

Climate Change, Desertification and Gender Justice

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*Principle 20: Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.
(Rio Declaration on Environment and Development, Earth Summit, 1992)*

Introduction

During the 1992 Rio Earth Summit (United Nations Conference on Environment and Development, UNCED), climate change, desertification and the loss of biodiversity were identified as the greatest challenges to sustainable development. Since then, despite three United Nations conventions — the Framework Convention on Climate Change (UNFCCC), the Convention to Combat Desertification (UNCCD) and the Convention on Biological Diversity (CBD) — and other efforts, results are minimal and each threat remains, decreasing the likelihood of a sustainable future.

An unstable climate resulting from carbon dioxide emissions (CO₂) and a growing lack of productive land and loss of species work together in a feedback loop, increasing the related negative consequences, which can include lack of food security and availability of clean water. These impacts have a gender dimension and will contribute to increasing poverty, particularly among the poorest, where women make up the majority. The post-2015 framework and sustainable development goals must address this interrelationship.

The climate science

The greatest contributor to climate change (global warming) is CO₂. The world must lower its CO₂ emissions to a concentration of approximately 350 parts per million (ppm) to stabilize the planet's temperature (Hansen, 2009) and therefore the climate. Data show that atmospheric concentration of CO₂ hit a new annual average in 2012 (393.81 ppm), which is an increase of 2 ppm per year during the last 10 years and 40% greater than preindustrial levels (Table 1).

Table 1: Annual average of concentration of CO₂ in the atmosphere

Year	Annual average of CO ₂ (ppm)	Notes
2012	393.81	
2011	391.62	
2009	387.37	Copenhagen Accord (UNFCCC)
2007	383.76	Bali Action Plan (UNFCCC)
2001	371.13	
1997	363.71	Kyoto Protocol
1992	356.38	Earth Summit in Rio de Janeiro
1987	349.16	The last year when annual average CO ₂ level was less than 350 ppm
1959	315.97	The first year with comparable data

Source: Annual CO₂ Data from the National Ocean and Atmosphere Administration, USA (NOAA): [NOAA-ESRL](http://co2now.org/Current-CO2/CO2-Now/noaa-mauna-loa-co2-data.html) Found in: <http://co2now.org/Current-CO2/CO2-Now/noaa-mauna-loa-co2-data.html>

In 2010, CO₂ emissions primarily came from two sources: the burning of fossil fuels and land use change (deforestation and logging, and intensive agriculture) (Le Quéré et al. 2009,¹ Nature Geoscience

¹ http://www.pmel.noaa.gov/images/headlines/ngeo_689_aop.pdf

Canadell et al. 2007, PNAS,² R A Houghton, undated³). Historically, the major emitters have been developed countries, but as of 2009, some emerging economies were emitting more than developed countries. For example China now emits more in total than the US (although the US still emits far more than China on a per capita basis) (R A Houghton, undated⁴). In addition, as several studies show, the steep rise in Chinese emissions is a result of manufacturing goods for consumption in foreign markets (R A Houghton, undated⁵) which begs the question: who is responsible for these emissions?

Historical and Common but Differentiated Responsibilities

It is vital to take into account the principles of historical and common but differentiated responsibilities, when considering future action. This principle addresses the fact that today's temperature rises are a result of CO₂ emissions that occurred in developed countries years ago during and after the industrial revolution; it is the developed countries, therefore, that are responsible for addressing the current climate change challenge. In practical terms this means *developed countries have an obligation to repay the ecological debt they owe to developing countries, who are already facing the negative effects of global warming. This debt is to be repaid in the form of financial resources from public sources and the effective transfer of appropriate technology that will facilitate adaptation to a changing climate. Developed countries are also expected to reduce their consumption patterns and establish mitigation strategies with a view to stabilizing the climate. In order not to make the same mistakes that industrialised countries have made in the past, developing countries including emerging economies should try to adopt low carbon approaches in their bid to meet the fundamental needs of their populations on the basis of sustainable development.*

This principle also has an important gender dimension that needs to be understood. Women are more severely affected by climate change and natural disasters, especially because of impacts on food, health and homes, and women's allocated responsibilities in this regard, including within the home and as small-scale farmers. Women are also more at risk because of discrimination and poverty, which makes them disproportionately more vulnerable in the first place and also less able to recover from natural disasters (IUCN, 2007⁶).

Women generally contribute less to CO₂ emissions as well. For example, women are over-represented as heads of low-income households and underrepresented in high-income groups. In this respect, gender inequalities resulting in differentiated income levels have also played a role in CO₂ emissions (Whitty, 2007; UNESCO website⁷).

Gender equality should be recognized and supported as a key factor in the drive to achieve climatic justice. Women and men, as a result of their differential economic and social roles and experiences, also have differentiated responsibilities and capacities in terms of adapting to and mitigating climate change. Women have significant contributions to make, based on their involvement in areas such as sustainable agriculture to take just one example, but are often overlooked in related decision-making processes.⁸ Future strategies need to focus on women as a vital part of development, including with respect to deciding on and taking measures to adapt and face climate change. To this end it will be necessary to provide them with all the necessary means and tools, including capacity building to better understand climate change and to create and identify alternatives and solutions, and to ensure that resources are

² <http://www.pnas.org/content/104/47/18866.abstract>

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http://unfccc.int/files/methods_and_science/research_and_systematic_observation/application/pdf/iucn_houghton.pdf

⁴http://unfccc.int/files/methods_and_science/research_and_systematic_observation/application/pdf/iucn_houghton.pdf

⁵http://unfccc.int/files/methods_and_science/research_and_systematic_observation/application/pdf/iucn_houghton.pdf

⁶ For now: http://cmsdata.iucn.org/downloads/climate_change_gender.pdf

⁷ for now <http://www.unesco.org/new/en/unesco/themes/gender-equality/themes/climate-change/>

⁸ <http://www.unwomen.org/focus-areas/climate-change-and-the-environment/>

available for implementation. This responsibility relies not only on the States but also at lower levels within societies.

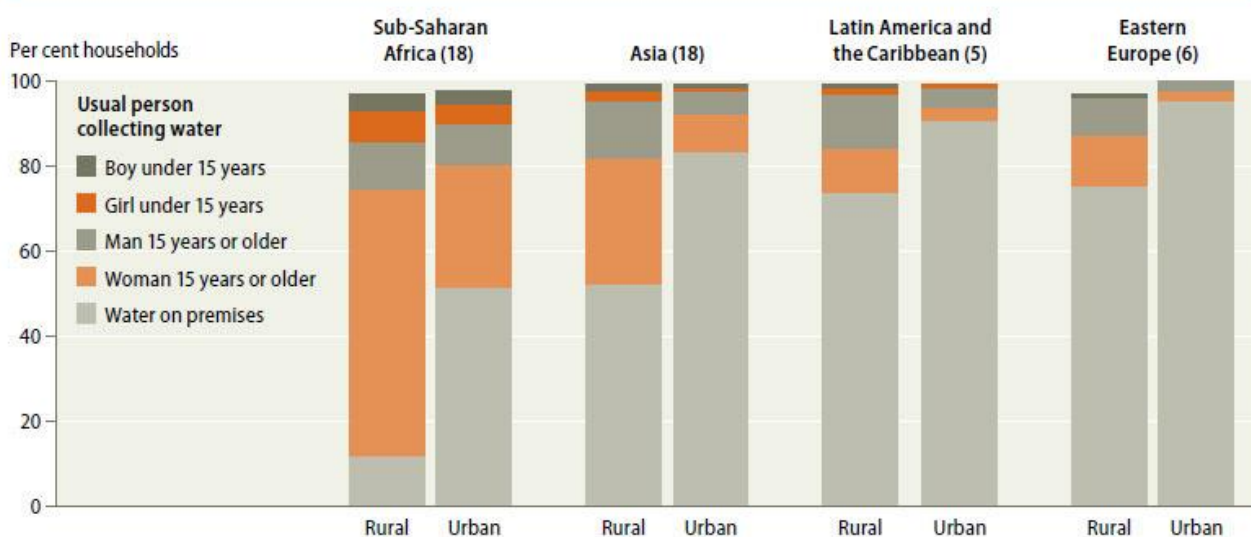
Climate impacts are gendered

Aside from increasing average temperatures, climate change is manifesting itself in different ways around the world, including through increased and more intense storms and floods; long droughts and forest fires; less reliable or loss of seasonal crops due to changing distribution and intensity of rain; melting glaciers; the migration of species and resultant shifting disease vectors; and loss of biodiversity. Impacts will be felt everywhere, from big cities to small villages, from the poles to the deserts, in developed and developing countries, at the coasts and up in the mountains. However, the impacts will vary from region to region;⁹ and the most vulnerable will be least able to deal with the changes that climate change is bringing.¹⁰

Climate change will result in imbalances in the availability of water, food and energy resources. This will be significant for all, but particularly for women. For example, in areas affected by floods, such as Bangladesh, women may be in a more vulnerable situation due to lack of information, an inability to swim or cultural restrictions on movement.¹¹ Women are also generally the ones responsible for fetching household water (see Table 2); when water is scarce or contaminated, women and girls spend many hours on the task — decreasing available time for school or other livelihood/employment activities.

Table 2: Distribution of households by person responsible for water collection

Distribution of households by person responsible for water collection, by region and urban/rural areas, 2005–2007 (latest available)



Source: *(The) World's Women 2010. Trends and Statistics. UNDESA, 2010*

In <http://www.un.org/waterforlifedecade/gender.shtml>

Contaminated water may be a result of poor sanitation or the destruction of water systems during climate-related storms, which results in water-related illnesses and diarrhea; and it is often women who spend time and energy to take care of the sick. Water quality and availability issues may increase malnutrition, which puts everyone's health at risk, in particular girls and pregnant women. Rising sea levels and coastal flooding can also result in sea water intrusion into fresh water sources. This can have

⁹ <http://co2now.org/Know-the-Changing-Climate/Climate-Changes/ipcc-faq-regional-climate-variations.html>

¹⁰ http://www.bridge.ids.ac.uk/reports/Climate_Change_DFID_draft.pdf (see p11)

¹¹ http://www.bridge.ids.ac.uk/reports/Climate_Change_DFID_draft.pdf (see p6)

significant health impacts. In Bangladesh for example, women who drink water with high salt content experience reproductive health impacts such as eclampsia, miscarriage and stillbirth twenty times higher than in other areas of Bangladesh (Islam, 2013).

During long walks for water or in camps and shelters after storms, women also face increased levels of physical and sexual violence. Limited water also means less water available for productive purposes. Women, especially heads of households, will therefore have to deal with higher food prices, lower incomes, decreased ability to feed their families (especially rural women who play a primary role in household food production) and increased time poverty. In tending to basic needs, education will become less of a priority, contributing to cycles of poverty and challenging efforts to meet goals of universal education. In short, the consequences of climate change impact almost all aspects of women's daily lives and long-term development, which in turn affects the entire community.

Furthermore, productive systems are beginning to deteriorate and eventually whole ecosystems may collapse. Such impacts pose a huge challenge, particularly to those relying most on natural resources, such as local populations that rely on native flora for resources that do not need to be paid for, especially women using them for household needs. It is critical to build resilience to the impacts and to mitigate the causes of climate change; women play a pivotal role in both adaptation and mitigation and their contributions should not be underestimated. New policies on climate change must incorporate measures consistent with the reality of women in the most vulnerable sectors, mainly in rural areas (Capriles, 2010).

Responding to the challenges of climate change

The threats of climate change have a strong gender impact, thus mitigation and adaptation strategies should incorporate gender considerations in order to move beyond the status quo, transform the current dynamic, and improve the state of gender equality. Countries should make sure mitigation and adaptation strategies take into account the rights and needs of women as well as ensuring the equitable sharing of the costs and benefits of these approaches, not only between countries and generations but also between men and women.

Furthermore, current mitigation strategies are often based on market or payment-related mechanisms which lack a gender or long-term social justice perspective. For example, the current promotion and use of biofuels has been taken forward without gender and environmental analyses that might have predicted their high social cost when they compete with food crops or are grown for industrial uses that do not contribute to development of the local community; and that their production can be just as bad for the climate when full lifecycle emissions are taken into account. Other mitigation strategies that prioritize carbon sequestration may also affect the relationship between women, especially indigenous women, and the forest, especially if access to traditional territories is restricted or banned for conservation purposes.¹² Many such strategies fail to prioritize local community benefits or consider the implications for women in terms of unequal land tenure rights. Ultimately they are likely to reduce access to forest resources, include water, food, fuel and other resources necessary for sustainable livelihoods.

Climate change links with CEDAW and women's rights

Women's rights and gender equality must be guaranteed in order to achieve sustainable development. This means that climate change must be addressed in a way that ensures women's rights are taken into account, and that women are not further jeopardised by the proposed solutions.

Existing legal and normative frameworks guide the connections between gender equality, women's rights and climate change. The three Rio Conventions and/or their resulting decisions— UNFCCC, CBD and UNCCD – all now include references to women or gender equality. CEDAW addresses the connection, for example, in Article 14, *"...the particular problems faced by rural women and the significant roles which rural women play in the economic survival of their families, including their work in*

¹² <http://globalforestcoalition.org/wp-content/uploads/2010/12/Impacts-marketbasedconservationmechanisms-on-woman41.pdf>

the non-monetized sectors of the economy, and shall take all appropriate measures to ensure the application of the provisions of the present Convention to women in rural areas”.

Some governments have taken an approach that addresses both adaptation and mitigation; the Bolivian proposal on Integrated Forest Conservation Policies, for example, takes the multiple functions forests provide into account. This includes livelihoods for local communities, as well as biodiversity, food security and access to water resources. Nevertheless it should still be ensured that all approaches are fully in line with CEDAW and also take into account women’s rights and needs and the vital role women play in biodiversity conservation. According to WEDO (2007) “Women are often perceived primarily as victims and not as positive agents of change. However, women can be key agents of adaptation and mitigation to climate change. Their responsibilities in households, communities and as stewards of natural resources position them well to develop strategies for adapting to changing environmental realities”. Thus we need a framework that addresses all these various dimensions of climate change.

Conclusions

A post-2015 framework that moves towards achieving sustainable development must address climate change in a way that recognizes that climate change, like other global crises, is not gender neutral. Addressing climate change requires an equitable approach that protects and promotes human rights in order to ensure sustainable livelihoods, and as part of this approach protects and promotes women’s rights, with a view to achieving gender equality.

The role of women should be central in any proposed goals, taking into account that they have a strategic role to play in achieving real solutions to the climate crisis, from both an adaptation and mitigation standpoint. As climate change and gender equality are addressed hand-in-hand, it is also important to create policies that are flexible enough to adapt to women’s varied and changing roles in society – to avoid locking women into specific gender roles that ultimately thwart the goal of transformative change.

As the threat posed by increasing concentrations of CO₂ in the atmosphere has not resulted in a strong political response, it is clear there is a lack of political will to commit to lowering emissions and stabilizing temperature. Therefore real change may best be based on something more tangible and visible – the impact on people’s lives, homes and businesses – coupled with the scientific facts. Linking climate change to the post-2015 development agenda means focusing the world’s attention on issues that are directly affected by climate change such as water access, supply and availability, food security and sovereignty, as well as alternative, renewable, sustainable and low-cost energy sources. In all cases, goals should focus on integrating women into key roles and ensuring women and men have the necessary information, the appropriate technology and the resources they need to face these challenges.

The costs and benefits posed by adaptation and mitigation strategies must also be addressed through a gender-sensitive lens in order to strategically tackle some of the equity and equality gaps that are delaying the achievement of sustainable development.

Recommendations

1. Design and implement rights-based, socially just, gender-responsive and coherent ecosystem-based approaches to climate change mitigation and adaptation.
2. Integrate gender-sensitive solutions to climate change into the post-2015 framework and SDGs to ensure gender equality, and ensure that women’s rights and empowerment are fundamental cross-cutting goals when addressing the climate crisis and sustainable development.
3. Address common but differentiated responsibilities from a gender perspective.
4. Promote the capacity-building of women in relation to skills that facilitate the development and use of adaptation technologies, especially those that have co-benefits such as improving resilience and ensuring livelihoods.

5. Engage women leaders and facilitate women's equitable participation in decision-making processes at all levels.
6. Recognize and take into account women's specific needs and abilities, and women's human rights.
7. Incorporate solutions that go beyond current economic models, which are often based on privatization strategies that do not promote gender equality.
8. Promote different means of information sharing, to ensure that women have timely access to relevant and quality information; and integrate this within all the goals.
9. Maintain flexibility to account for local realities and practices, and draw upon successful practices of promoting efficient resource use in different social contexts when designing adaptation and mitigation strategies.
10. Support and engage in research into the experiences of women, including through the collection of sex-disaggregated data that identifies concrete problems, sustainable and unsustainable coping strategies, and potential solutions.

Case Studies

Case Study 1: Financing for Climate Change Mitigation and adaptation in the Philippines: a Pro-poor and Gender-sensitive Perspective

By Athena Peralta

This study shows that it is women who have led their households and communities in the development of agricultural coping strategies including food preservation, mixed cropping and crop diversification, water harvesting and irrigation, growing reliance on wild fruits and forest products, and cultivating at higher levels. Financial coping strategies include shifting from crop production, taking out loans, selling off livestock, seeking government financial assistance, reducing food consumption, and migrating to find other sources of work and income. Drawing from a rich body of local and traditional knowledge, people in the countryside have begun to adjust to extreme weather variations using a variety of adaptation and coping strategies (not all of which are sustainable), with limited resources and support. Women farmers are organizing and strategizing in order to secure their livelihoods and access to basic needs, and are increasingly engaged in organic farming initiatives, integrated pest management programs, agro-forestry, and tree-planting projects. Currently, the Philippines financing policy framework has limited focus on women's concerns and minimal women's participation. For example, in assessing the Philippines national financial regime, the study found a lack of recognition of links between climate change and the financing of overall development goals, including gender equality; an inordinate reliance on market-based solutions that do not account for gender roles and the feminization of poverty; and a lack of consultation and participation of women and women's rights advocates.

<http://www.wedo.org/prototype/wp-content/uploads/genderandclimatechangefinance.pdf>



Case Study 2: Gender and Climate Change: South Africa Case Study

By Dr. Agnes Babugura

In trying to understand gender and climate change in the context of South Africa, it is important to appreciate gender and gender relations in the country. In this context the contemporary position of women in South Africa cannot be fully appreciated without an understanding of the ways in which colonialism, capitalism and apartheid have dictated the development of social relations and fractured society along racial, class and gender lines (Baden, et al., 1998). South Africa therefore presents a unique situation from a political perspective, particularly with reference to apartheid, to encourage a situation in which women and men can make real choices about their own lives and other issues. In spite of major gains, there still remain enormous disparities and inequalities between men and women. The most important challenges are faced by women in rural areas, who are still living in poverty with limited resources to ensure sustainable livelihoods. Gender roles are undergoing change due to climate-related impacts, which are further heightened by factors such as unemployment, HIV/AIDS and poverty, which causes men and women to engage in different activities, with more women diversifying their livelihoods. In this study it was evident that women are now more involved in activities that generate earnings, thus reshaping relationships between men and women. The income generated by women through trade is used to sustain the household, and women generating an income also have more opportunities and power to decide what the income can be used for.

<http://www.fanrpan.org/documents/d00920/>



Case Study 3: Women and Climate Change in Los Andes

By Carmen Capriles

The Andean region has a high level of ethnic and cultural diversity and includes countries that emit very low levels of greenhouse gases into the atmosphere, such as Bolivia, Peru, Ecuador and Colombia. It is also an area currently threatened by global warming. Almost 10% of the freshwater reserves in the world are within the Andean region; it is the second largest reservoir of freshwater on the planet. Much of this fresh water is in the form of glaciers. The increase in global temperature has already led to the loss of permafrost in several summits, and the Chacaltaya glacier located at 5,200 meters above sea level has been gone since 2009. This alarming fact has a big impact on the people who depend on water from snow-ice melting for domestic supply, productive activities and in many cases, power supply. In the Andean highlands, agriculture is the one of the most important activities and is based on irrigation by gravity, which leads to an inefficient use of water. Irrigation is one of the main activities and takes a great deal of time; the participation of women is low, mainly due to the fact that harnessing irrigation waters from melting glaciers is both tedious and harsh. The climatic conditions, loss of fertility and related socioeconomic factors are contributing to male migration to urban centres in search of a better life. Women are left behind in the communities, which results in an increase of responsibilities for women and a feminization of the rural areas. More women are now dealing with rising temperatures in places where radiation is one of the highest on the globe, while at the same time they have less access to any kind of resources and struggle to produce sufficient food on infertile land.



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