

This is Google's cache of <http://www.unfpa.org/swp/2009/en/ch5.shtml>. It is a snapshot of the page as it appeared on 1 Jan 2010 02:28:05 GMT. The [current page](#) could have changed in the meantime. [Learn more](#)

These search terms are highlighted: **keya acharya**

[Text-only version](#)

[UNFPA - United Nations Population Found](#)

State of World Population 2009

[go to UNFPA.org](#)

[English](#) / [Français](#) / [Español](#)

Facing a changing world: women, population and climate

- [Back to home](#)
- [Foreword](#)
- [Overview](#)
- [Download Full Report](#)

5 Mobilizing for change

"Women are important actors in ensuring their communities' ability to cope with and adapt to climate change. They can be effective agents of change and are often the ones turned to in times of need and can play a role in crisis situations."

—The United Nations Framework Convention on Climate Change Secretariat([1](#))



Women in a flood-prone community in Gaibandha, Bangladesh, gather once a week to share ideas about how to adapt to worsening climate and rising seas.

© GMB Akash/Panos Pictures

Working with farming communities along the flood-ravaged coast of southwestern Bangladesh, the humanitarian organization CARE has maximized its employment of women, trained all staff in gender relations, and prioritized work with female-headed households. Some time ago women farmers lamented that

their chickens, a profitable source of livelihood when the weather was fair, were drowning when the monsoon season drove floodwaters over the land. The farmers and the non-governmental organization identified a strategy that effectively solved the problem: Give up on chickens. Raise ducks.[\(2\)](#)

This strategy could serve as an epigram for one of the essential tasks the whole world faces—adjusting to and thriving amidst the changes on the way. Successfully carrying out this task will require mobilizing public opinion and political will for mitigating and adapting to climate change. Women in poor and wealthy countries alike are increasingly working either directly on climate change, on the global stage or in their own communities, or they are struggling and strategizing to prevail amid deteriorating environmental conditions. Often men are involved along with women in propelling this work. Those who work on climate change and those who work on reproductive health and rights have much in common and much to learn from each other. To paraphrase Nobel Peace Prize laureate Wangari Maathai of Kenya, there is unlikely to be climate equity without gender equity. And as the world's Governments noted at the International Conference on Population and Development (ICPD), there is unlikely to be gender equity until all women, men and young people have access to a full range of reproductive health services, from voluntary family planning to safe motherhood and the prevention of HIV and other sexually transmitted infections.

[26] Wangari Maathai: women hold the keys to climate's future



© Mainichi Corporation

"When we started [planting trees] we were not thinking about climate change," Nobel Peace Prize laureate and Green Belt Movement founder Wangari Maathai says, "but it now happens that this work is also extremely important as a way of dealing with the issue."

In the mid-1970s, Maathai partnered with rural women (and some men) around Kenya to rejuvenate the environment by planting trees—more than 40 million to date (the Green Belt Movement has also supported community-based tree-planting efforts in other African countries as well as Haiti.) As landscapes are transformed, so are lives and minds.

Today, the Green Belt Movement is exploring partnerships with the World Bank to plant trees as a way of mitigating the greenhouse-gas emissions fueling climate change. "We want to learn the ropes," Maathai says. "Carbon credits and carbon trading present a new opportunity for the Green Belt Movement to do what it's always done, but now in partnership with organizations and Governments that are now addressing this issue of climate change."

Maathai's biggest concern related to global warming is that poor regions and communities won't be able to adapt fast enough, in part because they don't have the capital to afford greener, more efficient technologies. What, she asks, "will Governments in Africa or elsewhere do if, for example, the seas rise and people move

from coastal areas to the hinterlands in large masses? What will happen in Africa if the desertification process is so enhanced that a huge number of people will have to move to areas where there are greener pastures?"



Women near Hyderabad plant crops adaptable to climate change in the bed of a dried-up lake as part of a national rural employment project that will benefit India's environment.

© Reuters

Why haven't more women been involved to date in global warming negotiations and policy development? Climate change is a "science-based subject," Maathai answers, and continuing gender inequities in women's access to education are the main reason. If women "are not getting adequate education, are not well represented in the sciences, not well represented in decision-making, that will be reflected at the negotiating table," she says.

In developing and implementing climate policy, Maathai sees gender as essential. "Quite obviously, when we talk about reducing emissions from deforestation and degradation, we need to focus on women and we need to focus on communities, particularly communities that live near forests," she says, ensuring that they understand the impacts of climate change and the effects it will have on their livelihoods. Such inclusion is also integral, in Maathai's view, to changing behaviours at the grass roots that can build resilience to global warming, such as reducing forest clearing or degradation, and improving agricultural practices. "That's one level," Maathai says. "The other is the decision-making level that must allocate resources that will ensure that these women and these communities are educated, engaged and guided so they do the right things."

The front lines of climate change

Women the world over tend to be more involved in managing energy within the household, while men manage energy at the level of cities and nations. Men often claim technology as their realm. In the early 1990s, solar cookers (stoves using mirrors to concentrate the sun's energy for heating food) failed to catch on in Zimbabwe, for example, in large part because men objected to women learning how to use new devices the men knew nothing about; so, using their power as heads of households, the men refused to buy them.⁽³⁾

Yet women overcome such obstacles every day, especially when they work together—and sometimes with men as well as women—toward collective objectives. The fact that women are far more likely than men to repay loans for small-scale entrepreneurial activities is the basis of a global microfinance industry for women's initiatives. The microfinance idea began in Bangladesh with the Grameen Bank and is now an important part of lending at the World Bank and other multilateral finance institutions.

In India, an organization called the Self-Employed Women's Association has 500,000 members in western Gujarat state alone. Its bank boasts 350,000 depositors, and the repayment rate for its loans has been as high as 97 per cent. "We don't have a liquidity problem," bank manager Jayshree Vyas told a reporter. "Women

save."[\(4\)](#)

Many gender discrepancies cross cultures, but at least those related to energy and technology management grow less acute as incomes rise with development, and as women become mass consumers and, often, business managers.[\(5\)](#) As they make this transition, women bring with them perspectives that come in large part from their roles as child-bearers and primary care-givers of new generations. Although gender differences are hotly debated, in recent years there has been intriguing evidence about the practical benefit of involving women much more fully in enterprises at all levels. The question isn't whether women or men are more resourceful, only whether they bring different perspectives, contributions, and qualities to the table.

"First we thought it would waste our time, because women wouldn't know how to run a village," said a Tanzanian village councilman, asked in 2002 about recent legal changes that brought women into his council. "But we were surprised. The women on the council see things in different ways and come up with ideas none of the rest of us would have thought of. We wouldn't want to lose them now."[\(6\)](#)

Women marketers of smokeless stoves in India won over women consumers by customizing each unit with special artwork.[\(7\)](#) In the developed world, a 2007 Danish study found companies with a roughly equal balance of women were significantly more innovative and better at developing new products and services as companies without such gender balance.[\(8\)](#)

Women, men and the management of risk

A considerable body of research supports claims that, on average, men and women approach financial and other risks differently: men are somewhat more likely to accept large risks for potentially large gains, while women tend more to eschew extreme risks for lesser ones, even though they typically yield more modest gains.[\(9\)](#) A study in France, for example, concluded that companies that most successfully weathered the 2008 global financial crisis were those with the highest proportion of women in management.[\(10\)](#) The women managers approached risk more conservatively, thus helping avert the large losses experienced by their male counterparts.

Might men's and women's different approaches to risk in general also apply specifically to climate change?

The past few years have seen an upsurge of collective women's enterprises in developed and developing countries alike. And much of that has grown in response either to the challenge of limiting the risks from climate change, or to the need to adapt to hardships stemming at least in part from a changing climate. Women farmers in Malawi are joining together in "farmers' clubs" to share the latest information about seeds and cultivation techniques that can take advantage of poor soils and erratic rainfall.[\(11\)](#) In peri-urban areas of Mali, they form associations and pool resources to purchase or rent small plots of land for gardening.[\(12\)](#) In Bangladesh, some of the poorest and most marginalized women living along rivers opportunistically build temporary dwellings and harvest resources on *chars*, silt islands unburdened by property titles that appear and just as quickly disappear with shifts in water levels. Perhaps the most vulnerable denizens in that climate-threatened country, these women demonstrate the value of traditional knowledge by managing a changing environment with little or no support from their societies.[\(13\)](#)

Rural women in west-central Nepal are reaching in another direction: toward video technology that can teach them how to communicate their adaptation needs in ways that make a difference. In the aftermath of deadly monsoon floods of 2007, the United Kingdom-based non-governmental organization ActionAid and researchers at Sussex University visited communities lacking basic services and struggling to maintain their agricultural livelihoods despite changes in monsoon and other weather patterns. Dealing mostly with women (because many of the men had migrated from the area to seek other work), ActionAid staff and researchers helped the communities prioritize their needs. Soon the idea emerged to use video cameras to help women

dramatize their circumstances and needs and effectively visualize how they could ask local officials for needed resources to better their lives. By the assessments of the British organizations, the exercise has not only improved women's empowerment in the districts but helped the women go beyond adaptation and reach for influence on policy in their communities and beyond.[\(14\)](#)

Policy support, women and climate change

After years of negligible awareness of women in the context of climate change, the international policy community appears to be increasing efforts to acknowledge the influence of gender and to overcome obstacles that hamper women's mitigation and adaptation efforts. The Secretariat of the United Nations Framework Convention on Climate Change is newly committed to taking gender into consideration in its deliberations, and the Global Environment Facility is now committed to assessing the impacts of its investments on women.

[27] Monique Barbut: deploying women's good sense

In the global fight against climate change, says Monique Barbut, one powerful weapon has not been adequately deployed: "the good sense that most women have."

Barbut should know. As the Chief Executive Officer of the Global Environment Facility (GEF), Barbut has brought her trademark good sense to an institution that is now the world's largest funder of efforts to protect the global environment. From that position, Barbut is working to make sure that women play a larger role in efforts to mitigate and adapt to climate change.



© Global Environment Facility

Supported by donor countries, the GEF has provided or leveraged more than \$40 billion in funding for environmental projects in the developing world since 1991. But, by the time Barbut took its helm in 2006, the GEF had grown into an unwieldy bureaucracy, where projects typically took 66 months to move from conception to implementation. Barbut set out to change that, and succeeded: today, the process takes just 22 months. The transformation was not easy, she says. "When you talk about reforms, everybody applauds you. But when you start to implement them, everybody insults you."

Barbut attributes her success to a certain fearlessness, acquired over years of working in the male-dominated fields of finance and development. Trained as an economist, Barbut began her career at France's economic development bank, la Caisse centrale de coopération économique, before moving to the foreign aid agency, Agence française de développement, and then to the United Nations Environment Programme.

Working among men has given Barbut an appreciation for the particular contributions women bring to the table. Like pragmatism, for example. "Women are very concrete, very pragmatic—they move quickly to solutions, while men take more time to discuss around the issue," Barbut says. And farsightedness: the

experience of mothering, she believes, gives women a special investment in the future.

Women's pragmatism and farsightedness are much needed in the effort to address climate change. At the same time, women in developing countries who live close to nature are often the keepers of ancestral knowledge that may hold solutions to climate challenges. "Not everything has to be high-tech to be good," says Barbut.

To engage women more fully in the effort to address climate change and other environmental problems, Barbut is working to incorporate a gender perspective in all of the GEF's work. In practical terms, that means analysing the needs of women and men to ensure that women benefit equitably from GEF investments. It also means involving women—consistently—throughout the life of the project. "You don't just have a stakeholder meeting where you invite five women on the first day of the conception of the project, and then forget them," says Barbut.

The best projects tackle environmental problems while markedly improving the lives of women and girls. For example, investments in public transportation are important—not just to reduce emissions from vehicles—but to connect women to educational, commercial and political opportunities. In many developing countries, where women are not taught to drive, "you need the right transportation if you want them to be part of the society," says Barbut. Similarly, introducing photovoltaics in areas that are not connected to the grid can free up women's time and connect them to the larger world—benefits that Barbut says "go way beyond light and electricity."

Barbut believes that women have much to contribute to solving climate change and other environmental issues, yet she herself came to this field by accident: when she was given the task of representing the Government of France at an international conference on the environment. Barbut decided that her practical experience in finance could make a needed contribution to the field. But her colleagues were mystified: "At that time, it was not very good for your career in finance to say, 'I want to take care of environmental problems.'"

Barbut urges other women to contribute their experience, their expertise and their wisdom to fighting climate change. Although women are appearing in larger numbers at climate negotiations and in other forums, "the number does not make the voice," she says; the conversation is still dominated by men. Her advice to women climate activists: "We should not be afraid to raise good sense propositions, even if they don't look clever. It is much more important to have two feet on the ground."

Both the science and the policy of climate change have long been and remain dominated by men. Just 16 per cent of the scientists contributing to the work of the Intergovernmental Panel on Climate Change are women, including Susan Solomon of the United States, co-chair of Working Group I, which deals with the science of climate change and is one of three such groups. Women fare no better among heads of Government climate delegations, however, than they do as contributors to the Intergovernmental Panel on Climate Change's work, with proportions varying from 8 per cent to 18 per cent. The percentage of women at the negotiating tables of the Conferences of the Parties to the United Nations Framework Convention on Climate Change appears to be improving slightly. According to the non-governmental organization GenderCC, it varied from 15 per cent to 23 per cent in the 1990s and in recent years has been around 28 per cent.

These proportions are actually little different than those of women in key decision-making positions generally around the world. Only seven of the world's 150 elected national leaders are women.⁽¹⁵⁾ In national assemblies, women hold just 18.4 per cent of the seats, and only in 22 countries can they claim more than 30 per cent. Progress is detectable, but it is slow. At the current rate of increase, by one calculation, it will be 2045 in most developing countries before neither sex holds more than 60 per cent of parliamentary seats.⁽¹⁶⁾

In some cases, the best progress in women's participation in climate negotiations can be found in developing

countries. Bernaditas Muller is lead climate negotiator of the Philippines and coordinator for the delegations at United Nations climate negotiations of the Group of 77 and China.

[28] Bernaditas Muller: women must be empowered

Climate negotiator Bernaditas Muller is accustomed to being outnumbered by men. A career diplomat, Muller now serves as lead negotiator for the Philippines and as coordinator of delegations from the developing nations' Group of 77 (which now includes many more than 77 countries) and China. But Muller does not see gender as a constraint in the mostly male world of climate negotiations. "If anything," she says, her fellow negotiators are "more polite because I'm a woman."



© Climate Change Coordination Centre

The big divide on climate change, says Muller, is between the affluent nations of the North and the developing nations of the South. The affluent countries, she says, have not met their legally binding commitments to provide financial resources and technology transfers to developing nations. Moreover, when resources are provided, they are treated by the affluent countries as "development assistance," with many strings attached.

The failure to meet those commitments is symptomatic of a larger unwillingness to accept responsibility for climate change, says Muller. Until 2004, she says, some 75 per cent of the greenhouse gases accumulating above natural levels in the atmosphere were emitted by developed countries, which account for only 20 per cent of the world's population. So, historically, the 80 per cent of the population that lives in developing countries has contributed just a quarter of all emissions. That lopsided responsibility for creating the problem means that developed and developing countries have differentiated responsibilities for solving it.

Fundamentally, Muller argues, it's about reducing consumption and changing lifestyles that are unsustainable—a responsibility that belongs mostly to the developed countries. "One must bite the bullet," she says. That means, for example, building cities around viable public transportation systems, with neighbourhood schools and shops. It also means rethinking what we buy, wear and eat. "Do we actually need strawberries in winter?"

The importance of changing lifestyles points to a key role for women, says Muller, because—like it or not—women are usually responsible for household work. (Muller is quick to point out that her husband, who enjoys baking cakes, defies the stereotypical gendered division of labour.) Women in affluent countries have substantial power to reduce their families' carbon footprint and environmental impact. At the same time, women in developing countries have the power to reject the consumption pattern modelled on more affluent countries and to craft their own alternatives. And women everywhere have the power to teach the next generation about the importance of sustainability.

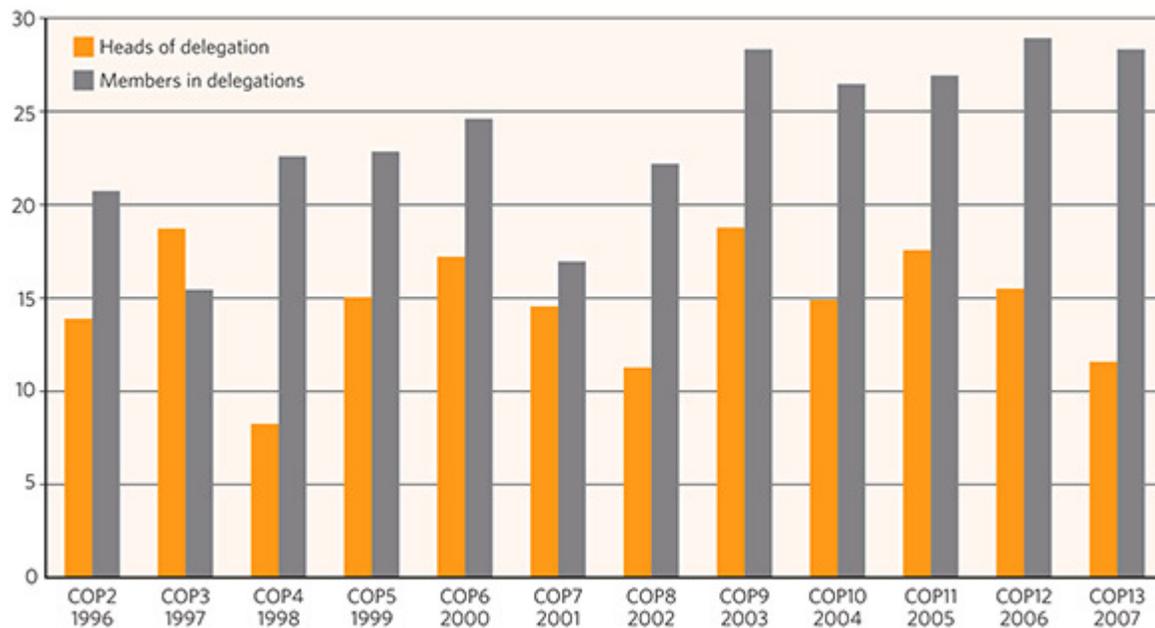
For sustainable development to succeed, says Muller, "women must be empowered."

[29] Canada and China, cooperating to engage women

The Canadian International Development Agency is working with the Government of China to reduce carbon emissions in China's paper and pulp, fertilizer, and plastics industries—but with a gender twist to the work. Funded through the Canada Climate Change Development Fund, the Canada-China Cooperation Project in Cleaner Production aims for at least 30 per cent participation of women in the project and to greatly expand their representation among managers, technicians and workers in the industries. Baseline research disaggregated by sex informs the work, and gender equality awareness sessions are designed to develop and incorporate participants' gender analysis into project activities. Women received training in process improvement, auditing practices, monitoring of equipment and computer use. A key objective is to increase women's awareness, abilities, self-confidence and motivation to address the issue of climate change. So enthusiastically have women taken to the project's objectives that they have taken on their own environmental initiatives off the job.⁽¹⁷⁾

Still, strong involvement of or participation by women remains the exception in the climate-change field, and it may continue to be the exception without stronger commitment by Governments and the publics they serve. Indeed, given the universality of the issue and the challenges it presents, climate change science and policy work will benefit from diversity not only in gender but also from diversity in age and income and from the inclusion of indigenous people.

Figure 5.1: Women's share in delegations to Conferences of the Parties to the United Nations Framework Convention on Climate Change



Source: Lebelo, D. and G. Alber. 2008. "Gender in the Future Climate Regime." Berlin: GenderCC—Women for Climate Justice.

Women and civil society: lessons for climate change

The history of environmental, population and development negotiations outside the climate sphere demonstrates that women's participation can be substantial and influential. The last two decades in particular have seen dramatic growth in "global civil society"—international networks of activists working to protect the environment, secure women's rights, promote sustainable development and more. Fuelled by new awareness that these issues transcend national boundaries—and by the diffusion of low-cost communication technologies and travel—global civil society played a significant part in the major United Nations conferences

of the 1990s, especially those on environment (1992), human rights (1993), population (1994) and women (1995).

The growing influence of global civil society has enabled women to play a much larger role in United Nations decision-making, by creating alternative channels to male-dominated national delegations. (In 2000, more than 40 per cent of United Nations delegations consisted of only men, according to the Commission on Sustainable Development Non-governmental Organization Women's Caucus.[\(18\)](#)) Through these new channels, women activists have applied a gender lens to some of the most urgent issues of our time—bringing their perspective and life experiences to bear on the way these issues are understood and addressed.

For example, in the run-up to the 1992 United Nations Conference on Environment and Development (UNCED), women from 83 countries assembled in Miami for the first World Women's Congress for a Healthy Planet, sponsored by the Women's Environment and Development Organization.[\(19\)](#) At that meeting, women from many nations and diverse backgrounds shared life stories of environmental challenges and solutions, and produced the Women's Action Agenda 21, a blueprint for incorporating women's concerns into environmental decision-making. At the UNCED conference itself in Rio de Janeiro, the "women's tent"—the largest in the Non-governmental Organization Forum—offered a focal point for networking and strategizing.

The success of these efforts is reflected in the conference document, Agenda 21, which includes more than 145 references to the roles and positions of women in environment and sustainable development, as well as a separate chapter entitled "Global Action for Women towards Sustainable Development."[\(20\)](#) Agenda 21 identifies women as one of the nine "major groups" for implementing its broad programme of action.

Paradigm shifts

The women who took part in UNCED prompted a seismic shift in thinking about environmental policy. They demonstrated that effective policy cannot be "gender neutral." Instead, they showed that it is essential to acknowledge the role of women as stewards of natural resources, because "no one knows the realities of the over-exploitation of the land more intimately than the women who till it, draw and carry its water, use its trees for fuel, harvest forests for healing herbs and medicinal plants, and use their traditional knowledge for the benefit of the community..."[\(21\)](#) These roles and responsibilities render women disproportionately vulnerable to the impacts of environmental degradation, and they also place women at the centre of any meaningful effort to implement solutions. Empowering women, by ensuring access to the resources and information they need to make sound decisions about resource management, is therefore key to sustainable development.

The 1994 ICPD marked another paradigm shift. The Programme of Action that emerged from the event was the culmination of a worldwide effort to shift population policies and programmes from an emphasis on achieving demographic targets for reduced population growth to a focus on improving the reproductive health of populations. Women, together with men, achieved an approach to population policy that is built on a foundation of respect for rights and human development. "All couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information, education and means to do so," participating Governments agreed.[\(22\)](#) Empowering women is key: where women have access to education, livelihoods, family planning and other health services, they have healthier—and smaller—families, on average later in their own lives than would otherwise be the case.

Since the ICPD, national population policies have evolved in line with the ICPD's Programme of Action. In India, for example, the state family planning programme has abandoned demographic "targets" in favour of free and informed choice in reproductive health services.[\(23\)](#)

Many aspects of the ambitious Programme of Action have been hampered by funding constraints. Since the mid-1990s, funding for reproductive health services, including family planning, has declined as a percentage of health spending and in many cases in real terms as well. As a result, some 200 million women in developing

countries have unmet need, lacking access to family planning services and thus unable to exercise their right to make decisions about the number and spacing of their children.⁽²⁴⁾ The largest amount earmarked for family planning since the ICPD was in 1995, with \$723 million committed, remaining above \$600 million for all but one year to 1999. The latest estimate, for 2007, is about \$338 million.⁽²⁵⁾



A woman prepares to plant a seedling during the "Feast of the Forest" in Puerto Princesa, the Philippines. Participants attend the annual event to plant trees in deforested areas to help stem global warming.

© Reuters/John Javellana

The same kind of paradigm shift that culminated in the ICPD is also needed in the latest international efforts to address climate change. A gender-sensitive approach must replace one where questions of equality between women and men have largely been ignored and where women have been mostly excluded from the debate.

Over the years, efforts to "mainstream" a gender perspective in environmental policy have met with mixed success. In preparation for the World Summit on Sustainable Development in 2002, women's groups reviewed progress towards implementing the gender-specific recommendations in Agenda 21. They concluded that important steps had been taken at international, national and local levels, but these efforts were scattered and most were *ad hoc*. They found no real integration of gender issues into global environment and sustainable development policies and activities, let alone a thorough mainstreaming of gender concerns in these areas.

The United Nations meetings of the 1990s offer important lessons for efforts to incorporate a gender perspective in climate change. First, active involvement by women advocates is essential to produce a gender-sensitive agreement. But, while many organizations are now working to bring a gender perspective to climate issues, women remain underrepresented in the negotiating process.

Women were, however, an increasingly forceful presence at recent Conferences of the Parties to the United Nations Framework Convention on Climate Change in Bali in 2007 and Poznań in 2008. Women-led and women-staffed non-governmental organizations, such as the Women's Environment and Development Organization and GenderCC, worked together with the United Nations Environment Programme and the Global Gender and Climate Alliance, an alliance of civil society and United Nations agencies, to advance a gender agenda in the talks. Climate non-governmental organizations based in developing countries, including women-led organizations, are also beginning to appear in negotiating conferences.

[30] Malini Mehra: aiming for the triple bottom line

When political scientist Malini Mehra looks around during climate conferences in India and in developed countries, she finds "a paucity of women among the bureaucrats and politicians tasked with climate policy." But her message that positive action is needed to prevent climate change—even within developing countries

—finds receptive listeners among women at every level in her own country.

"In traditional societies, women still do care for their families and their children," Ms. Mehra says. "India is no different. Women can see the impact of polluted air and water on their children and this is how the environmental message first reaches them."



© Courtesy of Centre for Social Markets (CSM)

A gender specialist by training, Malini Mehra has worked on sustainability, development and human rights issues for more than 20 years. For much of that time she has worked to convince the Government of India to shift from a policy of blame—criticizing developed countries for their historic role in causing climate change—to prevention—working to minimize the lead role her rapidly developing and demographically growing country (currently 1.2 billion people) could play in future greenhouse-gas emissions.

Leveraging such a shift is also the goal of her organization, the Centre for Social Markets, a non-governmental organization straddling bases in India and the United Kingdom and dedicated to making markets work for what she calls the "triple bottom line": people, planet and profit. "Our goal is to reframe the debate from a victim-led 'can't-do-won't-do' mentality to a 'can-do-must-do' debate based on hope and good propositions," Ms. Mehra says.

In collaboration with an international network of partners and associates, the Centre for Social Markets leads many major public engagement initiatives, including Climate Challenge India to promote a proactive domestic response to climate change in India. This multi-year campaign strives to build a communication platform on climate change by using the media and focusing on city leadership, professional bodies and the business community. In a global competition hosted by the Consultative Group on International Agricultural Research, Climate Challenge India was selected as one of the world's top-five climate campaigns in 2007 and profiled at the United Nations' Climate Change Conference in Bali in December 2007.

The Centre for Social Markets is actively working to engage popular women's media in the country to help reach women in their homes and workplaces and mobilize them to act on climate change. "Women are a key constituency for us," Ms. Mehra says. "They are the real movers and shakers on this issue in India. Through them we will make the change we are committed to."

Ms. Mehra says climate change will be felt differently by men and women—not because of inherent differences between the sexes—but because we continue to lead gendered lives, play different roles, and have different pressures and expectations. "In their roles as managers of the household economy, women—especially poor and marginalized women—will suffer from resource scarcity, disease and poor health, extreme weather events and displacement," she says. "We can anticipate the deprivations of the future because we can see them around us now. Hunger, malnutrition, conflict, these will all intensify as people's access to the basics in life—clean air, water, food and shelter—become compromised."

Achieving greater representation of women in formal negotiations, as well as in the sectors of "global civil society" represented at climate meetings, is a critical first step toward gender equality in climate change work.

Crucially, women must be involved not only in negotiations and planning but in implementation, which will involve a vast array of institutions. Given the complexity of human-climate interactions, a diversity of Government, intergovernmental and private entities will need to be engaged for decades in efforts to mitigate and adapt to climate change. Ensuring a gender perspective requires scrutiny of policymaking on energy, agriculture, health, disaster preparedness, and more. Women's voices will need to be forceful and heard, from tribal councils to national energy ministries to the halls of the United Nations.

Building mobilization capacity

It is not enough, however, simply to call for greater involvement of women. Governments sensitized by gender-aware publics and voters should remove obstacles to women's participation in the climate change debate. Gender equality will come closer to reality when Governments change laws and societies let go of the adverse norms and expectations that isolate women in the narrow confines of secondary citizenship and sexual and maternal roles defined by others. When societies expect legislative bodies to have at least 40 per cent women's participation, women are likely to step forward to fill the seats. But the other side of this coin is that life conditions—especially those relating to education, health and opportunity—must support women in reaching for and achieving personal and collective goals. It's worth asking what society can do, beyond the necessary task of changing laws and expectations, to make this transformation possible.

The concept of "human capital" may lend itself to a greater understanding about the roots of overall development, of gender equality and of the future of population growth. Wolfgang Lutz, leader of the World Population Program of the International Institute of Applied Systems Analysis in Austria, defines human capital as simply the combination of education and health in societies. "Human capital formation may even be the key for societies' adaptive capacity to climate change," Lutz suggests.[\(26\)](#)

The concept of "human capital" may lend itself to a greater understanding about the roots of overall development, of gender equality, and the future of population growth.

Higher levels of educational attainment and their impact on reducing fertility are directly proportional to the number of years of schooling completed. Based on the experience of countries with more than 90 per cent of the world's population, according to the International Institute of Applied Systems Analysis, women who have never gone to school average 4.5 children each, while those who have completed a few years of primary school have just three. Women who complete one or two years of secondary school have an average of 1.9 children each, while those who complete one or two years of college have an average of just 1.7 children.[\(27\)](#) Lower fertility rates would contribute to slower population growth and in turn contribute to the reduction of future emissions and make it easier for Governments to keep pace with the need for adaptation to climate change.

As impressive as its impact on fertility, higher educational attainment—especially completion of several years of secondary school—also increases women's earnings, improves their life expectancy and the health outcomes of pregnancy and childbirth, and reduces infant mortality.[\(28\)](#) Each of these benefits is a mark of societies that are likely to be resilient in general, but specifically resilient to climate change. Moreover, going to school builds familiarity with wider circles of people and with cultural and social diversity, and it brings awareness of the world beyond one's doorstep. Women in many societies are still far more likely to spend most of their lives in and close to their homes. For them in particular, education facilitates the skills and confidence that can build capacity for mobilization for action, whether on climate change or other social concerns.

The other side of human capital—health—is at least as important as schooling to social resilience and mobilizing capacity. Societies can hardly be prosperous, dynamic and adaptive if mortality and morbidity rates are high. Health may be even more important to women's capacity to mobilize for change, since their

reproductive roles and the expectations of their caregiving and other domestic responsibilities already force upon them high opportunity costs for outwardly directed social action.

Reproductive health is especially catalytic for women. From difficult pregnancies and childbirths to HIV and other sexually transmitted infections, reproductive health problems comprise the leading causes of death and disability among women worldwide. (29) Moreover, the lack of access to reproductive health services undermines achievement of most if not all of the Millennium Development Goals. That undoubtedly constitutes a further hindrance to social resilience and mobilization capacity.

[31] India's women farmers tackling climate change

A collective of 5,000 women spread across 75 villages in the arid interior of Andhra Pradesh is now offering chemical-free, non-irrigated, organic agriculture as one method of combating global warming.

Agriculture accounts for 28 per cent of Indian greenhouse-gas emissions, mainly methane emission from paddy fields and cattle and nitrous oxides from fertilizers. A 2007 report by the Intergovernmental Panel on Climate Change says India's rainfall pattern will be changing disproportionately, with intense rain occurring over fewer days, leading directly to confusion in the agricultural scenario.

Decreased rain in December, January and February implies lesser storage and greater water stress, says the report, while more frequent and prolonged droughts are predicted. The report cites, as an example of impacts, that a rise in temperature of 0.5 degrees Celsius will reduce wheat production in India by 0.45 tons per hectare. Research at the School of Environmental Sciences in New Delhi projects crop losses of 10 per cent to 40 per cent by 2100 despite the beneficial effects of higher carbon dioxide on growth, with the dynamics of pests and diseases significantly altered.

In the village of Zaheerabad, *dalit* (the broken) women, forming the lowest rung of India's stratified society, now demonstrate adaptation to climate change by following a system of interspersing crops that do not need extra water, chemical inputs or pesticides for production.

The women grow as many as 19 types of indigenous crops to an acre, on arid, degraded lands that they have regenerated with help from an organization called the Deccan Development Society (DDS).

DDS, working in this area of India for the last 25 years, has helped these women acquire land through Government schemes for *dalits*, and form *sanghas* or local self-help groups that convene regularly and decide their own courses.

The women plant mostly in October-November, calling up the family's help for seven days for weeding and 15 to 20 days for harvesting. Farmyard manure is applied once in two or three years depending on soil conditions.

In Bidakanne village, 50-year-old Samamma, standing in her field, points out the various crops, all without water and chemical inputs, growing in between the rows of sunflowers: linseed, green pea, chickpea, various types of millet, wheat, safflower and legumes. The sunflower leaves attract pests and its soil depletion is compensated by the legumes which are nitrogen-fixing.

"In my type of cropping, one absorbs and one gives to the soil, while I get all my food requirements of oils, cereals and vegetable greens," says Samamma.

Samamma's under-one-acre plot produces, among other crops, 150 kilogrammes of red "horsegram," 200 kilogrammes of millet and 50 kilogrammes of linseed. She keeps 50 kilogrammes of grains and sells the rest in the open market.

The 5,000 women in 75 villages are now in various stages of adopting this method of agriculture.

"In the climate change framework, this system of dryland agriculture has the resilience to withstand all the fallouts of elevated temperatures," says P.V. Satheesh, the director of DDS.

The women now run a uniquely evolved system of "crop financing" and food-distribution that they have mapped out themselves. The money collected from open market sales every year is deposited in regular banks and the interest earned from them is used to finance loans for members who again complete the cycle by paying back their loan in grain over five years.

DDS has now involved the women in a monitored system of organic produce that is certified by the global Participatory Guarantee Scheme (PGS)'s Organic India Council. In Zaheerabad, the organically certified staples and grains are packed and labelled with the PGS certification, and taken by a mobile van to be sold retail to consumers in Hyderabad city. Satheesh says the women are swamped with orders.

By **Keya Acharya**. Excerpted with permission from Inter Press News Agency.

[Download Chapter PDF](#)

[Back to Top](#)

Charts

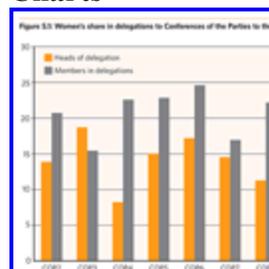


Figure 5.1: Women's share in delegations to Conferences of the Parties to the...

Photos



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5

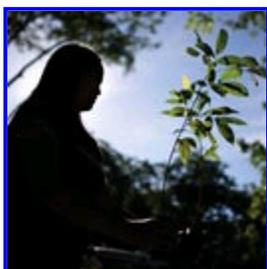


Photo 6



Photo 7

- [1Elements of climate change](#)

- [2At the brink](#)
- [3On the move](#)
- [4Building resilience](#)
- [5Mobilizing for change](#)
- [6Five steps back from the brink](#)
- [+ Technical Notes](#)
- [+ Indicators](#)
- [+ Notes](#)

Youth Supplement Young Facing Changes



Seven young people from seven different countries describe their challenges in living in a changing environment. [+ see report](#)

Press Kit

Download an advance copy of the report plus related press materials.. [+ The Reports + Media Advisories and Press Releases + Feature Stories + Contact Information + Graphs and Tables + Photographs](#)

THE VIDEO YOU ARE TRYING TO WATCH
CANNOT BE VIEWED FROM THIS
WEBSITE.

Video

UNFPA, United Nations Population Fund

- + Orders: gulrajani@unfpa.org
- + [Previous Years' Reports](#)
- + Questions? contact: serrano@unfpa.org