

## Women and Climate Change: Vulnerabilities and Adaptive Capacities

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Although climate change will affect everyone worldwide, its impacts will be distributed differently between men and women as well as among regions, generations, age classes, income groups, and occupations. The poor, the majority of whom are women living in developing countries, will be disproportionately affected. Yet most of the debate on climate so far has been gender-blind.<sup>1</sup>

Gender inequality and climate change are inextricably linked. By exacerbating inequality overall, climate change slows progress toward gender equality and thus impedes efforts to achieve wider goals like poverty reduction and sustainable development. And women are powerful agents of change whose leadership on climate change is critical. Women can help or hinder strategies related to energy use, deforestation, population, economic growth, and science and technology, among other things.

Climate change can have disproportionate impacts on women's well-being. Through both direct and indirect risks, it can affect their livelihood opportunities, time availability, and overall life expectancy. (See Table.) An increase in climate-related disease outbreaks, for example, will have quite different impacts on women than on men. Each year, some 50 million women living in malaria-endemic countries become pregnant; half of

them live in tropical areas of Africa with high transmission rates of the parasite that causes malaria. An estimated 10,000 of these women and 200,000 of their infants die as a result of malaria infection during pregnancy; severe malarial anemia is involved in more than half of these deaths.<sup>2</sup>

People's vulnerability to risks depends in large part on the assets they have available. Women, particularly poor women, face different vulnerabilities than men. Approximately 70 percent of the people who live on less than \$1 a day are women. Many live in conditions of social exclusion. They may face constraints on their mobility or behavior that, for example, hinder their ability to relocate without a male relative's consent.<sup>3</sup>

In general, women tend to have more limited access to the assets—physical, financial, human, social, and natural capital—that would enhance their capacity to adapt to climate change, such as land, credit, decisionmaking bodies, agricultural inputs, technology, and extension and training services. Thus any climate adaptation strategy should include actions to build up women's assets. Interventions should pay special attention to the need to enhance women's capacity to manage risks with a view to reducing their vulnerability and maintaining or increasing their opportunities for development.<sup>4</sup>

Ways to reduce climate-related risks for women include improving their access to skills, education, and knowledge; strengthening their ability to prepare for and manage

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### Direct and Indirect Risks of Climate Change and Their Potential Effects on Women

Potential Risks	Examples	Potential Effects on Women
<b>Direct Risks</b>		
Increased drought and water shortage	Morocco had 10 years of drought from 1984 to 2000; northern Kenya experienced four severe droughts between 1983 and 2001.	Women and girls in developing countries are often the primary collectors, users, and managers of water. Decreases in water availability will jeopardize their families' livelihoods and increase their workloads, putting their capacity to attend school at risk.
Increased extreme weather events	The intensity and quantity of cyclones, hurricanes, floods, and heat waves have increased.	An analysis of 141 countries in the period 1981 to 2002 found that natural disasters (and their subsequent impacts) on average killed more women than men in societies where women's economic and social rights are not protected, or they killed women at an younger age than men.
<b>Indirect Risks</b>		
Increased epidemics	Climate variability played a critical role in malaria epidemics in the East African highlands and accounted for an estimated 70 percent of variation in recent cholera series in Bangladesh.	Women have less access to medical services than men, and their workloads increase when they have to spend more time caring for the sick. Adopting new strategies for crop production or mobilizing livestock is harder for female-headed and infected households.
Loss of species	By 2050, climate change could result in species extinctions ranging from 18 to 35 percent.	Women often rely on crop diversity to accommodate climatic variability, but permanent temperature change will reduce agro-biodiversity and traditional medicine options.
Decreased crop production	In Africa, crop production is expected to decline 20–50 percent in response to extreme El Niño-like conditions.	Rural women in particular are responsible for half of the world's food production and produce 60–80 percent of the food in most developing countries. In Africa, the share of women affected by climate-related crop changes could range from 48 percent in Burkina Faso to 73 percent in the Congo.

Source: See endnote 2.

disasters; supporting their political ability to demand access to risk-management instruments; and helping households gain greater access to credit, markets, and social security.

Despite the many challenges they face, women are already playing an important role in developing strategies to cope with climate change. They have always been leaders in community revitalization and natural

resource management, and there are countless instances where their participation has been critical to community survival. In Honduras, for example, the village of La Masica was the only community to register no deaths in the wake of 1998's Hurricane Mitch. Six months earlier, a disaster agency had provided gender-sensitive community education on early warning systems and

hazard management. Women took over the abandoned task of continuously monitoring the warning system. As a result, the municipality was able to evacuate the area promptly when the hurricane struck.<sup>5</sup>

Women also play a crucial role in forest preservation strategies and increasing carbon sinks through reforestation and afforestation. For example, since 2001 women in Guatemala, Nicaragua, El Salvador, Honduras, and Mexico have planted more than 400,000 Maya Nut trees as part of the Mayan Nuts Project supported by the Equilibrium Fund, which also increased food supplies for the communities. This shows how specific projects can improve the quality of life for women and at the same time be strategies for mitigation and adaptation to climate change.<sup>6</sup>

And in Kenya, the Green Belt Movement and the World Bank's Community Development Carbon Fund signed an emissions-reduction agreement in November 2006 to reforest two mountain areas. Women's groups are planting thousands of trees, an activity that will provide poor rural women with a small income and some economic independence as well as capture some 350,000 tons of carbon dioxide, restore eroded soils, and support regular rainfall essential to Kenya's farmers and hydroelectric plants.<sup>7</sup>

Women from indigenous communities often know a range of "coping strategies" traditionally used to manage climate variability and change. In Rwanda, women produce more than 600 varieties of beans, and in Peru Aguaruna women plant more than 60 varieties of manioc. These vast varieties, developed over centuries, allow them to adapt their crops to different biophysical parameters, including soil quality, temperature, slope, orientation, exposure, and disease tolerance.<sup>8</sup>

Despite their experience and knowledge, women have not been given an equal opportunity to participate in critical decisionmaking on climate change adaptation and mitigation. Any accurate examination of climate change must integrate social, economic, political, and cultural dimensions—including analysis of gender relations.



Courtesy Equilibrium Fund

*This Guatemalan women's Maya Nut producer group has contracted to provide school lunches, using Maya Nut products, to three school districts.*

The first important step is to promote international policy action on climate and gender. Negotiations on a post-2012 climate framework under the United Nations Framework Convention on Climate Change (UNFCCC) should incorporate the principles of gender equity and equality at all stages, from research and analysis to the design and implementation of mitigation and adaptation strategies. It is critical that the UNFCCC recognize the importance of gender in its meetings and take the necessary measures to abide by key human rights and gender frameworks, especially the Convention on the Elimination of All Forms of Discrimination against Women, known as CEDAW. The UNFCCC needs to develop a gender road map, to invest in specialized research on gender and climate change, and to guaran-

tee the participation of women and gender experts at all meetings and in the preparation of reports. It should establish a system of gender-sensitive indicators for its national reports and for planning adaptation strategies or projects under the Clean Development Mechanism (CDM).

Second, governments need to take action at regional, national, and local levels, including translating international agreements into domestic policy. They can also develop strategies to improve and guarantee women's access to and control over resources, use women's specialized knowledge and skills in strategies for survival and adaptation to natural disasters, create opportunities to educate and train women on climate change, provide measures for capacity building and technology transfer, and assign specific resources to secure women's equal participation in the benefits and opportunities of mitigation and adaptation measures.

Third, all financial mechanisms and instruments associated with climate change should include the mainstreaming of a gender perspective and women's empowerment. For example, climate change adaptation funds could guarantee the incorporation of gender considerations and the implementation of initiatives that meet women's needs. Women could also be included in all levels of the design, implementation, and evaluation of afforestation, reforestation, and conservation projects that receive payments for environmental services, such as carbon sinks. And women should have access to commercial carbon funds, credits, and information that enable them to understand and decide which new resources and technologies meet their needs. Finally, the CDM should finance projects that bring renewable energy technologies within the reach of women to help meet their domestic needs.

Fourth, the many organizations, minis-

tries, and departments that address women's issues, including UNIFEM, should play a more active role in climate change discussions and decisionmaking. Climate change cannot be considered an exclusively environmental problem; it needs to be understood within all its development dimensions.

One encouraging sign of progress on these issues was the establishment of the Global Gender and Climate Alliance (GGCA) in December 2007 at the Bali Conference of the Parties to the UNFCCC. This was set up by the U.N. Development Programme, the International Union for Conservation of Nature–IUCN, the U.N. Environment Programme, and the Women's Environment and Development Organization in response to the lack of attention to gender issues in existing climate change policymaking and initiatives.<sup>9</sup>

The GGCA plans to:

- integrate a gender perspective into global policymaking and decisionmaking in order to ensure that U.N. mandates on gender equality are fully implemented;
- ensure that U.N. financing mechanisms on mitigation and adaptation address the needs of poor women and men equitably;
- set standards and criteria for climate change mitigation and adaptation that incorporate gender equality and equity principles;
- build capacity at global, regional, and local levels to design and implement gender-responsive climate change policies, strategies, and programs; and
- bring women's voices into the climate change arena.

Climate change is a global security issue and a question of freedom and fundamental human rights. It represents a serious challenge to sustainable development, social justice, equity, and respect for human rights for both current and future generations

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