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The right to adequate housing

Note by the Secretary-General

The Secretary-General has the honour to transmit to the General Assembly the report submitted by the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context, Raquel Rolnik, submitted pursuant to Human Rights Council resolution 6/27.

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Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context

Summary

The present report, submitted in accordance with Human Rights Council resolution 6/27, constitutes the second report to the General Assembly of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context.

The report discusses how the impacts of climate change have consequences for the fulfilment of the right to adequate housing. The report provides an overview of the scope and severity of climate change, its implications for extreme weather events and its impact on urban and rural areas, including unplanned and unserviced settlements, on human mobility and on small islands and low-lying coastal zones. It also outlines the relevant international human rights frameworks and obligations in connection to the right to housing and discusses the essential role of international cooperation to address the inevitable impacts of climate change. It considers policies on mitigation and adaptation from a human rights perspective to the right to adequate housing. Finally, the Special Rapporteur draws preliminary conclusions on the relationship between climate change and the right to adequate housing and urges States to take a number of measures, including upholding their human rights obligations when mitigating climate change and adapting to its inevitable impacts.

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I. Introduction

1. In December 2007, by its resolution 6/27, the Human Rights Council reviewed and renewed the mandate of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context.

2. During the presentation of her previous report to the General Assembly (A/63/275), the Special Rapporteur provided her views on the mandate and a programme of work. She expressed her interest in expanding the work of the mandate on a number of issues, including the relation between climate change and the right to adequate housing.

3. The present report is the result of thematic research undertaken, of information collected during a country visit of the Special Rapporteur to Maldives in February 2009 and of knowledge-sharing through participation at conferences and seminars on the topic of climate change and its potential impact on the realization and enjoyment of the right to the highest attainable standard of living, particularly, adequate housing.

4. The aim of the report is not to look at the causes that have produced climate change but at the impact of climate change on the fulfilment of the right to adequate housing, especially in respect of how climate change exacerbates existing vulnerabilities. The report provides an overview of the scope and severity of climate change, its implications for extreme weather events and its possible impact on urban and rural areas, including unplanned and unserviced settlements, on human mobility and on small islands and low-lying coastal zones. The report analyses the relevant international human rights frameworks and obligations in connection with the right to adequate housing. It also explores policies on mitigation and adaptation from a human rights perspective to the right to adequate housing. It concludes with recommendations, in particular for mitigation and adaptation strategies that are being designed and negotiated at local, national and international levels.

II. Overview

5. The Intergovernmental Panel on Climate Change[1] indicated in 2007 that the Earth was warming faster than at any other time in recorded human history. In its fourth assessment report, the Panel affirmed the scientific consensus that global warming was clearly under way, indicating a high likelihood that the rate of warming was greater than at any time over the past 10,000 years.

6. The Panel also concluded that global warming was most likely due to the effects of human activity, primarily fossil fuel use and land use changes that had taken place in particular after the industrial revolution. The concentrations of carbon dioxide in the Earth's atmosphere far exceeded pre-industrial levels as recorded in

[1] The Intergovernmental Panel on Climate Change was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to assess the information relevant to the scientific basis of the risk of human-induced climate change, its potential impacts and possible response strategies.

polar ice cores dating back 650,000 years.[2] This is already causing a linear warming trend that is twice that of the past 100 years. The 11 years between 1995 and 2006 have been among the 12 warmest years in recorded history, a trend that is causing deep oceans to warm, glaciers to melt and sea levels to rise. If current warming trends are sustained, the Panel estimates that sea levels will rise an additional 0.23 to 0.47 metres, and average temperatures could rise by 6°C before the end of the century.[3]

7. In efforts to meet the challenges posed by a rapidly warming planet, negotiations are currently under way for a new agreement to replace the Kyoto Protocol[4] of the United Nations Framework Convention on Climate Change.[5] This new treaty, to be agreed at the upcoming Conference of the Parties in Copenhagen in December 2009, will seek to effectively mitigate the warming trends while preparing to adapt to the inevitable consequences of climate change.

8. Global warming is prompting longer-lasting droughts and threatening to turn entire regions of the world into deserts. The warming of the Earth's climate is also changing the amount, intensity and frequency of precipitation. This implies more intense and longer-lasting storms and other extreme weather events, as well as a higher risk of flooding and storm damage. While it is impossible to link any specific extreme weather event to changes in the Earth's climate, it has been established that global warming is increasing the severity of storms that often result in disasters.[6] The Panel also found evidence indicating that intense tropical cyclone activity in the North Atlantic had increased since about 1970. The Panel further stated: "it is likely that future tropical cyclones (typhoons and hurricanes) will become more intense, with larger peak and wind speeds and more heavy precipitation associated with ongoing increases of tropical sea surface temperatures".[7]

9. Between 2000 and 2004, a yearly average of 326 climate-related disasters was reported, and some 262 million people were affected, more than double the level in the first half of the 1980s.[8] By means of illustration: the 2005 hurricane season in the Atlantic was the most active on record, producing 27 named storms and killing over 1,600 people. In 2004, a first-ever hurricane battered the southern coast of Brazil.[9] That same year droughts swept across the Horn of Africa and Southern

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[2] Intergovernmental Panel on Climate Change, "Summary for policymakers", a report of Working Group I of the Intergovernmental Panel on Climate Change, 2007.

[3] Intergovernmental Panel on Climate Change, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, contribution of Working Group II to the fourth assessment report of the Panel. Cambridge, United Kingdom, Cambridge University Press, 2007.

[4] FCCC/CP/1997/7/Add.1, decision 1/CP.3, annex.

[5] United Nations, *Treaty Series*, vol. 1771, No. 30822.

[6] National Office of Oceanic and Atmospheric Research, "Global warming and hurricanes", available from http://www.oar.noaa.gov/spotlite/archive/spot_gfdl.html. Last accessed 29 June 2009.

[7] Intergovernmental Panel on Climate Change, Working Group I report, "Summary for policymakers", in *Climate Change 2007: the Physical Science Basis* (Cambridge, United Kingdom, Cambridge University Press), p. 9.

[8] United Nations Development Programme, *Human Development Report 2007/2008. Fighting Climate Change: Human Solidarity in a Divided World* (United Nations Development Programme, 2007).

[9] *Up in smoke? Latin America and the Caribbean: The Threat from Climate Change to the Environment and Human Development*, third report of the Working Group on Climate Change and Development, August 2006.

Africa. In the following year, many countries in those areas experienced extensive flooding. The 2007 monsoon season in South Asia caused intense floods and storms that killed more than 1,000 people in Bangladesh, India, Southern Nepal and Pakistan and displaced more than 14 million people in India and 7 million in Bangladesh. According to the World Food Programme, 57 countries, including 29 in Africa, 19 in Asia and 9 in Latin America were hit with catastrophic floods, droughts and heatwaves.[10]

10. The impacts of extreme weather events will be felt disproportionally in the developing world. Between 1990 and 1998, 94 per cent of the world's 568 major natural disasters, and more than 97 per cent of all natural disaster-related deaths, were in developing countries.[11] Beyond the exposure of many developing countries to weather extremes due to their geographical location, poor countries lack the resources, infrastructure and insurance systems necessary to protect their populations against the effects of those disasters.[8] Between 2000 and 2004, for example, an average of 1 in 19 people living in the developing world was affected by a climate disaster per year, while 1 in 1,500 was affected within member countries of the Organization for Economic Cooperation and Development.[12] Japan is more highly exposed to the risks associated with storms, cyclones and flooding than the Philippines; yet between 2000 and 2004, average disaster-related fatalities amounted to 711 in the Philippines and 66 in Japan.[8]

11. The stakes are high, particularly for the world's poorest people. Extreme weather events and natural disasters threaten a series of essential human rights, particularly for the poorest and most vulnerable populations. They exacerbate disaster risks, both by intensifying climatic and extreme weather hazards as well as by decreasing the ability of people to withstand the impacts and recover from damages.[13]

12. The heaviest impacts affect people who have contributed least to the problem and lack the resilience necessary to survive these changes without major harm. According to a recent report of the United Nations International Strategy for Disaster Reduction secretariat: "Climate change is perhaps the greatest global outcome of environmental inequity since it is driven by the emissions that have brought benefits to affluent individuals and societies[,] yet most of the burdens fall on poorer individuals and societies, with developing countries and their poorest citizens being the most vulnerable".[14] This issue is a fundamental point of focus for the negotiations leading up to the Conference of the Parties in Copenhagen, and must be considered if the full challenges posed by climate change are to be effectively addressed.

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[10] "Global food crisis looms as climate change and fuel shortages bite", 3 November 2007, *The Guardian*, United Kingdom.

[11] John Vidal, "Climate change will overload humanitarian system, warns Oxfam", *The Guardian*, United Kingdom.

[12] Oxfam International, "Climate wrongs and human rights: putting people at the heart of climate change policy", September 2008.

[13] United Nations International Strategy for Disaster Reduction Secretariat, *2009 Global Assessment Report on Disaster Risk Reduction: Risk and Poverty in a Changing Climate: Invest Today for a Safer Tomorrow*, p. 11.

[14] Ibid., p. 10.

III. Climate change and the right to adequate housing

A. Effects of climate change on housing in urban settlements

13. In its third assessment report, the Panel stated that climate change would increase the magnitude and frequency of weather extremes, such as heavy rainstorms, cyclones or hurricanes. These events pose specific risks to cities and smaller settlements.

14. The most direct risks are connected to flooding and landslides, caused by increases in rainfall intensity, sea-level rise and storm surges in coastal areas.[15] This precipitation can overwhelm urban drainage systems and result in floods. Inadequate drainage exacerbates the effects of heavy rainfall, leading to localized flooding and further weakening the already degraded infrastructure. Heavy rainfalls can also overburden sanitation systems and cause contamination of drinking water. When shelters are built in areas susceptible to hazards, such as in floodplains on the banks of rivers or on slopes that pose the risk of erosion and mudslides during heavy rains, the consequences can be devastating.

15. As rainfalls become more irregular or scant, drought is predicted to become more frequent and severe. This phenomenon has an impact on urban systems of water supply. The melting of glaciers is also affecting water storage and resulting in a scarcity of the water supply. This is the case in La Paz, where a water shortage is expected by 2025 and has the potential to affect 2 million people.[16] Increased water stress results in decreased access to water and sanitation and as water sources dry out, people are forced to move further in search of water for drinking, cooking and hygiene. This has a particular impact on women and girls, who are usually responsible for fetching water, with their health and access to education often suffering as a result.

16. The extent to which extreme weather events affect urban settlements is not only related to their locations but also to the quality and level of infrastructure and service provision: “For any city, the scale of the risk from these extreme weather events is also much influenced by the quality of housing and infrastructure in that city and the level of preparedness among the city’s population and key emergency services”.[17] Poor communities can be especially vulnerable, in particular those concentrated in unplanned and unserviced settlements within urban areas, which tend to be built on hazardous sites and to be susceptible to a number of climate change-related disasters. Living in a situation of poverty and exclusion, they lack adequate resources to protect themselves. Climate change-related effects aggravate existing risks and vulnerabilities.

17. The majority of the urban population is concentrated — and will be even more so in the coming decades — in low- and middle-income countries, which have most of their urban populations living at greater risk in unplanned and unserviced

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[15] Intergovernmental Panel on Climate Change, “Industry, settlement and society”, in *Climate Change 2007: Impacts, Adaptation and Vulnerability*, p. 361.

[16] Questionnaire sent by Habitat International Coalition on climate change and the right to adequate housing, available from www.hic-al.org. Information provided by Red Habitat Bolivia.

[17] David Satterthwaite et al., Human Settlements Discussion Paper Series, Theme: Climate Change and Cities 1, *Adapting to Climate Change in Urban Areas: The Possibilities and Constraints in Low- and Middle-Income Nations* (International Institute for Environment and Development).

settlements. According to the United Nations Human Settlements Programme (UN-Habitat), there are about 1 billion slum-dwellers in the world today. The majority of these, more than 930 million, live in developing countries, where they constitute 42 per cent of the urban population. The proportion of slum-dwellers is particularly high in sub-Saharan Africa (72 per cent of the urban population) and in Southern Asia (59 per cent).[18] Disasters caused by extreme-weather are not simply a result of natural events but also reflect a failure of development policies.

18. These informal settlements are usually located in the most hazardous sites within cities, at risk from flooding or landslides. For instance, large concentrations of illegal settlements can be seen on hills prone to landslides (La Paz; Caracas; and Bamenda, Cameroon), in deep ravines (Guatemala City) or on land prone to flooding (Guayaquil, Ecuador; Recife, Brazil; Monrovia; Lagos, Nigeria; Port Harcourt, Nigeria; Port Moresby; New Delhi; Bangkok; Jakarta; Buenos Aires; Resistencia, Argentina; Bogota; Mumbai, India; Accra; Kumasi, Ghana; and Mombasa, Kenya).[19]

19. The areas exposed to and constantly affected by flooding, landslides and earthquakes still attract poor groups because of cheaper land and housing costs. They are also the only places where they can find accommodation close to their income-earning areas and livelihood opportunities within cities. Low-income groups will face serious constraints in being able to move to less dangerous sites, because of a lack of resources to enable them to move and due to a lack of alternative safer sites that are at the same time affordable and close to their income-earning and human development opportunities.

20. The lack of protective infrastructure and services aggravates human vulnerability to extreme weather-related phenomena: “For instance, it is generally cities with the largest inadequacies in protective infrastructure that have experienced the highest number of flood-related deaths and injuries over the last 25 years”.[19] One of the examples is the impact of the lack of waste collection on urban settlements. In research undertaken, the presence of uncollected waste is seen to frequently block streams and drainage channels leading to, or exacerbating, flooding. [20] UN-Habitat reported that a total of 98 per cent of the 211 million people affected by natural disasters during the period from 1991 to 2000 were in developing countries.[21] Consequently, “much of the human cost of extreme weather events in urban centres in low- and middle-income nations comes not from the ‘hazard’ or the ‘disaster event’, but from the inadequate provision of protection for urban population (or particular sections of the population) from these”.[22]

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[18] UN-Habitat, “Key findings and messages”, in *Global report on human settlements 2007: Enhancing Urban Safety and Security*.

[19] Caroline Moser and David Satterthwaite, Human Settlement Discussion Paper Series, Theme: Climate Change and Cities — 3, *Pro-poor climate change adaptation in the urban centres of low- and middle-income countries* (International Institute for Environment and Development, October 2008), p. 9.

[20] UN-Habitat, Global report on human settlements 2011: cities and climate change, chapter 6, case study: Dar es Salaam (forthcoming).

[21] UN-Habitat, *Global report on human settlements 2007*.

[22] David Satterthwaite et al., “Adapting to climate change in urban areas: the possibilities and constraints in low- and middle-income nations” in *Adapting Cities to Climate Change*, Jane Bicknell, David Dodman and David Satterthwaite (eds) (Earthscan, London, 2009), p. 19.

21. When discussing the vulnerability of poor urban populations to climate change impacts, consideration must be given to the most vulnerable groups, such as children. Children may be removed from school in order to work and help to increase the income of their families and the supply of food and water. Schools are also often used as emergency lodging after natural disasters. This is a reality for Saint Louis, Senegal, where after recurrent flooding, the affected population has been moved to schools, thereby reducing the school year and affecting student attendance.[23] Climate change-related effects might also exacerbate the exposure of children to undernutrition and increase their vulnerability to a number of diseases and illnesses, such as malaria.[24] Thus, the common constraints many children already suffer from as a result of poverty are intensified by the related effects and pressures of climate change-induced disasters. Gender inequalities that existed prior to a disaster may also increase.

B. Climate change and human mobility[25]

22. The linkages between climate change and human mobility are complex and not entirely predictable. The Intergovernmental Panel on Climate Change noted in 1990 that the greatest impact of climate change might be on human mobility. While there are no reliable estimates of the numbers of population flows related to climate change, it is clear that climate change-related impacts are already resulting in substantial human mobility. According to the Panel:

> "Estimates of the number of people who may become environmental migrants are, at best, guesswork since (a) migration in areas impacted by climate change are not one-way and permanent, but multi-directional and often temporary or episodic; (b) the reasons for migration are often multiple and complex, and do not relate straightforwardly to climate variability and change; (c) in many cases migration is a longstanding response to seasonal variability in environmental conditions, it also represents a strategy to accumulate wealth or to seek a route out of poverty, a strategy with benefits for both the receiving and original country or region; (d) there are few reliable censuses or surveys in many key parts of the world on which to base such estimates".[26]

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[23] Questionnaire sent by Habitat International Coalition on climate change and the right to an adequate housing, available from www.hic-al.org. Information provided by Environmental Development Action in the Third World.

[24] UNICEF, *Climate Change and Children: A Human Security Challenge* (November 2008), pp. 9-13.

[25] Climate change raises critical questions concerning the legal status of those forced to move within their countries. That issue is not examined in the present report, as it is being considered by the Representative of the Secretary-General on the human rights of internally displaced persons. See, for example, the background paper entitled "Displacement caused by the effects of climate change: who will be affected and what are the gaps in the normative frameworks for their protection?", which was submitted by the Representative of the Secretary-General to the Inter-Agency Standing Committee Working Group at its 71st meeting, held from 18 to 20 June 2008, and has been developed further by the Representative of the Secretary-General in the context of subsequent meetings of the Inter-Agency Standing Committee informal sub-working group on displacement/migration and climate change.

[26] Intergovernmental Panel on Climate Change, "Industry, settlement and society", in *Climate Change 2007: Impacts, Adaptation and Vulnerability*, p. 365.

23. People might move voluntarily, in search of a better life in areas not affected by these phenomena, or forcibly, when threats to life, health, property and livelihoods exist. Some affected people might be evacuated before and during disasters and some of them would be relocated because returning to the original place of residence is not possible or too dangerous. International human rights standards and the right to adequate housing must be respected during any relocation process.

24. In the context of urban and rural areas, climate change will affect such areas with increasingly frequent and hazardous events. The erosion of livelihoods, due partly to environmental degradation, intense storms, floods, droughts, water stress and food scarcity, is already accelerating the rural-urban drift,[27] as farmers migrate due to failing crops and insecure livelihood perspectives.

25. In the Arctic circle and surrounding areas, warmer temperatures are causing the seas to freeze later in the autumn months and the permafrost to thaw. This is affecting the water storage capacity of the glaciers, which used to store water during winter months and feed rivers during summer months. Rapid glacier melt also affects the water supply and increases flooding risks in other parts of the world. This has a great impact on rural agriculture located in river deltas, resulting in the movement of many people.

26. Drought is also a factor that is affecting mobility in rural areas. Studies have demonstrated that desertification is influencing migration in Mexico.[28] Inhabitants of Tlaxcala, an area dependent on rain-fed agriculture, complained of shifting rainfall periods, which generated uncertainty and a decline in crop yields and incomes: “Return migration, and seasonal migration as a livelihood diversification strategy have been documented in this area … The opportunity for some people to migrate seasonally, send remittances, and return home is an example of migration as an adaptation strategy to deteriorating environmental conditions”.[28] Climate change has also had related impacts in West Africa, such as rainfall decreases, land degradation, and violence in the arid and semi-arid areas of Senegal, Mali, Burkina Faso and the Niger. This has “resulted in a rapid intra-country migration southward and a swelling of big cities like Dakar, Bamako, Ouagadougou, Niamey and Kano, [Nigeria]. Estimates for Burkina Faso suggest that close to half of the adult population born there has moved for at least part of the year to coastal states like [Côte d’Ivoire] and Ghana”.[29]

27. Disturbances in marine ecosystems and fisheries as well as the deterioration of farmlands due to salt water flooding will jeopardize the access of population to food and to safe drinking water. This phenomenon also generates the movement of people to other areas in search of a better livelihood.

28. Migration can also aggravate economic problems in receiving areas. Many of the people who move to cities will do so as a result of increasingly inadequate

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[27] Annual report of the Office of the United Nations High Commissioner for Human Rights on the relationship between climate change and human rights (A/HRC/10/61).

[28] See “In search of shelter: mapping the effects of climate change on human migration and displacement”, CARE International; Center for International Earth Science Information Network, Columbia University; United Nations High Commissioner for Refugees, United Nations University Institute for Environment and Human Security; and Social Dimensions of Climate Change, World Bank (May 2009), p. 7.

[29] Ibid., p. 9.

access to sustainable livelihoods and will therefore lack the resources to gain access to adequate housing when moving. These movements will affect urban development in a number of ways, including increasing pressure on urban infrastructure and services. Rapid and unplanned urbanization has serious implications for urban welfare and urban service provision.

29. Many migrants will move to urban slums and informal settlements, living in precarious conditions in hazardous areas. UN-Habitat estimates that in the rapidly expanding slum settlements of Africa, about one third of slum-dwellers have migrated to the cities after being driven off their land by advancing desert frontiers and failing pastoral farming systems.[30]

C. Impact of sea-level rise on housing in small islands and low-lying coastal areas

30. The vulnerability of human settlements to the impacts of climate change can be aggravated by the location of settlements in low-lying coastal areas. “Assets and population in both developed and developing countries are increasingly located in coastal areas, slopes, ravines and other risk-prone regions.”[31] More precisely: “Low elevation coastal zones contain 2 per cent of the world’s land and 10 per cent of its population, based on estimates for 2000. Of the somewhat more than 600 million people living in the zone, 360 million are urban. This implies an urbanization level of 60 per cent compared to a world urbanization level of slightly less than 50 per cent.”[32]

31. In particular, urban centres located in coastal areas will face serious risks as sea-level rise increases exposure to coastal flooding, erosion, rising water tables undermining building foundations and saltwater contamination of ground water. According to the report of the Intergovernmental Panel on Climate Change, many more millions of people are projected to be flooded every year due to sea-level rise by the 2080s. Densely populated and low-lying areas, where adaptive capacity is relatively low and which already face other challenges such as tropical storms or local coastal subsidence, are especially at risk. The numbers affected will be largest in the mega-deltas of Asia and Africa, with small islands being especially vulnerable.[33]

32. Small islands, where almost half a million people live,[12] are particularly vulnerable to rising seas, which threaten to erode coastal dwellings, destroy fisheries and exacerbate inundation and erosion. “Moreover, protection costs for settlement, critical infrastructure, and economic activities that are at risk from sea-

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[30] See statement by the Executive Director of UN-Habitat to the High-level segment of the United Nations Climate Change Conference, United Nations Framework Convention on Climate Change, available from http://www.unhabitat.org/content.asp?cid=5502&catid=550&typeid=8&subMenuId=0.

[31] Intergovernmental Panel on Climate Change, “Industry, settlement and society”, in *Climate Change 2007: Impacts, Adaptation and Vulnerability*, p. 372.

[32] Gordon McGranahan, Deborah Balk and Bridget Anderson, “The rising tide: assessing the risks of climate change and human settlements in low-elevation coastal zones”, in *Adapting Cities to Climate Change*, Jane Bicknell, David Dodman and David Satterthwaite (eds) (Earthscan, London, 2009), p. 58.

[33] Intergovernmental Panel on Climate Change, “Summary for policymakers”, in *Climate Change 2007: Impacts, Adaptation and Vulnerability*, p. 12.

level rise will be burdensome for many small island States. Similarly, tourism — the leading revenue earner in many States — is projected to suffer severe disruption as a consequence of adverse impacts expected to accompany sea-level rise".[34] The process threatens the vital infrastructure and facilities that support the livelihood of island communities.

33. The small islands of Tuvalu, Kiribati and Maldives are particular vulnerable to rising sea levels. In the case of the island State of Tuvalu in the Western Pacific: "Frequent saltwater flooding, accelerated coastal erosion and increasing difficulty growing vegetables and plants are day-to-day challenges. The people of Tuvalu have reluctantly accepted the idea of relocation and have started moving to New Zealand, under the terms of a negotiated migration scheme".[35]

34. In the case of Maldives, geographic and natural characteristics make it particularly fragile to climate change and related problems. A chain of 1,200 islands and coral atolls located in the Indian Ocean, its highest point is only 1.8 metres above sea level. As a low-lying, small island State, Maldives is very vulnerable to the impacts of climate change and associated sea-level rise. The Special Rapporteur emphasized in her preliminary note on her mission to Maldives in February 2009 (A/HRC/10/7/Add.4) that the impact of climate change on the acceleration of coastal erosion, frequency of storms and flooding and the rise of the sea level would clearly have a dramatic impact on the housing and livelihood of many Maldivians. Climate change had aggravated and would further amplify some of the problems linked with Maldives characteristics, including land scarcity and the vulnerability of the islands to natural phenomena. Such changes had an impact on the enjoyment of the right to adequate housing.[36]

IV. Human rights/adequate housing approach to climate change

A. International human rights obligations in the right-to-adequate housing debate

35. The obligation of States to take steps towards the realization of the right to adequate housing for all is laid down in a number of international legally binding human rights instruments. The instruments also form the basis of the mandate of the Special Rapporteur. They include the Universal Declaration of Human Rights; the International Covenant on Economic, Social and Cultural Rights (article 11); the Convention on the Rights of the Child (article 27, para. 3); the non-discrimination provisions found in article 14, paragraph 2 (h), of the Convention on the Elimination of All Forms of Discrimination against Women; article 5 (e) of the International Convention on the Elimination of All Forms of Racial Discrimination; article 43.1 (d) of the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families; and article 28 of the Convention on the

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[34] Intergovernmental Panel on Climate Change, "Small island States", in *Climate Change 2001: Impacts, Adaptation and Vulnerability*, contribution of Working Group II to the third assessment report (Cambridge, United Kingdom, Cambridge University Press, 2001).

[35] *Human Impact Report: Climate Change: The Anatomy of a Silent Crisis* (Global Humanitarian Forum, Geneva), p. 51.

[36] Further details will be provided in the report of the Special Rapporteur on her mission, to be submitted to the Human Rights Council at its thirteenth session, in March 2010.

Rights of Persons with Disabilities. The right to adequate housing has also been recognized at the regional level, such as in the European Social Charter (1961), the American Declaration of the Rights and Duties of Man (1948), the American Convention on Human Rights (1969), the Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights ("Protocol of San Salvador") and the African Charter on Human and Peoples' Rights (1981).

36. States have clear obligations under international human rights law to respect, protect and fulfil the right to adequate housing and to pursue, through international cooperation, global solutions to the global problem of climate change and its impact on housing. It is therefore necessary to take into account international human rights standards to respond to the challenges posed by climate change.

B. International cooperation

37. The most severe impacts of climate change particularly affect countries located in low-lying coastal areas, small island States and areas prone either to flooding or desertification. These areas and their populations already face a number of vulnerabilities to the impacts of global warming. For the regions that face extreme levels of vulnerability and are not in a condition to confront the impact of climate change within their existing base of resources, international support for their adaptation, in order to assist them in investing in increased resilience to climate change, is essential.

38. Industrialized countries have historically contributed most to man-made greenhouse gas emissions. At the same time, the world's poorer regions and countries, which have generally contributed the least to human-induced climate change, are the ones disproportionally affected by warming-driven impacts. The unequal burden of the effects of climate change is recognized in the United Nations Framework Convention on Climate Change,[5] which calls upon States, in article 3, "to protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly the developed country Parties should take the lead in combating climate change and the adverse effects thereof". In article 4, paragraphs 4 and 9, the Convention states that developed country Parties should also support developing countries with the costs of adaptation measures and should take into account their specific needs with regard to funding and transfer of technology. Moreover, the human rights framework complements the Convention "by underlining that 'the human person is the central subject of development' 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".[27]

39. Any effective response to the inevitable effects of climate change furthermore will require cooperation at the international level.[37] This is a necessary response to the disproportionate distribution of the causes and effects of climate change. It is

[37] As the United Nations Deputy High Commissioner for Human Rights stated: "The human rights perspective underlines the need for international cooperation to address the unequal burden falling on those who are least able to carry its weight". Statement delivered at the Human Rights Council Panel Discussion on the relationship between climate change and human rights held on 15 June 2009.

also consistent with the long-standing obligations concerning international assistance and cooperation emphasized in the International Covenant on Economic, Social and Cultural Rights (article 2.1) and Articles 55 and 56 of the Charter of the United Nations. As stated by Kofi Annan in 2000 in his report entitled "We the peoples: the role of the United Nations in the twenty-first century": "In addition to the separate responsibilities each state bears towards its own society, states are, collectively, the custodians of our common life on this planet — a life the citizens of all countries share". Given the global nature of the threat of climate change, internationally coordinated action to assume collective stewardship of the global climate is particularly critical.

40. The World Bank has estimated that adaptation could cost between $4 billion and $37 billion annually. Yet, the resources allocated to the Global Environmental Fund as of September of 2008 totalled only $3.3 billion.[12] In addition, many of the pledges for adaptation assistance have simply represented a portion of existing official development assistance budgets, rather than the allocation of new resources. Given that few countries have yet reached the international aid target of 0.7 per cent gross domestic product, the conflation of funding commitments for adaptation with pledges for regular development assistance programmes by donor countries is problematic.[38] In order for the international community to effectively respond to the urgent need to assist countries and groups of people who are particularly vulnerable to the effects of climate change to adapt in order to minimize harm, commitments towards adaptation assistance should reflect new resources, distinct from funds earmarked for regular development assistance.

41. Funding for adaptation is far from being the most complex challenge ahead. In addressing the development deficit in infrastructure provision, international cooperation projects need to confront technical and cultural challenges. Adaptation projects on climate change cannot simply replicate the hard engineering solutions that have been behind development projects for decades. For instance, to address flooding and erosion on low elevation coastal zones, the usual measures to protect settlements are to build breakwaters, seafront walls and beach defences. Although effective in alleviating the local problems caused by erosion, such protective systems usually transfer erosion further along the coast, causing flooding and losses elsewhere. International cooperation projects must be adapted to local needs and oriented to long-term development goals.

C. Mitigation and climate change: strategies and effects on housing

42. The grave consequences of climate change require decisive action by the international community. "Mitigation", in the context of climate change, refers to efforts aimed at actions and policies that seek to prevent global warming from causing dangerous interference with the climate. While there are several different arenas for possible mitigation action, the world's leading climate scientists have converged towards a threshold for dangerous climate change of a maximum rise in the global average temperature of 2°C above the pre-industrial level. It will require global greenhouse gas emissions to peak before 2015 and to be reduced to

[38] International Council on Human Rights Policy, *Climate Change and Human Rights: A Rough Guide* (Geneva, 2008).

approximately 50 per cent of the current level by the year 2050.[39] Negotiations taking place under the United Nations Framework Convention are currently seeking to define the respective responsibilities of both developing and developed countries in the face of this major goal.

43. To date, the track record for countries complying with their commitment to reduce emissions has been poor. In 1992, the 23 wealthiest countries, home to 14 per cent of the global population and today responsible for 40 per cent of the emissions released into the atmosphere each year, committed to return their collective emissions to 1990 levels by the year 2000. Yet, by 2005, their collective emissions had increased more than 10 per cent above the target levels.[12] If States continue to settle for half-hearted attempts to comply with mitigation goals, the Earth's temperatures will continue to rise.

44. The level of emissions reductions must be sufficient to adequately stabilize the Earth's climate and avoid contributing to further challenges to the enjoyment of human rights, which will otherwise follow. As mentioned earlier in the present report, in order to avoid dangerous climate change, global temperature increases must be kept under 2°C (above pre-industrial levels). A rise in just under 2°C in global temperatures may well be tolerable for societies that enjoy a minimal degree of resilience, flexible infrastructure and adequate baseline conditions of health, housing and income levels. Many of the world's most resource-poor or otherwise vulnerable people face the very real threat of the loss of their homes and means of subsistence due to the increased frequency and intensity of storms, rising sea levels, desertification and drought. For such people, the threshold for an acceptable level of global warming might be arguably lower.[38] A human rights-centred focus on the world's most vulnerable populations would therefore argue for both emissions reductions targets that are sufficiently stringent to avert denial of human rights deriving from climate change and for stronger accountability mechanisms for complying with the targets once they are defined.

45. Human rights standards require all countries to seek to reduce their harmful emissions to the global atmosphere, with a view to reducing their negative effect on the enjoyment of human rights. This requires action at multiple levels. Industrialized countries, according to the United Nations Framework Convention on Climate Change "equity principle" must lead in reducing emissions levels and ensure that they comply with their commitments in this context. Developed countries must also contribute to efforts by developing countries to pursue low-carbon development paths, thereby avoiding new rounds of increases in emissions.

46. Developing countries also have obligations at a national level, in the context of the mitigation of climate change. National development plans must take into account the urgent need to refrain from contributing further to emissions that cause climate change, which requires the design of economic development strategies that avoid excessive reliance on fossil fuels to power their growth.

47. Both developing and developed countries are responsible for ensuring that the measures undertaken are consistent with their human rights obligations. For example, without adequate human rights safeguards, mitigation measures related to

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[39] Intergovernmental Panel on Climate Change, *Climate Change 2007: Mitigation of Climate Change*, contribution of Working Group III to the fourth assessment report of the Panel (Cambridge, United Kingdom, Cambridge University Press, 2007), p. 173.

the development of alternative sources of energy, such as hydroelectric dams, may result in human rights violations. While such measures may aim to promote development and mitigate climate change, their impacts on the rights of people situated near project sites have in many cases been a subject of concern. Large dam projects around the world have resulted in the displacement of communities from their traditional lands.[40] Forced evictions and the displacement of communities within the context of efforts partly aimed at mitigating climate change have thus sometimes led to violations of the right to adequate housing.

48. Mitigation strategies in developed countries include the mobilization of renewable, decentralized energy devices and technologies. New building standards have been adopted to reduce the need for artificial cooling and heating and to promote the concept of energy-plus housing, which refers to houses that have the capacity not only to provide energy for their own consumption but also to generate a surplus that can be used for other purposes. Although such new technologies are paths to mitigate greenhouse emissions, a number of people living in developed countries and most urban dwellers in developing countries lack the resources to buy those technologies and to refurbish their houses to meet the new housing standards.[41]

49. International human rights mandates contain obligations for States to respect the rights of their populations and to provide protection against processes or practices that threaten those rights. Domestically, this requires States to pursue strategies aimed at mitigating climate change, while ensuring that they do not contribute to other rights violations.

50. Human rights mandates also require the participation of groups that stand to be affected in the design and implementation of mitigation measures. Informed and effective participation, in turn, requires that information about the mitigation targets and decisions related to those goals are managed transparently.[42] The principle of participation in the context of mitigation initiatives should be implemented to ensure that those who stand to be most directly affected have a say in its design and implementation, which could help anticipate, and thus avert, new rights violations that could result from the measure under discussion. Human rights standards would also require the existence of institutional forms of redress for grievances, compensation in response to inevitable damages and an evaluation of the distributional impacts of projects and effects.

D. Adapting to climate change: effects on housing

1. Disaster prevention and risk-reduction actions

51. A human rights approach has much to offer towards adaptation to climate change and reduction of the risks posed by natural disasters. While some natural disasters are unavoidable, much can be done to avoid their negative impacts on human lives and human rights. Of particular importance are measures to strengthen

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[40] Presentation by the International Forum of Indigenous Peoples on Climate Change to the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol.

[41] See Heirinch Boll Stiftung, “Urban futures 2030”, 2009.

[42] Submission by the Forest Peoples Programme, available from http://unfccc.int/resource/docs/2009/smsn/ngo/104.pdf.

the resilience and capacity to adapt to climate change of individuals and groups most vulnerable to the impacts of natural disasters. Examples of projects aimed at disaster risk reduction include conducting risk assessments in urban planning, rural development projects and the design of housing.

52. Adaptation measures to climate change need to include an assessment of the areas most at risk and the particularly vulnerable groups within the population. Normally, the most effective adaptation is to establish the necessary infrastructure that may prevent extreme weather events from becoming disasters. Most of the settlements at high risk of suffering the related consequences of extreme weather events can reduce the risk by improving building quality and providing infrastructure and services. It is clear that such measures may be constrained by a lack of funding and capacity.

53. Warning information must be communicated to all neighbourhoods at risk in order to allow dwellers to seek protection and to take risk reduction actions. Successful examples include efforts undertaken in Latin America, where Government provision of early warning and support for immediate pre-disaster action has contributed towards limiting damages. In Cuba, in 2004, hundreds of thousands of people were evacuated as Hurricane Charley approached, and international press reports suggested that although over $1 billion worth of damage had been caused, including 70,000 houses damaged, only four or five people had died. Various measures had been taken in Central America, partly in response to the devastation caused by Hurricane Mitch in 1998, which had affected over 1.2 million people.[43] For instance, in Nicaragua, in 2000, the Government created the National System of Prevention, Mitigation and Attention to Disasters that integrates different Government levels, social actors and municipal and regional committees for risk prevention and mitigation, with a clear focus on risk management.

54. The human rights obligation to reduce disaster risks and vulnerabilities, for example, by setting up alarm and evacuation systems, has been addressed by the European Court of Human Rights. According to its decision in the case *Budayeva and Others v. Russia*,[44] if a disaster is foreseeable and the State is able to prevent ensuing threats to life and property, it has to take appropriate action in conformity with its human rights obligations under the right-to-life and/or the protection of privacy and property.[45]

2. Resettlement

55. People may be temporarily displaced for short periods of time due to climate change-related disasters, such as hurricanes, storms and floods, and be able to return to their original homes once the event ends. In such cases, temporary relocation must last only as long as absolutely necessary and all displaced persons should have the right to return to their homes without discrimination.

56. All options must be evaluated before proceeding with resettlement plans. States may designate a high-risk zone and prohibit the return to that area only “if the

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[43] Caroline Moser and David Satterthwaite, Human Settlement Discussion Paper Series, Theme: Climate Change and Cities — 3, p. 22.

[44] *Budayeva and Others v. Russia*, European Court of Human Rights, No. 15339/02.

[45] The Court referred to obligations under the right to life and property, but clearly the same argument would apply to the right to adequate housing.

area of return is indeed an area with high and persistent risks for life or security, the remaining resources are inadequate for survival of returnees, the enjoyment of basic human rights cannot be guaranteed, all other available adaptation measures are exhausted, and the situation in the area of return can no longer be alleviated by protective measures".[46] Of particular concern are some Government policies, adopted in the context of post-disaster situations, which did not allow affected low-income persons to return to their original areas, which were then converted into areas for higher-income residential, commercial or industrial use. One example of this is the post-tsunami coastal buffer zone established in some countries, forcing the relocation of villages, disrupting livelihoods and generating social tensions, while tourist businesses expanded their operations into the "vacant" land areas. A comparably large coastal zone, wherein all rebuilding was to be banned, was also proposed for parts of other countries after the tsunami.[17]

57. The affected population should be consulted and fully involved during any process of relocation and resettlement. Permanent relocation should never result in homelessness. Alternative accommodation (or the necessary subsidy or cash payments) should be provided, as required by international human rights standards, to those who would not be otherwise able to access adequate housing. The criteria recognized for adequacy of housing also apply in those circumstances and include: legal security of tenure, availability of services, materials, facilities and infrastructure, affordability, habitability, accessibility for disadvantaged groups, access to employment options, health-care services, schools, childcare centres and other social facilities, whether in rural or urban areas and culturally adequate housing.[47] Relocation areas must also be safe from natural disasters. Therefore an evaluation of the area should be undertaken in consultation with the affected population.

58. The alternative sites offered to the affected population must be adequate and not be too far from their income-earning opportunities. This will avoid dependence on the use of long-distance transport for work, which is essential to prevent adaptation measures resulting in an increase in greenhouse gas emissions and, thus, undermine mitigation.

59. In the context of resettlement, particular consideration should be given to the needs of women. Women generally assume the responsibility for child and domestic care, such as getting food, fuel and water, which can become more onerous in resettlements situations. They also encounter a number of problems related to lack of tenure and property rights and they are frequently ignored in the process of reconstruction and rebuilding of livelihoods.[48]

60. In the rebuilding process, poorer groups have more limited capacity to adapt. They normally lack insurance protection and receive less support from the State. They must be involved in all discussions concerning reconstruction processes and must be supported directly if conditions cannot be created to ensure that they can

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[46] Office of the United Nations High Commissioner for Refugees, "Forced displacement in the context of climate change: challenges for States under international law", 2009.

[47] General Comment No. 4: The right to adequate housing (art. 11 (1)) of the Covenant, adopted by the Committee on Economic, Social and Cultural Rights in 1991.

[48] Caroline Moser and David Satterthwaite, Human Settlement Discussion Paper Series, Theme: Climate Change and Cities — 3, p. 12.

obtain, on their own, appropriate access to adequate housing and livelihood. Local skills should also be taken into consideration and enhanced.

61. The resettlement process should be seen as an opportunity to address short and longer term development issues, contributing to poverty reduction. The consequences of extreme weather disasters are also a failure of development, rather than simply natural events. Climate-change adaptation measures will also affect traditional urban infrastructure concerns such as housing. It also recognizes the social dimensions of the adaptation policies and the need to involve all actors, including individuals, households and communities, in defining and implementing the policies.

3. Participation and empowerment

62. The people who are most vulnerable to the impacts of floods, droughts and storms are frequently the same people who already live in poverty and lack guarantees for the full realization of their rights. The measures undertaken by States to respond to climate change also, in some cases, present particular challenges for the full realization of their rights.

63. The informed participation of people in the development of national — and local-level responses aimed at adapting to the effects of climate change requires efforts to build the capacity of national populations to take part in such decisions through public awareness and mobilization. Once such capacity is in place, communities and civil society organizations will be more empowered to monitor and participate in the development of national and local adaptation strategies and ensure that they benefit those who most require the support. This approach will ensure that the people whose rights are most directly threatened by the impacts of climate change, as well as by the responses undertaken, become central authors in the implementation of urban planning initiatives and projects aimed at the development of new infrastructures. The participation of the beneficiaries of adaptation projects in the design and implementation of the projects, and the leading role of local governments in such projects, will therefore increase the likelihood of the governments being more responsive to human rights vulnerabilities and of being better positioned to effectively strengthen the resilience of communities, homes and infrastructure systems.

64. In the undertaking of adaptation projects, human rights standards and obligations would therefore call for the consultation and participation of concerned communities, gender-sensitive project designs, the recognition of local knowledge for special attention to be paid to marginalized groups and those who face discrimination and exclusion. These initiatives must, furthermore, be culturally adequate[49] and avoid contributing to the violation of other human rights. Care should also be taken in such measures to anticipate the potential for the projects to exacerbate the marginalization of different groups or coincide with potential conflict triggers. In that context, adaptation assistance should be made accessible to both rural and city dwellers, and across all similarly affected geographical regions of a

[49] An example is the case of Saint-Louis, Senegal, following recurrent inundations of the cemetery, the local government decided to construct protection walls instead of moving its location, due to cultural sensitivity. Questionnaire sent by Habitat International Coalition on climate change and the right to an adequate housing, available from www.hic-al.org. Information provided by Environmental Development Action in the Third World.

country. When possible, the projects should offer broad benefits across population groups. In other cases, adaptation assistance must be tailored to ensure that the benefits reach the people who are often most vulnerable to discrimination, including indigenous peoples and ethnic minorities, women and people with disabilities.[50]

V. Conclusions and recommendations

65. **Climate change-related impacts have a range of implications for the effective implementation of the human right to adequate housing. The implications will be severe, particularly for low-income groups and those living in countries that lack the resources, infrastructure and capacity necessary to protect their populations.**

66. **The Special Rapporteur believes that urban areas are key players both in the generation of greenhouse gases and in strategies to reduce emissions, especially in decreasing dependence upon carbon-based fuels. Moreover, there is a need for urgent action to reduce the vulnerability of urban dwellers to the impact of climate change.**

67. **The most vulnerable to the impacts of intense storms, floods and droughts are frequently those who already live in poverty and whose human rights are less well protected. Hundreds of millions of urban dwellers live in slums, which are usually located in the most hazardous sites within cities, at risk from the direct and indirect impacts of climate change. Slums lack the basic infrastructure and services necessary to protect their dwellers from environmental disasters.**

68. **The effects of climate change are disproportionately distributed. The world's poorest people and nations, who have generally contributed the least to man-made greenhouse emissions, are those most affected by the impact of global warming.**

69. **The challenges posed by climate change — and the range of issues raised in the present report — will require further analysis and the Special Rapporteur will continue to monitor the situation. However, she would like to offer some preliminary recommendations for the consideration of the General Assembly.**

70. **States must comply with their commitments to the global atmosphere by reducing their harmful warming emissions. Industrialized countries must lead in reducing emissions levels and support developing countries in pursuing low-carbon development paths.**

71. **States have an obligation to employ measures to mitigate climate change and adapt to its inevitable impacts. At the same time, States must uphold their human rights obligations in all areas of action, including with regard to mitigation and adaptation projects and measures. They should also ensure that measures intended to protect people from the effects of climate change do not result in the unintended violation of other human rights.**

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[50] German Watch, Brot für die Welt, and Diakonie, *Climate Change, Food Security and the Right to Adequate Food* (Stuttgart, October 2008).

72. **An effective response to address the effects of climate change requires international cooperation. Some affected regions already face extreme levels of vulnerability and are not able to confront climate change impacts within their existing resources; so they therefore depend upon international support for adaptation.**

73. **When planning and implementing mitigation and adaptation projects, the consultation and participation of concerned communities in decision-making must be ensured; projects must be gender-sensitive, and local knowledge recognized. Adaptation projects should not rely on technologies not adapted to local environments.**

74. **Climate change adaptation efforts should give priority to the needs of the most vulnerable and start by identifying the measures to be introduced for their protection. This includes installing protective infrastructure, supporting buildings of better quality, through technical support and appropriate finance systems, and assisting those who live in the most dangerous sites to move to safer sites. In this context, access to affordable and well-located land for the urban poor is essential in order to avoid further unplanned settlement expansions or settling the poor far away from income-earning or human development opportunities.**

75. **The Special Rapporteur supports resettlement plans only as an alternative to be used in extreme circumstances where protection of residents cannot be guaranteed in areas proven to be unsafe. During all relocation stages, human rights standards concerning adequacy of housing must be respected and decision-making must involve all affected groups.**

76. **The human consequences of extreme-weather disasters reflect a failure of development policies and adaptation measures rather than only natural events. Therefore, reconstruction processes should be seen as an opportunity to address short- and longer-term development problems, contributing to poverty reduction and strengthening the effective enjoyment of human rights.**

77. **The Special Rapporteur considers that climate change represents an opportunity for reflection and debate on how to improve housing systems, policies and programmes so as to ensure adequate housing for all. She intends to continue exploring considerations on the right to adequate housing, which should be integrated in all efforts to deal with large-scale population resettlement and in prevention and reconstruction efforts in the context of natural disasters. She would welcome inputs and discussion concerning the future work of the mandate in those areas.**