general comment No. 12, CEDAW general recommendation No. 24 (1999) on art. 12 of the Convention (women and health); CRC general comment No. 4 (2003) on Adolescent health and development in the context of the Convention on the Rights of the Child.

⁴⁷ IPCC AR4 Synthesis, p. 48.

⁴⁸ Uncertainty remains about the potential impact of climate change on malaria at local and global scales because of a lack of data and the interplay of other contributing non-climatic factors such as socio-economic development, immunity and drug resistance (see IPCC WGII Report, p. 404).

⁴⁹ A/62/214, para. 102.

34. Non-climate related factors, such as education, health care, public health initiatives, are critical in determining how global warming will affect the health of populations.⁵⁰ Protecting the right to health in the face of climate change will require comprehensive measures, including mitigating the adverse impacts of global warming on underlying determinants of health and giving priority to protecting vulnerable individuals and communities.

5. The right to adequate housing

35. The right to adequate housing is enshrined in several core international human rights instruments and most comprehensively under the International Covenant on Economic, Social and Cultural Rights as an element of the right to an adequate standard of living.⁵¹ The right to adequate housing has been defined as “the right to live somewhere in security, peace and dignity”.⁵² Core elements of this right include security of tenure, protection against forced evictions,⁵³ availability of services, materials, facilities and infrastructure, affordability, habitability, accessibility, location and cultural adequacy.⁵⁴

36. Observed and projected climate change will affect the right to adequate housing in several ways. Sea level rise and storm surges will have a direct impact on many coastal settlements.⁵⁵ In the Arctic region and in low-lying island States such impacts have already led to the relocation of peoples and communities.⁵⁶ Settlements in low-lying mega-deltas are also particularly at risk, as evidenced by the millions of people and homes affected by flooding in recent years.

37. The erosion of livelihoods, partly caused by climate change, is a main “push” factor for increasing rural to urban migration. Many will move to urban slums and informal settlements where they are often forced to build shelters in hazardous areas.⁵⁷ Already today, an estimated 1 billion people live in urban slums on fragile hillsides or flood-prone riverbanks and face acute vulnerability to extreme climate events.⁵⁸

⁵⁰ IPCC AR4 WGII Report, p. 12.

⁵¹ ICESCR, art. 11. See also Universal Declaration of Human Rights, art. 25, para. 1; ICERD, art. 5 (e) (iii); CEDAW, art. 14, para. 2; CRC, art. 27, para. 3; ICRMW, art. 43, para. 1 (d); CRPD, arts. 9, para. 1 (a), and 28, paras. 1 and 2 (d).

⁵² CESCR general comment No. 12, para. 6.

⁵³ See CESCR general comment No. 7 (1997) on the right to adequate housing (art. 11 (1) of the Covenant): Forced evictions.

⁵⁴ CESCR general comment No. 12, para. 8.

⁵⁵ IPCC AR4 WGII Report, p. 333.

⁵⁶ IPCC AR4 WGII Report, p. 672.

⁵⁷ A/63/275, paras. 31-38.

⁵⁸ UNDP Human Development Report 2007/2008, *Fighting climate change: Human solidarity in a divided world*, p. 9.

38. Human rights guarantees in the context of climate change include: (a) adequate protection of housing from weather hazards (habitability of housing); (b) access to housing away from hazardous zones; (c) access to shelter and disaster preparedness in cases of displacement caused by extreme weather events; (d) protection of communities that are relocated away from hazardous zones, including protection against forced evictions without appropriate forms of legal or other protection, including adequate consultation with affected persons.⁵⁹

6. The right to self-determination

39. The right to self-determination is a fundamental principle of international law. Common article 1, paragraph 1, of the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights establishes that “all peoples have the right of self-determination”, by virtue of which “they freely determine their political status and freely pursue their economic, social and cultural development”.⁶⁰ Important aspects of the right to self-determination include the right of a people not to be deprived of its own means of subsistence and the obligation of a State party to promote the realization of the right to self-determination, including for people living outside its territory.⁶¹ While the right to self-determination is a collective right held by peoples rather than individuals, its realization is an essential condition for the effective enjoyment of individual human rights.

40. Sea level rise and extreme weather events related to climate change are threatening the habitability and, in the longer term, the territorial existence of a number of low-lying island States. Equally, changes in the climate threaten to deprive indigenous peoples of their traditional territories and sources of livelihood. Either of these impacts would have implications for the right to self-determination.

41. The inundation and disappearance of small island States would have implications for the right to self-determination, as well as for the full range of human rights for which individuals depend on the State for their protection. The disappearance of a State for climate change-related reasons would give rise to a range of legal questions, including concerning the status of people inhabiting such disappearing territories and the protection afforded to them under international law (discussed further below). While there is no clear precedence to follow, it is clear that insofar as climate change poses a threat to the right of peoples to self-determination, States have

⁵⁹ In this regard the Guiding Principles on Internal Displacement (E/CN.4/1998/53/Add.2, annex) provide that “at the minimum, regardless of the circumstances, and without discrimination, competent authorities shall provide internally displaced persons with and ensure safe access to: ... basic shelter and housing” (principle 18).

⁶⁰ The right to self-determination is enshrined in Articles 1 and 55 of the Charter of the United Nations and also contained in the Declaration on the Right to Development, art. 1, para. 2, and the United Nations Declaration on the Rights of Indigenous Peoples, arts. 3 and 4.

⁶¹ Human Rights Committee, general comment No. 12 (1984) on art. 1 (Right to self-determination), para. 6. See also Committee on the Elimination of Racial Discrimination (CERD), general recommendation 21 (1996) on the right to self-determination.

a duty to take positive action, individually and jointly, to address and avert this threat. Equally, States have an obligation to take action to avert climate change impacts which threaten the cultural and social identity of indigenous peoples.

C. Effects on specific groups

42. The effects of climate change will be felt most acutely by those segments of the population who are already in vulnerable situations due to factors such as poverty, gender, age, minority status, and disability.⁶² Under international human rights law, States are legally bound to address such vulnerabilities in accordance with the principle of equality and non-discrimination.

43. Vulnerability and impact assessments in the context of climate change largely focus on impacts on economic sectors, such as health and water, rather than on the vulnerabilities of specific segments of the population.⁶³ Submissions to this report and other studies indicate awareness of the need for more detailed assessments at the country level and point to some of the factors which affect individuals and communities.

44. The present section focuses on factors determining vulnerability to climate change for women, children and indigenous peoples.

1. Women

45. Women are especially exposed to climate change-related risks due to existing gender discrimination, inequality and inhibiting gender roles. It is established that women, particularly elderly women and girls, are affected more severely and are more at risk during all phases of weather-related disasters: risk preparedness, warning communication and response, social and economic impacts, recovery and reconstruction.⁶⁴ The death rate of women is markedly higher than that of men during natural disasters (often linked to reasons such as: women are more likely to be looking after children, to be wearing clothes which inhibit movement and are less likely to be able to swim). This is particularly the case in disaster-affected societies in which the socio-economic status of women is low.⁶⁵ Women are susceptible to gender-based violence

⁶² See e.g. IPCC AR4 WGII Report, p. 374.

⁶³ National communications, submitted according to arts. 4 and 12 of UNFCCC, make frequent references to the human impacts of climate change, but generally do so in an aggregate and general manner, mentioning for example that people living in poverty are particularly vulnerable.

⁶⁴ IPCC AR4 WGII, p. 398. See also submission by the United Nations Development Fund for Women available at: <http://www2.ohchr.org/english/issues/climatechange/index.htm>.

⁶⁵ E. Neumayer and T. Plümper, *The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981-2002*, available at <http://ssrn.com/abstract=874965>. As the authors conclude, based on the study of disasters in 141 countries, “[a] systematic effect on the gender gap in life expectancy is only plausible if natural disasters exacerbate previously existing patterns of discrimination that render females more vulnerable to the fatal impact of disasters” (p. 27).

during natural disasters and during migration, and girls are more likely to drop out of school when households come under additional stress. Rural women are particularly affected by effects on agriculture and deteriorating living conditions in rural areas. Vulnerability is exacerbated by factors such as unequal rights to property, exclusion from decision-making and difficulties in accessing information and financial services.⁶⁶

46. Studies document how crucial for successful climate change adaptation the knowledge and capacities of women are. For example, there are numerous examples of how measures to empower women and to address discriminatory practices have increased the capacity of communities to cope with extreme weather events.⁶⁷

47. International human rights standards and principles underline the need to adequately assess and address the gender-differentiated impacts of climate change. In the context of negotiations on the United Nations Framework Convention on Climate Change, States have highlighted gender-specific vulnerability assessments as important elements in determining adaptation options.⁶⁸ Yet, there is a general lack of accurate data disaggregated by gender data in this area.

2. Children

48. Studies show that climate change will exacerbate existing health risks and undermine support structures that protect children from harm.⁶⁹ Overall, the health burden of climate change will primarily be borne by children in the developing world.⁷⁰ For example, extreme weather events and increased water stress already constitute leading causes of malnutrition and infant and child mortality and morbidity. Likewise, increased stress on livelihoods will make it more difficult for children to attend school. Girls will be particularly affected as traditional household chores, such as collecting firewood and water, require more time and energy when supplies are scarce. Moreover, like women, children have a higher mortality rate as a result of weather-related disasters.

⁶⁶ Y. Lambrou and R. Laub, "Gender perspectives on the conventions on biodiversity, climate change and desertification", *Food and Agriculture Organization of the United Nations (FAO), Gender and Population Division*, pp. 7-8.

⁶⁷ See e.g. IPCC AR4 WGII Report, p. 398; International Strategy for Disaster Reduction, *Gender Perspectives: Integrating Disaster Risk Reduction into Climate Change Adaptation. Good Practices and Lessons Learned*, UN/ISDR 2008.

⁶⁸ UNFCCC, *Climate Change: Impacts, Vulnerabilities and Adaptation in Developing Countries*, 2007, p. 16.

⁶⁹ UNICEF Innocenti Research Centre, *Climate Change and Children: A Human Security Challenge*, New York and Florence, 2008; UNICEF UK, *Our Climate, Our Children, Our Responsibility: The Implications of Climate Change for the World's Children*, London, 2008.

⁷⁰ World Bank, *Global Monitoring Report 2008 - MDGs and the Environment: Agenda for Inclusive and Sustainable Development*, p. 211.

49. As today's children and young persons will shape the world of tomorrow, children are central actors in promoting behaviour change required to mitigate the effects of global warming. Children's knowledge and awareness of climate change also influence wider households and community actions.⁷¹ Education on environmental matters among children is crucial and various initiatives at national and international levels seek to engage children and young people as actors in the climate change agenda.⁷²

50. The Convention on the Rights of the Child, which enjoys near universal ratification, obliges States to take action to ensure the realization of all rights in the Convention for all children in their jurisdiction, including measures to safeguard children's right to life, survival and development through, inter alia, addressing problems of environmental pollution and degradation. Importantly, children must be recognized as active participants and stewards of natural resources in the promotion and protection of a safe and healthy environment.⁷³

3. Indigenous peoples

51. Climate change, together with pollution and environmental degradation, poses a serious threat to indigenous peoples, who often live in marginal lands and fragile ecosystems which are particularly sensitive to alterations in the physical environment.⁷⁴ Climate change-related impacts have already led to the relocation of Inuit communities in polar regions and affected their traditional livelihoods. Indigenous peoples inhabiting low-lying island States face similar pressures, threatening their cultural identity which is closely linked to their traditional lands and livelihoods.⁷⁵

52. Indigenous peoples have been voicing their concern about the impacts of climate change on their collective human rights and their rights as distinct peoples.⁷⁶ In particular, indigenous peoples have stressed the importance of giving them a voice in policymaking on climate change at both national and international levels and of taking into account and building upon their

⁷¹ UNICEF UK (see footnote 69 above), p. 29.

⁷² For example, UNEP and UNICEF have developed an environmental resource pack for child-friendly schools designed to empower children (see footnote 69 above, UNICEF Innocenti Research Centre, p. 28).

⁷³ See e.g. CRC, general comment No. 4 (2003) on adolescent health and development in the context of the Convention on the Rights of the Child.

⁷⁴ M. Macchi and others, *Indigenous and Traditional Peoples and Climate Change*, International Union for Conservation of Nature, 2008.

⁷⁵ See e.g. report of the Special Rapporteur on the situation of human rights and fundamental freedoms of indigenous peoples, A/HRC/4/32, para. 49.

⁷⁶ In April 2008, the Permanent Forum for Indigenous Issues stated that climate change "is an urgent and immediate threat to human rights" (E/C.19/2008/13, para. 23).

traditional knowledge.⁷⁷ As a study cited by the IPCC in its Fourth Assessment Report observes, “Incorporating indigenous knowledge into climate change policies can lead to the development of effective adaptation strategies that are cost-effective, participatory and sustainable”.⁷⁸

53. The United Nations Declaration on the Rights of Indigenous Peoples sets out several rights and principles of relevance to threats posed by climate change.⁷⁹ Core international human rights treaties also provide for protection of indigenous peoples, in particular with regard to the right to self-determination and rights related to culture.⁸⁰ The rights of indigenous peoples are also enshrined in ILO Convention No. 169 (1989) concerning Indigenous and Tribal Peoples in Independent Countries.

54. Indigenous peoples have brought several cases before national courts and regional and international human rights bodies claiming violations of human rights related to environmental issues. In 2005, a group of Inuit in the Canadian and Alaskan Arctic presented a case before the Inter-American Commission on Human Rights seeking compensation for alleged violations of their human rights resulting from climate change caused by greenhouse gas emissions from the United States of America.⁸¹ While the Inter-American Commission deemed the case inadmissible, it drew international attention to the threats posed by climate change to indigenous peoples.

D. Displacement

55. The First Assessment Report of the IPCC (1990) noted that the greatest single impact of climate change might be on human migration. The report estimated that by 2050, 150 million people could be displaced by climate change-related phenomena, such as desertification,

⁷⁷ E/C.19/2008/13, para. 4. The Permanent Forum also recommended that a mechanism be put in place for the participation of indigenous peoples in climate change negotiations under UNFCCC (ibid., para. 30).

⁷⁸ IPCC AR4 WGII Report, p. 865 (citing Robinson and Herbert, 2001).

⁷⁹ Key provisions include the right to effective mechanisms for prevention of, and redress for, actions which have the aim or effect of dispossessing them of their lands, territories or resources (art. 8); the principle of free, prior and informed consent (art. 19), the right to the conservation and protection of the environment and indigenous lands and territories (art. 29), the right to maintain, control, protect and develop their cultural heritage and traditional knowledge and cultural expressions (art. 31).

⁸⁰ See the provisions on cultural rights in ICCPR, art. 27, and ICESCR, art. 15.

⁸¹ Available at: <http://inuitcircumpolar.com/files/uploads/icc-files/FINALPetitionICC.pdf>.

increasing water scarcity, and floods and storms.⁸² It is estimated that climate change-related displacement will primarily occur within countries and that it will affect primarily poorer regions and countries.⁸³

56. It is possible to distinguish between four main climate change-related displacement scenarios,⁸⁴ where displacement is caused by:

- Weather-related disasters, such as hurricanes and flooding
- Gradual environmental deterioration and slow onset disasters, such as desertification, sinking of coastal zones and possible total submersion of low-lying island States
- Increased disaster risks resulting in relocation of people from high-risk zones
- Social upheaval and violence attributable to climate change-related factors

57. Persons affected by displacement within national borders are entitled to the full range of human rights guarantees by a given State,⁸⁵ including protection against arbitrary or forced displacement and rights related to housing and property restitution for displaced persons.⁸⁶ To the extent that movement has been forced, persons would also qualify for increased assistance and protection as a vulnerable group in accordance with the Guiding Principles on Internal

⁸² More recent studies refer to estimates for the same period of 200 million (Stern Review on the Economics of Climate Change, 2006, available at http://www.hm-treasury.gov.uk/sternreview_index.htm) and 250 million (*Human tide: the real migration crisis*, Christian Aid 2007). See also IPCC AR4 WGII Report, p. 365 and the Norwegian Refugee Council, *Future floods of refugees: A comment on climate change, conflict and forced migration*, 2008.

⁸³ See e.g. contributions to *Forced Migration Review*, vol. 1, No. 31, October 2008.

⁸⁴ Adapted from typology proposed by the Representative of the Secretary-General on human rights of internally displaced persons and also used in the working paper submitted by the IASC informal group on migration/displacement and climate change, "Climate Change, Migration and Displacement: who will be affected", 31 October 2008.

⁸⁵ Guiding Principles on Internal Displacement (E/CN.4/1998/53/Add.2, annex), principles 1, para. 1, and 6, para. 1 .

⁸⁶ Principle 8.2, Principles on Housing and Property Restitution for Refugees and Displaced Persons (endorsed by the Sub-Commission on the Promotion and Protection of Human Rights in resolution 2005/2); FAO/IDMC/NRC/OCHA/OHCHR/UN-Habitat/UNHCR: *Housing and Property Restitution for Refugees and Displaced Persons: Implementing the "Pinheiro Principles"*, 2007.

Displacement.⁸⁷ However, with regard to slow-onset disasters and environmental degradation it remains challenging to distinguish between voluntary and forced population movements.

58. Persons moving voluntarily or forcibly across an international border due to environmental factors would be entitled to general human rights guarantees in a receiving State, but would often not have a right of entry to that State. Persons forcibly displaced across borders for environmental reasons have been referred to as “climate refugees” or “environmental refugees”. The Office of the United Nations High Commissioner for Refugees, the International Organization for Migration and other humanitarian organizations have advised that these terms have no legal basis in international refugee law and should be avoided in order not to undermine the international legal regime for the protection of refugees.⁸⁸

59. The Representative of the Secretary-General on human rights of internally displaced persons has suggested that a person who cannot be reasonably expected to return (e.g. if assistance and protection provided by the country of origin is far below international standards) should be considered a victim of forced displacement and be granted at least a temporary stay.⁸⁹

60. One possible scenario of forcible displacement across national borders is the eventual total submergence of small island States.⁹⁰ Two working papers of the Sub-Commission on the Promotion and Protection of Human Rights point to some of the human rights issues such situations would raise, such as the rights of affected populations vis-à-vis receiving States and possible entitlement to live in community.⁹¹ Human rights law does not provide clear answers as to the status of populations who have been displaced from sinking island States. Arguably,

⁸⁷ The Guiding Principles have gained wide acceptance and were recognized by the General Assembly in the 2005 World Summit Outcome (A/RES/60/1) “as an important international framework for the protection of internally displaced persons”.

⁸⁸ See IASC working paper referred to in footnote 84 above.

⁸⁹ Representative of the Secretary-General on human rights of internally displaced persons, *Displacement Caused by the Effects of Climate Change: Who will be affected and what are the gaps in the normative framework for their protection?* background paper, 2008, available at: <http://www2.ohchr.org/english/issues/climatechange/submissions.htm>.

⁹⁰ In the face of rising sea levels, migration is one adaptation strategy which is already being implemented in low-lying island States, such as Kiribati, the Maldives, and Tuvalu. So far this population movement has mainly taken the form of in-country resettlement schemes (IPCC AR4 WGII Report, p. 708).

⁹¹ The papers (E/CN.4/Sub.2/AC.4/2004/CRP.1; E/CN.4/Sub.2/2005/28) were prepared by Françoise Hampson pursuant to a request from the Commission on Human Rights (decision 2004/122) to prepare a report on the legal implications of the disappearance of States for environmental reasons. A questionnaire was prepared in 2006 (E/CN.4/Sub.2/AC.4/2006/CRP.2) with a view to obtaining more accurate data on the nature, scale and imminence of the problem, but as yet no follow-up has been given to this initiative.

dealing with such possible disasters and protecting the human rights of the people affected will first and foremost require adequate long-term political solutions, rather than new legal instruments.⁹²

E. Conflict and security risks

61. Recent reports and studies identify climate change as a key challenge to global peace and stability.⁹³ This was also recognized by the Norwegian Nobel Committee when, in 2007, it awarded the Nobel Peace Prize jointly to the IPCC and Al Gore for raising awareness of man-made climate change.⁹⁴ Equally, in 2007, the Security Council held a day-long debate on the impact of climate change on peace and security.

62. According to one study, the effects of climate change interacting with economic, social and political problems will create a high risk of violent conflict in 46 countries - home to 2.7 billion people.⁹⁵ These countries, mainly in sub-Saharan Africa, Asia and Latin America, are also the countries which are particularly exposed to projected negative impacts of climate change.

63. Climate change-related conflicts could be one driver of forced displacement. In such cases, in addition to the general human rights protection framework, other international standards would be applicable, including the Guiding Principles on Internal Displacement, international humanitarian law, international refugee law and subsidiary and temporary protection regimes for persons fleeing from armed conflict. Violent conflict, irrespective of its causes, has direct implications for the protection and enjoyment of human rights.

⁹² This point was made by Ms. Hampson and other panellists at the consultation meeting organized by OHCHR on 22 October 2008, summary of discussions available at: <http://www2.ohchr.org/english/issues/climatechange/docs/SummaryofDiscussions.doc>.

⁹³ See e.g. Government of the United Kingdom of Great Britain and Northern Ireland, *The National Security Strategy of the United Kingdom: Security in an interdependent world*, 2008 and German Advisory Council on Global Change, *World in Transition - Climate Change as a Security Risk*, 2008.

⁹⁴ As the Chairman of the Nobel Committee stated: "The chief threats may be direct violence, but deaths may also have less direct sources in starvation, disease, or natural disasters" (Presentation speech 10 December 2007).

⁹⁵ International Alert and Swedish International Development Cooperation Agency (SIDA), *A Climate of Conflict*, 2008, p. 7. In the same vein, the Special Rapporteur on the right to food observes that conflicts in Africa, including in the Darfur region, are linked to land degradation and related fights over resources (A/HRC/7/5, para. 51).

64. It should be noted, however, that knowledge remains limited as to the causal linkages between environmental factors and conflict and there is little empirical evidence to substantiate the projected impacts of environmental factors on armed conflict.⁹⁶

F. Human rights implications of response measures

65. The United Nations Framework Convention on Climate Change and its Kyoto Protocol commit States parties to minimize adverse economic, social and environmental impacts resulting from the implementation of measures taken to mitigate or adapt to climate change impacts (“response measures”).⁹⁷ With regard to measures to reduce the concentration of greenhouse gases in the atmosphere (mitigation), agro-fuel production is one example of how mitigation measures may have adverse secondary effects on human rights, especially the right to food.⁹⁸

66. Whereas agro-fuel production could bring positive benefits for climate change and for farmers in developing countries, agro-fuels have also contributed to increasing the price of food commodities “because of the competition between food, feed and fuel for scarce arable land”.⁹⁹ CESCR has urged States to implement strategies to combat global climate change that do not negatively affect the right to adequate food and freedom from hunger, but rather promote sustainable agriculture, as required by article 2 of the United Nations Framework Convention on Climate Change.¹⁰⁰

67. Apart from the impact on the right to food, concerns have also been raised that demand for biofuels could encroach on the rights of indigenous peoples to their traditional lands and culture.¹⁰¹

⁹⁶ See e.g. H. Buhaug, N.P. Gleditsch and O.M. Theisen, *Implications of Climate Change for Armed Conflict*, 2008. As the IPCC AR4 WGII Report points out (citing Fairhead, 2004) there are many other intervening and contributing causes of conflict and many environmentally-influenced conflicts in Africa are related to abundance of natural resources (e.g. oil and diamonds) rather than scarcity, suggesting “caution in the prediction of such conflicts as a result of climate change” (p. 365).

⁹⁷ UNFCCC, art. 4, para. 8, and Kyoto Protocol, arts. 2, para. 3, and 3, para. 14.

⁹⁸ For a discussion of the human rights dimensions of mitigation and adaptation policies see International Council on Human Rights Policy, *Climate Change and Human Rights: A Rough Guide*, 2008, chapter II.

⁹⁹ Statement of the Special Rapporteur on the right to food, 22 May 2008, at the special session of the Human Rights Council on the global food crisis.

¹⁰⁰ E/C.12/2008/1, para. 13.

¹⁰¹ See e.g. M. Macchi and others, *Indigenous and Traditional Peoples and Climate Change*, International Union for Conservation of Nature, 2008. CERD expressed concern about plans to establish a large-scale biofuel plantation and the threat it constituted to the rights of indigenous peoples to own their lands and enjoy their culture (CERD/C/IDN/CO/3, para. 17).

68. Concerns have also been raised about possible adverse effects of reduced emissions from deforestation and degradation (REDD) programmes. These programmes provide compensation for retaining forest cover and could potentially benefit indigenous peoples who depend on those forest resources. However, indigenous communities fear expropriation of their lands and displacement and have concerns about the current framework for REDD. The Permanent Forum on Indigenous Issues stated that new proposals for reduced emissions from deforestation “must address the need for global and national policy reforms ... respecting rights to land, territories and resources, and the rights of self-determination and the free, prior and informed consent of the indigenous peoples concerned”.¹⁰²

III. RELEVANT HUMAN RIGHTS OBLIGATIONS

69. There exists broad agreement that climate change has generally negative effects on the realization of human rights. This section seeks to outline how the empirical reality and projections of the adverse effects of climate change on the effective enjoyment of human rights relate to obligations assumed by States under the international human rights treaties.

70. While climate change has obvious implications for the enjoyment of human rights, it is less obvious whether, and to what extent, such effects can be qualified as human rights violations in a strict legal sense.¹⁰³ Qualifying the effects of climate change as human rights violations poses a series of difficulties. First, it is virtually impossible to disentangle the complex causal relationships linking historical greenhouse gas emissions of a particular country with a specific climate change-related effect, let alone with the range of direct and indirect implications for human rights. Second, global warming is often one of several contributing factors to climate change-related effects, such as hurricanes, environmental degradation and water stress. Accordingly, it is often impossible to establish the extent to which a concrete climate change-related event with implications for human rights is attributable to global warming. Third, adverse effects of global warming are often projections about future impacts, whereas human rights violations are normally established after the harm has occurred.¹⁰⁴

¹⁰² E/C.19/2008/13, para. 45.

¹⁰³ In recent years, several lawsuits related to greenhouse gas emissions and their contribution to climate change have been filed at national level against State authorities and private actors. However, the Inuit petition to the Inter-American Commission on Human Rights (see footnote 81 above) remains the only case to have invoked human rights law. For an overview of recent climate change-related lawsuits, see e.g. International Council for Human Rights Policy, *Climate Change and Human Rights: A Rough Guide*, 2008.

¹⁰⁴ The Human Rights Committee has clarified that for a person to claim to be a victim of a violation of a right, “he or she must show either that an act or an omission of a State party has already adversely affected his or her enjoyment of such a right, or that such an effect is imminent ...” *Aalbersberg v. The Netherlands* (No. 1440/2005). In several cases concerning environmental harms, the Committee has found that the author(s) did not meet these criteria for a victim of a human rights violation.

71. Irrespective of whether or not climate change effects can be construed as human rights violations, human rights obligations provide important protection to the individuals whose rights are affected by climate change or by measures taken to respond to climate change.

A. National level obligations

72. Under international human rights law, individuals rely first and foremost on their own States for the protection of their human rights. In the face of climate change, however, it is doubtful, for the reasons mentioned above, that an individual would be able to hold a particular State responsible for harm caused by climate change. Human rights law provides more effective protection with regard to measures taken by States to address climate change and their impact on human rights.

73. For example, if individuals have to move away from a high-risk zone, the State must ensure adequate safeguards and take measures to avoid forced evictions. Equally, several claims about environmental harm have been considered by national, regional and international judicial and quasi-judicial bodies, including the Human Rights Committee, regarding the impact on human rights, such as the right to life, to health, to privacy and family life and to information.¹⁰⁵ Similar cases in which an environmental harm is linked to climate change could also be considered by courts and quasi-judicial human rights treaty bodies. In such cases, it would appear that the matter of the case would rest on whether the State through its acts or omissions had failed to protect an individual against a harm affecting the enjoyment of human rights.

74. In some cases, States may have an obligation to protect individuals against foreseeable threats to human rights related to climate change, such as an increased risk of flooding in certain areas. In that regard, the jurisprudence of the European Court of Human Rights gives some indication of how a failure to take measures against foreseeable risks could possibly amount to a violation of human rights. The Court found a violation of the right to life in a case where State authorities had failed to implement land-planning and emergency relief policies while they were aware of an increasing risk of a large-scale mudslide. The Court also noted that the population had not been adequately informed about the risk.¹⁰⁶

¹⁰⁵ For a review of relevant jurisprudence, see Asia Pacific Forum of National Human Rights Institutions, *Human Rights and the Environment*, 12th Annual Meeting, Sydney, 2007; D. Shelton, "Human rights and the environment: jurisprudence of human rights bodies", background paper No. 2, Joint UNEP-OHCHR Expert Seminar on Human Rights and the Environment, January 2002, available at <http://www.unhchr.ch/environment/bp2.html>.

¹⁰⁶ *Budayeva and Others v. Russia*, European Court of Human Rights (ECHR), No. 15339/02.

1. Progressive realization of economic, social and cultural rights

75. As discussed in chapter II, climate change will have implications for a number of economic, social and cultural rights. As specified in the relevant treaty provisions, States are obliged to take measures towards the full realization of economic, social and cultural rights to the maximum extent of their available resources.¹⁰⁷ As climate change will place an additional burden on the resources available to States, economic and social rights are likely to suffer.

76. While international human rights treaties recognize that some aspects of economic, social and cultural rights may only be realized progressively over time, they also impose obligations which require immediate implementation. First, States parties must take deliberate, concrete and targeted measures, making the most efficient use of available resources, to move as expeditiously and effectively as possible towards the full realization of rights.¹⁰⁸ Second, irrespective of resource limitations, States must guarantee non-discrimination in access to economic, social and cultural rights. Third, States have a core obligation to ensure, at the very least, minimum essential levels of each right enshrined in the Covenant. For example, a State party in which “any significant number of individuals is deprived of essential foodstuffs, of essential primary health care, of basic shelter and housing, or of the most basic forms of education” would be failing to meet its minimum core obligations and, *prima facie*, be in violation of the Covenant.¹⁰⁹

77. In sum, irrespective of the additional strain climate change-related events may place on available resources, States remain under an obligation to ensure the widest possible enjoyment of economic, social and cultural rights under any given circumstances. Importantly, States must, as a matter of priority, seek to satisfy core obligations and protect groups in society who are in a particularly vulnerable situation.¹¹⁰

2. Access to information and participation in decision-making

78. Awareness-raising and access to information are critical to efforts to address climate change. For example, it is critically important that early-warning information be provided in a manner accessible to all sectors of society. Under the United Nations Framework Convention on Climate Change, the parties commit to promote and facilitate public access to information on climate change.¹¹¹ Under international human rights law, access to information is implied in the

¹⁰⁷ See CESCR general comment No. 3 (1990) on the nature of States parties’ obligations (art. 2, para. 1, of the Covenant). For a discussion of the concept of progressive realization under the international human rights treaties, see report of the United Nations High Commissioner for Human Rights to the Economic and Social Council (E/2007/82).

¹⁰⁸ See e.g. CESCR general comments No. 3, paras. 2 and 9, and No. 14 (2000) on the right to the highest attainable standard of health (art. 12), para. 31.

¹⁰⁹ CESCR general comment No. 3, para. 10.

¹¹⁰ See Statement by CESCR (E/C.12/2007/1, paras. 4 and 6).

¹¹¹ UNFCCC, art. 6.

rights to freedom of opinion and expression.¹¹² Jurisprudence of regional human rights courts has also underlined the importance of access to information in relation to environmental risks.¹¹³

79. Participation in decision-making is of key importance in efforts to tackle climate change. For example, adequate and meaningful consultation with affected persons should precede decisions to relocate people away from hazardous zones.¹¹⁴ Under the Convention, States parties shall promote and facilitate “public participation in addressing climate change and its effects and developing adequate responses”.¹¹⁵ The right to participation in decision-making is implied in article 25 of the International Covenant on Civil and Political Rights which guarantees the right to “take part in the conduct of public affairs”. Equally, the United Nations Declaration on the Rights of Indigenous Peoples states that States shall consult and cooperate with indigenous peoples “to obtain their free, prior and informed consent” before adopting measures that may affect them.¹¹⁶ The Convention on the Rights of the Child in article 12 enshrines the right of children to express their views freely in all matters affecting them.

3. Guiding principles for policymaking

80. Human rights standards and principles should inform and strengthen policymaking in the area of climate change, promoting policy coherence and sustainable outcomes. The human rights framework draws attention to the importance of aligning climate change policies and measures with overall human rights objectives, including through assessing possible effects of such policies and measures on human rights.

81. Moreover, 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. The human rights framework seeks to empower individuals and underlines the critical importance of effective participation of individuals and communities in decision-making processes affecting their lives.

¹¹² Universal Declaration of Human Rights, art. 19, and ICCPR, art. 19.

¹¹³ See e.g. *Guerra and Others v. Italy*, ECHR 14967/89; Inter-American Court of Human Rights, Case of *Claude Reyes et al. v. Chile*. Merits, Reparations and Costs, Series C, No. 151.

¹¹⁴ See A/63/275, para. 38.

¹¹⁵ Article 6. The amended New Delhi work programme on article 6 elaborates on and reinforces this point (FCCC/CP/2007/6/Add.1, decision 9/CP.13, annex, para. 17 (k)).

¹¹⁶ United Nations Declaration on the Rights of Indigenous Peoples, art. 19.

82. Equally, human rights standards underline the need to prioritize access of all persons to at least basic levels of economic, social and cultural rights, such as access to basic medical care, essential drugs and to compulsory primary education free of charge.

83. The human rights framework also stresses the importance of accountability mechanisms in the implementation of measures and policies in the area of climate change and requires access to administrative and judicial remedies in cases of human rights violations.¹¹⁷

B. Obligations of international cooperation

84. Climate change can only be effectively addressed through cooperation of all members of the international community.¹¹⁸ Moreover, international cooperation is important because the effects and risk of climate change are significantly higher in low-income countries.

85. International cooperation to promote and protect human rights lies at the heart of the Charter of the United Nations.¹¹⁹ The importance of such cooperation is explicitly stated in provisions of the International Covenant on Economic, Social and Cultural Rights, the Convention on the Rights of the Child, the Convention on the Rights of People with Disabilities and in the Declaration on the Right to Development.¹²⁰ According to CESCR and the Committee on the Rights of the Child, the obligation to take steps to the maximum of available resources to implement economic, social and cultural rights includes an obligation of States, where necessary, to seek international cooperation.¹²¹ States have also committed themselves not only to

¹¹⁷ Useful guidance on how human rights standards and principles can be incorporated into policy measures are found in various guidance tools, including *Frequently Asked Questions on a Human Rights-Based Approach to Development Cooperation*; OHCHR (2006), *Principles and Guidelines for a Human Rights Approach to Poverty Reduction Strategies*, available at <http://www.ohchr.org/EN/PublicationsResources/Pages/SpecialIssues.aspx>.

¹¹⁸ In the words of the special procedures mandate holders of the Human Rights Council, in a joint statement on International Human Rights Day, 10 December 2008: “Today the interests of States, and the impacts of actions by States, are ever more interconnected. New challenges include ensuring global access to food, and those presented by climate change and financial crisis have potentially massive human rights and development implications. If we are to confront them effectively we must do so collectively.”

¹¹⁹ See articles 1, paragraph 3, 55 and 56.

¹²⁰ ICESCR, arts. 2, para. 1, 11, para. 2, 15, para. 4, 22 and 23; Convention on the Rights of the Child, arts. 4 and 24, para. 4; CRPD, art. 32; Declaration on the Right to Development, arts. 3, 4 and 6.

¹²¹ CESCR, general comment No. 3, para. 11; Committee on the Rights of the Child, general comment No. 5 (2003) on general measures of implementation of the Convention on the Rights of the Child (arts. 4, 42 and 44, para. 6), para. 7.

implement the treaties within their jurisdiction, but also to contribute, through international cooperation, to global implementation.¹²² Developed States have a particular responsibility and interest to assist the poorer developing States.¹²³

86. The Committee on Economic, Social and Cultural Rights identifies four types of extraterritorial obligations to promote and protect economic, social and cultural rights. Accordingly, States have legal obligations to:

- Refrain from interfering with the enjoyment of human rights in other countries
- Take measures to prevent third parties (e.g. private companies) over which they hold influence from interfering with the enjoyment of human rights in other countries
- Take steps through international assistance and cooperation, depending on the availability of resources, to facilitate fulfilment of human rights in other countries, including disaster relief, emergency assistance, and assistance to refugees and displaced persons
- Ensure that human rights are given due attention in international agreements and that such agreements do not adversely impact upon human rights¹²⁴

87. Human rights standards and principles are consistent with and further emphasize “the principle of common but differentiated responsibilities” contained in the United Nations Framework Convention on Climate Change. According to this principle, developed country Parties (annex I) commit to assisting developing country Parties (non-annex I) in meeting the costs of adaptation to the adverse effects of climate change and to take full account of the specific needs of least developed countries in funding and transfer of technology.¹²⁵ The human rights framework complements the Convention by underlining that “the human person is the central subject of development”,¹²⁶ and that international cooperation is not merely a matter of the obligations of a State towards other States, but also of the obligations towards individuals.

¹²² See e.g. CRC, general comment No. 5, para. 7.

¹²³ See CESCR general comment No. 3, para. 14.

¹²⁴ See e.g. CESCR general comments No. 12 (1999) on the right to adequate food (art. 11); No. 13 (1999) on the right to education (art. 13); No. 14 (2000) on the right to the highest attainable standard of health (art. 12); and No. 15 (2002) on the right to water (arts. 11 and 12 of the Covenant).

¹²⁵ UNFCCC, art. 4, paras. 4 and 9.

¹²⁶ Declaration on the Right to Development, art. 2, para. 1.

88. Human rights standards and principles, underpinned by universally recognized moral values, can usefully inform debates on equity and fair distribution of mitigation and adaptation burdens. Above all, human rights principles and standards focus attention on how a given distribution of burden affects the enjoyment of human rights.

Intergenerational equity and the precautionary principle

89. The United Nations Framework Convention on Climate Change stresses principles of particular importance in the context of climate change which are less well developed in human rights law. Notably, these include the notion of “intergenerational equity and justice” and “the precautionary principle”, both of which are well-established in international environmental law.

90. Human rights treaty bodies have alluded to the notion of intergenerational equity.¹²⁷ However, the human rights principles of equality and non-discrimination generally focus on situations in the present, even if it is understood that the value of these core human rights principles would not diminish over time and be equally applicable to future generations.¹²⁸

91. The precautionary principle reflected in article 3 of the United Nations Framework Convention on Climate Change, states that lack of full scientific certainty should not be used as a reason for postponing precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. As discussed above, human rights litigation is not well-suited to promote precautionary measures based on risk assessments, unless such risks pose an imminent threat to the human rights of specific individuals. Yet, by drawing attention to the broader human rights implications of climate change risks, the human rights perspective, in line with the precautionary principle, emphasizes the need to avoid unnecessary delay in taking action to contain the threat of global warming.

IV. CONCLUSIONS

92. Climate change-related impacts, as set out in the assessment reports of the Intergovernmental Panel on Climate Change, have a range of implications for the effective enjoyment of human rights. The effects on human rights can be of a direct nature, such as the threat extreme weather events may pose to the right to life, but will often have an indirect and gradual effect on human rights, such as increasing stress on health systems and vulnerabilities related to climate change-induced migration.

¹²⁷ See CESCR general comments No. 12, para. 7, and No. 15, para. 11. Equally the concern for how current needs and rights affect the future health and development of the child is central to the Convention on the Rights of the Child (see e.g. Committee on the Rights of the Child general comment No. 4 (2003) on adolescent health and development in the context of the Convention on the Rights of the Child, para. 13).

¹²⁸ For a discussion on the relationship between intergenerational equity and human rights in the context of climate change, see S. Caney, “Human rights, climate change, and discounting”, *Environmental Politics*, vol. 17, No. 4, August 2008, p. 536.

93. **The effects of climate change are already being felt by individuals and communities around the world. Particularly vulnerable are those living on the “front line” of climate change, in places where even small climatic changes can have catastrophic consequences for lives and livelihoods. Vulnerability due to geography is often compounded by a low capacity to adapt, rendering many of the poorest countries and communities particularly vulnerable to the effects of climate change.**

94. **Within countries, existing vulnerabilities are exacerbated by the effects of climate change. Groups such as children, women, the elderly and persons with disabilities are often particularly vulnerable to the adverse effects of climate change on the enjoyment of their human rights. The application of a human rights approach in preventing and responding to the effects of climate change serves to empower individuals and groups, who should be perceived as active agents of change and not as passive victims.**

95. **Often the effects of climate change on human rights are determined by non-climatic factors, including discrimination and unequal power relationships. This underlines the importance of addressing human rights threats posed by climate change through adequate policies and measures which are coherent with overall human rights objectives. Human rights standards and principles should inform and strengthen policy measures in the area of climate change.**

96. **The physical impacts of global warming cannot easily be classified as human rights violations, not least because climate change-related harm often cannot clearly be attributed to acts or omissions of specific States. Yet, addressing that harm remains a critical human rights concern and obligation under international law. Hence, legal protection remains relevant as a safeguard against climate change-related risks and infringements of human rights resulting from policies and measures taken at the national level to address climate change.**

97. **There is a need for more detailed studies and data collection at country level in order to assess the human rights impact of climate change-related phenomena and of policies and measures adopted to address climate change. In this regard, States could usefully provide information on measures to assess and address vulnerabilities and impacts related to climate change as they affect individuals and groups, in reporting to the United Nations human rights treaty monitoring bodies and the United Nations Framework Convention on Climate Change.**

98. **Further study is also needed of protection mechanisms for persons who may be considered to have been displaced within or across national borders due to climate change-related events and for those populations which may be permanently displaced as a consequence of inundation of low-lying areas and island States.**

99. **Global warming can only be dealt with through cooperation by all members of the international community. Equally, international assistance is required to ensure sustainable development pathways in developing countries and enable them to adapt to now unavoidable climate change. International human rights law complements the United Nations Framework Convention on Climate Change by underlining that international cooperation is not only expedient but also a human rights obligation and that its central objective is the realization of human rights.**

Annex

SELECTED HUMAN RIGHTS STANDARDS AND GUIDELINES RELEVANT TO EFFECTS OF CLIMATE CHANGE^a

Effects	Examples of rights affected	Human rights standards and climate change
Extreme weather events	<p>Right to life:</p> <p>ICCPR art. 5; CRC art. 6; Universal Declaration of Human Rights, art. 3.</p>	<p>Human Rights Committee, general comment No. 6 (1982) on article 6 (Right to life).</p> <p>Inter-Agency Standing Committee, <i>Protecting Persons Affected by Natural Disasters - IASC Operational Guidelines on Human Rights and Natural Disasters</i>.</p> <p>Guiding Principles on Internal Displacement (E/CN.4/1998/53/Add.2, annex).</p>
Increased food insecurity and risk of hunger	<p>Right to adequate food, right to be free from hunger:</p> <p>ICESCR art. 11; CRC art. 24 (c); CRPD arts. 25 (f), 28, para. 1; CEDAW art. 14, para. 2 (h); ICERD art. 5 (e); Universal Declaration of Human Rights, art. 25.</p>	<p>CESCR, general comment No. 12 (1999) on the right to adequate food (art. 11).</p> <p>FAO, <i>Voluntary guidelines to support the progressive realization of the right to adequate food</i>.</p>
Increased water stress	<p>Right to safe drinking water:</p> <p>ICESCR arts. 11 and 12; CEDAW art. 14, para. 2 (h); CRPD art. 28, para. 2 (a); CRC art. 24, para. 2 (c).</p>	<p>CESCR, general comment No. 15 (2002) on the right to water (arts. 11 and 12 of the Covenant).</p> <p>Report of the United Nations High Commissioner for Human Rights on the scope and content of human rights obligations related to equitable access to safe drinking water and sanitation under international human rights instruments (A/HRC/6/3).</p> <p>Realization of the right to drinking water and sanitation (E/CN.4/Sub.2/2005/25).</p>

^a General comments/recommendations of the treaty bodies are available in document HRI/GEN/1/Rev.9 (vols. I and II).

Effects	Examples of rights affected	Human rights standards and climate change
Stress on health status	<p>Right to the highest attainable standard of health:</p> <p>ICESCR arts. 7 (b), 10 and 12; CEDAW arts. 12 and 14, para. 2 (b); Universal Declaration of Human Rights, art. 25; ICERD art. 5 (e) (iv); CRC art. 24; CRPD arts. 16, para. 4, 22, para. 2, and 25; ICRMW arts. 43, para. 1 (e), 45, para. 1 (c) and 70.</p>	<p>CESCR, general comment No. 14 (2000) on the right to the highest attainable standard of health (art. 12).</p> <p>Committee on the Rights of the Child, general comment No. 4 (2003) on adolescent health and development in the context of the Convention on the Rights of the Child.</p> <p>Committee on the Elimination of Discrimination against Women, general recommendation No. 24 (1999) on article 12 of the Convention (women and health).</p> <p>Human Rights Committee, general comment No. 6.</p>
Sea-level rise and flooding	<p>Right to adequate housing:</p> <p>ICESCR art. 11; ICERD art. 5 (e) (iii); CEDAW art. 14, para. 2; CRC art. 27, para. 3; ICRMW art. 43, para. 1 (d); CRPD arts. 9, para. 1 (a), 28, paras. 1 and 2 (d); Universal Declaration of Human Rights, art. 25.</p>	<p>CESCR, general comment No. 4 (1991) on the right to adequate housing (art. 11, para. 1, of the Covenant).</p> <p>CESCR, general comment No. 7 (1997) on the right to adequate housing (art. 11, para. 1, of the Covenant): Forced evictions.</p> <p>OHCHR, OCHA, UN-HABITAT, UNHCR, FAO, NRC, <i>Handbook on Housing and Property Restitution for Refugees and Displaced Persons - Implementing the "Pinheiro Principles"</i>.</p>