



RESOURCE GUIDE ON GENDER AND CLIMATE CHANGE



United Nations Development Programme



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FOREWORD

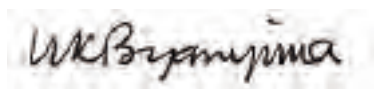
Climate change is the defining human development issue of our generation. The 2007 Human Development report acknowledges that climate change threatens to erode human freedoms and limit choice and the report further underscores that gender inequality intersects with climate risks and vulnerabilities. Poor women's limited access to resources, restricted rights, limited mobility and muted voice in shaping decisions make them highly vulnerable to climate change. The nature of that vulnerability varies widely, cautioning against generalization but climate change will magnify existing patterns of inequality, including gender inequality.

In the agricultural sector, rural women in developing countries are the primary producers of staple food, a sector that is highly exposed to the risks that come with drought and uncertain rainfall. In many countries, climate change means that women and young girls have to walk further to collect water, especially in the dry season. Women in sub-Saharan Africa, for example, spend 40 billion hours per year collecting water – equivalent to a year's worth of labor by the entire workforce in France; moreover, women can be expected to contribute much of the unpaid labor that will go into coping with climate risks through soil and water conservation, the building of anti-flood embankments, and increased off-farm employment.

While underscoring the vulnerability of poor women to climate change, it should also be acknowledged that women play an important role in supporting households and communities to mitigate and adapt to climate change. Across the developing world, women's leadership in natural resource management is well recognized. For centuries, women have passed on their skills in water management, forest management and the management of biodiversity, among others. Through these experiences, women have acquired valuable knowledge that will allow them to contribute positively to the identification of appropriate adaptation and mitigation techniques, if only they are given the opportunity.

Moving forward, UNDP will continue to support gender equality and women's empowerment: one important aspect of this work will be facilitating women's equal participation in the ongoing climate change negotiations process, to ensure that their needs, perspectives, and expertise are equally taken into account. UNDP will also work to orient policymakers and government delegates on the gendered aspects of climate change, while supporting the efforts of local people on the ground.

This resource guide aims to inform practitioners and policy makers of the linkages between gender equality and climate change and their importance in relation to the achievement of the Millennium Development Goals. It makes the case for why it is necessary to include women's voices, needs and expertise in climate change policy and programming, and demonstrates how women's contributions can strengthen the effectiveness of climate change measures. As the world moves towards a new global agreement on climate change, it is critical that women contribute to the effort and that their perspectives are equally represented in the debate.



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ACRONYMS

ADB	Asian Development Bank
ANEJ	African Network of Environmental Journalists
BCPR	Bureau for Crisis Prevention and Recovery
CBD	Convention on Biological Diversity
CDERA	Caribbean Disaster Emergency Response Agency
CDM	Clean Development Mechanism
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CEPREDENAC	Centre of Coordination for the Prevention of Natural Disasters in Central America
CIDA	Canadian International Development Agency
COP	Conference of the Parties
CRMI	Caribbean Risk Management Initiative
CSD	United Nations Commission on Sustainable Development
CSW	Commission on the Status of Women
DAW	Division for the Advancement of Women
DECRIPS	United Nations Declaration on the Rights of Indigenous Peoples
DFID	United Kingdom Department for International Development
ECLAC	Economic Commission for Latin America and the Caribbean
ECOSOC	United Nations Economic and Social Council
EIA	Environmental Impact Assessments
ENERGIA	International Network on Gender and Sustainable Energy
ERPA	Emissions Reduction Purchase Agreement
FAO	United Nations Food and Agriculture Organization
FONAFIFO	National Forestry Financing Fund
GEF	Global Environment Facility
GENANET	Gender, Environment and Sustainability Network
GGCA	Global and Gender Climate Change Alliance
GHGs	Greenhouse Gases
GRID	Global Resource Information Database
GTC	Giga Tonnes of Carbon

GTZ	German Technical Cooperation Agency
HDR	Human Development Report
IEI	International Energy Initiative
IIIEE	International Institute for Industrial Environmental Economics
INE	National Ecology Institute (Instituto Nacional de Ecología)
IPCC	Intergovernmental Panel of Experts on Climate Change
ISDR	International Strategy for Disaster Reduction
IUCN	International Union for the Conservation of Nature
IWRM	Integrated Water Resources Management
LGP	Liquefied Petroleum Gas
LIFE	The Financial Instrument for the Environment, European Union
MDG	Millennium Development Goals
MEA	Multilateral Environment Agreements
NAPA	National Adaptation Programmes of Action
OAS	Organisation of American States
OECD	Organisation for Economic Co-operation and Development
OECS	Organisation of Eastern Caribbean States
Oxfam	Oxford Committee for Famine Relief
ppm	Parts per million
REDD	Reducing Emissions from Deforestation and Forest Degradation
SAGEN	South African Gender and Energy Network
SCOPE	Scientific Committee on Problems of the Environment
SDP	Small Donations Programme
SEA	Strategic Environmental Assessment
SEMARNAT	Ministry of the Environment and Natural Resources (Secretaría del Medio Ambiente and Recursos Naturales)
SURF	Latin America and the Caribbean Sub-Regional Resource Facility
UNCCD	United Nations Convention to Combat Desertification
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees

UNIFEM	United Nations Development Fund for Women
UNISDR	United Nations International Strategy for Disaster Reduction
WECF	Women in Europe for a Common Future
WEDO	Women's Environment and Development Organization
WHO	World Health Organization
WSSD	World Summit on Sustainable Development

INTRODUCTION

As recently as a decade ago, discussions about climate change were nearly exclusively the province of experts in environmental and atmospheric science. In doubt about the reliability of available information on the causes and effects of climate change, world opinion leaders as well as the wider public scuttled around questions about how much they could actually achieve or, indeed, whether it was even necessary to do anything at all.

Today, the effects of climate change are felt all over the world and climate change is no longer a theory or a meteorological model that interests only a few people. Because of the scientific work that has been done, more people now understand how human activities are hastening it. There is also more and more recognition that climate change seriously threatens sustainable human development. Now and in future, it affects or will affect agriculture, energy, human health, food security, the economy, and physical infrastructure.

Examples of these effects are many and grave. Faced with these new conditions, women and men in different social strata and countries are making their voices heard. In Latin America and the Caribbean, the frequency and magnitude of hurricanes are keeping a number of countries on the alert; in sub-Saharan Africa, many women must spend more and more hours walking in search of water; in Switzerland, a lack of snow in recent winters has affected mountain shelters; and in Australia, ancestral forms of drawing done recently by aboriginal women attest to the changes that corals and fish have faced. Depending on social categories such as gender, age, economic level and ethnic groups, climate change has, and will have, different effects. If attention is not paid to its causes and effects, climate change may increase inequality the world over.

In view of this reality, ensuring the participation of the greatest possible swath of the population – women, men, young people, boys and girls – in developed and less developed countries alike is not only a matter of social justice and respect for human rights in the present, but also one of great significance for future generations.

There can be no effective and efficient battle against climate change if there is not equitable representation of all segments of society in decision-making at all levels. The motivation to prepare this document was not only the wish to support the work of planners, policy-makers, decision-makers and others at those levels who strive to

mitigate and adapt to climate change, but also the wish to promote gender equity and equality while these people are doing that work.¹

These views underlie the reflections and proposals presented in this *Guide*:

- Climate change presents new challenges to achieving the Millennium Development Goals (MDGs);
- Climate change is a problem of development and, as such, is affected by two characteristics: inequality and poverty;
- Climate change has numerous causes and effects and must therefore be approached by numerous sectors, stakeholders and disciplines;
- While needs are global, they are more urgent and dramatic for societies living in conditions of greatest inequality and vulnerability;
- In order to fight climate change as effectively as possible, consideration must be given to the gender-specific effects of climate change

This *Resource Guide on Gender and Climate Change* presents principal conceptual and methodological advances on gender relations in the context of climate change, with the overall objective of providing guidelines for actors, practitioners and consumers in this relatively new programme area. It has been prepared through research, analyses and combinations of international frameworks, conceptual and methodological documents, and the compilation of case studies. The Guide also considers the approaches that consultants take to deal with the topic, as well as views held by organizations and experts in this field.

The Resource Guide on Gender and Climate Change will facilitate an understanding of the socio-environmental problem as dealt with from an integrated point of view – one provided by the gender equality approach – but its principal contribution will be to provide a more proactive agenda that will make it easier to understand the policies formulated.

The document has two sections. The first section, which contains six chapters, deals with the principal gender considerations that must be taken into account in the face of climate change.

The first chapter describes the climate change phenomenon, its causes, characteristics, effects and implications for the environment and human societies, particularly in relation to the quest for sustainable development.

¹ Gender equity implies the possibility of different treatments to correct inherent inequalities and measures which, while not necessarily the same, result in equality in terms of rights, benefits, obligations and opportunities. Gender equality signifies that there is no discrimination based on the sex of the person in the allocation of resources or benefits or in access to services

The second chapter analyzes, from a gender approach, how climate change may affect the achievement of the MDGs, and how humanity confronts new challenges that were not given enough weight when the MDGs were formulated. For example, although there is insufficient empirical evidence to prove that there is a link between the food crisis and climate change, some data presented in this chapter nevertheless indicate that this should not prevent people from taking quick action.² Thus, the chapter presents consequences for matters such as poverty, food, health, education and HIV/AIDS that affect women and men differently in different regions of the world.

The third chapter contains a review of the international framework related to gender equality, the environment, and climate change, and highlights recent global efforts to link both themes. The authors call here for more coordination of what, until recently, were distinctly separate international agendas on gender equality and climate change.

The fourth chapter links climate change mitigation and adaptation strategies to gender equality and women's empowerment strategies, and presents experiences and initiatives that have pioneered integrating actions.

The fifth chapter presents conclusions and recommendations, while the sixth chapter, which concludes the first section of the *Guide*, contains a reference list.

The second section is the result of an effort to compile, systematize and analyze information gathered from different sources. The first chapter, comprising the annotated bibliography, summarizes and organizes research on the principal documents, portals, web pages and news that show how climate change and gender are linked. It includes specific documents that indicate conceptual, methodological and policy formulation challenges and deficiencies. It also includes good practices that confirm that gender equality is a catalyst for success when confronting climate change.

Finally, the second chapter, comprising a list of international frameworks, gives a brief analysis of the principal instruments developed by the international community that provide a reference for integrating the gender approach into responses to climate change. This section is mainly supportive of chapter three of the first section.

We hope that this synthesis of analytical, bibliographic and programmatic resources will help readers understand that gender is central to work on climate change. Gender and climate change must be approached holistically, with the recognition of the fact that climate change is not only a scientific problem, but also includes the important issues of equality and development.

² Oslo Policy Forum, 2008.



What is climate change?

"Climate change is a serious threat to development everywhere. Indeed, the adverse impacts of climate change could undo much of the investment made to achieve the Millennium Development Goals. But it is not a zero-sum game. By being creative, we can reduce emissions while promoting economic growth. This is our opportunity to advance sustainable development, encourage new kinds of cleaner technologies, industries and jobs, and integrate climate change risks into national policies and practices."³

Ban Ki-moon, United Nations Secretary General
Declaration at the high-level meeting on climate change
New York, September 2007

While the ongoing discussion about climate change takes very diverse forms and concentrates on various aspects of the problem, this chapter includes basic information about climate change in an attempt to define a common starting point from which to gain an understanding of the magnitude of the problem, its causes and its effects.

Climate change is today a priority on the international development agenda. According to the Human Development Report 2007-2008 by the United Nations Development Programme, "climate change is the defining human development issue of our generation." Tackling it can no longer be postponed, let alone ignored, and everyone concerned – that is, the entire planet and all sectors of development, whose actions have so far been haphazard – must integrate their efforts.

³ UNDP, 2007.

1. Definition

Climate change is a scientifically proven phenomenon that includes “any change in the climate, whether due to its natural variability or as a result of human activity”;⁴ it is also a reminder of a sometimes forgotten fact: we are ecologically interdependent.⁵ Human activity takes place within ecological systems not bound by political frontiers and will have generally negative impacts on the environment and on people’s well-being if not managed in a sustainable manner.

The description of the characteristics and implications of climate change shows that it is a multi-dimensional problem whose causes and consequences are clearly related to the present development model, which has led to more inequality and poverty. While affecting people generally, these conditions render women and the poor particularly more vulnerable.

Although global warming, which is due to increased emissions of greenhouse gases (GHGs), almost always comes to mind in discussions about climate change, it is important to remember that climate change has economic and social aspects as well, as is clear, for example, when one considers energy generation systems and the dramatic and ongoing increase in the world’s population. Consequently, any comprehensive, potentially effective plan to address climate change also needs to consider issues traditionally considered development issues alone.⁶

2. Principal causes

The Greenhouse Effect

The greenhouse effect is a result of the gases that absorb and re-emit solar energy that rises from the earth’s surface in all directions, allowing the temperature to be higher than it would be if the atmosphere did not exist.⁷ Without GHGs, the planet’s average temperature would be -18°C. GHGs are thus crucial for the maintenance and development of life as we know it. However, as a result of human activities (for example, the burning of fossil fuels and changes in land use), concentrations of GHGs in the atmosphere have increased markedly all over the world and have raised the Earth’s temperature beyond the levels that would have existed through natural processes.

⁴ IPCC, 2007.

⁵ “Emphasizes the mutual importance and interdependence of all ecological, social and economic components of a region or common space.” Wyman & Stevenson, 2000. “All nations and all human beings share the same atmosphere and we only have one.” UNDP, 2007.

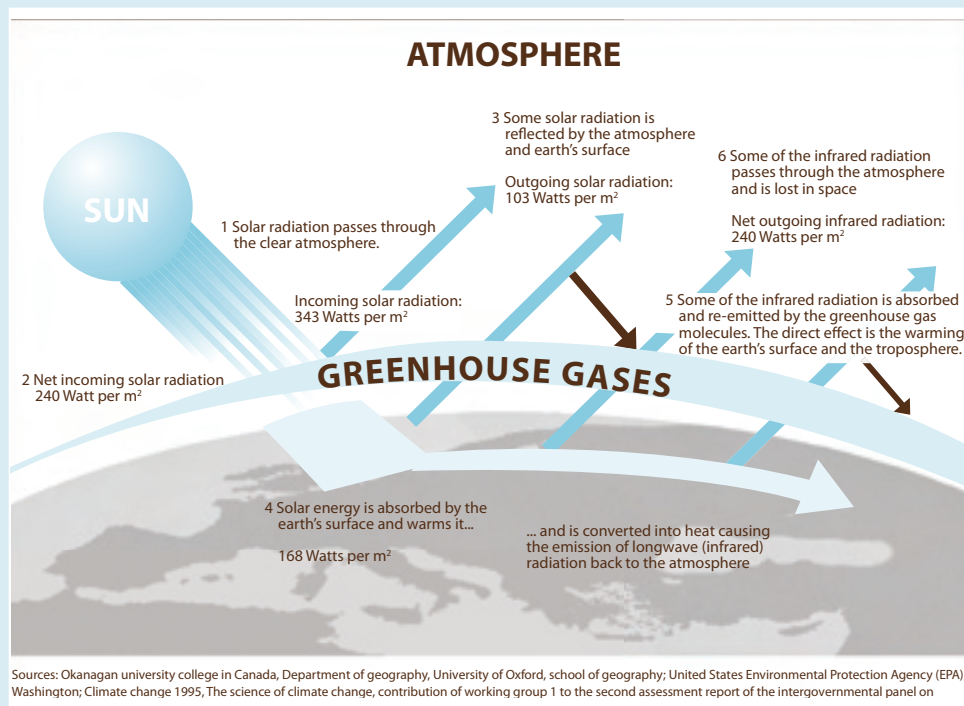
⁶ INE – UNDP, 2008.

⁷ See http://cambio_climatico.ine.gob.mx/

BOX 1**Definition of Greenhouse Gases (GHGs)**

The GHGs are gases, both natural and anthropogenic (produced by human activity), that make up the atmosphere. The main greenhouse gases are water vapour (H_2O), carbon dioxide (CO_2), nitrous oxide (N_2O), and methane (CH_4). There are also various greenhouse gases in the atmosphere that are produced solely by human activities, such as the halocarbons and other substances that contain chlorine and bromide.

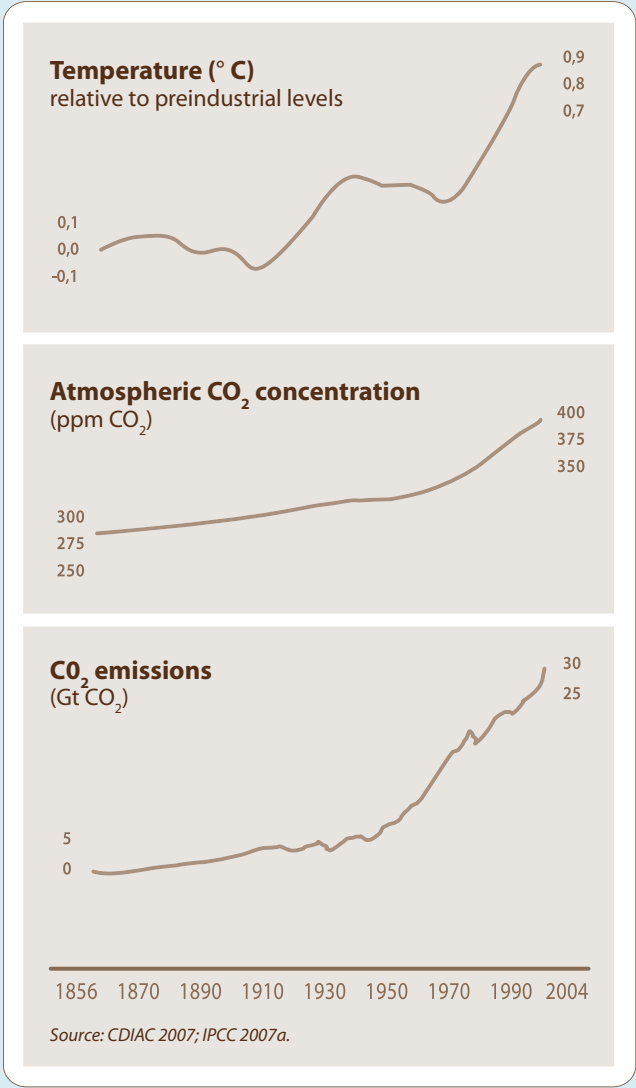
Source: IPCC Fourth Assessment Report 2007

FIGURE 1**Greenhouse Effect**

Source: Climate change portal INE/SEMARNAT

The latest scientific studies focus on the high atmospheric concentrations of carbon dioxide (CO₂), nitrous oxide (N₂O) and methane (CH₄). The gas with the highest emission volume is CO₂ and it is to a large extent associated with energy generation and productive processes. A third of N₂O emissions are of human origin, mainly due to some of the fertilizers used in agriculture.⁸

FIGURE 2 **The increase in CO₂ emissions causes them to accumulate and raises the temperature**



Source: UNDP Human Development Report 2007-2008

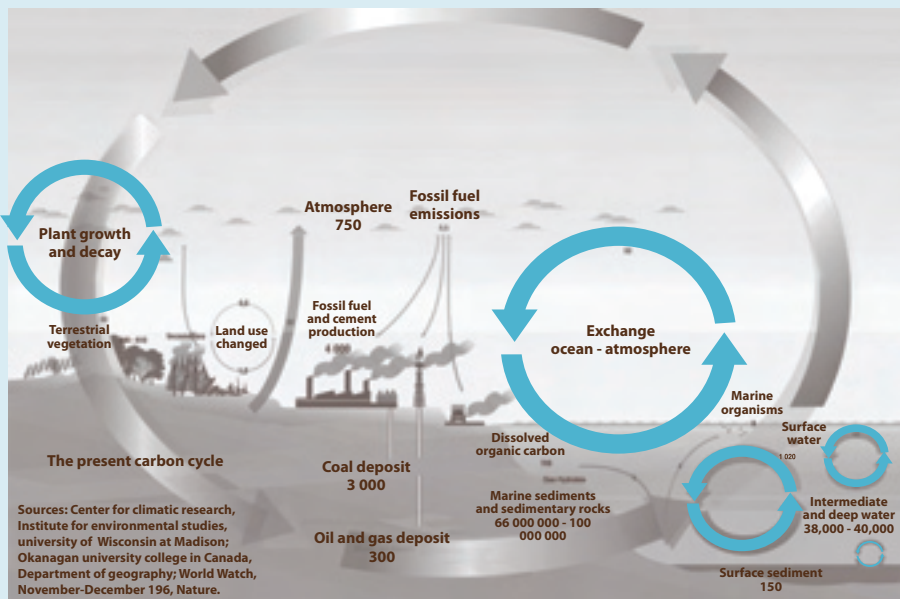
⁸ IPCC, 2007.

Carbon cycle

In a process known as the “carbon cycle,” whereby carbon circulates through the biosphere, the atmosphere and the oceans, carbon acquires various forms, among them that of carbon dioxide. Because carbon dioxide is constantly absorbed and discharged by living beings, it is an indispensable component of the planet’s life processes. Furthermore, because carbon dioxide is one of the greenhouse gases that affect the planet’s temperature balance, an understanding of the carbon cycle is fundamental for understanding climate change and for identifying anthropogenic actions that have broken the natural balance dating back millions of years; such an understanding is also essential for suggesting feasible and sustainable solutions to reduce carbon emissions.

This natural cycle is affected by CO₂ emissions that are created by human activities and have increased from an average of 6.4 GTC⁹ per year during the 1990s to 7.2 GTC per year between 2000 and 2005. Besides this increase in emissions, the carbon cycle has been altered by environmental problems such as deforestation and the saturation of carbon sink in oceans and the soil, further limiting the atmosphere’s regenerative capacity to eliminate carbon dioxide.¹⁰

FIGURE 3 Carbon cycle



Source: Carbon cycle (2005). In: UNEP/GRID-Arendal Maps and Graphics Library. Recovery 22 August 2007 from http://maps.grida.no/go/graphic/carbon_cycle.

⁹ GTC “Giga tonnes of carbon”; a giga tonne is equivalent to a thousand million metric tonnes. The emission of 1 GTC (one giga tonne of carbon) corresponds to 3.67 GTCO₂ (three point sixty-seven giga tonnes of carbon dioxide).

¹⁰ UNESCO and SCOPE, 2006.

Forests, oceans and the Earth's crust are the main carbon sinks or natural reserves. These reserves help the atmosphere to process CO₂, although, in the case of the oceans, it is a slow assimilation process in comparison with the long life of carbon.

BOX 2**Carbon sink definition**

A carbon sink is any substratum that sequesters and prevents GHGs from escaping into the atmosphere. Because trees remove carbon from the atmosphere (by absorbing CO₂) and sequester it in their woods and roots, the most important sinks include forests and plantations.

*Source: International Relations Center, 2007. Consulted 21 November 2007
http://americas.irc-online.org/reports/2005/sp_0506carbon.html*

Scientific studies indicate that saturating the sinks, as well as increasing the global temperature, will release additional CO₂ from the natural reserves; this could cause an increase of 200 parts per million (ppm) in the concentration of this GHG in the atmosphere in the next 100 years. This is a substantial increase, especially in view of the fact that the increase in the previous century was only 100 ppm, from 280 to 380 ppm.¹¹

Natural carbon reserves most vulnerable to an increase in temperature and to saturation are:

- Frozen soils and sediments
- Tropical and temperate peat bogs¹²
- Wooded areas vulnerable to fire
- Methane hydrates on continental platforms and permafrost
- Tropical forests subject to deforestation

Because GHG emissions have increased, the international community has developed instruments, such as those mentioned below, to regulate emissions.

¹¹ UNESCO and SCOPE, 2006.

¹² Peat bogs are humid composites of partially decomposed vegetable matter that have accumulated over five to eight thousand years.

3. International climate change framework and instruments

United Nations Framework Convention on Climate Change

The magnitude of the potential consequences of climate change has motivated international action and a search for effective response measures. To this end, the United Nations General Assembly established a negotiating committee at its 45th session in 1990, and in 1992 the United Nations Framework Convention on Climate Change (UNFCCC) was signed at the Earth Summit.

The Convention delineated broad objectives to stabilize concentrations of GHGs in the atmosphere, as well as to define adaptation measures for multilateral action. To achieve its objectives, commitments were defined for the Signatory Parties, based on the principle of shared but differentiated responsibilities; there are also commitments that apply to all states.

BOX 3

Commitments made by all UNFCCC Parties (Art. 4)

- | | | |
|---|--|---|
| <ul style="list-style-type: none">• Prepare, periodically update, publish and make available to the Conference of the Parties, national inventories of anthropogenic emissions and of absorption by sinks, of all the greenhouse gases not controlled by the Montreal Protocol.• Draw up national programmes that contain climate change mitigation measures.• Through cooperation, promote and support development and the transfer of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases.• Promote sustainable management and conservation and strengthen all greenhouse gas, sinks and deposits. | <ul style="list-style-type: none">• Cooperate in preparing to adapt to the impacts of climate change; develop and draw up appropriate and integrated plans to manage coastal zones, hydraulic resources and agriculture.• Take into account, as far as possible, climate change considerations in social, economic and environmental policies and measures.• Cooperate in promoting and supporting scientific, technological, technical, socio-economic and other research, systematic observation, and the establishment of archives with data on the climate system. | <ul style="list-style-type: none">• Through cooperation, promote and support the full, open and timely exchange of scientific, technological, technical, socio-economic and legal information on the climate system and climate change, and on the economic and social consequences of the various response strategies.• Through cooperation, promote and support education, training and the public's awareness about climate change, and encourage the widest possible participation in this process, including by non-governmental organizations.• Provide the Conference of the Parties information about the application of the Convention, in accordance with Article 12. |
|---|--|---|

Kyoto Protocol

In the second half of the 1990s, given that the Annex 1 Parties¹³ were unable to comply with their reduction commitments, the Kyoto Protocol was adopted. This mechanism, signed during the third session of the Conference of the Parties in the city of Kyoto, Japan, was meant to facilitate compliance with the Convention’s final objective to reduce emissions, and it established new quantitative goals for the countries. The Protocol entered into force in February 2005 for the nations that had deposited their ratification instrument, and will remain in force until 2012.

BOX 4 Obligations of all State Parties to the Kyoto Protocol (Art. 10)

- Draw up national/regional programmes to improve the quality of emission factors, activity data and local models to prepare and periodically update national inventories of HGH emissions.
- Periodically draw up national and, if applicable, regional programmes with measures to mitigate climate change and to facilitate the adoption of appropriate adaptation measures.
- Among other aspects, such programmes will be related to the energy, transport and industrial sectors, as well as to agriculture, silviculture and waste management.
- Cooperate in promoting effective ways to develop and disseminate ecologically rational technologies, specialized knowledge, practices and processes concerning climate change.
- Cooperate with the international plan to build national capacity, in particular human and institutional capacity, especially in developing countries.
- In the national plan, facilitate public awareness of information on climate change and the public’s access to such information (Kyoto Protocol, 1997).

Post-Kyoto

The unprecedented consensus among scientific, political, business and civil society communities means there is widespread recognition and acute awareness about the urgency of dealing with climate change. As a consequence, it was decided during the G-8 + 5 emerging economies summit in 2007 that, by the end of 2009, an agreement would be negotiated under the United Nations Framework Convention on Climate Change to succeed the Kyoto Protocol. In addition, during the United Nations High-Level Event on Climate Change, held in New York in September 2007, governments made a commitment to initiate negotiations on a later agreement that was to be presented at the thirteenth session of the Conference of the Parties (COP-13), held in Bali, Indonesia, in December 2007.

¹³ A group of developed countries with a quantitative commitment to the UNFCCC to reduce their GHG emissions to return, in 2000, to the 1990 volume of emissions and to maintain those levels.

During COP-13, Parties adopted the Bali Road Map with a number of forward-looking decisions representing various tracks that are essential to reaching a secure climate future. The road map included the adoption of the Bali Action Plan for developing a new agreement to replace the Kyoto Protocol upon its expiration in 2012. This plan established a framework for a new negotiation process follow-up, and made a commitment to develop the following five points:¹⁴

- Establish a shared vision on long-term cooperation to achieve the objectives of the UNFCCC;
- Promote national and/or international actions on mitigation;
- Take more adaptation actions;
- Encourage the development and transfer of technology to support mitigation and adaptation;
- Take more actions to provide financial and investment resources for mitigation, adaptation and technological cooperation.

The fourteenth session of the Conference of the Parties (COP-14) was held on 1-12 December 2008 in Poznan, Poland. This COP paid special attention to technological themes and strategies to manage and reduce risks associated with climate change, and marked the midway point on the road to Copenhagen. Parties agreed to operationalize the Adaptation Fund, making it a legal entity that grants direct access to developing countries, and progress was made on the issues of adaptation, finance, technology, the reduction of emissions from deforestation and forest degradation (REDD), and disaster management. Participants also assessed the progress achieved in 2008, and governments made a clear commitment to shift into full negotiation mode in 2009, intending to shape an ambitious and effective international response to climate change. They outlined a detailed action plan for the upcoming year, which will culminate with an agreement at the fifteenth Conference of the Parties (COP-15), to be held in Copenhagen in December 2009. COP-15 is of special importance because it will determine the successor agreement to the Kyoto Protocol, which is set to expire in 2012.

Principal contributions to climate change knowledge

In recent years,¹⁵ there has been a considerable increase in information available on the effects and implications of climate change. The most important scientific documents recently presented include the reports of the Intergovernmental Panel on Climate Change (IPCC) and the Stern Report. Although those documents do not take into account gender considerations such as inequality or women's potential as agents for

¹⁴ UNFCCC, 2008

¹⁵ See Section 2 of this document, Bibliography with Comments.

change, a series of efforts is underway to ensure the inclusion of a gender perspective in scientific documents.¹⁶

The IPCC was created by UNEP and the World Meteorological Organization (WMO) in order to understand climate change, its possible effects and adaptation and mitigation alternatives by assessing scientific, technical and socio-economic information; in 2007, it presented its Fourth Assessment Report. The report, which provides an exhaustive scientific description of the physical effects of climate change, emphasized that the evidence about global warming is unequivocal and that the warming observed in the 20th century is a product of anthropogenic activities.¹⁷

In addition to this report, the IPCC presented several other publications on associated issues involving impact, adaptation, vulnerability and mitigation in 2007, including a prognostic report on the potential effects of climate change, based on the assumption of various possible emissions scenarios around the world. Basing its finding on evidence gathered from all continents and most oceans, the IPCC concluded that regional climate changes are affecting natural systems. The IPCC also suggested that the emission of greenhouse gases will continue to increase if present mitigation policies and development practices continue, but that changes in lifestyles and behavioural patterns could help to mitigate emissions of these gases.

The Stern Report, drafted by economist Sir Nicholas Stern at the request of the government of the United Kingdom and published on 30 October 2006, deals with the impact of climate change and global warming on the world's economy. The report agrees with the scientific evidence presented by the IPCC and concludes that the economic impact of climate change is expected to be greater than previously suggested. The report predicts that the risks and impacts of climate change will reduce global per capita consumption by at least 5% now and for the rest of the century. The report also states that an increase of 5-6°C in global temperature – an altogether plausible possibility in this century – would reduce global GDP by 5-10% and the GDP of developing countries by 10%. Mitigating climate change will have a cost, and the report calculates that about 1% of the world GDP will be needed to stabilize CO₂ at between 500-550 ppm; otherwise, the world could be subject to a recession that could reach 20% of global GDP. The report cites three factors that, if subjected to appropriate policies, would result in a reduction of emissions: 1) the price of carbon; 2) technological policies; and 3) barriers that impede changes in behaviour.¹⁸

¹⁶ See specific strategies in Chapters 3 and 4 of this document.

¹⁷ IPCC, 2007.

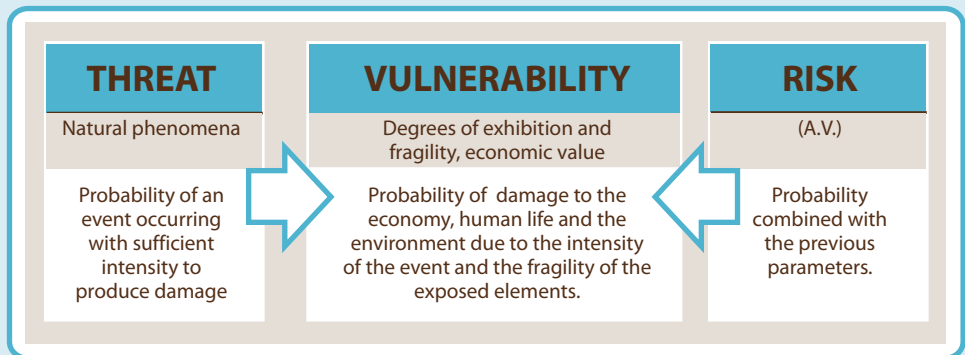
¹⁸ Stern, 2006

4. Effects of climate change on sustainable human development

The increase in GHGs above the level of concentration that existed when industrial development began in the 18th century is such that, even if we maintain present percentages, we will not be able to reverse the effects of our previous emissions. The rise in global temperature is irreversible and it is calculated that it may be as much as 5°C at the end of the present century. Some studies suggest that an average global temperature increase of more than 2°C could produce an inevitable, rapid reversal of human development and nearly unavoidable ecological damage.¹⁹ Specifically, climate change could lead to an increase in average sea level, the melting of polar ice caps or an increase in the intensity of extreme hydro-meteorological events.²⁰ These changes, compounded with present levels of vulnerability, could lead to even more disasters.

Disaster impacts are usually associated with levels of regional, sectoral and social vulnerability. Therefore, an analysis of climate change risk requires an assessment of vulnerability to the associated threat. Box 5 below summarizes this.

BOX 5 Definition of risk and vulnerability



Source: GEF - UNDP - INE (2005 - 2007a)

The **risk** exists for the world as a whole. Individuals, families and communities are constantly exposed to risks that threaten their quality of life. Climate risks have distinctive characteristics. Droughts, floods, storms and other climate events can disrupt people's lives by causing loss of income, goods and opportunities. Even though the economic costs affect everyone, climate change risks are not equally distributed.

The term **vulnerability** refers to a different concept of risk. While the word "risk" refers to exposure to extreme hazards over which people have limited control, the term "vulnerability" refers to the capacity a person is calculated to have to be able to manage these hazards without suffering a long-term and potentially irreversible loss of well-being.

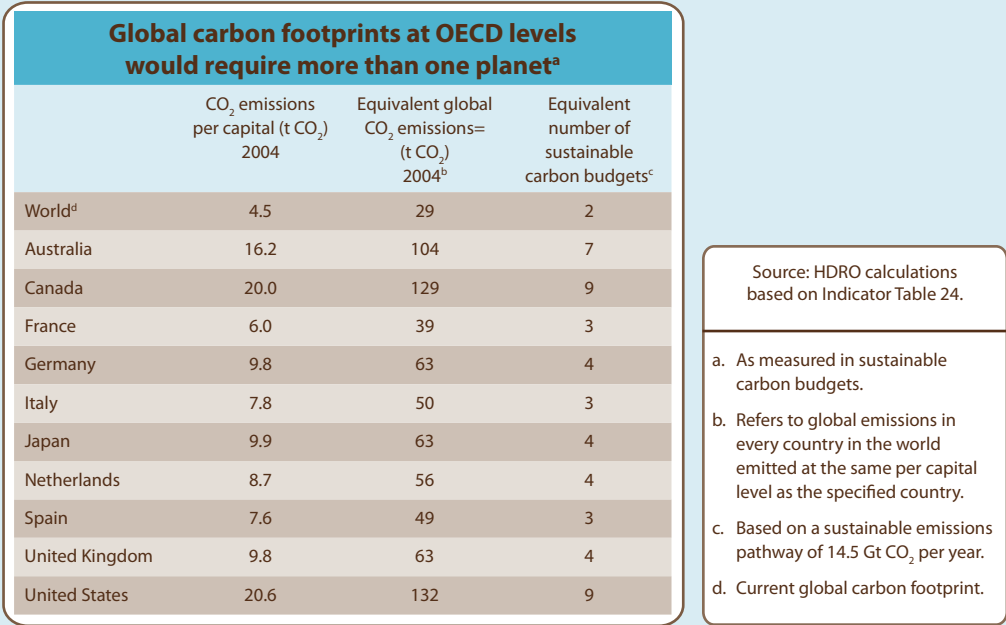
Source: UNDP, 2007

¹⁹ UNDP, 2007

²⁰ IPCC, 2007

Every country will be affected by climate change. Because projections indicate that climate change will cause less secure means of subsistence, more vulnerability to hunger and poverty, exacerbation of social inequalities (including gender inequalities) and more environmental degradation,²¹ the poorest and most vulnerable countries will be most affected. Ironically, it is these countries that produce the lowest levels of emissions.

Figure 4 Emissions of CO₂ per capita



Source: UNDP (2007) Human Development Report 2007-2008

Potential effects of climate change on sustainable human development

Biodiversity ecologists have estimated that 15-37% of natural species may be extinct by 2050 as a result of climate change and habitat change.²² It is estimated that each temperature increase of 1°C forces animals to migrate 160 km from their customary habitats as the plant species on which those animals depend for food are unable to subsist under the new, warmer weather conditions. The speed of climate change will not allow natural adaptation and will test the resilience of socio-economic systems. In addition, changes in human settlement patterns usually reduce the number of available

²¹ UNDP, 2006.

²² Thullier, W. 2007.

places to which animals can migrate. If species are not able to find new habitats or to change their life cycles, or if they do not have evolutionary processes that result in new physical characteristics, they will be condemned to extinction.

Studies have demonstrated that certain species are more vulnerable to the effects of climate change than others. For example, it is predicted that if present GHG emissions are maintained, up to 60% of mountain plant species could become extinct²³ and that coral reefs will experience episodes of bleaching every two years.²⁴ Another study published by Science magazine reports that 231 of the 704 species of coral are in danger of extinction because of the increase in temperatures and anthropogenic activities.²⁵ Climate change may also affect the abundance and composition of species. Studies carried out at various sites around the world have correlated changes in populations of some species with such effects; for example, two populations of butterflies in California have disappeared due to changes in precipitation,²⁶ and in Great Britain the number of generalist butterflies has decreased.²⁷

Agriculture and food security. The Convention on Biological Diversity (CBD) points out that agricultural ecosystems and food security are especially vulnerable to climate change. Since the practice of agriculture began more than 12,000 years ago, about 7,000 species of plants have been cultivated for food, and today 90% of our food is provided by only 15 species of plants and eight species of animals. Conserving varieties of wild ancestors of these foods could provide alternatives so that, in future, new species could be developed that are resistant to drastic climate changes. Unfortunately, many of these wild ancestors are already in danger of extinction. For example, it is predicted that one-quarter of wild potato species will disappear in the next 50 years.²⁸ IPCC projections indicate that agriculture will be more greatly affected in hot subtropical countries than in temperate subtropical countries.

Hydrology and land resources. Changes in precipitation, melting ice patterns and glacier reduction will affect the levels of rivers and lakes, limiting access to drinking water. This would direly threaten the one-sixth of the world's people who obtain their drinking water from melting mountain ice. At the same time, the inhabitants of dry lands are likely to face more frequent and longer-lasting droughts. As this situation worsens, millions of people will be forced to move.

²³ Thuiller et al., 2005.

²⁴ Donner, Knutson, & Oppenheimer, 2007.

²⁵ Carpenter et al., 2008.

²⁶ MacLaughlin et al., 2002.

²⁷ Menéndez et al., 2006

²⁸ Convention on Biological Diversity, 2007.

The rise in temperature will presumably lead to an increase in humans' demand for potable water for urban and agricultural needs. This will lead to the over-exploitation of wetlands, which, in turn, will weaken river and stream flows. The rise in temperature will lead to increased evapotranspiration, reduced runoffs and infiltration and, therefore, decreased availability of fresh water and to lower soil humidity.

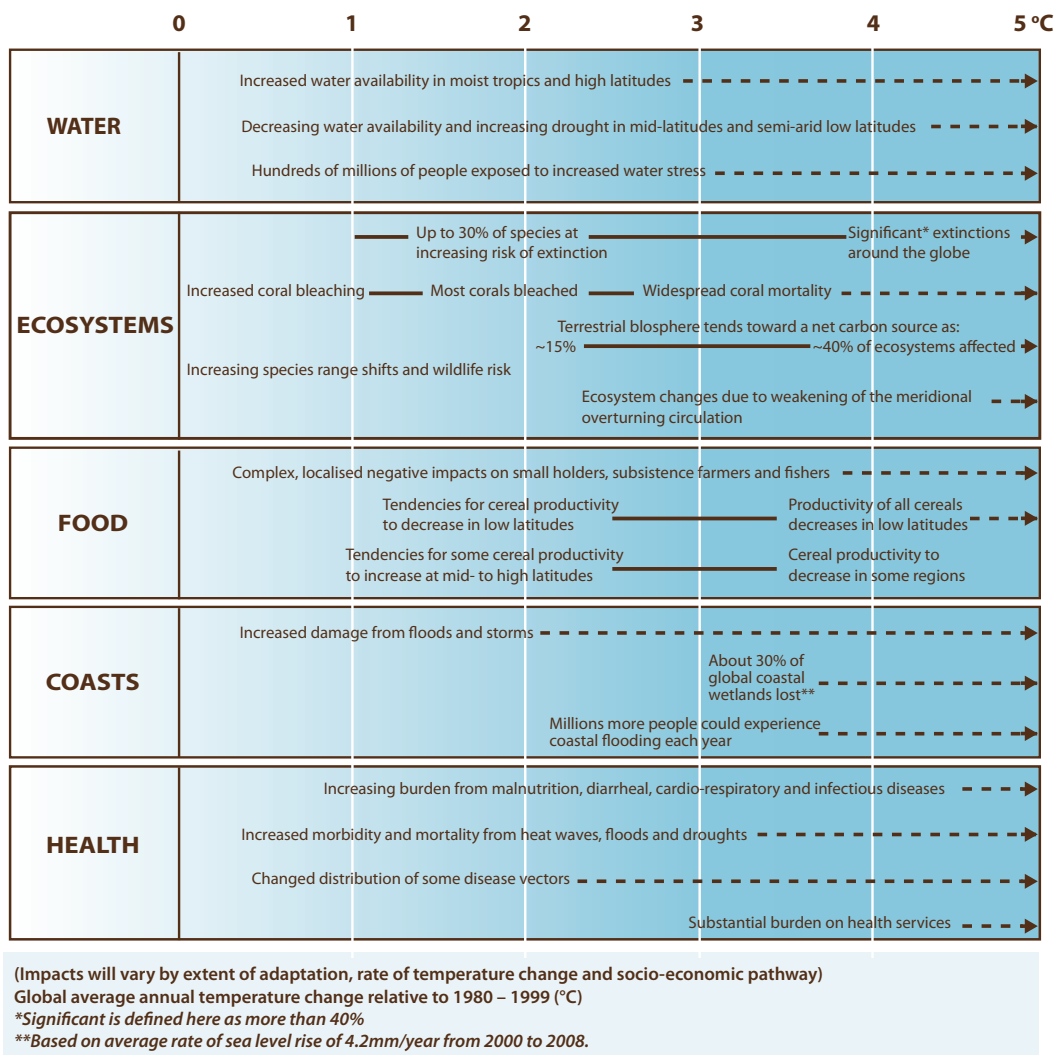
Coastal zones and marine ecosystems. Erosion of coastal zones and an increase in the sea level caused by melting ice will produce particularly significant effects: floods in coastal zones and the encroachment of salt water upon fresh water reserves such as estuaries and aquifers. The IPCC emphasizes that developing countries face major challenges to adapt to these changes, especially because these densely populated zones will be affected by other phenomena such as tropical storms.

Health. The World Health Organization (WHO) has declared that most health consequences of climate change will be adverse. It is estimated that, in 2000 alone, climate change was responsible for 2.4% of diarrhoea cases and 6% of malaria cases worldwide. Climate change will have three general types of effects on health:

1. Direct effects of extreme climate events;
2. Effects caused by environmental damage;
3. Tertiary effects caused by the displacement of populations as a result of economic problems, environmental degradation or conflicts arising from climate change (i.e., traumas, infections, psychological diseases and negative effects on food security, among others).²⁹

²⁹ World Health Organization, 2003.

FIGURE 5 Examples of impacts associated with the change in average global temperature



Examples of impacts associated with projected global average surface warming. **Upper panel:** Examples of global impacts projected for climate changes (and for sea level and atmospheric CO₂ where relevant) associated with varying increases in global average surface temperature in the 21st century. The black lines link impacts; broken-line arrows indicate impacts continuing with increasing temperature. Entries are placed so that the left-hand side of the text indicates the approximate level of warming that is associated with the onset of a given impact. Quantitative entries for water scarcity and flooding represent the additional impacts of climate change relative to the conditions projected across the range of SRES scenarios A1FI, A2, B1 and B2. Adaptation to climate change is not included in these estimations. Confidence levels for all statements are high. **Lower panel:** Dots and bars indicate the best estimate and likely ranges of warming assessed for the six SRES marker scenarios for 2090-2099 relative to 1980-1999.

Source: IPCC 2007c

Box 6 summarizes some potential impacts of climate change; it attempts to be indicative rather than exhaustive, and the scenarios shown are based on IPCC scientific studies.

Box 6	Potential climate change scenarios
Biodiversity	Changes in habitats, life cycles or evolutionary processes resulting in some species showing new physical characteristics (which might improve their chances of survival) Growing risk of extinction of up to 30% of animal and plant species Loss of wild ancestors of food, medicinal plants and domestic animals Reduction in wooded cover Loss of symbiotic relations or trophic cascades Loss of resistance of many ecosystems Changes in the structure of ecosystems and in the functionality of some species Changes in the geographic ranges of some species
Agriculture and food security	Negative impacts on agriculture and fisheries, particularly for small-scale farmers Difficulties in meeting irrigation needs Impacts on managing domestic animals (e.g., cattle, sheep, goats, pigs, and poultry) Changes in the supply and distribution of marine resources Reduced productivity of crops in dry and tropical zones Increased frequency of droughts and floods that damage or destroy crops
Hydrology and terrestrial ecosystems	More evapotranspiration and reduction in soil humidity and available water Reduced ice and snow cover, including glacial recession Degradation of mangroves and wetlands due to drinking water demands Changes in the intensity of the hydrological cycle More frequent extreme climate events such as droughts and floods The availability of water will increase by 10-40% at high latitudes and in some humid tropical zones and will decrease by 10-30% in some dry regions at medium latitudes and in the dry tropics. Reduction of water sources stored in glaciers and in the snow cover result in less availability of water for one-sixth of the human population. More uncertainty about hydrological changes

	Potential climate change scenarios
Coastal zones and marine ecosystems	- Structural damages caused by floods and storms - Rising sea levels - Coastal erosion - Population migration due to floods and disasters - Higher sea surface temperatures - Shrinking sea ice cover - Fresh water reserves invaded by salt waters - Deteriorating coral systems - Ocean acidification - Loss of marshes and mangroves
Health	- Increased morbidity and mortality due to heat waves, floods, storms, fires and droughts - Greater incidence of infectious diseases such as cholera, malaria and dengue fever, due to the extension of risk seasons and a wider geographic distribution of disease vectors - Increased malnutrition, diarrhoea, and cardiorespiratory diseases

Source: Adapted from: IPCC 2007 and CBD 2007

To summarize: Climate change poses potentially unprecedented threats to human development and well-being. Much of that threat consists inter alia in changes to hydrological cycles and rain regimes, in the effect of temperature increases on evaporation, and in the worsening severity of extreme climate events. Humans in general will be increasingly subject to ever greater risk and vulnerability as climate change damages humans' means of subsistence, health and security.

For these reasons and in accordance with the analysis established in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, the application of risk management techniques – that can accommodate sectorial, regional and temporal diversity – requires not only information about impacts caused by the most likely climate scenarios, but also those that result from lower-probability but high-consequence events. Risk is generally understood to be the product of the likelihood of an event happening and its consequences. Climate change impacts depend on the characteristics of natural and human systems, their development pathways and their specific locations.³⁰

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³⁰ IPCC, 2007.





Gender equality in the context of climate change

"The trade-offs forced upon people by climate shocks reinforce and perpetuate wider inequalities based on income, gender and other disparities."

UNDP 2007

This chapter deals with the relations between women and men in the context of climate change. An effort has been made to link both perspectives analytically as well as outline the possible impact of gender equality and climate change on achieving the Millennium Development Goals (MDGs).

1. Why begin with inequality?

The international community widely recognizes gender equality and women's empowerment as both ends in themselves and means for promoting development in general. Indeed, gender equality and women's empowerment have been defined in goal three of the eight MDGs.³¹ The Millennium Declaration states that gender equality is both a goal in itself (MDG-3) and a condition to combat poverty, hunger, and diseases and achieve all other goals.

³¹ Millennium Development Goal 3: Promote gender equality and empower women.

An analysis of the development process made from the gender approach explains why and how the effects of climate change and gender inequality are closely linked with one another and how both women and men face risks relating to climate and vulnerability. Yet it is not sufficient to establish a direct relationship between inequality and vulnerability and the causes and effects of climate change. These relationships are undoubtedly measured by taking account of environmental, social, economic, cultural and political contexts, and, therefore, vary between regions and countries, as well as within countries. Social inequalities, in particular, have serious repercussions on many women's lives, limiting their access to land ownership, housing, education, health care and participation in policy-making and decision-making – in other words, limiting their human freedoms and options.

This issue raises a number of questions, including: Do people face climate change in similar conditions? Do they have the same abilities to deal with it? Will the consequences of climate change affect everyone in the same way? It is difficult to give definite answers to these questions because large sectors of society are often excluded based on their socio-economic condition, sex, age or ethnicity, which places them in a situation of inequality.

In better-developed countries, problems of gender inequality and climate change must also be tackled because although there might be greater equality in some regards, gender inequality persists in others.

Gender refers to the differences in socially constructed roles and opportunities associated with being a man or a woman and the interactions and social relations between men and women. Gender determines what is expected, permitted and valued in a woman or a man in a determined context.

Gender equality refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality between men and women is seen both as a human rights issue and as a precondition for, and indicator of, sustainable people-centered development.³²

The gender approach provides the theoretical and methodological instrument to analyze gender relations, to understand their dynamics in specific contexts, such as climate change, and to build proposals to promote equity.³³

What is the origin of gender inequality? Inequality has its origins in development models that were used to build present societies. Social assessment of individuals based on their gender has led to an unfair distribution of accessible resources and opportunities and, therefore, of the possibilities for participation in the benefits of development.

³² UNDP Gender Equality Strategy 2008-2011

³³ The gender equity approach presupposes the recognition of the diversity of gender associated with age, ethnic group and socio-economic condition, among others.

2. Why suggest using the gender approach?

Men and women face their social, economic and environmental reality in different ways; how they participate is also different and is closely related to age, socio-economic class and culture. The gender approach attempts to take this fact into account while striving to provide an understanding of how gender identities and relations in specific social contexts have evolved historically. Analysis of the factors that determine these identities and relations enables the formulation of social transformation proposals that help to build more equitable societies. Unlike other perspectives that are also concerned with social inequality, this approach tackles two key issues:

- First, it recognizes that men and women, because of their gender, face different situations that oblige them to acquire different capacities and knowledge while also recognizing that they have different needs and interests. If men and women are not only to have equal rights in theory, but also to exercise them in practice, they will need specific measures that take their respective gender-differentiated conditions into account.
- Second, it seeks to establish equitable relations between men and women by transforming gender identities and the unjust relations that result from those identities. An approach that considers only the situation of women will not bring about this transformation. Gender inequality can be corrected if the rights, responsibilities, and opportunities of women and men are recognized and their interests, needs and priorities are taken into consideration – recognizing the diversity of different groups of women and men.

When incorporated in analyses of climate change, the gender approach promotes understanding of how the identities of women and men determine different vulnerabilities and capacities to deal with climate change; such an approach can also help to attenuate the causes of climate change. Integrating the gender approach is also helpful in designing and implementing policies, programmes and projects that lead to greater equity and equality. In particular, it may contribute to building more capacity to adapt to and mitigate climate change, insofar as it affords a clearer and more complete view of the relations people have built with ecosystems.

When incorporated in discussions about development, the gender approach strives to analyse and understand the different roles and responsibilities of men and women, the extent and quality of their participation in decision-making, and their needs and views.

For example, gender-sensitive analyses recently undertaken in different sectors such as agriculture, forestry, economy, health, education and the environment have shown that men and women experience poverty and development differently. At the same time, an understanding of the relations between gender and sustainable development requires an exhaustive analysis of patterns of use, knowledge and skills related to managing, using and conserving natural resources.

Box 7

Equity and equality

"Gender equality presupposes that the different behaviours, aspirations and needs of women and men are equally valued and favoured. It does not mean that women and men have to become the same, but that their rights, responsibilities and opportunities will not depend on whether they were born male or female [...]. Equality is achieved by means of gender equity, understood as justice in how women and men are treated according to their respective needs. Gender equity means fairness of treatment for women and men, according to their respective needs.

Gender equity implies the possibility of differential treatments to correct innate inequalities: measures that are not necessarily equal but that result in equality in terms of rights, benefits, obligations and opportunities. All UNDP documents include the term gender equality, but the concept of equity is adopted in the framework of the human development paradigm. The use of these terms is a pending debate in our organization (UNDP). [...] We have opted for the term gender equity to highlight the need to continue taking differential actions to put an end to inequality."

Source: UNDP, 2005

Inequality: A risk that has become a reality

CAs pointed out by the IPCC in 2001, *"The impacts of climate change will be differently distributed among different regions, generations, ages, classes, income groups, occupations and sexes."* The IPCC also affirmed that climate change will disproportionately affect less developed countries and people living in poverty in all countries, exacerbating inequalities in well-being and in access to food, clean water and other resources.

At the 14th Meeting of the United Nations Commission on Sustainable Development (CSD, 2006), the Women's Major Group³⁴ pointed out that climate change has specific gender characteristics because:

- Women, due to their social roles, discrimination and poverty, are affected differently by the effects of climate change and by extreme climate events that often translate into disasters.

³⁴ The CSD was established at the Earth Summit in Rio de Janeiro. It defines the need to achieve broad public participation to put Agenda 21 into practice; to do this, it recognizes nine important groups of civil society, including women. This Commission includes all organizations recognized by the United Nations Economic and Social Council.

- Women are not sufficiently represented in decision-making processes on climate change, or adaptation and mitigation strategies.
- Women must be included, not because they are “more vulnerable” but because they have different perspectives and experiences to contribute (for example, in implementing adaptation measures).

Women, like men, have particular socially conditioned vulnerabilities and capacities; these have developed through the socialization process and, therefore, must be dealt with accordingly. Women are vulnerable not because they are “naturally weaker,” but because they face different conditions of vulnerability than men. Women often live in conditions of social exclusion, such as cultural limitations to mobilize outside their immediate environment; have less access to information to early warning systems in times of disasters, and to forecasts of climate variability; and have difficulties in participating in training processes.

Women are also capable of bettering themselves and of becoming empowered or changed. Women are not passive, nor do they only receive help – rather, they are active agents with different capacities to respond to the challenges posed by climate change.

Women in Nigeria: agents for change

In 1999, Nigerian women headed a world movement to stop flaring natural gas. In Nigeria, a transnational oil company was burning most of the natural gas to cut maintenance costs and to avoid involvement with other industries; the amount of gas burnt in the country was more than in any other part of the world and emitted more greenhouse gases into the atmosphere than the whole sub-Saharan region. In 1999, the women of the Niger Delta organized simultaneous protests in Nigeria and the United Kingdom that resulted in the company’s London headquarters being closed, and the temporary closing of the wells; as the protests continued, the company turned to military control and in a confrontation 200 people were killed and many women raped. On 11 January 1999, hundreds of women members of the Niger Delta Women’s Organization for Justice, indignant about the rapes and assassinations, organized a protest, as well as several political awareness workshops for women. Finally, in January 2006, due to social pressure, the Nigerian courts cancelled the gas company’s licence and ordered that a stop be put to flaring natural gas in petroleum wells in the western zone of the Niger Delta. This unprecedented international action demonstrates women’s ability to act as important agents for change who can help to mitigate climate change.³⁵

³⁵ Adapted from Turner & Brownhill, 2006.

Likewise, the following matters must be considered in the differentiated relationship women and men have with environmental resources:

- Level of dependence on environmental subsistence resources;
- Unequal relations in using, accessing, and controlling resources, and in the distribution of benefits;
- Ownership, protection and rights on resources; and
- Differentiated knowledge about resources, their products and environmental problems.

For example, when ecosystems become more fragile and natural resources are totally lost or unavailable, poor communities – which depend on them for their survival – are the most affected, with women, the elderly and children being particularly affected.

3. Millennium Development Goals and gender inequality: data

This section takes as a reference the international agenda on poverty reduction contained in the MDGs. Data and figures show the inequalities between women and men when facing challenges and the complicated condition of many countries that makes it difficult for them to achieve the 2015 goals.

Gender, poverty and inequality

The MDG agenda proposes a holistic approach to development and poverty reduction. Poverty consists of various inter-related components, each of which needs to be addressed if poverty is to be eradicated or reduced.

Two fundamental components of the battle against poverty, as it affects women specifically, need to be taken into account: 1) the elimination of social, cultural and political barriers that have put many women and ethnic groups at greatest disadvantage and 2) the diligent pursuit of environmental sustainability. Reasons for this are as follows:

- During the past decade, the world has witnessed a continuous increase in the percentage of women who live in poverty. Poverty is characterized not only by a lack of economic income, but also by the inability to live a long and healthy life, to have full access to knowledge, to enjoy a decent standard of living and to participate in the richness of the social, cultural and economic life of a community.³⁶

³⁶ UNDP, 2007.

- Women's poverty is caused by factors such as lower wages, increased workload, insufficient social support systems, violence, meagre opportunities for participation in decision-making, and limited access to education and productive resources.
- Women's poverty is exacerbated by their situation in productive processes, their disadvantaged position in legal codes, and local customs that stymie their economic and social advancement.
- Women who become heads of households after men leave to find work elsewhere must assume traditionally male responsibilities without having the same or direct access to the financial, technological and social resources that the men had. Furthermore, the amount of money that men send home depends on the often unreliable economic opportunities open to them.
- Gender-differentiated poverty is also reflected in women's limited access to and control of environmental goods and services; in their negligible participation in decision-making; and in the distribution of environment management benefits. Consequently, women are less able to confront climate change.
- In the pursuit of environmental sustainability, the fundamental role of women in poverty reduction strategies, designing creative tools to adapt to degraded ecosystems, needs to be equally acknowledged.
- Indeed, rural women in less developed countries are the principal basic food producers. Crops in these areas particularly susceptible to drought and potential rain pattern changes. As climates change and water sources dry up, women and girls have to walk longer and longer distances to collect water. Furthermore, women work at conserving soil and water, building embankments to prevent flooding, and taking on more non-agricultural work in an effort to mitigate and adapt to climate risks.

Broadening the perspective

The above-mentioned conditions of inequality must be approached with reflections that are broader in scope. For example:

- Are ways being sought to permit women and girls to spend less time carrying water and firewood? Or do we want this time to be distributed more fairly between all family members? Or should no one have to spend time on these activities?
- How can we suggest that men should participate more when they have left in search of work elsewhere and are thus absent?

- The issue of gender and energy concerns more than firewood and coal. Have we paid enough attention to the urban context?
- What actions should be proposed to guarantee women's participation in defining mitigation and adaptation strategies?
- Are financial resources for adaptation and mitigation equally available to women and men?
- Does the technology associated with climate change take into account the needs and priorities of women?

4. Gender inequality and the MDGs

Attitudes, beliefs and practices that exclude women are often deeply rooted and, in many cases, associated with cultural, social, political and religious norms. Statistics, surveys and case studies provide valuable information about gender discrimination and inequalities by regions and are a framework of reference to assess how the MDGs are being achieved. Each of the eight MDGs enumerated below is followed by statistics that demonstrate how women and girls are particularly impacted by the issue.

1. Eradicate extreme poverty and hunger

Seventy percent of the 1.3 billion people living in conditions of poverty are women. In urban areas, 40% of the poorest households are headed by women. Women predominate in the world's food production (50-80%), but they own less than 10% of the land. A study in Rwanda showed that, when receiving the same income, families headed by women consume 377 more calories per adult than families headed by men. Women are the world's principal producers of primary staple foods (rice, wheat, maize), which account for up to 90% of the food eaten by poor rural populations throughout the world and between 60% and 80% of foods in most less developed countries.³⁷

2. Achieve universal primary education

There are 960 million illiterate people in the world, two-thirds of whom are women.³⁸ Education is fundamental to empowering women and girls, but, worldwide, 75 million children – including 41 million girls – do not attend school.³⁹ A key reason why girls cannot attend school is that they are responsible for collecting water and firewood.⁴⁰

³⁷ FAO, 2007.

³⁸ UNFPA, 2008.

³⁹ MDG monitor, <http://www.mdgmonitor.org/goal2.cfm>, accessed February 20, 2009.

⁴⁰ Lara, 2004a.

3. Promote gender equality and empower women

Women receive 70% of the wages paid to men for the same type of work, both in developed and less developed countries.⁴¹ In the latter, at least 50 million women work in the fishing industry, mostly in low paid jobs and unsatisfactory working conditions.⁴²

Women's fewer economic resources, social benefits, and political power lessen their capacity to respond in situations of environmental risk. Other aggravating factors are the scant dissemination of emergency information among women, and the fact that many women and girls can neither read nor write, a situation that is worse in monolingual indigenous populations.⁴³

Extreme climate effects, such as floods, landslides and storms, cause death and injuries and may affect women and men in different ways, depending on the means at their disposal to ensure their own safety. In Bangladesh, for example, restrictions placed on women's movements hamper their access to shelter or to medical attention when cyclones or floods strike.⁴⁴

4. Reduce child mortality

Extreme climate conditions such as out-of-season rains, floods and droughts may increase infant mortality. Water-borne diseases and those caused by poor sanitation (such as diarrhoea) and respiratory infections related to pollution, are the main causes of mortality in children under five years of age.⁴⁵

5. Improve maternal health

In Nepal, women suffer from bladder problems associated with carrying large amounts of firewood after they become pregnant.⁴⁶ Women who have had more access to education have more possibilities to practise birth control and to better care for their children's health. In Bolivia, for example, infant mortality is 113 babies per 1,000 births among women with no education, 88 among women with primary education, and 30 among women with advanced education.⁴⁷

Miscarriage in Uttarachal, India, is 30% higher than the national average and is associated with the very heavy weights women in that rural zone have to carry to collect water and firewood.⁴⁸

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⁴¹ Lara, 2004b.

⁴² Aguilar, 2004a.

⁴³ UNDP/SEMARNAT, 2006.

⁴⁴ Rowshan, 1992.

⁴⁵ Malchinkhuu, 2001.

⁴⁶ Bonetti et al., 2004.

⁴⁷ Pan-American Health Organization, 2005.

⁴⁸ Boender & Thaxton, 2004.

6. Combat HIV/AIDS, malaria, and other diseases

According to the WHO, 80% of the population in less developed countries depend on traditional medicine for healthcare. New medicines obtained from biodiversity offer a promising alternative in the fight against the principal diseases. Women hold most traditional knowledge about the medicinal properties of plants.

In sub-Saharan Africa, young women are four times more likely than men to become infected with HIV/AIDS. In South and Southeast Asia, 60% of young people infected with HIV/AIDS are women.⁴⁹

7. Ensure environmental sustainability

More than 1,000 million people in less developed countries have no access to drinking water and 2,400 million lack access to a proper sanitary service. It is generally women and girls who are responsible for collecting water and taking care of the environment in their households and communities. Women in sub-Saharan Africa, for example, spend 40 billion hours a year collecting water, which is equivalent to a year's worth of labor by the entire workforce in France.⁵⁰

Two billion people in the world do not have access to energy sources.⁵¹ It is generally women who must collect firewood and other biomass products, and they spend from two to nine hours per day doing so. Close to 80% of rural women in Asia, 60% in Africa and 40% in Latin America are affected by a shortage of firewood. Worldwide, pollution in homes caused by the smoke from burning firewood kills about two million women and children a year.⁵²

Women have access to only 5% of the concessions given worldwide to manage and use natural resources. Women invest almost all the money they receive for the use of biodiversity on improving their families' quality of life (90% to 95%). Droughts are the most serious cause of food shortages, causing 60% of food emergencies.

8. Create a global development partnership

Forming partnerships between rich and poor countries can help alleviate many of the world's environmental problems, such as climate change, loss of biodiversity, and exhaustion of fishery resources and water. Alternatively, predatory investments in natural resources in poor countries may increase over-exploitation of environmental assets.⁵³ A critical matter for women is the enormous technological and financial disparity they face when they have to deal with climate change. This disparity occurs more frequently between regions and countries.

⁴⁹ Oglethorpe & Gelman, 2004.

⁵⁰ Lenton, Roberto, Albert M. Wright, and Kristen Lewis, 2005.

⁵¹ Lara, 2004a.

⁵² Aguilar, 2004b.

⁵³ UNDP, 2003 Human Development Report. The Millennium Development Goals: A compact among nations to end human poverty.

With respect to global human development commitments, the Human Development Report 2003 points out that “[t]he enormous and unequal reach of human development in the world is reflected in the astonishing progress made in some zones that remain surrounded by others submerged in stagnation or in an abysmal recession. Equilibrium and stability for the whole world needs the commitment of all nations, developed and developing, and a global compact that permits everyone to broaden the numerous existing possibilities.”⁵⁴

5. Millennium Development Goals, climate change and gender inequality

The eight MDGs summarize the development goals agreed upon by countries. These goals are inter-related and there are multiple conditions concerning compliance. Box 8 shows how the effects of climate change have differentiated implications for women and men and how these have an impact on achieving the MDGs.

Box 8 Implications of inequality		
Millennium Development Goals	Effects of climate change	Implications
1. Eradicate extreme poverty and hunger	The main solutions proposed to eradicate extreme poverty and hunger may be affected by and impede, among others: Agricultural subsistence; commercial production; food security; access to safe drinking water; use of forests.	Loss of plant and domestic animal species used by women to ensure their families are fed. Drop in production of cereals and basic grains due to droughts and floods. Reduction, mobilization or disappearance of marine species used by women as part of their diet and as a productive activity. In many parts of the world, women are responsible for agricultural production, and climate changes could affect production and crop susceptibility to disease. This will not only reduce productivity but will increase the burden on women. Many women collect forest products and use them for fuel, food, medicines or food for livestock; the reduction or disappearance of these products endangers their own and their families’ welfare and quality of life.

⁵⁴ Ibid.

Millennium Development Goals	Effects of climate change	Implications
2. Achieve universal primary education	Climate change increases the work of agricultural production and other subsistence activities such as collecting water and firewood, which could put pressure on families to take their children out of school. Increased migration of families because of extreme climate changes and disasters could interrupt and limit educational opportunities.	It is generally women and girls who are responsible for collecting water and firewood. Extending the time they need for these tasks puts their ability to attend school at risk. According to UNHCR, 80% of the world's refugees are women and children, which is one reason why the younger generations have limited access to education. A study by IPCC in 2006 calculated that, by 2050, the number of possible climate change refugees could reach 150 million. As men migrate more often than women, many households are headed by women and need girls to help out with family work, preventing them from attending school.
3. Promote gender equality and empower women	Deaths and injuries are effects of extreme climate events such as floods, landslides and storms, and they may affect women and men in different ways, depending on their independence and the means they have at their disposal to ensure their own safety.	In different regions of the world, restrictions on the independence and empowerment of women hamper their access to shelter or medical care during cyclones, earthquakes and floods. Loss of natural resources and agricultural productivity increases women's workload and leaves them less time to participate in decision-making processes, conservation and income-generating activities.
4. Reduce infant mortality 5. Improve maternal health	Climate change will harm health because it will heighten people's vulnerability to diseases caused by poor nutrition, poor quality water, increase in vectors and more favourable conditions for spreading viruses associated with temperature and heat.	Due to women's traditional role of taking care of family health, their workload will increase and so will their probability of catching infectious diseases. Loss of medicinal plants used by women impedes their traditional capacity to treat ailments. Pregnant women are particularly susceptible to water-borne diseases and malaria. Anaemia, as an effect of malaria, causes one-quarter of maternal mortality. The high index of mortality of mothers/women during disasters, causes an increase in infant mortality and more children to be orphaned.

Millennium Development Goals	Effects of climate change	Implications
6. Combat HIV/AIDS, malaria, and other diseases	In less developed countries, the poorest households affected by HIV/AIDS have fewer resources to adapt to the effects of climate change. For example, it is harder for households headed by women and with family members suffering from AIDS to adopt new crop strategies or rear cattle. Increase in climate change related disasters has consequences that add to the risk of the spread of HIV/AIDS.	In less developed countries, the poorest households affected by HIV/AIDS have fewer resources to adapt to the effects of climate change. For example, the need to adopt new strategies for crops (i.e., irrigation) or cattle rearing is more acute for households headed by women and with family members suffering from AIDS. Post-disaster increase in the number of girls getting married at an early age, school dropouts, sexual harassment, trafficking in women and prostitution with more risk of transmitting sexually transmitted diseases, including HIV/AIDS. Because families are separated and people are forced to crowd together, migration following climate change increases the risk of HIV/AIDS infection.
7. Ensure environmental sustainability	Climate change causes species extinction, changes in their composition, alterations in symbiotic relationships and trophic chains, and other phenomena. Such alterations change the quantity and the quality of available natural resources and reduce the productivity of ecosystems. Climate change affects natural patterns of floods, droughts and glacier recession as well as the polar ice cap.	Without secure access to and control over natural resources (land, water, cattle, trees), women are less likely than men to be able to confront climate change. Limited availability of drinking water increases the work of collecting, storing, protecting and distributing it, and has negative impacts on the work done by women. Measures to adapt to climate change, including those related to combating desertification, generally require long, hard working days. At all levels (local, national, regional and international), women are not represented or do not participate in decision-making on climate change. Most policies on climate change do not reflect women's ideas, needs and priorities. Decrease in forestry resources used by women; rural women in developing countries collect forest products and use them as fuel, food, medicines or food for their livestock. The reduction or disappearance of these products will have a negative impact on the well-being and quality of life for them and their families. Environmental degradation in areas where women obtain their resources may lead them to illegally exploit resources in protected areas.

Millennium Development Goals	Effects of climate change	Implications
8. Create a global development partnership	Climate change increases the challenge of complying with the MDG. There is a need to increase financial resources for adaptation and mitigation initiatives.	Incorporate the gender approach when transferring technology and promoting programmes and projects in order to improve mitigation and adaptation. The response to climate change to support national adaptation and mitigation efforts must include principles of gender equality and ethnicity. Building capacities, management of South-South and North-South assistance and cooperation are vital in developing adequate responses. Investment in preventive infrastructure with a gender approach will lower rehabilitation costs.

Sources: Aguilar, et.al., 2007, Dankelman et al., 2008, UNDP, 2003 and Oxfam, 2005.





Do international instruments recognize the gender-climate change link?

In the past three decades, numerous international instruments, including declarations, conventions, platforms, plans of action, resolutions and agreements have been generated to ensure gender equality and to end discrimination against women; measures have been adopted on sustainable development, climate change, biodiversity conservation, the combat against desertification, and risk reduction, among others. Together, these instruments reflect how ideas and trends that guide how states, international organizations, academia and civil society think and act have evolved.

This chapter analyzes how relationships between gender, environmental sustainability, and human rights have evolved, and the importance of taking action and enacting policies to deal with climate change. The conclusion is that to improve the effectiveness of equality and sustainability principles more harmonization of international policy is needed so that policies may help to attenuate the effects of climate change and promote equitable adaptation to it.⁵⁵

⁵⁵ No attempt has been made to categorize the numerous international instruments, but to encounter a link between the basic principles of human rights of women and the international commitments related to the environment and climate change. The international Framework may be consulted for more details.

1. Declarations and conventions

Human rights as a starting point

A number of human rights treaties and agreements celebrated at international conferences and created by governments over several decades – with the growing influence of an increasingly stronger world movement in favour of women's rights – provide the legal bases to eliminate gender discrimination. These agreements affirm that women and men have equal rights and oblige states to adopt measures against discriminatory practices.⁵⁶

The starting point is found in the United Nations Charter and the Universal Declaration of Human Rights, to which all United Nations Member States adhere. After these two instruments were drafted in the 1940s, concrete descriptions were prepared on rights and freedoms. Each of the later treaties on human rights has been based on their precursor's explicit recognition of equality of rights and fundamental freedoms of each man and each woman, and has emphasized the protection of the dignity of persons.

Decisions adopted by consensus at international conferences are also powerful instruments to promote change, both within countries and internationally. The Declaration and the Vienna Programme of Action (Vienna, 1993); the Programme of Action of the International Conference on Population and Development (Cairo, 1994); the Platform of Action approved at the Fourth World Conference on Women (Beijing, 1995); Resolution 2005/31 of the United Nations Economic and Social Council; and Resolution (jj) on Financing for Gender Equality and the Empowerment of Women at the 52nd Session of the Commission on the Status of Women are all international agreements approved by consensus that firmly support gender equality and women's empowerment.

BOX 9

What is the difference between a declaration, a convention and a pact?

A Declaration is a series of norms and principles that states create and promise to comply with within their nations. The States that sign it have no obligation to comply. If they do not, they are given a "moral sanction," that is, they are reprimanded (Example: the Millennium Declaration, 2000).

A Convention is a series of agreements by states with norms and principles that oblige them to guarantee their compliance (Example: American Convention on Human Rights).

A Pact is an annex of new norms added to a Convention (Example the Facultative Protocol of CEDAW and the Kyoto Protocol).

A pact or a convention becomes effective when it is ratified. It must be borne in mind that it is not enough for states to sign the pact or convention; a state is not fully committed until it ratifies the agreement. Ratification means that it is signed as a contract committing the country to comply. At the same time, the international community (the other signatory countries) has the right to request an explanation in the case of non-compliance.

Source: UNFPA, 2008. <http://www.unfpa.org/derechos/preguntas.htm>.

⁵⁶ UNFPA, 2000.

Convention on the Elimination of All Forms of Discrimination against Women

The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), adopted by the United Nations General Assembly in 1979, is the first international treaty expressly recognizing women's human rights. CEDAW's Optional Protocol establishes procedures that allow women to make complaints about violations of their human rights;⁵⁷ it was adopted by the General Assembly in 1999 and has been in effect since 22 December 2000.

CEDAW defines discrimination against women as *"any distinction, exclusion or restriction made on the basis of sex which has the effect or purpose of impairing or nullifying the recognition, enjoyment or exercise by women, irrespective of their marital status, on a basis of equality of men and women, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field."*

CEDAW establishes that discrimination against women violates the principles of equal rights and respect for human dignity and obstructs them from participating in political, social, economic and cultural life on the same level as men. It also recognizes that gender discrimination is an obstruction to improving the well-being of society and the family, and that it interferes with the full development of women's possibilities to contribute to society.

Countries that have ratified CEDAW are committed to adopting measures necessary to eradicate all forms of discrimination against women, especially women in rural zones, in order to ensure conditions of equality between men and women; to promote women's participation in rural development and in its benefits; and to better enable them to "participate in preparing and executing development plans at all levels" and "in all community activities."⁵⁸ In addition, CEDAW recognized that women should have "equal rights to enter contracts and administer property."⁵⁹

Global environment instruments

Although there is no mechanism specifically linked to promoting and including gender equity and equality in climate change strategies, the international framework related to environmental themes offers sufficient guidelines to include such a mechanism. Specific gender equality considerations must be stressed when promoting climate change equality measures.

In 1992 the United Nations Conference on Environment and Development, also known as the "Earth Summit," was held in Rio de Janeiro, Brazil. Two legally binding agreements

⁵⁷ Aguilar, 2008.

⁵⁸ It has a Committee of Experts whose main task is to supervise and assess its proper application and to collaborate with the States Parties to end discrimination against women. To do so, national governments send periodic reports on which the Committee makes recommendations.

⁵⁹ Aguilar, 2008.

of great environmental importance were signed at the meeting: the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD), the latter being the first global agreement focussed on the conservation and sustainable use of biodiversity.

United Nations Framework Convention on Climate Change

The United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992 and entered into force on 21 March 1994. The objective of the UNFCCC is to stabilize concentrations of GHGs in the atmosphere, to prevent anthropogenic interferences in the climate system, and to allow for enough time to permit ecosystems to naturally adapt to the change; this will help ensure that food production is not threatened and allow for sustainable economic development. One of its other purposes is to raise worldwide public awareness about problems related to climate change.

In 1997, governments agreed to incorporate an addition to the UNFCCC, known as the Kyoto Protocol, with the objective of reducing emissions of GHGs by 5% between 2008 and 2012 by taking more energetic (and legally binding) measures. The Kyoto Protocol includes three flexible mechanisms designed to reduce the costs of compliance with emission reduction targets: the Clean Development Mechanism (CDM); the Joint Implementation (JI); and Emissions Trading. The Protocol, though, does not include a gender perspective in its operation or in its mechanisms.

Overall, the UNFCCC makes no mention of gender or of women and men as specific stakeholders. Its implementation has thus failed to recognize the gender aspects of climate change and has omitted any mention of gender equality and women's participation.

Convention on Biological Diversity

The Convention on Biological Diversity (CBD), adopted in 1992, is the international framework for the conservation and sustainable use of biodiversity and the fair distribution of its benefits. The objective of the CBD is to promote the sustainable use of biodiversity. This convention recognizes that biodiversity includes not only plants, animals, micro-organisms and their ecosystems, but also human beings and their needs (e.g., food, clean air, medicines and a clean and healthy environment).⁶⁰ To date, it has been ratified by 190 states.

Women's participation has been explicitly addressed within the CBD. Paragraph 13 of the Convention mentions the important participation of women in the conservation and sustainable use of biodiversity: *"Recognize the vital role that women play in the*

⁶⁰ www.cbd.int

conservation and sustainable use of biological diversity, emphasizing the need for the full participation of women at all levels of policymaking and implementation for biological diversity conservation [...].” The Conferences of the Parties (COP) and working groups have also incorporated gender language in other documents, including:

- **Programme of the working group to implement article 8 (j) of the CBD. General Principles:** *“Recognizing the vital role that women play in the conservation and sustainable use of biodiversity, and emphasizing that greater attention should be given to strengthening this role and the participation of women of indigenous and local communities in the programme of work.”*
- **The Second Working Group on Review of Implementation of the Convention (WGRI-2).** Urged the Parties in July 2007 to *“develop, review and implement their national biodiversity strategies and action plans and, in cases where there are regional strategies [...] to promote mainstreaming of gender considerations [...]”*

Since 2007, the CBD Secretariat has made specific efforts to mainstream gender. The Secretariat has designated a Gender Focal Point, and in January 2008 it worked with IUCN’s Gender Office to develop a Gender Plan of Action. This plan was approved by the Bureau of the Convention and was presented during COP-9 in Bonn, Germany, in May 2008. The Plan of Action has four strategic objectives:

- To mainstream a gender perspective into the implementation of the Convention and the associated work of the Secretariat;
- To promote gender equality in achieving the three objectives of the Convention on Biological Diversity and the 2010 Biodiversity Target;
- To demonstrate the benefits of gender mainstreaming in biodiversity conservation, sustainable use and benefit sharing from the use of genetic resources; and
- To increase the effectiveness of the work of the Secretariat of the Convention on Biological Diversity.⁶¹

United Nations Convention to Combat Desertification

The United Nations Convention to Combat Desertification (UNCCD), adopted in 1994, is the only internationally recognized legally binding instrument dealing with the problem of land degradation in terra firma rural areas. The objective of this Convention is to demonstrate that the risks of desertification are substantial and clear. Present calculations show that the means of subsistence of more than 1 billion people could be

⁶¹ Convention on Biological Diversity, 2008.

at risk because of desertification and, as a consequence, 135 million people could be in danger of being driven from their lands. Especially vulnerable are poor people living in rural zones, particularly those in less developed countries. For that reason, there is an urgent need to tackle the implications of this problem.

The UNCCD goes beyond mainstreaming gender, not only recognizing the role women play in rural sustenance, but also promoting equal participation of women and men. The prologue of the convention stresses *“the important role played by women in regions affected by desertification and/or drought, particularly in rural areas of developing countries, and the importance of ensuring the full participation of both men and women at all levels in programmes to combat desertification and mitigate the effects of drought.”*⁶² Likewise, Article 4 of the General Obligations requires the affected country to *“[p]romote awareness and facilitate the participation of local populations, particularly women, with the support of non-governmental organizations, in efforts to combat desertification and mitigate the effects of drought.”*⁶³

2. International synergy-producing actions

As mentioned by Rico (1998), the United Nations Environment Programme’s (UNEP) Senior Women’s Advisory Group on Sustainable Development suggested the first process that sought to establish a link between women and the environment. The Group began to advise the Programme on the connection between women’s roles and their potential contribution to conserving the environment and achieving sustainable development, and women’s exclusion. Later, the World Conference to Review and Assess the Achievements of the United Nations Decade for Women: Equality, Development and Peace (Nairobi 1985), was the first women’s event to include official discussion on the theme of the environment.

Thanks to initiatives taken mainly by non-governmental organizations, the World Summit on Environment and Development (Rio de Janeiro in 1992) adopted a gender perspective in all development and environment policies and programmes, leading to the promotion of women’s effective participation in the proper use of natural resources. This provided the first international precedent for including the gender perspective in promoting sustainable development.

⁶² See <http://www.unccd.int/>

⁶³ Ibid

Agenda 21 describes action priorities to achieve sustainable development “from now and into the twenty-first century.” While there is mention of women throughout the 40 sectorial and inter-sectorial chapters, chapter 24 is specifically dedicated to considering women. It focuses on the crucial role they play in changing the present consumption and production model and stresses that, if the Summit’s resolutions are to be successfully implemented, they will need to play a part in politico-economic decisions.

At the same time, there are proposed actions to end present discrimination against women. These include:

- The implementation of measures that strengthen and stimulate women’s institutions, non-governmental organizations and groups that provide training on using and managing resources.
- The promotion of a reduction of women’s very heavy workload by establishing child care centres, evenly dividing household tasks between men and women and using environmentally healthy technologies.
- The implementation of programmes that establish and strengthen preventive health and health care services directed and managed by women and that include safe, cheap and voluntary family planning services.

Agenda 21 recognizes the importance of women’s traditional knowledge and practices, stresses the contributions women have made to biodiversity conservation (Section 24.8 (a)) and asks that specific measures be adopted to transform objectives into strategies (Section 24.2(f)).

Source: *Rico, N. 1998*

At the Fourth World Conference on Women, held in Beijing in 1995, the link between gender, the environment and sustainable development was clearly defined. Chapter K of the Platform for Action makes specific reference to the environment with strategic objectives and action as central themes, including the poverty that affects many women; the need for women to participate vigorously in making decisions about the environment at all levels; and integration of the gender perspective in sustainable development policies and programmes. This perspective was later apparent in a number of international meetings that further explored the relationship between gender and sustainable development.

In the follow-up meeting to the Beijing Platform for Action (2005), the General Assembly stressed the need *“to actively involve women in environmental decision-making at all levels; integrate their concerns and the gender perspective in sustainable development policies and programmes and consolidate or establish mechanisms at the national, regional, and international levels to assess the impact of development and environmental policies on women.”*⁶⁴

⁶⁴ see <http://www.csdwand.net/>

BOX 11

What CEDAW and Beijing demand

Agenda 21 describes priorities for action to achieve sustainable development. According to the precepts of CEDAW and Beijing, governments must ensure that women – especially in rural zones – participate at all levels of decision-making concerned with environmental sustainability, and that women's interests and perspectives are adequately reflected in all policies and approaches adopted.

Furthermore, governments must ensure that women have access to and control over certain key environmental resources such as water and land. Governments also need to protect women from the effects of environmental deterioration so that women may be better able to improve their environment.

Source: UNIFEM, 2005

World Conference on Disaster Reduction (Hyogo, 2005)

The World Conference on Disaster Reduction (Hyogo, 2005) is the most recent international advance in efforts to integrate gender equity into all decision-making and planning processes related to disaster risk management. The Framework for Action of the World Conference on Disaster Reduction states:

"A gender perspective should be integrated into all disaster risk management policies, plans and decision-making processes, including those related to risk assessment, early warning, information management, and education and training (Gender consideration of action priorities).

"Develop early warning systems that are people centred, in particular systems whose warnings are timely and understandable to those at risk, which take into account the demographic, gender, cultural and livelihood characteristics of the target audiences, including guidance on how to act upon warnings, and that support effective operations by disaster managers and other decision makers (Essential priority activity to take early warning action).

*"Ensure equal access to appropriate training and educational opportunities for women and vulnerable constituencies, promote gender and cultural sensitivity training as integral components of education and training for disaster risk reduction (Essential priority activity for action for teaching and training)."*⁶⁵

United Nations Framework Convention on Climate Change

The Women's Caucuses that have been held since COP-11 have vigorously negotiated for the inclusion of the gender approach in all areas of the Convention, facilitated by the Gender and Climate Change Network - Women for Climate Justice (www.gendercc.net). Members of the Global Gender and Climate Alliance (GGCA), which was launched in 2007 at COP-13 in Bali, have also been active in promoting gender equality concerns in

⁶⁵ see <http://www.unisdr.org>

global efforts to address climate change; IUCN, for example, has worked with the UNFCCC Secretariat to incorporate a gender perspective. To date, the UNFCCC secretariat has designated a Gender Focal Point and suggested a series of steps to integrate gender into the Convention and the Secretariat.

In the UNFCCC documents, the only reference to gender is in the guide on how to prepare National Adaptation Plans of Action (NAPA). Gender equality is one of the principles included when designing the NAPA and it advises that experts – both women and men – be included on the teams working on gender questions. Many of the national reports submitted by the signatory nations to the UNFCCC Secretariat thus far stress, in very general terms, the vulnerability of women and the importance of equality.⁶⁶ Specifically, many of these NAPA recognize that women are mainly responsible for domestic chores such as collecting water, firewood (or other fuels) and producing and preparing meals. They also mention that, in general, vulnerable women are found in the poorest populations.

Some NAPAs also provide examples that show how climate change is affecting women. For example, Tuvalu reports that the reduction in the literacy rate and in girls attending school is correlated to more time being needed to collect water and firewood.⁶⁷ In Uganda, the NAPA records an increase in the number of families that marry off their daughters at an early age to get the dowry and have more resources when droughts occur. Because their husbands tend to have several sexual partners, these girls then become exposed to sexually transmitted diseases. In Tanzania, women have had to change their productive activities because they now have to buy water to irrigate their crops.⁶⁸

Very few NAPAs recognize women as important agents in adaptation activities. One of the exceptions worth mentioning is Malawi, whose NAPA recognizes gender as an important factor and stipulates that: “Several interventions are proposed that target women in highly vulnerable situations, including: (i) empowerment of women through access to microfinance to diversify earning potential, (ii) ensuring easier access to water and energy sources by drilling boreholes and planting trees in woodlots, and (iii) use of electricity provided through the rural electrification programme.”⁶⁹ Zambia also mentions that providing women with micro-credit is a priority, while Tanzania mentions that women’s groups must be strengthened to be able to support community participation.⁷⁰

In general, the NAPAs portray women as victims without the skills that would allow them to become involved in negotiations or strategic planning. Most of these plans do not even recognize that women, with the knowledge they have, can make a contribution to adaptation processes or that they should be a focal group of adaptation programmes.

⁶⁶ Aguilar, L. 2008.

⁶⁷ Tuvalu, formerly Ellice Islands, is an island country in the region of Polynesia, in the Pacific Ocean.

⁶⁸ Dankelman, et al., 2008.

⁶⁹ NAPA, Malawi, 1996 in <http://unfccc.int/adaptation/napas/items/2679.php>

⁷⁰ Ibid.

On the other hand, some reports mention that when those reports were being prepared there were consultations with groups of women and women's ministries; the problem is that these consultations do not translate into actions that involve women in any concrete manner. The direct inclusion of women both in policy-making and in project planning must be promoted.

High-level roundtable on "Gender and Climate Change" (New York, 2007)

In September 2007, the Women's Environment and Development Organization WEDO, the Heinrich Böll Foundation (HBF) and the Council of Women World Leaders (CWWL) organized a high-level roundtable on "Gender and Climate Change." This meeting was a prelude to the United Nations Secretary General's High-Level Event on Climate Change (New York, September 2007) and was attended by representatives of the United Nations, NGOs and officials from 60 countries. The roundtable included extensive discussions on the connection between climate change and gender; presentations from various countries demonstrating that relationship; mention of the importance of including the gender approach in all policies about climate change, especially in adaptation policies; and suggestions for specific steps to ensure that gender equity is included in decision-making processes.⁷¹

13th Conference of the Parties on Climate Change (Bali, 2007)

COP-13, held in Bali, Indonesia in December 2007, clearly underlined the commitments of Member States concerning climate change. There, Parties also formulated the Bali Action Plan, a crucial framework to begin negotiations to reach a global agreement on climate change by the end of 2009. The Bali Action Plan affirmed that an effective approach to climate change includes mitigation, adaptation, technology and financing.⁷²

The Bali conference led toward the promotion of gender equality: in the framework of the UNFCCC COP-13, there were efforts to promote incorporation of the gender theme. Especially noteworthy among these efforts is the 11 December 2007 meeting of the Network of Women Ministers and Leaders for Environment and their call upon the Parties and the UNFCCC Secretariat to:

- Recognize that women are powerful agents of change and that their full participation in climate change adaptation and mitigation policies and initiatives is indispensable and to ensure participation of women and female gender experts in all decisions relating to climate change;

⁷¹ The round table was moderated by the United Nations Commissioner for Human Rights, Mary Robinson, and the principal speakers were the U.N. Special Envoy on Climate Change, Dr. Gro Harlem Brundtland, the Vice-President of WEDO, Irene Dankelman, and the IUCN's Senior Gender Adviser, Lorena Aguilar.

⁷² Session number 52 of the Commission on the Status of Women (CSW) in its Interactive Panel of Experts: emerging themes, trends and new approaches to matters affecting the situation of women or equity between women and men.

- Take steps to ensure that the UNFCCC acts in accordance with human rights frameworks and with national and international agreements on gender equality and equity, including CEDAW;
- Develop a gender strategy, invest in research on climate change gender implications and establish a system of gender-sensitive criteria and indicators for governments that include national communications sent to the UNFCCC Secretariat;
- Analyze and identify protection impacts and measures, disaggregated by gender, to deal with floods, droughts, heat waves, diseases and other environmental changes and disasters;
- Design financial mechanisms to which women have access and which make them less vulnerable, recognizing the fact that millions of poor women who are affected by climate change live and work outside formal markets, and provide women and men living in poverty with greater access to commercial mitigation initiatives such as the Clean Development Mechanism (CDM).

14th Conference of the Parties on Climate Change (Poznan, 2008)

Gender and climate change advocates had a high profile at COP-14. The Global Gender and Climate Alliance (GGCA) led various events, including a High-Level Panel advocating for the inclusion of Gender in the climate change dialogue; the meeting of the Network of Women Ministers and Leaders for the Environment, which addressed the need for a gender perspective within the UNFCCC process and produced a joint letter of recommendations to the UNFCCC; and a side event on gender and climate change finance, led by WEDO, which highlighted the need for gender-sensitive funding for climate change. Further, the GGCA, led by IUCN, compiled a training manual on gender and climate change and trained 17 regional trainers from Africa, Arab States, Asia, Latin America and the Caribbean, and oriented over 50 national delegates to the UNFCCC. The orientation raised awareness about the gendered impacts of climate change and resulted in greater delegate support to address the dire need to include a gender strategy in the UNFCCC. The *gendercc women for climate justice* — a global network of women and gender activists and experts working on gender and climate justice — actively advocated for gender justice in climate change, including facilitating the daily women's caucus meetings and participating in other advocacy events.

Global Gender and Climate Alliance (GGCA)

Within the UNFCCC COP-13 framework, and in an unprecedented effort, UNDP, UNEP, IUCN and WEDO launched the Global Gender and Climate Alliance (GGCA). The principal objective of this Alliance is to ensure that policies, initiatives and decision-making processes on climate change include the gender approach at global, regional

and national levels. The fundamental principle is to guarantee the inclusion of women's voices in decision-making and in policy-making.

The GGCA's objectives and strategies aim to:

1. Integrate the gender approach in world policies and decision-making to ensure full compliance with United Nations mandates on gender equality;
2. Ensure that mitigation and adaptation financing mechanisms take equal account of the needs of poor men and women;
3. Build capacities at global, regional and local levels to design policies, strategies and programmes on climate change that recognize gender equity.

To reach these objectives, the Alliance will: establish a global policy on climate change and gender equity; collaborate with the Secretariat to prepare a plan to incorporate a gender perspective in the UNFCCC; develop gender guidelines for financing mechanisms associated with climate change; and attempt to advise UNFCCC delegates about gender and climate change.

During the Bali conference, representatives of the Alliance met with the Executive Secretary of the UNFCCC and have since begun cooperation with the Gender Focal Point. The GGCA is also developing a training module that will focus on mitigation, adaptation, financing and the technology associated with climate change.

Commission on the Status of Women

From 2002 until the present, the Commission on the Status of Women (CSW) has continued to promote awareness of the links between gender, disaster and climate change. In accordance with resolution 2006/9 of the United Nations Economic and Social Council (ECOSOC), the CSW identifies emerging global themes that require global and regional actions in each of its annual sessions. Specifically, Resolution (jj) on Financing for Gender Equality and Women's Empowerment (E/CN.6/2008/L.8) requests governments to "integrate a gender perspective in the design, implementation, monitoring, evaluation and reporting of national environmental policies, strengthen mechanisms and provide adequate resources to ensure women's full and equal participation in decision-making at all levels on environmental issues, in particular on strategies related to the impact of climate change on the lives of women and girls."

At its 46th session in 2002, the CSW broached themes related to climate change when it focused on disaster management and mitigation. In its conclusions, the Commission called for the integration of a gender perspective in ongoing research that the academic and other sectors are conducting on the impact of climate change and its deep-rooted

causes. The Commission also concluded that the results of such research should be heeded when policies and programmes are formulated and implemented.

At its 52nd session in March 2008, the CSW considered the “Gender perspective on climate change” as an emerging theme. To identify gender perspectives and women’s participation in actions concerning climate change, the participants in the interactive dialogue shared experiences on good practices at the national, regional and international levels.

United Nations Permanent Forum on Indigenous Issues

At its Sixth Session, the United Nations Permanent Forum on Indigenous Issues requested that a document be prepared to investigate and report on “the impacts of mitigation measures on indigenous peoples.” In compliance with that request, the impact of mitigation on indigenous people was taken up as a special theme at the seventh session of the Forum (April-May 2008), entitled “Climate change, bio-cultural diversity and livelihoods: the role of indigenous peoples and new challenges.” The result was a report compiled by the Support Group members at the Forum on indigenous peoples and climate change (E/C.19/2008/10), in which recommendation No. 79 recognized women’s important role, stating: *“The principles of shared but differentiated responsibilities, equity, social justice and sustainable development, must remain as key principles that sustain climate change negotiations, policies and programmes. The approach to development and the ecosystem, based on human rights, should guide the design and implementation, at national, regional and global levels, of policies and projects on climate. The crucial role of women and indigenous girls in developing mitigation and adaptation measures must also be ensured.”*

3. Conclusion: there is still insufficient explicit recognition of gender considerations in climate change

Although there are numerous mandates that demand the gender approach be integrated in all spheres of development, human rights and the environment, the approach is still absent from international climate change policies. Nevertheless, the UNFCCC is determined by the United Nations framework; therefore, decisions taken by the General Assembly and conventions or treaties concerning gender are binding. If responses to climate change are to consider the vulnerabilities and capacities of men and women, the debate about climate change should consider development and human rights.

At present, global negotiations on climate change are mainly focused on reducing GHGs by means of the UNFCCC, the IPCC, the Kyoto Protocol, and other related mechanisms. The gender dimension has not been significantly broached in considering adaptation and mitigation, and therefore they provide neither a legal framework nor a rights-based approach needed to implement responses to climate change that are equitable for both men and women.



Prospects for Gender Equality in Adaptation and Mitigation Strategies

Development and environment conservation strategies to deal with climate change have been suggested in two areas: adaptation to extreme climate events and mitigation of the causes of climate change (that is, reducing greenhouse gases). Similarly, gender mainstreaming is a globally accepted strategy for achieving gender equality: it takes a two-pronged approach of advancing equality and empowerment of women.⁷³

Reaffirming the importance of integrating gender rather than considering it as an add-on, this chapter analyses these strategies in an effort to facilitate changes in the traditional way of designing, implementing and assessing actions on climate change.

1. Strategies

Promoting gender equality and the empowerment of women⁷⁴

The establishment of gender equality is a necessary condition for human development. It is also a fundamental objective in the fight against poverty. Women and men play different roles and have different responsibilities in their families, communities, and societies. Understanding these differences is vital when developing policies, programmes and projects meant to improve people's livelihoods.

⁷³ Because many women find themselves in a condition of inequality, special reference is made to the importance of empowering women as a necessary part of establishing affirmative actions in the transition towards a fairer society.

⁷⁴ UNDP, 2005.

Gender-blind policies or programmes are potentially harmful to human development as they tend to exacerbate existing inequality or exclusion. Gender mainstreaming assesses the different implications of any planned action for men and women and pertains to legislation, policies or programmes in any area and at all levels.⁷⁵ It is a strategy to make the concerns and experiences of men and women an integral dimension of the design, implementation, monitoring and evaluation of policies, initiatives and programmes. When realized, it ensures that women and men benefit equally from the development process, thereby resulting in effective and sustainable policies and programmes.

Rather than adding women’s participation to existing strategies and programmes, gender mainstreaming aims to transform unequal social and institutional structures in order to make them profoundly responsive to gender. However, special attention may be required to compensate for the existing gaps and inequalities that women currently face.

2. Link between adaptation, mitigation and gender

Adaptation

In recent years, the world’s perception of adaptation’s role in response to climate changes has been reformulated. Adaptation was originally viewed as a secondary and long-term option if mitigation efforts were not enough; as it is now clear that mitigation efforts will not be sufficient, adaptation is now a priority. Humanity in general, but at-risk and impoverished communities in particular, must be prepared for the effects of climate change.

BOX 12

Definition of adaptation

The Intergovernmental Panel on Climate Change IPCC defines adaptation as “adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. This term refers to changes in processes, practices, and structures to moderate potential damages to or benefit from opportunities associated with climate change.”

Source: IPCC, 2001.

⁷⁵ ECOSOC, 2005.

Adaptation strategies for climate change will be more effective if made with a participatory decision-making process. To facilitate this, decision makers need to take the following issues into account:

- Equal access, control and distribution of benefits
- Viability of communal and natural resources
- Levels of vulnerability, resilience and autonomy of men and women when confronted with different threats
- Importance of local knowledge for social and economic development
- Present subsistence and adaptation gender strategies
- Disaster risk reduction management to take action on causes and lessen impacts

Gender inequality intersects with risk and vulnerability

The Human Development Report (HDR) 2007-2008 affirms that the disadvantages of women, who have historically had limited access to resources, restricted rights and little voice in decision-making, make them extremely vulnerable to climate change. Although this vulnerability varies so greatly from one location to another that one should avoid making broad generalizations, it is clear that climate change may increase present gender disadvantages.⁷⁶ A key recognition in the HDR is that as they are more vulnerable because of their gender and that it is important that women participate in planning processes to adapt to climate change.⁷⁷

Because women use and manage natural resources differently than men, and the degradation of natural resources affects them differently, women's disadvantages may increase with the change in or loss of natural resources associated with climate change. For example, rural women in developing countries are the principal producers of basic foods, and the agricultural sector is highly susceptible to risks of drought and uncertain precipitation; this means that climate change endangers food security as well as families' well-being and capacity to survive.⁷⁸

Furthermore, women, by conserving the soil and water, building embankments to avoid floods and doing more non-agricultural work, will presumably make a large contribution to the efforts required to confront climate risks. In the community of Keur Moussa in Senegal, for example, erosion was making less water available, flooding the land used for sowing crops and causing young men and women to migrate to the cities. Women's

⁷⁶ UNDP, 2007.

⁷⁷ HDR 2007/2008

⁷⁸ FAO, 2007.

organizations have helped to control erosion by building crescent-shaped canals to retain water, recover croplands and improve agricultural output.⁷⁹

Disaster risk management

The threat of climate change is associated not with an isolated catastrophe, but rather with the risk of slowly emerging disaster. In this context, adaptation and mitigation strategies, initiatives and policies should include an understanding of risk management with a gender approach and vice versa.

According to Burón, risk management seeks a permanent reduction in and control of disasters in society as part of a sustainable development proposal in the social, economic, and territorial spheres.⁸⁰ In other words, risk management results from the capacities of societies and their stakeholders to transform risk by confronting its external and underlying causes, and includes intervention methods and means that tend to reduce, mitigate or prevent disasters. Disaster risk management may function as a link between decision-making, planning, execution and control that allows women and men to analyze their surroundings and to develop proposals for concerted action to reduce existing risks, i.e., risks which, if not properly managed, may become disasters.

Risk management and empowerment of women

The following examples clearly demonstrate the need for gender-responsive risk management programmes and support and how gender-differentiated impacts become more evident during emergency situations:

- Neumayer and Plümper analyzed disasters in 141 countries and found that, when it comes to deaths, gender differences are directly linked to women's economic and social rights; in societies where women and men enjoy equal rights, disasters cause nearly the same number of deaths in both sexes. They also confirmed that differences are the result of existing inequalities. For example, boys are given preferential treatment during rescue efforts and, following disasters, women and girls suffer disproportionately more from shortages of food and economic resources.⁸¹
- Studies show that women, boys and girls are 14 times more likely than men to die during a disaster.⁸²
- During the cyclone disasters in Bangladesh in 1991, 90% of the 140,000 fatalities were women.⁸³

⁷⁹ Dankelman et al., 2008.

⁸⁰ Burón, 2007.

⁸¹ Neumayer and Plümper, 2007.

⁸² Peterson, K. 2007.

⁸³ Zeitlin, 2007.

- More women than men died during the heat wave that affected Europe in 2003. In France, most deaths were among elderly women.⁸⁴
- During the emergency caused by hurricane Katrina in the United States, most of the victims trapped in New Orleans were African-American women with their children, the poorest demographic group in that part of the country.⁸⁵
- In Sri Lanka, it was easier for men to survive during the tsunami because mainly boys are taught how to swim and to climb trees. This social prejudice means that girls and women in Sri Lanka have very few possibilities of surviving such disasters in the future.⁸⁶
- Following a disaster, it is more likely that women will be victims of domestic and sexual violence; they even avoid using shelters for fear of being sexually assaulted.⁸⁷
- Nutritional condition determines a person's capacity to survive disasters.⁸⁸ Yet women are more likely to suffer from malnutrition because they have specific nutritional needs when they are pregnant or breast-feeding, and some cultures have food hierarchies. For example, in South and Southeast Asia, 45-60% of women of reproductive age are below normal weight and 80% of pregnant women have iron deficiencies. In sub-Saharan Africa, women lift much heavier loads than men but consume fewer calories because the culture dictates that men are to receive more food.⁸⁹
- In some cases, gender differences also increase men's mortality in disaster situations. Many men are exposed to risky situations and even die because they believe that, by being the "stronger sex," society expects them to take heroic rescue action and they need not take precautions. For example, there were more immediate deaths among men when hurricane Mitch struck Central America not only because men were engaged in open-air activities, but also because they took fewer precautions when facing risks.⁹⁰

The exclusion of women from climate change decision-making processes silences the voices of half the world's population, denies women their rights, fails to uphold human rights principles and deprives society of many skills, experiences and capacities unique to women. Indeed, women's environmental resources, knowledge, and practices can be key elements in climate change processes, as is shown by these three examples:

⁸⁴ Pirard, P. et. al., 2005.

⁸⁵ Gault, B. et. al. (2005) and Williams, E. et. al., 2006.

⁸⁶ Oxfam, 2005.

⁸⁷ Davis et al., 2005.

⁸⁸ Cannon, 2002.

⁸⁹ FAO, 2000.

⁹⁰ Bradshaw, 2004.

- In 1998, the Honduran community of La Masica was given gender-sensitive community training about early warning and risk systems. With that training, the women in the community took charge of monitoring the early warning systems that had been abandoned. Six months later, during Hurricane Mitch, not a single death was reported in La Masica because the municipal government was able to evacuate the population in time.⁹¹
- During a drought in the small islands of the Federated States of Micronesia, the women's ancestral knowledge about the islands' hydrology allowed them to easily find places to dig wells for drinking water. The women do not normally become involved with decision-making, but the information they provided benefited the entire community.⁹²
- In Bangladesh, climate patterns have changed in recent years and rains have become increasingly stronger and less predictable. The floods of 2004 left enormous losses with 280 people losing their lives, around four million being evacuated, and thousands of others being left without food or housing.⁹³ In the district of Gaibandha, a woman named Sahena is trying to deal with these flood patterns. She has organized a committee in her community to prepare women for floods. The committee teaches the women to make portable clay ovens, raise their houses, and use radios to hear of possible floods or climate change. Although Sahena faced resistance from her husband and other women, she is now president of the committee and has earned the respect of the community. Efforts such as hers save lives and empower women.⁹⁴

These experiences make it abundantly clear that women, while disproportionately vulnerable to the adversities of climate change, are not passive, and can become agents of change.

⁹¹ Sánchez del Valle, 2000.

⁹² Anderson, 2002.

⁹³ MAAS, 2004.

⁹⁴ Oxfam, 2008.

BOX 13**Seven principles for including a gender perspective in reconstruction and recovery: Work done in disaster situations is not gender-neutral**

1. Think big: gender equality and the principles of risk reduction must guide all disaster mitigation aspects, responses to disasters and reconstruction. The window of opportunity is quick to close.
2. Know the facts: gender analysis is imperative to directly helping victims and planning an equitable recovery.
3. Work with women in base organizations: in communities, the women's organizations have information, knowledge, experiences, networks and resources that are vital to increasing resilience in the face of disasters.
4. Work with and build the capacities of already existing women's groups.
5. Resist stereotypes: base all initiatives on knowledge of the specific contexts and differences of each culture, economic situation, as well as politics and gender, and not on generalizations.
6. Use a human rights approach: democratic and participatory initiatives help women and girls more. Both men and women have a right to the conditions they need to enjoy their fundamental human rights, as well as simply to survive.
7. Respect and build women's capacities. Avoid overburdening women, who already have a very heavy workload and many family responsibilities.

Source: Gender and Disasters Network, 2005.

Mitigation

While there has been somewhat more exploration of the links between gender and climate change adaptation, the gender aspects of mitigation are still preliminary. Actions associated with mitigation are grouped into two areas: 1) the reduction of GHG emissions and 2) the capture, fixing and sequestration of carbon. In each case, the solutions or initiatives are different and, consequently, so is the way in which gender considerations are articulated.

BOX 14**Definition of mitigation**

In the context of climate change, mitigation is "an anthropogenic intervention to reduce the sources of greenhouse gases or enhance their sinks." It is focused on limiting net emissions so as to slow and eventually reverse the rise of greenhouse gases in atmospheric concentrations.

Source: IPCC (2001).

Considering that developed countries bear historical responsibility for the vast majority of GHG emissions and have achieved a greater degree of economic development, mitigation actions are generally taken there, while adaptation actions tend to be taken in less developed countries. However, it is important to link these two aspects to confront the effects of climate change, as well as to relate them to combating poverty, which is the priority in less developed countries.

In its conclusions, the Oslo Policy Forum, a three-day conference held in Oslo in February 2008 to exchange information about disaster risk reduction, requested that better links be identified between climate change mitigation efforts and disaster risk reduction to provide comprehensive multi-hazard protection; maximise the efficiency of investments; and further strengthen sustainability by ensuring that investments in these areas are not themselves vulnerable to other types of risk.⁹⁵

Emissions patterns and emission reduction technologies: gender implications

It is widely recognized that industrialized countries are primarily responsible for GHG emissions. What is less clear is whether men share a similar responsibility for generating greater emissions than women, and whether or not this is even relevant. While identifying developed countries as the primary emitters is more widely accepted, determining gendered emissions patterns is much more complicated. Furthermore, researchers and practitioners have taken different positions on whether there is anything to be gained from a focus on this area.

Despite the preliminary work that has been done to identify gendered emission patterns, some argue that there is little to be gained from analyzing whether men or women bear primary responsibility for emissions, and assert that it is more urgent to generate diverse analyses to identify social, political and planning conditions – in different regions and countries – that affect the possible reduction of emissions.⁹⁶

On the other hand, some contend that gender implications are related to emissions. A number of preliminary studies made in Europe, including one promoted by the government of Sweden,⁹⁷ have investigated the differences between the “ecological footprint”⁹⁸ of women and men of different socio-economic levels, including their lifestyles and their resulting contributions to GHG emissions. One study, for example,

⁹⁵ Oslo Policy Forum, 2008.

⁹⁶ Wamukonya and Skutsch, 2002.

⁹⁷ Johnsson-Latham, 2007.

⁹⁸ UNDP, 2007.

analyses the place of gender in transport – an important sector in mitigation strategies – and how emissions related to transport have a clear gender differentiation. The study notes that present transport systems have been designed with a stereotypical view of “middle-aged, full-time working men,” while neglecting women’s much higher dependency on public transport. For work and recreation, women travel by car less frequently and over shorter distances, use smaller cars with fuel-saving technologies, and travel by air much less often than men. Thus, they contend that a greater proportion of emissions can be attributed to male activity.

Similarly, in Great Britain in 2007, a group of organizations launched the “Women’s Manifesto on Climate Change” in which they suggested that the responsibility for emissions sometimes seems to be linked to the division of work according to gender, economic power and men’s and women’s different consumption and recreation habits.⁹⁹ The survey which led to the publication showed that 80% of the women interviewed were concerned about climate change, and the Manifesto asks the British Government to take environmental mitigation and protection measures in a way that will ensure gender equality and recognize that existing inequality, both in developed and in less developed countries, makes it difficult to promote work on climate change.

A workshop held in Montreal in 2005, organized by Women in Europe for a Common Future (WECF), the Financial Instrument for the Environment of the European Union (LIFE), and the Gender, Environment and Sustainability Network (GENANET), also identified the need for gender-disaggregated data related to causes of climate change, such as energy consumption/contributions to GHG emissions and consumption patterns, and better information on the role of politics in technologies, infrastructure and differentiated impact.¹⁰⁰

The Intergovernmental Panel on Climate Change (IPCC) mentions various technologies and practices that may mitigate the GHGs produced by different sectors.¹⁰¹ The strategies include renewable energy resources (water, solar, wind, geothermal), the use of biomass, the use of first- and second-generation biofuels, improved management of land used for crops or for livestock, restoring degraded peat bogs, improved cultivation techniques, afforestation, reforestation, forest management, the reduction of deforestation, and the use of bioenergy, among others.

⁹⁹ Women’s Environmental Network and National Federation of Women’s Institutes, 2007.

¹⁰⁰ See WECF: www.wecf.eu LIFE: <http://ec.europa.eu/environment/life/GENANET>: <http://www.genanet.de/index.php?id=2&L=1>

¹⁰¹ IPCC, 2007.

Carbon capture, fixing or sequestration

Carbon capture, fixing or sequestration measures are intended to increase storage of GHGs by means of “sinks”; sustainable agriculture, forestry (forestation, reducing deforestation and reforestation) and the conservation of nature may provide some means of increasing the storage capacity of these gases. Unlike other mitigation strategies, however, these actions are primarily directed at the less developed countries, many of which have ecosystems, such as forests, mangroves and peat bogs, and other habitats, that fix or capture carbon.

There are many examples that demonstrate how women have become involved in reforestation, afforestation, regenerating ecosystems and preventing deforestation, and it is essential to emphasize the significant role women play in these strategies used to preserve and increase carbon sinks. For example, women in Guatemala, Nicaragua, El Salvador and Honduras have planted 400,000 maya nut trees (*Brosimum aliscastrum*) since 2001 as part of a project supported by the Equilibrium Fund. This project not only increases the women’s food sources, but also provides potential for those women to benefit from climate change finance, as the Equilibrium Fund is trying to participate in carbon trading with the United States and Europe. Such specific projects may improve women’s quality of life and, at the same time, serve as climate change mitigation and adaptation strategies.¹⁰²

Other cases have shown the negative consequences of excluding women or ignoring their needs. For example, various projects in India and Nepal faced serious problems in implementing their strategies for reforestation and the protection of forests and reserves because they did not have a gender perspective. Many of the objectives of these projects could not be met because the projects did not recognize that, needing firewood for cooking, women enter the reserves at night or exploit the forests in neighbouring regions. Forest rangers do not know how to stop the women from entering the reserves for fear that they will be accused of rape, and the project formulators failed to consider women’s knowledge about how to monitor deforestation or implement more effective reforestation strategies.¹⁰³

Reducing Emissions from Deforestation and Forest Degradation (REDD)

It is estimated that close to one-quarter of all GHG emissions are due to deforestation and other types of land degradation,¹⁰⁴ and recent studies have concluded that tropical forest loss will increase global warming.¹⁰⁵ In recognition of the this sector’s significant

¹⁰² The Equilibrium Fund, 2007.

¹⁰³ Agarwal, 2002.

¹⁰⁴ IUCN, 2007.

¹⁰⁵ Bala et al; Mahli et al, 2002.

contribution to climate change, the Parties at COP-13 in Bali recognized the urgent need for developing countries to adopt significant measures to reduce emissions caused by deforestation and forest degradation;¹⁰⁶ today, there is hope that a global agreement for moving forward with REDD will be in place by COP-15, to be held in Copenhagen in December 2009.

REDD is “a measure designed to provide positive incentives to developing countries to slow down their rates of deforestation and forest degradation to reduce emissions of greenhouse gases (mitigation),”¹⁰⁷ to be accomplished by industrialized countries compensating developing countries for avoiding deforestation. These programmes have the potential to achieve significant sustainable development benefits for millions of people worldwide, and may create opportunities for including local and indigenous people in the climate change process. It will also help improve the planet’s resilience to climate change, and has significant co-benefits, such as helping to conserve biodiversity and sustain essential ecosystem services. Nonetheless, REDD also has to deal with many challenges, including equity issues, the challenge of permanence, and the risks that affected people may be excluded from the decision making, or that indigenous peoples’ rights may be violated.¹⁰⁸

REDD also has serious implications for women. In several parts of the world, women play an important role in preserving forests. For example, groups of women in Zimbabwe administer forestry resources, plant trees, build nurseries and assist women in acquiring wooded areas.¹⁰⁹ REDD provides an opportunity to reward women for their biodiversity stewardship (especially regarding saving seeds and nurturing trees) through targeted and effective public governance measures, and could provide an opportunity for women to be paid for their time. But the major concern regarding gender is that REDD, as a market mechanism, could exacerbate existing gender inequalities. Women have less access to formal education than men and thus fewer formally acquired skills (such as proficiency in foreign languages), making it much harder for women to engage in technical and legal negotiations or to have sufficient education to benefit significantly from REDD projects. Thus, to ensure that women are not negatively impacted, international negotiations or regimes on REDD must faithfully comply with international and national commitments on gender equality and equity and ensure, from the beginning, women’s full participation and integration in national and international policy-making and in the different applications of REDD. Finally, men and women must share equally in the benefits obtained from applying REDD strategies.

¹⁰⁶ UNFCCC, 2008.

¹⁰⁷ McNeill, 2008.

¹⁰⁸ Ibid.

¹⁰⁹ NBSAP, Zimbabwe

Reducing new emissions with bio energy

There are many environmental, economic and social risks associated with bioenergy, as well as potential opportunities to improve environmental conditions and people's lives. However, to appropriately plan for and mitigate the risks while ensuring that these opportunities provide benefits for both women and men, it is essential to analyze the gender implications of bioenergy.¹¹⁰ For example, first-generation biofuels require raw material provided by staple crops (e.g., maize, sorghum, sugar cane, etc.), and producing them could cause price increases and limited access to and supply of these food products. This would affect women and their families because they are more vulnerable to food problems, are the main providers and producers of food in many regions, and use natural resources that could vanish with the expansion of monocultures,¹¹¹ which are agricultural plots focusing on a single-crop such as wheat or corn.

On the other hand, producing and using bioenergy and biofuels could benefit women if accompanied by policies and practices that try to reduce poverty and gender inequalities. Using biofuels on a small scale and with techniques appropriate to a specific context could meet the energy needs of women while simultaneously satisfying women's basic needs and considering the effects on their workload, health, family income and access to natural resources. For example, producing jatropha biofuel may lead to restoring the landscape because it is resistant to arid conditions and, when sown as a "live fence," may reduce soil erosion and increase nitrification and water retention. Small-scale jatropha community initiatives have also served to empower women. In Ghana, women use jatropha biodiesel to produce karate (shea butter) cream, and in Mali its seeds are used to produce soap.¹¹² In Kenya, local biofuel businesses are sources of income for farmers, both men and women, who change the way firewood is used to have cleaner and more efficient energy sources.¹¹³

3. Adaptation and mitigation strategies: actions on gender equality

Promoting mitigation and adaptation provides an opportunity to outline proposals that would allow men and women to work in conditions of equality when developing innovative activities. At the same time, this would help to ensure *de facto* and *de jure* equality between women and men. These proposals call for a number of measures, including:

¹¹⁰ Fossi & Lambrou, 2002.

¹¹¹ Araujo & Quesada Aguilar, 2007.

¹¹² GEF-UNDP Small Grants Programme. Project description in second section of this book.

¹¹³ More examples in Araujo & Quesada, 2007.

- Carrying out national and global studies about sex-differentiated impacts, with emphasis on capacities to assimilate urgently needed adaptation and mitigation measures.
- Identifying gender aspects of the technology and financing of climate change projects.
- Developing and applying gender-sensitive criteria and indicators in all UNFCCC and Kyoto Protocol instruments and mechanisms.
- Incorporating gender equality in the Clean Development Mechanism (CDM) of the UNFCCC, a mechanism that promotes large-scale projects in developing countries. However, women and men with few financial resources have found it practically impossible to be included in these initiatives. For example, despite the fact that access and control of energy sources are central to women's empowerment and their capacity as entrepreneurs, the CDM was formulated without taking into account the progressive increase in women's access to energy in developing countries. Nor does the CDM include initiatives to avoid deforestation, although women and their organizations contribute to such initiatives.
- Promoting the inclusion of gender criteria in international environment markets. Some countries and communities have used money obtained as payment for environmental services, such as initiatives to fix carbon, to promote equity and equality. In Costa Rica, the state has sold and transferred forest zones to groups of women so that they may continue receiving the advantages of environmental services. Scholarship systems have also been created to train the young people in forest management.
- Understanding and working with different patterns of using natural resources, and the gender- differentiated impacts and effects of climate change.
- Promoting women's equal access to land ownership and other resources needed for effective socio-economic participation, such as capital, technical assistance, technology, tools, equipment, markets and time.
- Recognizing the importance of domestic work and the knowledge it brings to matters concerning climate change, and to promote men's participation in this sphere.
- Training both women and men in methods for increasing their productivity with new silviculture technologies that may allow for greater productivity in a changing climate. These include, for example, techniques for nurseries, site selection, species selection, land preparation, sowing, weeding, and maintenance.

- Training women how to reduce and prevent fires. Preventing forest fires and controlling agricultural burning is the most effective prevention measure in managing protected areas and wooded zones. In Indonesia, Namibia, Central America and the Philippines, professional forest fire fighter brigades and squads have trained women who live in zones bordering protected areas and in zones of influence. Women can also help in the replacement of slash and burn agricultural with other practices, such as participation in mapping zones to control the risk of forest fires and agricultural burning and in equipping communities.
- Using a “bottom-up” model when preparing plans and programmes to assess marginalized people’s knowledge, instead of applying a model that favours only opinions that come from above.
- Carrying out studies with a gender approach to consumption and transport patterns, in both developed and developing countries, based on the questions, “Who? How? And why?”
- Analyzing the traditional technology-masculinity link and how it affects the discourse and work priorities on mitigation.
- Investigating how machismo also disempowers men and working with them to find a new definition of masculinity that has to do with self-mastery rather than with power over others – “others” being understood as women, other men, children, and nature.
- Adopting principles of gender equality in international negotiations on climate change and regional, national and local climate policies at all stages of the negotiating process, from research, analysis, and design to the implementation of mitigation and adaptation strategies.
- Basing climate change mitigation and adaptation strategies on gender strategies already practised in agriculture, livestock raising, water resources management, coastal zones management and disaster risk management.
- Developing national and local government strategies to improve natural resources and to ensure women have access to and control of them; to create educational and training opportunities in areas related to climate change; to encourage the development of technologies that take women into account; and to foster the transfer of technology to women.
- Including the gender approach in bioenergy policy-making and planning so as to ensure that the concerns and needs of men and women are given equal attention.
- Giving women access to credit, information and carbon fund markets so that they can learn about and decide which resources and technologies can satisfy their needs.

- Ensuring that women and men have capacities built on methods that increase carbon retention through the use of new forestry technologies. Access to and equal distribution of the economic benefits derived from forestry services must be promoted.

Some of the following actions refer to what have been called “gender essentials”:

BOX 15

Gender essentials

1. Effective participation. Refers to the possibilities of speaking, being listened to and valued, rather than simply to numerical participation (percentages-quantity).
2. Development of skills to gain access to and control over resources and their benefits. Women's subordinate relationship to men defines a type of access to and limited (and at times non-existent) control over resources and opportunities. This has been used in development as a part of gender analysis.
 - Access is defined as being able to participate, use and benefit.
 - Control refers to authority, property and the power to make decisions. In some circumstances, women may have access to (the possibility of using) a resource – land, for example – but have limited control over it (as they do not own it, they cannot decide about whether to sell or to rent).
 - Resources (understood as goods and means): different types of resources include economic or productive (e.g., land, equipment, tools, work, credit); political (e.g., leadership, information and capacity to organize); and time (one of women's scarcest resources). The benefits of using resources are economic, social, political and psychological rewards, including the satisfaction of having met basic and strategic needs, such as food, housing, education, training, political power, and status.
3. Joint responsibility and equitable redistribution of work.
 - Productive work: Includes producing goods and providing services for consumption or sale. This type of work usually refers to activities that bring an income and is counted in national censuses and statistics.
 - Reproductive work: Includes the care and maintenance of the domestic unit and its members, as well as management and care of children, food preparation, collecting water, buying provisions, doing domestic chores and caring for the family's health. This type of work is not considered as work in society and no monetary value is placed on it.
 - Community work: Includes collective organization of social and service events. This type of work is not considered in economic analyses, even when it involves many hours of voluntary work.

4. Negative effects of gender inequality and suggestions on how to combat it

The following pages present an analysis of a series of adaptation and mitigation measures which highlight some of the possible negative impacts that may occur if gender relations are not specifically considered; the analysis also includes suggestions to consider when designing and implementing such measures.

BOX 16

Negative effects of gender inequality and suggestions

 1 Managing infrastructure and settlements¹¹⁴

Measures	Possible negative impact	Suggestions
Build breakwaters or seafronts, dikes and barriers against rising tides	Creates job sources that favor hiring a male work force and provide few – or no – opportunities for women. May ignore the impact on women's productive activities (hand digging for molluscs, for example), fail to address the consequences of that impact.	Promote training and hiring of both women and men. Ensure access to wage-earning productive activities to improve living conditions for families. Include gender criteria in Environment Impact Assessments (EIA).
Re-zone settlements and productive activities in coastal areas¹¹⁵	Creates job sources that favor hiring a male work force and provide few – or no – opportunities for women. May ignore the impact on women's productive activities (hand digging for molluscs, for example), fail to address the consequences of that impact.	Involve women in monitoring the effects of climate change, for example, in coral ecosystems and in aquaculture. Include women in strategies to adapt to the reduction of marine species or the management of new marine species. Develop initiatives to recover and reforest mangroves. Implement integrated coastal management policies that consider risk management and gender approaches. Include gender criteria in Environment Impact Assessments (EIA).
Build bridges to cross areas subject to flooding	Creates job sources that favor hiring a male work force and provide few – or no – opportunities for women. Ignores men and women's specific interests and needs related to the use of space; if bridges are built exclusively for transport, this may lengthen or make more difficult many women's workday by increasing distances they must travel.	Consider the practical needs of mobility. Promote training and hiring of both women and men. Develop land use with a gender approach. Include gender criteria in the EIA.

¹¹⁴ See Siles y Soares, 2003.

¹¹⁵ See Aguilar and Castañeda, 2000.

Measures	Possible negative impact	Suggestions
Build structures to obtain alternative energy sources (e.g., dams, windmills, geothermal wells)	Creates job sources that favor hiring a male work force and provide few – or no – opportunities for women. May change or exhaust some of the resources women use for agricultural work, productive activities and household consumption	Promote training and hiring of both women and men. Ensure access to resources used by women. Include gender criteria in the Environment Impact Assessments (EIA).
Divert fresh water to areas where there is a water shortage (dikes, water transfer, or irrigation canals) or increase extraction from subterranean water reserves	Often ignores women's fresh water requirements for their productive and reproductive activities. Can lengthen and further burden women's productive and reproductive workday by placing water sources in distant zones. Privatizing water entails high prices, loss of supply, health problems, corruption, etc., making it harder for poor women and their families to have access to it.	Use a gender approach when diagnosing and planning communities' fresh water requirements.

2 Managing ecosystems¹¹⁶

Measures	Possible negative impacts	Suggestions
Introduce native and salt-tolerant plants and animals to protect/re-vegetate the coast	Has negative effect on women's interests and needs in coastal zones, if varieties introduced affect resources specifically used by them. If women are ignored in decision-making, their knowledge and practices concerning environmental coastal resources may be excluded.	Analyze gender relations associated with the use of, access to, management and control of coastal environmental resources. Consult with both women and men when introducing new plants and animal species. Create jobs with equitable participation of women and men.

¹¹⁶ See Aguilar Lorena et al., 2002.

Measures	Possible negative impacts	Suggestions
Introduce varieties of plants and crops tolerant of high temperature	Usually requires water and other resources used by women for reproductive work and household consumption. This may increase women's productive and reproductive ¹¹⁷ workload.	Analyze the impact of introducing new varieties and promote a more equitable distribution of reproductive work. Facilitate equitable access to and control of resources, as well as the distribution of their benefits (including productive resources, jobs, training and credit). Encourage exchanges of knowledge and practices between women and men about managing species.
Restore damaged ecosystems	Women often partake in voluntary (unpaid) work in rehabilitation and conservation activities. Restoring damaged ecosystems may worsen gender inequality by encouraging additional voluntary (unpaid) work in these areas.	Promote joint responsibility and redistribution of reproductive work in families, to give women free time for other activities. Encourage paying women for their work on environmental restoration. Encourage leadership and women's effective participation in organization and decision-making.
Establish natural protected areas and biological corridors	Prohibits productive activities, such as the gathering of non-timber forest products or medicinal plants, that are sources of income for households, some of which are poor and headed by women.	Take advantage of and pay for women's and men's knowledge about plant and animal species in natural protected areas and corridors. Analyze gender relations associated with the use of, access to, management and control of resources.
Introduction of herbicides	Uses herbicides without considering gender specifics when chemicals and containers are handled. They injure men and women (for example, during pregnancy and breastfeeding) in different ways.	Analyze the production process, paying attention to the use of herbicides by people with access to chemicals and containers.
Introduce drought-tolerant crop varieties	Lengthens the productive or reproductive workday (for example, by extending the growth period of plants).	Consider options that tend to reduce women's workdays. Ensure that alternatives are helpful to local families' food security and do not damage health or the environment.

¹¹⁷ See Grown, Caren et al., 2005. Reproductive work consists of managing a household, cooking, cleaning, gathering wood and hauling water, maintaining the home in good condition, and caring for family members, friends, and neighbors.

Measures	Possible negative impacts	Suggestions
Implement strategies for reforestation, aforestation, deforestation reduction, and soil degradation reduction	Harms women's interests and needs if these practices affect or limit access to resources they specifically use. If women are not consulted, their knowledge and practices related to environmental resources may be excluded. Creates job sources that favor hiring a male work force and provide few – or no – opportunities for women.	Analyze gender relations associated with the use of, access to, management and control of environmental resources Promote equitable integration of women and men in mitigation strategies.
Establish aquaculture, including mariculture, to compensate for losses in food production caused by extreme climate events	Projects often replicate the traditional work division and maintain inequality in access to productive resources and their benefits; thus, women's active participation in productive processes (for example, in fishing) is often ignored.¹¹⁸	Promote equitable integration of women and men in productive and reproductive activities.

3 Productive activities

Measures	Possible negative impacts	Suggestions
Change crop irrigation, times, type and uses	Removes water sources for domestic use or places them further away. Lengthens or further burdens the productive and reproductive workday.	Consider women as water users, both domestically and for production such as growing crops and raising animals. Analyze the use women can make of irrigated land to provide subsistence foods. Promote technologies appropriate to the needs of women and give them the proper training. Encourage equality in ownership of irrigated land.
Substitute agriculture	Projects often fail to consider women's participation in agricultural activities, thereby excluding them from new processes. Raises obstacles to using, having access to, managing and controlling resources (land, credit, and training).	Build new capacities for women and create non-traditional job sources.

¹¹⁸ Women often are responsible for making nets, collecting bait, fishing in estuaries, on coasts and in intertidal zones, processing and selling, and working on fish farms and in processing plants. From the coast, they also support their companions with tasks related to communications, accounts and quality control, or in preparing food for fishing trips.

4 Socio-economic processes

Measures	Possible negative impacts	Suggestions
Migration and community destabilization in areas affected by climate change	Socio-economic and gender inequalities in access to job opportunities, education, health, housing and credit. More households headed by women in societies that still exclude and discriminate against women heads of households. More women in jobs traditionally considered as “masculine,” where they are exploited and poorly remunerated in irregular or seasonable jobs. Increased incidence of harassment, sexual abuse and domestic violence during the migratory cycle.	Promote women’s rights. Encourage equal access by women and men to skilled and remunerated jobs. Ensure women and men have equal access to labour protection systems. Draw attention to the contribution migrant women and men make to their families and communities. Develop support services for communities, families and individuals left behind (i.e., who remained in the community of origin).

5. Good practices

Numerous programmes and projects have already considered gender when analyzing adaptation to disasters and risk reduction, thus demonstrating that the inclusion of a gender perspective is possible – and effective. This section highlights some of these successes.

The Latina Genera project (UNDP) is developing a joint programme with the Bureau for Crisis Prevention and Recovery (BCPR/UNDP) that seeks to integrate the gender approach into risk management. To achieve this, the project has made an initial suggestion that, if adopted, would form a virtual community, develop conceptual frameworks and methodological tools, and provide training for UNDP staff and partners.

- The Office of the IUCN World Gender Counsellor and the Secretariat of the United Nations International Strategy for Disaster Reduction (UNISDR) have begun designing a methodological guide to incorporate a gender perspective in national disaster reduction platforms.

Gender equity and gender equality are a relatively new themes in mitigation, but there are already concrete examples of the gender perspective helping to reduce GHG emissions:

- In Costa Rica, the Payment for Environmental Services Programme, administered by the National Forest Financing Fund (FONAFIFO), helps to mitigate carbon emissions and to properly manage natural resources by offering economic incentives to land owners for them to refrain from deforesting their lands. Since men own most of the land and women have little access to these economic incentives, FONAFIFO charges a fee to ensure that part of this programme's profits supports the women who want to acquire land.¹¹⁹
- Under the Kyoto Protocol, Luxembourg designed a plan to reduce CO₂ emissions and added it to the national plan on gender equality, designed to grant women in developing countries access to energy, to prevent air pollution in homes, and to reduce disaster risks.
- In 2006, the World Bank's Community Development Carbon Fund Project signed an Emissions Reduction Purchase Agreement (ERPA) with Kenya's Green Belt Movement, founded by Nobel Peace Prize winner Wangari Maathai. As part of the ERPA, groups of women will plant hundreds of trees in Kenya, enough to eliminate 375,000 tonnes of carbon by 2017, maintain regular precipitation restore land lost to erosion and, at the same time, provide an income for poverty-stricken rural women.

The United Nations, governments, international organizations and civil society women's organizations are already acting to remove gender inequalities in work on climate change:

- The Caribbean Risk Management Initiative (CRMI), with offices in UNDP Cuba and UNDP Barbados/OECS, with the collaboration of BCPR, CDERA, UNIFEM, SURF, UNFPA, the Latina Genera project and ECLAC, has launched the project Improving Gender Visibility in Risk Management in the Caribbean. The project will conduct a gender analysis of the present situation of climate change risk management in various countries in the Caribbean. Later, it will present a series of political recommendations.
- The United Nations Development Fund for Women (UNIFEM) took a leading role in organizing responses received to help women affected by the tsunami in Asia in 2004, including studying gender impacts, holding participatory consultations, and supporting the integration of gender perspectives into relief efforts.

¹¹⁹ Retrieved from: http://www.fonafifo.com/paginas_espanol/proyectos/e_pr_ecomercados.htm

- The Food and Agriculture Organization of the United Nations (FAO) has published several research reports on the links between gender and climate change, beginning with *Gender Perspectives on the Conventions on Biodiversity, Climate Change and Desertification*.
- In its Climate Programme 2004-2008, the Federal State of Lower Austria has implemented five measures to mainstream gender, including: the appointment of women to decision-making positions; the granting of equal opportunities in planning, organization and promotions to women; and the inclusion of gender considerations in public relations work.
- Ghana has carried out studies on the conditions of women's vulnerability in order to identify social, economic and political interests and changes in land use, and adaptation to climate change.
- In cooperation with 10 cities in four European countries, the Climate Alliance of European Cities examines the situation of women in municipal climate protection bodies, explores the possibility of coordinating women's leadership in making decisions about adapting to climate change, and reviews ways of increasing the number of women in decision-making positions.¹²⁰
- Of the 17 National Adaptation Programmes of Action (NAPAs) presented to the UNFCCC by less developed nations, some consider women's vulnerability or they include women among the target populations of proposed adaptation activities. Even so, very few governments mention gender equality as a priority and it is not prominent in specific adaptation projects.
- The Office of the IUCN World Gender Counsellor has led the efforts to include the political impact of the themes of gender, the environment and climate change in United Nations fora. In 2007, it promoted the awarding of prizes, on International Women's Day, to women who contributed to work on climate change.

Civil society women's organizations throughout the world that have taken note of and begun to act on this include:

- Various African and European women's organizations, including LIFE/Genanet, Women in Europe for a Common Future (WECF), South African Gender and Energy Network (SAGEN), and ENERGIA, all launched efforts related to gender and climate change during UNFCCC's COP-9.

¹²⁰ See www.genanet.de/

- WEDO has a partnership initiative with NGOs and governments in various countries to integrate the gender perspective into national responses to climate change and to publish their lessons learned.
- In Latin America, the Nature Fund periodically organizes international seminars on indigenous women and climate change; the most recent seminar was held in Colombia in 2007.
- The Guardianas de la Ladera (Guardians of the Hillside) in Manizales, Colombia, are a group of women who have done traditionally male work in order to preserve their houses and their environment on the unstable city hillsides. Their project was developed with 90 women heads of households.



Conclusions and recommendations

1. What we should not forget

Although climate change was initially conceived as a scientific and technical issue, expanding bases of knowledge have made it clear that the impacts are much broader; climate change is, in actuality, a socioeconomic problem. Thus, in order to fully understand and deal with climate change, it is imperative to consider the related social, economic and political aspects. Poverty and development, and the associated gender implications, for example, must be taken into account when determining appropriate responses. In the face of climate change, it will be impossible to eliminate poverty or promote human development without accepting the fact that different groups, including the poor, women and men, will be affected differently.

The Millennium Development Goals

Achieving the MDGs may be hindered by, among other things, the impacts of climate change. There are associated gender dimensions embedded within each of the goals, and failure to consider the gender relations can further exacerbate the challenges to meeting these targets by 2015. On the other hand, if planners and policymakers actively involved women in the planning and execution of policies and programs aimed at achieving the MDGs, the effectiveness of these measures could be greatly increased.

Women and men as agents of development

Women are powerful agents for development and, therefore, can and should be active participants and decision makers in mitigating and adapting to climate change. Women and men should have equal access to information, training, financial instruments or mechanisms (i.e., the Adaptation Fund) and to the benefits of commercial approaches to contain climate change (i.e., the CDM). If resources are not allocated to reduce gender gaps, measures implemented to mitigate or adapt to climate change will reproduce and exacerbate existing social inequalities, not eliminate them.

Financing strategies, mechanisms and instruments are fundamental

The promotion of gender equality and women's empowerment must be considered in climate change financing mechanisms and instruments. Gender must be considered in all phases of programmes and projects, including design, implementation, assessment of proposals, and of monitoring and evaluation systems. Likewise, gender-sensitive criteria and indicators must be incorporated into all programmes, projects or initiatives under the different financing mechanisms. For example:

- Funds for adaptation should ensure that gender considerations are taken into account and that initiatives are implemented that satisfy women's needs; a gender diagnosis must be included in all projects proposed for financing.
- Women should be included at the same level as men in all levels in the implementation and assessment of projects involving afforestation, reforestation, and avoidance of deforestation.
- Women should be given access to credit, commercial carbon funds, and information that allows them to understand and decide which modern biomass resources they can take advantage of and which technology meets their needs.
- The CDM should finance projects that place renewable energy technologies within reach of women and may supplement their domestic needs.

2. What we can and should do

Improve understanding and analysis of gender and climate change

Social, economic, political, and cultural dimensions must be integrated when examining the causes and consequences of climate change in general, and when analyzing gender relations in particular. Methodologies must also consider gender in the different scenarios related to climate change; this consideration must also be present in policies, programmes and projects.

Gather, produce and document information

Information should be gathered and the differentiated impact of climate change on the quality of life of women and men should be documented. This is required not only to better understand the causes and consequences of that impact, but also to design policies that reduce its negative effects. It is necessary, therefore, to invest in research in areas such as: specific resources and patterns of sex-differentiated use; vulnerability and risk patterns linked to gender relations; and other underexplored dimensions such as security, migration and disasters.

In regional and local environments, programmes and projects that attempt to implement adaptation measures are being created with increasing frequency. In these undertakings, local governments responsible for carrying out intensive gender analyses must play a prominent role so as to prepare initiatives that are more effective, equitable and sustainable. A first step is to collect sex-disaggregated data on the use of and access to resources, the distribution of benefits, and the participation of women and men in decision-making processes. Such information will help design policies that are better equipped to address climate change impacts in a gender-equitable manner.

Invest in effective communication

A large part of the investment in climate change must be directed at distributing information and building capacities. As Röhr points out, *“Studies show that women have a definite information deficit on climate politics and climate protection. This raises the question of how the subject is communicated. Is it slanted toward technically interested people? These discrepancies are particularly noticeable with regard to the extent to which people are informed about the international climate change negotiations.”*¹²¹ In this context, it is imperative to design appropriate mechanisms for disseminating information to women and other marginalized members of society.

¹²¹ Röhr, (2006).

Influence international and national policies

At international and national levels, legal tools must include explicit gender equality considerations. Integrating the gender approach into international instruments, national policies and national or local programmes and projects will not only promote compliance with an ethical human rights principle, but will also ensure that the measures are effective. Some recommendations for achieving these goals are listed below:

- It is important to develop – quantitatively, qualitatively and effectively – international and national legal instruments that help mitigate the effects of climate change and promote adaptation while advancing human equity and equality.
- The UNFCCC negotiation process must, at all stages, from research and analysis, design and implementation, to mitigation and adaptation strategies, include not only regional, national and local policies on climate change, but also the principles of gender equity and equality. In particular, this must be applied to current efforts to design an effective post-2012 mechanism to replace the Kyoto Protocol once it expires.
- There should be emphasis on the efforts of the CBD Secretariat, which is now designing a gender mainstreaming strategy. However, these efforts will not be fully effective so long as the Parties to the Convention do not include them in the agendas of the Conference of Parties (COP) as part of their priorities.
- Parties to the UNFCCC must adopt the necessary measures for the convention to comply with the international human rights frameworks and national and international agreements on gender, paying special attention to CEDAW and the recommendations of its Committee of Experts.
- It is essential that the UNFCCC develop a gender strategy, invest in specialized research on the theme of gender and climate change, and establish a system which requires the inclusion of gender indicators in national reports presented to the UNFCCC Secretariat.
- Parties must look for mechanisms to ensure that women and gender experts (both men and women) participate when national and international reports are prepared. Women's representation in national and international meetings must also be assured.

Plan and develop gender-responsive policies and strategies

Regardless of whether they are formulated at the international, national, regional or local level, policies and strategies addressing climate change must consider gender relations and promote equity and equality. Until recently, climate change had been mainly considered as an environmental problem, with all the responsibility for managing it being placed on ministers of the environment. Today, however, we see more and more climate change initiatives from the international to the local levels and in different regions and states, and there is now a better understanding and appreciation of the fact that climate change is a multi-sectoral development problem that must be approached from multiple angles.

So how can this be done? Public policies provide an opportunity to ensure that redistribution of a society's resources will benefit women and men equally. Their design and implementation, however, must include gender equality criteria to guarantee that they have a more profound impact on correcting social inequalities that aggravate the consequences of climate change. Promoting the development of mitigation and adaptation strategies, policies, research or initiatives – broken down according to multi-disciplinary groups so that equal attention is paid to gender, environmental, social and economic aspects – can also further the goals set forth in this document. Likewise, gender equality policies currently being implemented in many parts of the world should consider climate change in their strategic guidelines and be linked to policies and plans for national development. A good example is the Mexican National Women's Institute's National Programme of Equality between Women and Men 2008-2012, which includes a strategic line on gender equality and climate change.¹²²

Strengthen national and local capacities

Solutions designed at the global level must be implemented at the local level. This means that national and local governments must strengthen their capacities and act to:

- Translate international commitments adopted at the international level – in agreements, conventions, conferences, declarations and resolutions – into their domestic policies.
- Promote a more active role for women and women's organizations in discussions and decisions about climate change. It is also important to encourage a more balanced representation of women and men in decision-making and ensure that attention is paid to women's needs and perspectives.

¹²² www.inmujeres.gob.mx

- Develop strategies to improve women's access to and control over, and provide means of building, their capacities and transferring technology.
- Use the knowledge and specialized skills of women in mitigation and adaptation strategies.
- Provide equitable education, information and training on climate change conditions and opportunities.

3. Let's act

Theoretical knowledge and practical evidence dictate the need to link gender equality with climate change in any comprehensive, viable approach to the challenges posed by climate change. Having presented their findings, the authors of this Resource Guide urge all readers – women as well as men – to take concrete and gender-responsive steps so that we can address the increasingly urgent challenges of climate change with more than words. To fail to do so in short order would amount to an abdication of our responsibility to nothing less than the planet itself – and to ourselves.





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Second Section



Annotated Bibliography

T This chapter includes information for people who are interested in studying gender and climate change in detail. It includes a selection of recent principal publications on the theme. The selection was made in collaboration with a number of UNDP country offices in the Latin American and Caribbean region, and the IUCN, as well as with networks of experts on gender, the environment and climate change, who responded to the open electronic consultation established to learn about initiatives, studies, projects or related publications.

The information is presented in two alphabetically arranged sections. The first includes a basic bibliography organized according to four themes: 1. Climate change: reference framework; 2. Gender and climate change; 3. Energy and gender; and 4. Mitigation and adaptation. Some publications take a broad approach to the problem while others analyze specific aspects. Each gives the name of the author and the title, as well as where it was published, the publisher, the number of pages and a brief summary.

The second section includes another group of materials consulted, such as specialized guides and manuals, information sheets, news, web sites and portals related to this publication.

A. Basic bibliography

1 CLIMATE CHANGE: REFERENCE FRAMEWORK

DOCUMENT	DESCRIPTION
BRIDGE (Development –Gender), 2008. Gender and Climate Change: Mapping the Linkages. A Scoping Study on Knowledge and Gaps. http://siteresources.worldbank.org/EXTSOCIALDEVELOPMENT/Resources/DFID_Gender_Climate_Change.pdf	Seeks to put together previous efforts to link gender and climate change to reinforce future research. It attempts to identify aspects that today are not part of the discourse.
Canziani, O.F., Dokken, D.J., Leary, N.A., McCarthy, J.J., White (eds.). Part of the contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Climate Change 2001: Impacts, Adaptation and Vulnerability http://www.ipcc.ch/pdf/climate-changes-2001/impact-adaptation-vulnerability/impact-spm-ts-sp.pdf	Describes the advance made in understanding natural and human factors linked to climate change. It is based on IPCC assessments made in 2001 and includes new scientific research discoveries in the past six years.
Center for Health and the Global Environment, Harvard Medical School – UNDP, 2005. Climate Change Futures: Health, Ecological and Economic Dimensions. http://sgp.undp.org/downloads/CC%20Policy%20-%20ENGLISH.pdf	This document focuses on health. Its premise is that climate change will affect human health, as well as the ecosystems and the species on which we depend. These impacts on health will have economic repercussions.
Comisión Intersecretarial de Climate change, (Inter-Sectorial Commission on Climate Change) 2007. Estrategia Nacional de Climate change México. (National Climate Change Strategy) Mexico http://www.semarnat.gob.mx/queessemarnat/politica_ambiental/cambioclimatico/Pages/estrategia.aspx	Analyzes possible reductions of emissions, proposes that studies be undertaken to define more precise mitigation methods and outlines what Mexico as a country needs to advance in building adaptation capacities.
Ebrahimian, E. Project Supervisor: Gitonga, S., UNDP-GEF Small Grants Programme, 2003. Community Action to Address Climate Change: Case Studies Linking Sustainable Energy Use with Improved Livelihoods. http://sgp.undp.org/download/SGPCaseStudiesBook.complete.pdf	This publication summarizes the key information about energy projects and climate change supported by the GEF Small Grants Programme between 1992 and 2003.
Energy Saving Trust, 2007. The Impact of Climate Change in the Rest of the World. http://www.energysavingtrust.org.uk/your_impact_on_climate_change/the_impact_of_climate_change_in_the_rest_of_the_world	This link provides a short summary of key points on climate change. It explains how the phenomenon will be a greater menace to developing communities .

DOCUMENT	DESCRIPTION
Holdren, J., 2007. Meeting the Climate-Change Challenge: Avoiding the Unmanageable & Managing the Unavoidable. http://www.un.org/esa/sustdev/csd/csd15/statements/holdren_9may.pdf	This PowerPoint presentation was shown to the high-level round table on climate change at the 15th Session of the United Nations Commission on Sustainable Development (CSD-15). It details recommended adaptation and mitigation strategies.
Houghton J. T., Ding Y., Griggs D.J., Noguer M., (Eds.). Part of the contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Climate change 2001: The Scientific Basis http://www.ipcc.ch/pdf/climate-changes-2001/impact-adaptation-vulnerability/impact-spm-ts-sp.pdf	Describes advances made in understanding natural and human factors linked to climate change. It is based on IPCC assessments made in 2001 and includes new scientific research discoveries made during the past six years.
International Institute for Sustainable Development. 2003. Livelihoods and Climate Change: Combining disaster risk reduction, natural resource management and climate change adaptation in a new approach to the reduction of vulnerability and poverty. IUCN, IISD, SEI, SDC & Intercooperation.	This document attempts to provide a framework for research and policy-making and community groups that try to adopt decisions on adaptation.
International Institute for Sustainable Development. (2007). CRiSTAL: Community-based Risk Screening – Adaptation and Livelihoods. IISD, IUCN, SEI-US & Intercooperation.	CRiSTAL is a support tool developed jointly by IISD, IUCN, SEI-US, and Intercooperation. This tool is based on the Environmental Impact Assessment (EIA) and the sustainable living model (SLF). Its main objective is to provide a rationale and an easy process that can help users to better understand the links between risks related to climate, people's lives and the projects' activities.
Ministry of the Environment and Natural Resources and National Ecology Institute, 2007. Mexico Third National Communication under the United Nations Framework Convention on Climate change. http://www.imacmexico.org	This communication is in compliance with Article 4, Paragraph 1, of the UNFCCC, and Article 12, Paragraph 1, on transmitting information related to applying the Convention.
R. and Seck, P., 2007. The Short and Long-Term Human Development Effects of Climate Related Shocks: Some Empirical Evidence. Occasional Paper for the Human Development Report 2007/2008. http://hdr.undp.org/en/reports/global/hdr2007-2008/papers/background_ricardo_papa_2007.pdf	This document analyzes the disadvantages for human development caused by the impact of climate-related disasters. It analyzes data about homes in four countries that have suffered from recurrent climatic disasters, such as floods and droughts.

DOCUMENT	DESCRIPTION
Stern, N. 2006. The Economics of Climate Change: The Stern Review . Cabinet Office – HM Treasury. http://www.hm-treasury.gov.uk/sternreview_index.htm	The Stern report contains information on the impact of climate change and global warming on the world economy. It was prepared by the United Kingdom Treasury. It examines the impacts of climate change, its risks and associated costs. The report concludes that, because climate change is a serious global threat, the benefits of taking strong and timely action are more important than the economic costs of not taking action.
UK Parliamentary Office of Science and Technology, 2006. Adapting to Climate Change in Developing Countries . http://www.parliament.uk/documents/upload/postpn269.pdf	Concise bulletin that covers the most pressing matters for developing countries insofar as they adapt to climate change.
United Nations, 1994. Framework Convention on Climate Change (UNFCCC) . http://unfccc.int/resource/docs/convkp/conveng.pdf	The UNFCCC, which entered into force on 21 March 1994, established an international framework for governments, working together, to develop a policy proposal to reduce the effects of climate change and adapt to its threats.
United Nations, et al., 2003. Poverty and Climate Change. Reducing the Vulnerability of the Poor through Adaptation . http://www.unpei.org/PDF/Poverty-and-Climate-Change.pdf	The document centres around the impact of climate change on the fight against poverty, within the context of advances made towards meeting the Millennium Development Goals and the follow-up stage. It discusses how to incorporate and integrate adaptation to climate change in the fight against poverty and the efforts towards achieving sustainable development.
UNDP, 2001. Sustainable Energy, Development & the Environment: UNDP's Climate Change Initiatives . http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=1019	This 8-page leaflet outlines the commitment made by UNDP to support developing countries' initiatives to respond to the implications of climate change, placing special emphasis on improving the lives of those living in extreme poverty.
UNDP, 2007. Human Development Report 2007/2008. Fighting Climate Change: Human Solidarity in a Divided World . http://hdr.undp.org/en/reports/global/hdr2007-2008/	The report warns that climate change threatens to reverse human development and may lead to setbacks in health, education and poverty reduction, thus making inequalities worse. The document also points out the shared but different responsibility of countries to heed this common challenge and to promote compliance with the Millennium Development Goals.
UNDP / GEF, 2004. Lessons for the Future 2004: Meeting the Climate Change Challenge, Sustaining Livelihoods . http://www.undp.org/gef/05/documents/publications/climate_change_brochure2004.pdf	This UNDP/GEF leaflet highlights examples of activities dealing with climate change according to the five GEF priority areas.

DOCUMENT	DESCRIPTION
UNFCCC, 2005. The Kyoto Protocol. http://unfccc.int/kyoto_protocol/items/2830.php	The Kyoto Protocol of the United Nations Framework Convention on Climate Change (UNFCCC) is an amendment to the international treaty on climate change that obliges signatory nations to reduce emissions. It entered into force on 16 February 2005.
Watson, R.T. and a team of principal authors (Eds.) IPCC. Climate Change 2001: Summary report. http://www.ipcc.ch/ipccreports/assessments-reports.htm	Represents three years' work by about 450 main authors and 800 contributing authors. It also has comments by approximately 100 experts and government representatives. The report answers nine questions about scientific, technical and socio-economic questions on climate change.

2 CLIMATE CHANGE AND GENDER

DOCUMENT	DESCRIPTION
BRIDGE, Institute of Development Studies (IDS), UK. Gender and climate change: mapping the linkages http://www.bridge.ids.ac.uk/reports/Climate_Change_DFID_draft.pdf	This publication maps the gender impacts of climate change and the implications for gender equality; outlines the gender perspective in adaptation and gender inequality in mitigation; and gives recommendations for future research.
CIDA – Canadian International Development Agency. Gender Equality and Climate Change: Why Consider Gender Equality When Taking Action on Climate Change? http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUIImages/Climate%20change3/\$file/Gender-2.pdf	Analyzes relations between gender equity and climate change concerning the question: why consider gender equity when acting on climate change? Deals with such essential matters as food security, hydraulic resources and the effects of climate change on human health.
Dennison, C., 2003. From Beijing to Kyoto: Gendering the International Climate Change Negotiation Process. http://www.pugwash.org/	In spite of the efforts by the U.N. to universalize the gender theme, its activities, debates and negotiations on climate change take a neutral stand in this respect. This document suggests that international negotiations will not be legitimate or efficient if the process does not take the theme of gender equity into account.
Denton, F., 2001. Climate Change, Gender and Poverty—Academic Babble or Realpolitik? http://generoyambiente.com/admin/admin_biblioteca/documentos/FatmaDenton.pdf	What does gender have to do with all this? This is the rhetorical question with which the article begins. There is no doubt that climate change and its variables will have devastating effects on the lives of men and women. Climate change has been defined as a key phenomenon of our era – a group of events that may alter the lives of humanity in general. The document argues that climate change will exacerbate even more the gaps between the world's rich and poor and, above all, will increase gender gaps.
Denton, F., 2004. Gender and Climate Change: Giving the "Latecomer" a Head Start. http://www.siyanda.org/search/summary.cfm?nn=2275&ST=SS&Keywords=climate&SUBJECT=0&Donor=&StartRow=1&Ref=Sim	Concentrates on three sensitive areas on the theme of climate – agriculture, water and energy – and considers how adaptation strategies may be designed to help women and men in these sectors mitigate the effects of climate change. Suggestions include forest management projects that build new capacities to improve products, soil quality and water conservation.

DOCUMENT	DESCRIPTION
Duddly, J., 2005. Is Climate Change a Gender Issue? AWID. http://www.awid.org/eng/Issues-and-Analysis/Library/Is-climate-change-a-gender-issue2	Underlines the severity of climate change, recognized by the scientific community but ignored by international policy-makers. It reports the vulnerability of the Inuit community with respect to the effects of climate change now being felt, placing emphasis on impacts that affect women.
Dunkelman, I., 2002. Climate Change: Learning from Gender Analysis and Women's Experiences of Organizing for Sustainable Development. In <i>Gender & Development</i> , Vol. 10, pp. 21-29. http://www.popline.org/docs/1556/173133.html	Explores present and potential links between gender and climate change, and the specific implications for gender of this phenomenon. It also provides examples of women organized for change on matters concerning sustainable development, specifically in constructing the World Summit on Sustainable Development. It shows how women's participation may translate into more sensitive results on the gender theme.
Dunkelman, I., Alam, K., Bashar Ahmed, W., Diagne Gueye, Y., Fatema, N., & Mensah-Kutin, R. 2008. Gender, Climate Change and Human Security Lessons from Bangladesh, Ghana and Senegal. WEDO, ABANTU for Development in Ghana, ActionAid Bangladesh and ENDA in Senegal.	This report consists of a review of general literature on gender, climate change and human security, and it gives examples of various case studies in Senegal, Ghana and Bangladesh.
EDNA/IRADE, 2006. Is the Gender Dimension of the Climate Debate Forgotten? http://www.energia.org/pubs/papers/cop8_gender.pdf	Summarizes the COP-8 session on gender and climate change. It includes recommendations, lists of participants and key proposals to tackle the gender theme in this debate.
Gurung, J. et al., 2006. Gender and Desertification: Expanding Roles for Women to Restore Drylands. http://www.siyanda.org/static/gurung_gender_desertification.htm	The authors argue that in many of the world's dry regions women's knowledge, as well as the traditional roles they play in managing natural resources and food security, are crucial. However, women are often excluded from participating in land conservation, in development projects and in policy-making.
Hartmann, B., 2006. Gender, Militarism and Climate Change. http://www.zmag.org/zspace/commentaries/2561	At present, at the international policy level, the absence of the gender approach in debate about climate change is cause for concern. Recent studies and feminist campaigns challenge the invisibility of gender, in particular pointing out gender differences in vulnerability and adaptation to global warming.
Hemmati, M., 2005. Gender and Climate Change in the North: Issues, Entry Points and Strategies for the Post-2012 Process. Genanet. http://www.genanet.de/fileadmin/downloads/themen/Themen_en/Gender_Post-Kyoto_en_abstract.pdf	The author, who is the Genanet Focal Point for Gender Justice and Sustainability, treats relevant aspects of the gender theme and climate change, principally in industrialized countries in the North. She seeks to stimulate strategic considerations for women's organizations in Germany, Europe and the region in general, within the framework of the preparations being made for global regime negotiations on climate change post-2012.

DOCUMENT	DESCRIPTION
Hoddinott, J. and Kinsey, B., 2000. Adult Health in the Time of Drought. International Food Policy Research Institute Discussion Paper. http://www.ifpri.org/divs/fcnd/dp/papers/dp79.pdf	This document analyzes the impact of the drought of 1994-95 on the health of adults in rural zones in Zimbabwe.
IPADE. El cambio climático y los Objetivos de Desarrollo del Milenio. http://www.pobrezacero.org/objetivos/documentos/cambio_climatico_odm.pdf	Explains how the Millennium Development Goals (MDG) are closely linked to protecting the environment and to the fight against poverty. Above all, each of the MDGs has a specific relationship to climate change, since this has a direct bearing on the possibility of reaching them. Therefore, changes in climate and their associated effects are hampering the attainment of the MDG, which is worsening the poverty of the most vulnerable groups.
IUCN, 2007. Gender Aspects of Climate Change. http://cmsdata.iucn.org/downloads/gender_factsheet_climatechange.pdf	Details ways in which climate change affects women and how they are underrepresented in decision-making processes and in policy-making. It also states there is a gender bias when carbon emissions are calculated.
Lambrou, Y. and Piana, G., 2006. Gender: The Missing Component of the Response to Climate Change. http://www.siyanda.org/static/lambrou_gender_climatechange.htm	This report argues that gender, like poverty, is a transversal matter within climate change and needs to be recognized as such. The conclusions are that gender considerations have, in general, been ignored by international policies on climate. It is only in recent years, with the Sessions of the Conference of the Parties (COP), COP-8 (held in New Delhi in October 2002) and COP-9 (held in Milan in December 2003), that gender was, incidentally, tackled.
Masika, R. (ed.), 2002. Gender, Development, and Climate Change. Oxfam. http://publications.oxfam.org.uk/oxfam/display.asp?K=9780855984793&sf_01	This book considers the dimensions of gender in climate change. It suggests that neither the analysis of gender, nor the close connection of this theme with poverty, has been considered in international debates. It also shows the importance of taking the gender theme into account when attempting to understand the impact global environment change has on human communities.
Neumayer, E. and Plümper, T., 2007. The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981-2002. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=874965	Disasters do not affect everyone in the same way. Broaching the theme from the point of view of vulnerability suggests that inequity as to risk conditions, access to resources and opportunities and capacities, are different for men and women. The central theme of the document is an analysis of the vulnerabilities of women and girls, who tend to suffer more from the consequences of disasters.
Oxfam. Adapting to climate change: What's needed in poor countries, and who should pay? http://www.oxfam.org	Climate change is forcing communities in poor countries to adapt to an unprecedented impact. Rich countries, which bear most of the blame for the problem, must stop causing damage – by reducing emissions of greenhouse gases – and begin to help by providing funds for adapting to the change. Oxfam calculates that, in developing countries, such an adaptation will cost a minimum of \$US 50,000 million per year. This figure may rise significantly if global emissions are not quickly reduced.

DOCUMENT	DESCRIPTION
R. Laub and Lambrou, Y., 2004. Gender Perspectives on the Conventions on Biodiversity, Climate Change and Desertification . FAO Gender and Population Division. http://www.fao.org/sd/dim_pe1/docs/pe1_041002d1_en.doc	Explains how the gender perspective is not given equal treatment in the Conventions on Biological Diversity, Climate Change and Desertification as well as in the execution mechanisms. The objective of this document is to reaffirm the pertinence of adopting a gender perspective in the Multilateral Environment Agreements (MEA).
Rivero, R., 2002. Gendering Responses to El Niño in Rural Peru . In Gender & Development, Vol. 10, pp. 60-69. http://publications.oxfam.org.uk/oxfam/display.asp?K=002J1067&aub=Rachel%20Masika&sort=sort_date/d&m=10&dc=23	Reflects on lessons learned about the gender approach at the Centre for Andean Advancement and Development (CEPRODA MINGA) and drawn from the author's work with poor communities in the region of Piura, Peru, after the El Niño phenomenon in 1997-8. It centres on the traditional ways that rural communities, and women in particular, have been excluded from policy-making and considers how they may become more influential political and social stakeholders, creating their own sustainable development and mitigation strategies.
Röhr, U., 2004. Gender Relations in International Climate Change Negotiations . http://www.siyanda.org/search/summary.cfm?nn=2345&ST=SS&Keywords=gender&SUBJECT=0&Donor=&StartRow=521&Ref=Sim	Gender equity is not mentioned in the UNFCCC, even though it is an integral part of Agenda 21. It was not until the Kyoto Protocol instruments were created, specifically the Clean Development Mechanism (CDM), that gender considerations began to attract the interest of specialists on the subject. Since then, the focus of most of the positions adopted and analyses made from a gender perspective has concentrated exclusively on women in developing countries. It is in these countries where the CDM projects are being undertaken and where there are more women's networks in the energy field.
Röhr, U. et al., 2004. Mainstreaming Gender into the Climate Change Regime . http://www.genanet.de/fileadmin/downloads/Stellungnahmen_verschiedene_en/Gender_and_climate_change_COP10.pdf	Declaration of the Women's Caucus during COP-10, held in Buenos Aires, Argentina. The authors state that the U.N. has made a formal commitment to transversalize the gender approach in all its policies and programmes; nevertheless, this organization still does not understand why gender is a factor that ought to be considered in climate change, or how it should be included.
Röhr, U. and Hemmati, M., 2006. Why it Makes a Difference: Gender and Climate Change at COP11/MOP1 . Resultados de la XI Conferencia de las Partes (COP11). http://www.wecf.de/cms/articles/2006/01/montreal.php	Presents an analysis of results obtained by a group of women at the Conference of the Parties in Montreal (COP-11/MOP1). It treats the gender theme in debates and negotiations on climate change.
Skutsch, M., 2002. Protocols, Treaties, and Action: The Climate Change Process Viewed through Gender Spectacles . In Gender & Development, Vol. 10, pp. 30-39. http://www.informaworld.com/smpp/355807866-8325504/content~content=a741921471~db=all~order=page	This research begins by evaluating the extent to which gender considerations have been taken into account in international processes on developing climate change policies. It explores whether there are significant considerations of gender in relation to (a) emissions of greenhouse gases, (b) vulnerability to climate change and (c) participation in projects that finance efforts concerning climate. It concludes by suggesting areas of attention in which the gender perspective could improve the effectiveness of interventions with respect to climate and that also benefit women.

DOCUMENT	DESCRIPTION
Villagrasa, D., 2002. Kyoto Protocol Negotiations: Reflections on the Role of Women. In Gender & Development, Vol. 10, pp. 40-44. http://www.popline.org/docs/1556/173135.html	Briefly analyzes the three communities that have shaped the Kyoto Protocol, the United Nations Framework Convention on Climate Change (UNFCCC), and the role of the gender approach in these discussions. The first community is that of government delegations, the most important negotiators. The second consists of business representatives, and the third is made up of environmental NGOs.
Wamukonya, N. and Rukato, H., 2001. Climate Change Implications for Southern Africa: A Gendered Perspective. http://www.energia.org/pubs/papers/wamukonyarukato.pdf	South Africa's ability to adapt to climate change depends on whether resources, both financial and human, are available. Its geographic location and political situation could affect its capacity to respond. This document analyzes the implications of climate change for that country, from a gender perspective.
Wamukonya, N. and Skutsch, M., 2002. Gender Angle to the Climate Change Negotiations. In Energy & Environment, Vol. 13, No. 1, pp.115-124 (10). http://www.ingentaconnect.com/content/mscp/ene/2002/00000013/00000001/art00007	The South, given its vulnerable situation and the lack of resources to adapt to change, is more likely to suffer from the impacts of climate change than is the North. But do the different interests of men and women with respect to climate change have a South-North dimension?
WECF – Women in Europe for a Common Future, 2005. Gender and Climate Change Research Workshop: What Do We Know? What Do We Need to Find Out? http://www.siyanda.org/static/wecf_gender_climatechange_workshop.htm	Describes discussions between experts (women and men) on gender and climate change research. Emphasizes women's role and their impact on gender policies in the United Nations Convention on Climate Change.
WEDO — Women's Environment and Development Organization, 2003. Untapped Connections: Gender, Water and Poverty. http://www.wedo.org/learn/library/media-type/pdf/untapped-connections-2003	Includes an analysis of how the theme of water, gender and poverty has been included in international treaties, in governments' action plans, as well as the implications at the local level. This is reflected by presenting case studies on the theme.
WEDO — Women's Environment and Development Organization, 2007. Women and Global Climate Change. No. 74/75 Spring/Summer 2007. http://www.wedo.org/	The international magazine Women and Environments examines, from a feminist perspective, how women relate to their environments – natural, constructed and social. This volume is dedicated to the theme of women and climate change; it contains information on related matters, such as health, droughts, adaptation and mitigation, energy and case studies on the theme.

DOCUMENT	DESCRIPTION
Women's Group Statement on Gender and Climate Change, presented at the UNFCCC meeting in Montreal, 2005. Global Warming: Women Matter! http://www.genanet.de/fileadmin/downloads/themen/Gender_CC_COP11_statement_short_7dec.pdf	Describes the position of the Group of Women on Gender and Climate Change, presented at the meeting on the United Nations Convention on Climate Change held in Montreal in November 2005.
World Economic Forum, 2007. The Global Gender Gap Report. http://www.weforum.org/pdf/gendergap/report2007.pdf	Contains data that show the degree of equality between the genders in different sectors of society. It covers 128 countries, representing more than 90% of the world population.

3 ENERGY AND GENDER

DOCUMENT	DESCRIPTION
Anneck, W., 2002. Climate change, energy-related activities and the likely social impacts on women in Africa. In International Journal of Global Environmental Issues (IJGENVI), Vol. 2, No. 3-4. http://www.inderscience.com/search/index.php?action=record&record_id=2400&prevQuery=&ps=10&m=or	Seeks to establish links between climate change, energy use, gender relations and subsequent impacts on the daily life of women in Africa. There is a broad approach in an attempt to provide a perspective on the complexity of the factors considered in the analysis. Stress is placed on the difference between how energy is used in developed and developing countries and by men and women; the impact energy use has on climate change is explored. The most vulnerable energy sub-sector is the biomass used by the largest consumers' group: poor women.
Brew-Hammond, A. and Crole-Rees, A., 2004. Reducing Rural Poverty Through Increased Access to Energy Services: A Review of the Multifunctional Platform Project in Mali. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=1088	Reviews the experience of a multi-functional project in Mali. Analyzes documents on how modern energy services affect the lives of rural women in terms of income, education and social condition, as well as their health. It also makes analytical observations about important factors that affect relations between energy services and development results. It diagnoses the importance of the multi-functional concept for broader national and regional policies – within the framework of how development and energy can reduce poverty in Africa.
GEF-UNDP Small Grants Programme, 1998. Women and Energy Project. Zimbabwe. http://sgp.undp.org/index.cfm?Module=Projects&Page=ShowProject&ProjectID=3919	The general objective was to increase women's participation in decision-making, planning and implementing sustainable energy alternatives in Zimbabwe. It also documents and highlights the initiatives, experiences and social condition of women in sustainable energy projects in that country. This is done by using a participatory process culminating in a national plan; a dialogue is already under way to improve women's social condition and their participation in energy policy-making.
GEF-UNDP Small Grants Programme, 2002. Promoting the Production and Utilization of Jatropha Oil in the West Mamprusi District of the Northern Region of Ghana. http://sgp.undp.org/index.cfm?Module=Projects&Page=ShowProject&ProjectID=5521	This project helped a group of women to develop a jatropha plantation, build a processing plant and process the seeds as biodiesel by using a shea butter motor for power. They were taught to produce soap and to use organic fertilizer made from the residue of the processed jatropha seeds. The project has brought women together as an economic group that produces, sells and shares the profits earned from selling jatropha oil.

DOCUMENT	DESCRIPTION
GEF-UNDP Small Grants Programme, 2005. Solar Energy Power for Socio-Economic Advancement of Women in Selected Communities in the Northern Region. Ghana. http://sgp.undp.org/index.cfm?Module=Projects&Page=ShowProject&ProjectID=7466	The project introduces solar electricity in the region, giving rural women an alternative energy source to develop economic activities. Some women were trained in building and using solar driers to process shea butter. Solar energy was also used to establish a rural information centre where women, boys and girls attended literacy night classes.
GEF-UNDP Small Grants Programme, 2005. Estación micro-hidroeléctrica para el procesamiento de fibra natural (lanas) en Agua Blanca. Bolivia. (Micro-hydroelectric station to process natural fibre (wool) in Agua Blanca, Bolivia) http://sgp.undp.org/index.cfm?Module=Projects&Page=ShowProject&ProjectID=7229	The project's objective was to provide energy to the Agua Blanca community by building a hydroelectric generating station. The energy produced was used to process alpaca wool for production, and to operate drying machines, dyeing centrifuges and textile machines. The project helped a group of women with their activities by giving them equipment and better production conditions, allowing them to invest more time in their work and to set up a community micro-enterprise. The micro-enterprise allows them to earn more so as to improve living conditions for their families.
GEF-UNDP Small Grants Programme, 2005. Scaling Up Animal Husbandry Practices as Sustainable Livelihoods, Empowering Women through Credit, Self-Help and Alternative Fuels/ Energy Sources. India. http://sgp.undp.org/index.cfm?Module=Projects&Page=ShowProject&ProjectID=9240	The project's main objective was to promote biogas as an alternative fuel for domestic use, and reduce pressure on forests as well as carbon emissions. It was directly focussed on women, given that they traditionally work in the kitchen and use firewood to cook. Biogas plants were built and they are now administered by women and men. By using less firewood for fuel, the project helped to conserve biodiversity and reduce deforestation. It also helped groups of rural women to conserve biodiversity and improve their earnings by raising animals.
GEF-UNDP Small Grants Programme, 2005. Utilizing Solar Energy for Drying Agriculture Crops in Khuza'a Village by Distributing Crop Driers for 60 Women. Palestine. http://sgp.undp.org/index.cfm?Module=Projects&Page=ShowProject&ProjectID=7414	Local experts designed and manufactured sixteen solar driers for crops. Sixty women in the community directly benefited from the project, and another 360 women received indirect benefits. They were able to earn a modest \$US 200 per season, depending on what agricultural products were available at the time and that varied from medicinal plants to vegetables and dates. The results of the workshop were sustained after the project ended. Seventy solar driers, financed by other donors, have been set up in Gaza City.
Genanet. A Powerful Connection: Gender and Renewables. Gender Perspectives in Industrialized Countries. http://www.genanet.de/fileadmin/downloads/gm_rn04_en/leaflet__gender__and__renewables.pdf	Explores gender considerations in renewable energy production and initiatives now being implemented. Makes a number of recommendations.
Global Village Energy Partnership. GVEP National Energy for Poverty Reduction Action Plan. GVEP Ghana. http://www.gvepinternational.org	This project was undertaken to develop the National Action Plan, which includes interventions on energy that may improve how the Reduction of Poverty strategy in Ghana is implemented. The project contracted a gender expert as a consultant to analyze how gender is dealt with in this Action Plan.

DOCUMENT	DESCRIPTION
Misana, S. and Karlsson, G., 2001. Generating Opportunities: Case Studies on Energy and Women. Newsletter of the network for gender and sustainable energy, Vol 4. 2001. http://www.undp.org/energy/publications/2001/2001a.htm	Generating Opportunities is a book describing eight case studies in Africa and Asia about women and energy. Gives concrete examples of how to give women living in poverty better access to clean energy and economic services. The most important aspects considered in the publication, based on lessons learnt from the case studies, are how to design policies and programmes to improve rural women's access to modern energy supplies.
Modi, et al., 2005. Energy Services for the Millennium Development Goals. UN Millennium Project. http://www.unmillenniumproject.org/documents/MP_Energy_Low_Res.pdf	Within the framework of the Millennium Development Goals, this document discusses the theme of energy services to achieve these goals; it also suggests a practical strategy to provide energy services to the poorest populations.
Rossi, A., and Lambrou, Y., 2008. Gender and equity issues in liquid biofuels production: minimizing the risks to maximize the opportunities. FAO. ftp://ftp.fao.org/docrep/fao/010/ai503e/ai503e00.pdf	This book explores risks that are different depending on gender and are associated with large-scale production of the first generation of liquid biofuels in developing countries. Its objective is to open a debate on risks, and to identify research and policy strategies to confront them, in order to take maximum advantage of the opportunities that biofuels offer.
UNDP–United Nations Development Programme, 2007. Gender and Energy for Sustainable Development http://www.undp.org/energy/gendereng.htm	A contribution to including the gender perspective in the energy sector in Latin America. It is based on systematizing, in different countries of the region, sustainable energy experiences that include the gender perspective. Besides the lessons learnt, it describes a methodology for constructing gender indicators in sustainable energy projects.
UNDP / UN-DESA / World Energy Council, 2000. World Energy Assessment: Energy and the Challenge of Sustainability. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=5037	This publication gives state-of-the-art information on social, economic, and environmental aspects, as well as on security questions linked to energy. It analyzes how energy may serve as an instrument to achieve sustainable human development.
UNDP, The International Institute for Industrial Environmental Economics (IIIEE) and The International Energy Initiative (IEI), 2002. Energy for Sustainable Development: A Policy Agenda. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=5028	As a follow-up to the World Energy Assessment, this publication concentrates on policy-making and its effective application to accelerate the growth of energy systems that support sustainable development.
UNDP, 2004. UNDP and Energy for Sustainable Development. http://www.undp.org/energy/docs/UNDP_energy_brochure.pdf	This leaflet introduces the UNDP approach to energy. Activities and the list of projects on this theme are described and an explanation is given about how they are linked to the MDG.
UNDP, 2004. The World Energy Assessment: Overview. http://www.undp.org/energy/docs/WEAOU_full.pdf	Shows the links between energy and the Millennium Development Goals (MDG). Describes the discussions and results of the CSD-9 and the World Summit for Social Development. It also includes the most up-to-date trends and information on technology related to the energy sector and energy policy options for a sustainable future.

DOCUMENT	DESCRIPTION
UNDP, 2005. Energizing the Millennium Development Goals http://www.povertyenvironment.net/?q=energizing_the_millennium_development_goals	Explains that the poor spend most of their time on energy-related activities, such as collecting firewood, even when modern energy services are available to relieve their burden. This publication takes a look at the relation between energy and development and discusses how energy is related to the MDG.
UNDP, 2006. Fact Sheet: Integrating Energy Considerations into Poverty Reduction Strategies. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=5774	The exhibition Energizing the Millennium Development Goals took place during the 14th session of the Commission on Sustainable Development (CSD-14), held in New York in May 2006. This was one of the 12 energy services of the Millennium Development Goals.
UNDP Ghana, 2006. Liquefied Petroleum Gas (LPG) Substitution for Wood Fuel. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=5743	The project motivated and facilitated the use of liquefied petroleum gas (LPG) for fuel as a substitute for firewood and coal. It also supported marketing and making LPG available to supplement communities' energy needs in three regions in the north of Ghana. As a result, 600 domestic users – of whom 500 were women – were trained in using LPG; four LPG users' associations were created with 480 members, 289 of whom were women; 54 companies using energy, 43 of which were operated by or belonged to women, were interviewed; training was given to 45 women and men commercial food sellers.
UNDP, 2007. Conceptual Overview. Gender Mainstreaming: A Key Driver of Development in Environment and Energy. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=6449	This document offers a first approach to including the gender perspective in UNDP programmes and policies in the main areas concerned with energy and the environment: (1) managing hydraulic resources, (2) access to energy services, (3) sustainable land management, (4) biological diversity, and (5) control of ozone depleting substances and persistent organic pollutants.
UNDP, 2007. Gender Mainstreaming. A Key Driver of Development in Environment and Energy: Portfolio Review and Assessment. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=2342	This report presents the conclusions of a study carried out between November 2005 and April 2006 to assess the nature and extent of the gender perspective in UNDP's Energy and the Environment portfolio, including GEF and the Small Grants Programme.
UNDP, 2007. Gender Mainstreaming in Environment & Energy: Training Manual - Part 2. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=DocumentSearchResults&SearchText=&LibraryID=8&RegionID=0&CountryID=&ParentDocumentType=&DocumentType=&CategoryID=&ThemeID=615&Search=SEARCH	This document is part of a series of publications called Gender Mainstreaming: A Key Driver of Development in Environment & Energy. It is designed to help to understand the importance of including the dimensions of gender for sustainability of the environment and of energy.

DOCUMENT	DESCRIPTION
UNDP, 2007. Gender Mainstreaming in Environment & Energy: Training Manual - Part 2 for Facilitators. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=6523	This document is part of a series of publications called Gender Mainstreaming: A Key Driver of Development in Environment & Energy. In particular, the manual supports training facilitators to include the gender approach in the themes of energy and the environment.
UNDP, 2007. Sustainable Energy Services: The Why and How of Mainstreaming Gender in Sustainable Energy Services. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=6460	This document is part of a series of publications called Gender Mainstreaming: A Key Driver of Development in Environment & Energy. This guide explains the importance of the gender approach in sustainable energy policies and programmes.
Women's Major Group, 2006. Engendering the Energy and Climate Change Agenda. Discussion paper for CSD - 14. http://www.un.org/esa/dsd/csd/csd_csd14.shtml	This report is prepared with joint contributions from the International Network on Gender and Sustainable Energy (ENERGIA), Women's Environment Network/LIFE, Women in Europe for a Common Future (WECF), the International Union for Conservation of Nature (IUCN) and the Women's Environment and Development Organization (WEDO); in consultation with women's organizations throughout the world, in the framework of CSD-14. It deals with the relation between energy and climate change with respect to matters concerning gender in the context of proposals for international action.
Wamukonya, N., 2002. A Critical Look at Gender and Energy Mainstreaming in Africa: A Draft Paper. http://www.un.org/womenwatch/daw/forum-sustdev/Njeri-paper.pdf	Document delivered at a parallel event to the Pre Com III meeting called Gender Perspectives in Sustainable Development, organized by UNDESA/DAW and WEDO. It takes a critical look at transversalization of the gender perspective and energy themes in Africa.

4 MITIGATION AND ADAPTATION

DOCUMENT	DESCRIPTION
All India Disaster Mitigation Institute, 2005. Tsunami, Gender and Recovery. No. 6. Special edition for the International Day for Natural Disaster Reduction. http://www.tsunami-evaluation.org/NR/rdonlyres/D31E5BD4-E8A8-4FC9-A10F-D39B11A20F00/0/aidmi_tsunami_gender_recovery_oct_2005.pdf	This special edition treats the gender theme in the recovery plans of the tsunami that affected Asia in 2005. These plans are given a critical analysis since, as they lack gender considerations, they may have a negative impact on women.
Boyd, E., 2002. The Noel Kempff Project in Bolivia: Gender, Power, and Decision-Making in Climate Mitigation. In <i>Gender & Development</i>, Vol. 10, Issue 2. http://publications.oxfam.org.uk/oxfam/display.asp?K=002J1068&aub=Rachel%20Masika&sort=sort_date/d&m=7&dc=23	Since the Kyoto Protocol, emphasis on the use of land and forests to reduce carbon dioxide in the atmosphere has been at the heart of the international debate on climate change. This technical project has sought to provide the benefits of sustainable development to people dependent on forests, as well as to reduce emissions of greenhouse gases. The author explores this theory, considering how a climate mitigation project in Bolivia has had different results for women and men, and also links global policy-making processes and their local effects.
Cannon, T., 2002. Gender and Climate Hazards in Bangladesh. In <i>Gender & Development</i>, Vol. 10, pp. 45-50. http://www.informaworld.com/smpp/content~content=a741921480~db=all	Bangladesh has recently experienced high-profile disasters, including devastating cyclones and annual floods. Poverty causes vulnerability and is also a consequence of the disasters' impacts and risks. So far, there is no conclusive evidence that the impacts of disasters are greater for women than for men, and the evidence varies according to how the analysis is carried out. However, the document suggests that vulnerabilities due to gender may be reduced by making social changes.
Castro, C. and Reyes, L., 2006. Desastres Naturales y Vulnerabilidad de las Mujeres en México. Mexico.(Natural Disasters and Women's Vulnerability in Mexico) Mexico http://www.preventionweb.net/files/2684_DesastresNaturalesyVulnerabilidad.pdf	This is some of the first research on the theme in Mexico. It seeks to include the perspective of the Gestión Integral de Riesgo de Desastres (GIRD) (Integral Disaster Risk Management) and gender equity in public policy and in civil protection activities.
CATHALAC, UNDP/GEF, 2007. Capacity Building for Stage II Adaptation to Climate Change in Central America, Mexico and Cuba. http://www.authorstream.com/presentation/Techy_Guy-22686-Session9-CATHALAC-UNDP-Thematic-Agenda-2002-2007-Programme-Academic-Consortium-Capacity-Building-Stage-II-Adapta-as-Entertainment-ppt-powerpoint/	The project aims to strengthen the systemic, institutional and individual capacity of key stakeholders to assess vulnerability and to adapt to the impacts of climate change, including climate variations, to risks and extreme events in regional, national and local priority systems. The project also strengthens the institutional and individual systemic capacity of key stakeholders to develop strategies, implement policies and make preparations for regional, national and local adaptation.

DOCUMENT	DESCRIPTION
Denton, F., 2002. Climate Change Vulnerability, Impacts, and Adaptation: Why Does Gender Matter? In Gender & Development, Vol. 10, pp. 10-20. http://www.informaworld.com/smpp/content~content=a741921483~db=all	Argues that, if policies on climate change seek to ensure a sustainable future by combining development questions and the environment, account should be taken of the needs of all of the different interest groups. It also suggests that the Environment Global Fund of the Kyoto Protocol may play an important role in ensuring sustainable development, and might be implemented in such a manner as to avoid disadvantages for women or for the poorest people.
Gross, R., Dougherty, B. and Kumarsingh, K., UNDP, 2004. Conducting Technology Needs Assessments for Climate Change. http://www.energyandenvironment.undp.org/index.cfm?module=Library&age=Document&DocumentID=5232	This manual shows a flexible approach to prioritize the needs of technology and the application of practices and reforms needed to reduce greenhouse gas emissions and adapt to climate change. It is mainly intended for developing countries.
Hannan, DAW, 2002. Mainstreaming Gender Perspectives in Environmental Management and Mitigation of Natural Disasters. http://www.un.org/womenwatch/osagi/pdf/presnat%20disaster.PDF	Discusses, in broad terms, how women are involved in disaster management and mitigation processes. It analyzes transversalization of gender in mitigation and adaptation strategies, risk analysis, and the response to and management of emergencies.
Herrmann, T. et al., 2005. Social and Economic Aspects of Disaster Reduction, Vulnerability and Risk Management in Small Island Developing States. http://www.sidsnet.org/docshare/other/20050126112910_Disaster_Reduction_and_Small_Islands.pdf	This research describes the impact of disasters on women, as well as the central role women play in many cultures in managing disasters. It notes that women are an important force for change and, therefore, need strengthened capacities.
Jones, R., Hassell, D., Hudson, D., Wilson, S., Jenkins, G. and Mitchell J. (UNDP / GEF) National Communications Support Unit, 2004. Generating High Resolution Climate Change Scenarios Using PRECIS. Handbook. http://ncsp.undp.org/docs/652.pdf	This manual is part of a package prepared in collaboration with the Hadley Centre that includes a Regional Climate Model and a Technical Manual. The final objective of the Guide is to describe steps that need to be taken to prepare, using PRECIS, high-resolution climate change scenarios.
Lim, B. UNDP-GEF, 2005. Adaptation Policy Frameworks for Climate Change: Developing Strategies, Policies and Measures. http://www.undp.org/gef/05/kmanagement/pub_practitioner.html	This document is designed to support the process of developing adaptation policies in countries so as to protect and increase human wellbeing in the face of climate change.
Malone, E. L., Smith, J. B., Brenkert, A L., Hurd, B. UNDP, 2004. Developing Socio-Economic Scenarios for Use in Vulnerability and Adaptation Assessments Publication. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=5233	The manual's purpose is to help countries develop socio-economic scenarios in relation to the Adaptation Policy Framework (UNDP, 2004). This is to analyze vulnerability and adaptation as part of its National Communications.

DOCUMENT	DESCRIPTION
Nelson, V. et al., 2002. Uncertain Predictions, Invisible Impacts, and the Need to Mainstream Gender in Climate Change Adaptations. In Gender & Development, Vol. 10, pp. 51-59. http://www.informaworld.com/smpp/content~content=a741921482~db=all~order=page	Vulnerability to environmental degradation and natural dangers is mentioned with social, poverty and gender aspects. Because many areas of development policies and practices do not efficiently include the gender perspective, the potential impacts of climate change on gender relations have not been studied and remain out of sight. This article highlights predictions on climate change and explores its long-term effects on agriculture, ecological systems and gender relations. It requests that gender analysis be included in public policy-making.
Oxfam, 2005. The Tsunami's Impact on Women. Briefing Note. http://www.oxfam.org.uk/what_we_do/issues/conflict_disasters/downloads/bn_tsunami_women.pdf	Gives examples of the social impact of the tsunami of 2004 in Indonesia, India and Sri Lanka. Although not caused by climate change, it had a devastating effect, particularly on women. Includes recommended action to be taken to ensure that the needs of men and women are met and that the disproportionate impacts on women are taken into account in the recovery process.
Roy, M. and H. Venema, 2002. Reducing Risk and Vulnerability to Climate Change in India: The Capabilities Approach. In Gender & Development, Vol. 10, pp. 78-83. http://www.informaworld.com/smpp/content~db=all~content=a741921476~words=reducing* risk* vulnerability*	Argues that the ability of women to adapt to climate change pressures could be improved if women had the capacity to direct development efforts. By using this approach, women will improve their living conditions and will be more prepared as agents for change in their communities. This argument is based on previous research on gender and living conditions and on a study done in rural India.
Small Grants Programme – GEF, 2003. Responding to Climate Change, Generating Community Benefits. http://sgp.undp.org/download/SGPCC.pdf	This publication shows the experiences and lessons learnt from the SGP portfolio of community projects on climate change.
Small Grants Programme – GEF, 2007. Environmentally Sustainable Transport and Climate Change: Experiences and Lessons from Community Initiatives. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Llibrary&page=Document&DocumentID=6102	The result of systematizing the experiences of 65 sustainable transport community projects, financed by the GEF Small Grants Programme. This publication describes lessons and experiences that show the important role played by community initiatives in finding sustainable solutions for transportation needs.
UNDP–GEF, 2002. Pioneering the Low Carbon Future. Sustaining Livelihoods: Experiences from UNDP-GEF Projects in Climate Change & Ozone Depletion. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Llibrary&page=Document&DocumentID=5168	This leaflet is part of the UNDP/GEF series Lessons for the Future. It gives the most outstanding examples of UNDP/GEF projects on climate change and the depletion of the ozone layer in Brazil, Jordan, Ghana and Guatemala.

DOCUMENT	DESCRIPTION
UNDP, UNEP, World Bank, ADB, AfDB, GTZ, DFID, OECD, EC, 2003. Poverty and Climate Change: Reducing the Vulnerability of the Poor Through Adaptation. http://povertymap.net/publications/doc/PovertyAndClimateChange_WorldBank.pdf	The result of an inter-agency effort to explore and summarize the present state of knowledge about adaptation to climate change and the need to integrate it into poverty eradication and sustainable development efforts.
UNDP – Energy and Environment Group, 2006. The Clean Development Mechanism: An Assessment of Progress. http://www.energyandenvironment.undp.org/undp/index.cfm?DocumentID=5883&module=Library&page=Document	This report examines the experiences with the CDM during its first years of operations (from 2002 to mid-2006) and assesses how its growth and evolution have progressed to date.
UNDP, 2007. Climate Change Adaptation: Knowledge Needs Survey. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=2357	This survey, circulated among government agencies, United Nations agencies, research institutes, universities, NGOs and the private sector, points out the need to establish national adaptation policies to reduce risks to the population. It also notes that national development planning should contemplate climate change adaptation criteria. The capacity to develop national adaptation policies is identified as a major challenge – one greater than securing the needed funds. The results of this survey will guide the contents of the Adaptation Learning Mechanism – ALM – a project to promote the exchange of adaptation experiences by using an open-awareness platform.
UNDP, 2007. The Other Half of Climate Change: Why Indonesia Must Adapt to Protect Its Poorest People. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=6509	The report analyzes effects of climate in Indonesia.
UNDP Mexico, 2007. Endogenous Development Approach to Gender and Disaster Risk Reduction Issues - Building the Capacity of Indigenous Peoples to Address Disaster Risk and Gender Inequality. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=2296	Presents a case study of the Local Risk Management Programme applied in various indigenous villages in the south of Mexico; this is considered good practice because, among other things, it uses an integrated approach. The programme gives women – in particular in indigenous communities in marginalized areas – the opportunity and the option of better managing risks both to people and to their belongings.

B. Other resources

1 GUIDES AND MANUALS

DOCUMENT	DESCRIPTION
Braatz, B. V. and Doorn, M. (UNDP–GEF) National Communications Support Group, 2005. Managing the National Greenhouse Gas Inventory Process. http://ncsp.undp.org/docs/461.pdf	This manual is based on the principles of the IPCC inventory guides. It points out the importance of documenting and filing national inventories, as well as ways to institutionalize them.
Climate Alliance, 2005. Climate for Change Toolkit. http://www.siyanda.org/static/climate_alliance_toolkit.htm	Describes relevant protection tools, processes and procedures on climate and, specifically, on climate change that may help to promote and support women in decision-making positions.
ENERGIA, 2005. Training Manual to Increase Understanding of Gender Aspects of Energy Use and Planning. http://www.energia.org	Designed to raise awareness among development planners and project administrators to increase their capacity to include gender and energy in the planning cycle. Includes a range of gender tools specially designed to help users to identify gender aspects in energy problems.
Lu, X. 2006. National Communications Support Programme. Guidance on the Development of Regional Climate Scenarios for Vulnerability and Adaptation Assessments. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=2259	This document underlines the importance of planning to clearly define the information needs on climate scenarios. It gives a list of sources for scenario building models, tools, data and guides.
Rannau-Melgarejo, E. SRE/UNIFEM/ UNDP, Mexico, 2007. Manual: Convention on the Elimination of All Forms of Discrimination against Women and its Facultative Protocol CEDAW. http://www.sre.gob.mx	The publication describes the main elements of the Convention and its Facultative Protocol, as well as the recommendations adopted by the CEDAW Committee of Experts for the States Parties to the Convention. These are guides to implement its articles, as well as stages in the denouncement and research procedures contemplated in the Facultative Protocol. Finally, it includes observations on and recommendations for the six periodic reports supported by the Government of Mexico.
UNDP, 2004. Energy and Gender for Sustainable Development: A Toolkit and Resource Guide. http://www.undp.org/energy/genenergykit/genderengtoolkit.pdf	This manual and reference guide contains tools to help development professionals to identify the most relevant aspects to consider in order to achieve results on the theme of energy, considering the specific needs of women.

DOCUMENT	DESCRIPTION
UNDP, 2005. Energizing the Millennium Development Goals: A Guide to Energy's Role in Reducing Poverty. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=5491	Seeks to help development technicians to understand the role of energy services in achieving the Millennium Development Goals (MDG), by asking questions and giving explanations and examples. It offers a review of the most pertinent matters concerning the theme and suggests how energy matters should be dealt with to achieve the MDG.
UNDP. Gender and Water Alliance, 2006. Gender in Water Management: Resource Guide. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=5718	The Resource Guide: Transversalization of the Gender Approach in Water Management is a consultation document to assist professionals in the areas of gender and water, people responsible for transversalizing the gender approach in an institution, project or programme, as well as any other person or institution interested in the water sector and gender.
UNDP-UNEP-GEF National Communications Support Programme, 2006. NCSF RESOURCE KIT: The National Communications Process. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=2263	This set of resources provides guidance to countries on planning the National Communication Process, applying techniques to keep an inventory of greenhouse effect gases and assessing mitigation.

2 INFORMATION SHEETS

DOCUMENT	DESCRIPTION
Aguilar, L., 2004. Climate Change And Disaster Mitigation. http://www.genderandenvironment.org/admin/admin_biblioteca/documentos/Climate.pdf	Part of the series of Fact Sheets: Gender Makes the Difference, of the Office of the IUCN Senior Adviser on Gender. It analyzes the gender approach on the theme of climate change and disaster mitigation.
Aguilar, L., 2004. Energy. IUCN-Community Conservation Coalition. http://www.genderandenvironment.org/admin/admin_biblioteca/documentos/Energy.pdf	Part of the series of Fact Sheets: Gender Makes the Difference, of the Office of the IUCN Senior Adviser on Gender. Explores the relation between gender and energy, both in energy sector initiatives and in relation to how women use different forms of energy.
Aguilar, L, Araujo, A. and Quesada Aguilar, A., 2007. IUCN Fact Sheet – Gender and Climate Change. http://generoyambiente.org/admin/admin_biblioteca/documentos/Factsheet%20ClimateChange.pdf	Fact sheet presented at COP-13 (Conference of the Parties) of the UNFCCC (United Nations Framework Convention on Climate Change), held in Bali in December 2007. Climate change does not affect women and men in the same way; it has, and will continue to have, a different impact, depending on gender. Therefore, all aspects related to climate change (i.e., mitigation, adaptation, policy development and decision-making) must include a gender perspective.

DOCUMENT	DESCRIPTION
Aguilar, L, Araujo, A. and Quesada Aguilar, A., 2007. IUCN Fact Sheet - Reforestation, Aforestation, Deforestation, Climate Change and Gender. http://cmsdata.iucn.org/downloads/gender_factsheet_forestry.pdf	Fact sheet present at COP-13 of the UNFCCC, held in Bali in December 2007. It is crucial to understand the role played by women when considering the complexity of the services provided by forests and rain forests to mitigate climate change. Strategies are now designed to: comprehend and take account of the different benefits women and men receive from forestry services; recognize gender differences in having access to and controlling and knowledge about forest resources; and identify significant differences in the access women and men have to decisions, institutions and economic opportunities related to forestry.
Araujo, A. and Quesada Aguilar, A. In collaboration with: Aguilar, L., Athanas, A. and McCorminck, N., 2007. IUCN Fact Sheet - Gender and Bioenergy. http://generoyambiente.org/admin/admin_biblioteca/documentos/Factsheet%20BioEnergy.pdf	Fact sheet presented at COP-13 of the UNFCCC, held in Bali in December 2007. Energy is a means of satisfying needs. Both women and men depend on energy for most of their daily activities, but they have different needs and roles; in addition, the different energy services have different impacts on men and women. In the past, the energy needs of women, and their lifestyles, were ignored. Both traditional fuels and modern energy services have certain limitations that may increase the problems women face.
Araujo, A. and Quesada Aguilar, A. In collaboration with: Aguilar, L. and Pearl, R., 2007. IUCN Fact Sheet-Gender Equality and Adaptation. http://generoyambiente.org/admin/admin_biblioteca/documentos/Factsheet%20Adaptation.pdf	Fact sheet presented at COP-13 of the UNFCCC, held in Bali in December 2007. Vulnerabilities are socially built and are different for different groups of people. Women can be more vulnerable to the negative impacts of natural disasters because of their socio-economic position in societies.
Genanet. Fact Sheet - Energy from the Gender Perspective. http://www.genanet.de/fact_sheets.html?&L=1	Discusses three specific themes: attitudes toward nuclear energy; how work in the energy sector is divided in society; and the economic participation of women and men in the renewable energy sector.
Genanet. Fact Sheet - Gender Justice in Climate Protection. http://www.genanet.de/fact_sheets.html?&L=1	Analyzes the implications of gender in mitigating and adapting to climate change throughout the world.
PAHO. Gender and Natural Disasters. http://www.paho.org/English/DPM/GPP/GH/genderdisasters.pdf	The Pan-American Health Organization presents an analysis of gender and disasters, explaining that an essential part in establishing communities resistant to disasters is the inclusion of the most vulnerable groups – women, in this case.
Small Grants Programme, 2005. Climate Change Fact Sheet – Partnerships in Shaping National Policy. http://sgp.undp.org/downloads/CC%20Policy%20-%20ENGLISH.pdf	The SGP projects are designed to support activities that help to reduce greenhouse gases and assist local development. They promote poverty mitigation, economic development, energy security and the protection of the local environment.

DOCUMENT	DESCRIPTION
Thaxton, M., 2004. Water. IUCN/Community Conservation Coalition. http://www.genderandenvironment.org/biblioteca/documentos.php?cat=5&subcat=5&mens=1	Part of the series of Fact Sheets: Gender Makes the Difference, of the Office of the IUCN Senior Adviser on Gender. Treats the theme of gender equity in water management, as well as the relation of women to this resource.
UNDP, 2003. Mainstreaming Gender in Water Management: A Practical Journey to Sustainability: A Resource Guide. http://www.genderandwater.org/content/download/4545/37857/file/Gender_%20and_IWRM_Resource_Guide_complete_200610.pdf	This document is designed to support the integration of gender in the context of Integrated Management of Hydraulic Resources (IMHR). This approach is fundamental to achieving the Millennium Development Goals, as well as to applying the Johannesburg Plan.
UNDP, 2004. Water Governance for Poverty Reduction: Key Issues and the UNDP Response to the Millennium Development Goals. http://www.undp.org/water/pdfs/241456%20UNDP_Guide_Pages.pdf	This leaflet highlights the main water challenges faced by developing countries and gives examples of good practices based on the experience of UNDP and its associates. It also makes policy recommendations.
UNDP, 2005. Fact Sheet - Access to Sustainable Energy. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=5543	Provides information about the UNDP portfolio of energy projects and its approach to providing reliable and affordable energy services to achieve the Millennium Development Goals (MDG).
UNDP, 2005. Fact Sheet - Effective Water Governance. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=5541	Reflects the importance of the governability of water by using an integrated approach that recognizes its value for the mitigation of poverty and for human health and ecosystems.
UNDP, 2005. Fact Sheet - Sustainable Energy Services: The Gender Dimension. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=2024	Points out the importance of including the gender dimension in access to energy services to give women and girls more opportunities for a brighter future.
UNDP, 2005. Fact Sheet - Water Governance: The Gender Dimension. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=2025	Indicates that improving water and sanitation services may have a critical impact on the future lives of women and girls.

DOCUMENT	DESCRIPTION
UNDP, 2006. Fact Sheet – Energy for Gender Equality, Energy for the MDGs. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=1659	Explores the relationship between gender and energy and points out the importance of guaranteeing women access to energy services, if the Millennium Development Goals are to be met.
UNDP, 2007. Fast Facts: UNDP and Climate Change. http://www.energyandenvironment.undp.org/undp/index.cfm?module=Library&page=Document&DocumentID=6506	Explains UNDP's main areas of collaboration on climate change and how it supports developing countries to: adapt to climate change and reduce vulnerability; build national and local capacities; promote favourable market conditions for sustainable development and climate change mitigation; mobilize resources to improve mitigation and adaptation; and promote access to sustainable energy to comply with the Millennium Development Goals (MDG).

3 PORTALS AND WEB SITES

SITE NAME	CONTENTS
Adaptation to Climate Change Website UNDP-GEF http://www.undp.org/gef/adaptation/index.htm	Presents the most up-to-date information about the three GEF financing modalities to carry out adaptation activities. It also provides links to resources on climate change and adaptation and a general summary of UNDP's adaptation portfolio that includes examples of projects now being executed and of guides to prepare proposals.
African Network of Environmental Journalists (ANEJ) http://www.anej-media.org/	African Network of Environmental Journalists contains links to news and articles on climate change, both in the African context and internationally.
Cambio Climático en México (Climate Change in Mexico) http://cambio_climatico.ine.gob.mx/	Site of the National Ecology Institute with UNDP support. Presents a wide range of information on international agreements, the Kyoto Protocol, the situation in Mexico with respect to the theme, CO₂ capture, and mitigation greenhouse gas emissions in that country.
Climate Alliance http://www.klimabuendnis.org/	The Climate Alliance is a European initiative covering the theme of climate change from different perspectives such as international policies, local action and indigenous groups. The website contains much information on the theme, as well as references to other sites of interest.
Climate for Change - Gender Equality and Climate Policy http://www.climateforchange.net/	This European project attempts to improve women's participation in decision-making on climate change, with emphasis on the local level. The work undertaken with experts is reflected in the publication Climate for Change Toolkit.
El Cambio Climático en México. Información por estado y sector (Climate Change in Mexico. Information by state and sector) http://www.ine.gob.mx/cclimatico/edo_sector/	Presents information on the theme for each state and some sectors in Mexico. Includes data on climate threats, vulnerability and climate risk projections. Gives examples of work being done in Mexico on mitigating GHGs. It also suggests action to allow different sectors to adapt to climate change.

SITE NAME	CONTENTS
Climate Change Website http://www.undp.org/climatechange/	The UNDP page on climate change presents the Programme's latest news, publications and initiatives on the theme.
Climate Crisis http://www.climatecrisis.net/	The official site of Al Gore, who received an Academy of Motion Picture Arts and Sciences of the United States award for the documentary "An Inconvenient Truth." It provides basic statistics on climate change and associated information.
Climate Politics http://opendemocracy.net/	Gives access to a collection of articles by high-level political representatives and base activists concerned about climate change. Includes sections on science and the environment, creative energy and carbon-free cities.
Development Gateway - Environment & Development http://topics.developmentgateway.org/environment/highlights/default/showMore.do	In its section on key themes, has a range of articles on climate change as well as on other themes about the environment and development.
DFID's Climate Change Resource Base http://www.dfid.gov.uk/	Has an excellent selection of fact sheets on climate change and poverty. Also contains documents on climate change, policy-making to reduce poverty, the regional effects of climate change and relevant international agreements.
Energía http://www.energia.org/	The International Network on Gender and Sustainable Energy has much information on gender and energy, including academic articles, case studies and strategies for action.
European Environment Commission http://ec.europa.eu/environment/life/	Supports environmental projects and initiatives in Europe and neighbouring countries. Has information on European and international policies, case studies and on adaptation to climate change.
Genanet http://www.wecf.de/english/articles/2004/03/genanet.php	Project of the LIFE organization. Promotes women's participation in developing ecological technologies and in projects on environmental conservation and equity; develops educational concepts and facilitates relations between politicians, feminists and conservationists.
Gender and Climate Change http://www.gendercc.net/	Presents basic information on the relation between gender and climate change, including the themes of mitigation and adaptation.
Gender and Disaster Network http://www.gdnonline.org	The Gender and Disaster Network is an educational project begun by women and men interested in gender relations in the context of disasters.

SITE NAME	CONTENTS
Gender and Environment http://www.energyandenvironment.undp.org/	UNDP external publications on gender and the environment may be found in this virtual library called the eLibrary. It includes specific themes on gender and climate change.
Gender and Water Alliance http://www.genderandwater.org/	Seeks to promote gender equity on access to and safe management of water sources. Presents a wide range of information and tools to work on the theme, as well as case studies, projects and policies.
INSTRAW Website http://www.un-instraw.org/en/media-center/newsletter/un-instraw-e-letter-june-2008.html	Provides links to contemporary discussions on gender, climate change, and migration.
Intergovernmental Panel on Climate Change http://www.ipcc.ch/	Presents relevant information on technical, scientific and socio-economic assessments of climate change caused by human beings. Also includes technical reports, mainly directed at the UNFCCC Parties and the world community in general.
IUCN – Gender and Environment http://www.generoyambiente.org	Site of the International Union for Conservation of Nature, IUCN, which specializes in linking the gender approach and the environment. It presents a wide range of information, including articles about the gender theme and climate change.
Latin America Genera http://www.americalatinagenera.org	A knowledge platform promoted by UNDP to foster gender equity in the Latin American region. It collects publications, tools, and experiences from different stakeholders in the region (governmental, non-governmental, United Nations system agencies and donors). It has developed a virtual classroom, special forums and other education/communication spaces. It has a joint initiative with the UNDP Bureau for Crisis Prevention and Recovery that seeks to integrate the gender approach into risk management. To do so, it has suggested a first initiative that would lead to articulating knowledge and awareness between both areas by forming a virtual community, developing conceptual frameworks, methodological tools and developing internal and counterpart capacities (a virtual course).
Oxfam: Climate Change http://www.oxfam.org.uk/what_we_do/issues/climate_change/bp104_climate.htm	Contains excellent information related to climate change around the world, as well as links to publications that deal with matters of gender, development and climate change.
The Guardian's Climate Change Special Section http://www.guardian.co.uk/environment/climatechange	Gives access to an interesting collection of articles on climate change and the popularity of carbon markets, promoting the theme (advocacy) and activism. Contains special reports on case studies.
The Pew Center on Global Climate Change http://www.pewclimate.org/	Provides a great deal of information on climate change at the regional, national and international levels. Presents information related to creating inter-sectoral strategies and initiatives related to climate change.

SITE NAME	CONTENTS
UNDP. Energy for Sustainable Development: Overview http://www.undp.org/energy/	By using an integral development approach, the work of UNDP helps to create political frameworks, develop local capacities and provide technical assistance to expand access to energy services to the poorest. It responds in particular to MDG 1: Reduce the number of people living in poverty.
UNDP Mexico http://www.undp.org.mx/Genero/index.php	This page contains the principal work done and the initiatives taken by the country office on the gender theme.
United Nations Environmental Programme (UNEP) – Gender and Environment http://www.unep.org/gender_env/	Contains a great deal of scientific information on climate change, as well as information on international policies and official reports. Provides information on action taken by UNEP and its role with respect to climate change.
United Nations International Strategy for Disaster Reduction – ISDR http://www.unisdr.org/	The International Strategy for Disaster Reduction (ISDR) seeks to construct communities that are more prepared to confront disasters. In order to reduce the loss of human lives as well as social, economic and environmental losses, it promotes, as an integral sustainable development component, raising awareness about the importance of reducing the impacts of disasters.
United Nations System Portal on Climate Change http://www.un.org/climatechange/	Contains up-to-date information on climate change from agencies in the United Nations system. It offers details and news about conventions, international agreements and specific action by the United Nations on the theme. It also gives links to news, articles and international events concerning climate change.
WEDO http://www.wedo.org/	The Women's Environment and Development Organization provides many articles and much information on the themes of gender, development and global policies. Also contains information on themes related to climate change and gender.
Women in Europe for a Common Future. WECF. http://www.wecf.de/	WECF makes great efforts to achieve a healthy environment for all. It uses women's potential to conserve the environment, health and the economy. WECF's activities are based on its members, men as well as women, its individual views and necessities. Therefore, it implements local solutions and influences international policies. Its reports and documents can be found at this site.
Women's Environmental Network http://www.wen.org.uk	The Women's Environmental Network seeks to educate, empower and inform women and men who are concerned about the environment. It also organizes, from the perspective of women, campaigns on the environment and health.

4 NEWS AND OTHERS

DOCUMENT	DESCRIPTION
Calisiti, N., 2007. Peruanas bajo el temblor. (Peruvian women in the earthquake) Artemisa noticias, from Pisco. 22 August 2007. http://www.artemisanoticias.com.ar/site/notas.asp?id=2&idnota=4792	Reports that it is mainly women who demand that humanitarian aid be fairly distributed. They accompanied rescue workers to search for bodies and looked after the children following the earthquake devastation that ravished Peru in August 2007.
CEPREDENAC, 1996. First Constructive Central American Meeting on Gender and Disaster Culture. Coordination: Delia Castillo Godoy, Gender Coordinator CEPREDENAC. http://www.sica.int/cepredenac/	First meeting held in Guatemala, 20-23 November 1996, to deal with the gender theme and the culture of disasters in more depth and to formulate joint action strategies.
ENERGIA, 2005. Gender, Energy and the MDG. Energy News, Vol. 8, Issue 2, Dec. 2005. http://www.energia.org/resources/newsletter/en-122005.pdf	ENERGY – Information bulletin of the Network on Energy and Sustainable Development. This volume treats themes on gender and sustainable energy. It presents both case studies and theoretical analyses.
Falconi, C. UNDP, 2006. UNDP's Support for Climate Change Adaptation. Latin America Regional Workshop on Adaptation. 18-20 April 2006, Lima, Peru. http://unfccc.int/files/adaptation/adverse_effects_and_response_measures_art_48/application/pdf/undps_support_for_climate_change_adaptation_-_cecilia_falconi_undp.pdf	The document contains the results of the Latin America Regional Workshop on Adaptation, held in Lima, Peru, in 2006.
IMTA, Gender and Environment Network, SEMARNAT, and UNDP, 2006. La Agenda azul de las mujeres. (Women's Blue Agenda) http://www.undp.org.mx/Doctos/Publicaciones/MEMORIAzacatecasDIC5.pdf	Identifies women's needs and problems concerning water management in Mexico. Expresses the perspectives and formulates concrete proposals on women's inclusion in public policies and to consolidate the organizational processes of women and men with respect to water.
Machado, M. and M. Benítez, 2002. Convenios internacionales en materia ambiental y sus implicaciones con el enfoque de equidad de género en El Salvador. (International environment agreements and their gender equity approach implications in El Salvador) Development alternatives. http://pdf.usaid.gov/pdf_docs/PNACP890.pdf	Presents an analysis of women's human rights and how they relate to the environment. Contains elements on environmental management with gender equity in El Salvador. Also includes an analysis of the main international environmental agreements, synergies and lines of action in applying them, and recommendations for a follow-up plan on the conventions for gender management, the environment, and development.

DOCUMENT	DESCRIPTION
Newsweek (12 March 2007). The Carbon Folly. http://www.accessmylibrary.com/coms2/summary_0286-30068210_ITM	The article takes a critical look at carbon commerce.
OAS. 2006. International Strategy for Disaster Reduction in Latin America and the Caribbean. http://www.eird.org/eng/revista/no_13_2006/art12.htm	The OAS held and presented the results of a Workshop on Natural Disaster Management for the First Inter-American Meeting of Ministers and High Level Authorities on Sustainable Development.
Poverty-Environment Partnership, 2006. Linking Poverty Reduction and Water Management. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=1580	This document describes different ways in which improvements in water management help to reduce poverty.
Red Cross, 2007. Climate Change Will Take Its Heaviest Toll on the Poor and the Vulnerable. Red Cross, Guayaquil. Information bulletin. Number 5 – May 2007. http://www.ifrc.org/docs/news/opinion07/07040601/	The bulletin explains that climate change will most severely affect poor and vulnerable people and especially women.
Röhr, U., 2006. Gender and Climate Change. http://www.wecf.de/cms/articles/2006/01/climatechange_docs.php	Presents five documents on matters relating to gender and climate change, within the framework of the Conference of the Parties COP-1.
UNDP, 2006. Resource Guide – Gender in Water Management. http://www.genderandwater.org/content/download/4545/37857/file/Gender_%20and_IWRM_Resource_Guide_complete_200610.pdf	The Resource Guide: Transversalization of the Gender Approach in Water Management is a consultation document to assist professionals in the areas of gender and water, people responsible for transversalizing the gender approach in an institution, project or programme, as well as any other person or institution interested in the water sector and gender.
UNDP – Cap-Net, 2006. Why Gender Matters: A Tutorial for Water Managers. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=1869	The tutorial shows how dealing with questions of gender will make the use of water more efficient in helping to sustain the environment, as well as improving social benefits and equity in the use of water resources. It will also help to build the capacity to include gender questions in training and educational programmes. It was prepared jointly by Cap-Net and AGA.

DOCUMENT	DESCRIPTION
UNDP, 2007. Mother Earth: Women and Sustainable Land Management. http://www.undp.org/gef/05/documents/publications/Women&SustLandManagement_web.pdf	This publication is part of a UNDP series that includes the gender perspective. It gives practical guidance on how to include the gender perspective when formulating sustainable land management policies.
UNDP, 2007. Sustainable Land Management: The Why and How of Mainstreaming Gender in Sustainable Land Management. http://www.energyandenvironment.undp.org/undp/indexAction.cfm?module=Library&action=GetFile&DocumentAttachmentID=2322	This document is part of a series of publications called Gender Mainstreaming: A Key Driver of Development in Environment & Energy. This guide explains the importance of the gender approach in preparing sustainable land management policies and programmes.
Women's Environmental Network (15 May 2007). Women's Manifesto on Climate Change. Women Demand More Action on Climate Change. Press release. http://www.wen.org.uk/general_pages/Newsitems/pr_manifest15.5.07.htm	This manifesto, launched by two influential women's organizations, demands more action in dealing with climate change, more serious steps to reduce CO2 emissions and more participation of women in environmental decision-making.



International Framework

This chapter contains a brief analysis of the principal instruments developed by the international community and provides references on integrating the gender approach into to climate change responses.

These international instruments are a framework for equity, gender equality and women's human rights to be applied in the context of initiatives and policies related to climate change mitigation and adaptation.

1 CONVENTIONS

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
Convention On the Elimination On All Forms of Discrimination against Women (CEDAW)	Approved by the U.N. on 18 December 1979.	Under CEDAW, the States Parties are obliged to give men and women the same opportunities in terms of economic, social, cultural, civil and political rights. The Convention also establishes that discrimination against women is in violation of the principle of equal rights and respect for human dignity, making it difficult for women to participate on an equal basis with men in the political, social and economic life of a country, hindering the growth of prosperity in society and in the family, and making it more difficult for women to completely build their capacities to serve their country and humanity. The exclusion of women from the decision-making processes relating to climate change responses will unquestionably amount to discrimination against women and is a violation of CEDAW.	Various articles of CEDAW are relevant to how governments may promote equality approaches in action and policies related to climate change. Article 14. Establishes the adoption of appropriate measures to eliminate discrimination against rural women, so that they may enjoy adequate living conditions, particularly in relation to water supply. Article 14.1 Ensures the right of women in rural zones to participate in preparing development plans at all levels. Article 14.2.a) Ensures that women in rural areas have access to agricultural credits and loans, commercial facilities, adequate technology, and equal treatment on matters of agrarian reform and new settlements. Article 14.2.g) Ensures that women in rural areas enjoy adequate living conditions, especially in relation to housing, health conditions, electricity and water supply, transport and communications. Article 15. States that women have equal rights to enter into contracts and administer their properties. In accordance with Articles 17 to 22 of CEDAW and in order to examine the progress made by the States Parties to the Convention in applying them, the United Nations Committee on the Elimination of Discrimination Against Women was established. This Committee monitors and assesses the proper application of CEDAW and issues general recommendations to the States Parties to the Convention and to individuals in each country in accordance with its periodic reports.

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
			The States Parties to the Convention are obliged to take into account the recommendations issued by the Committee and provide information about its application in its reports to or meetings with the Committee.
United Nations Framework Convention on Climate Change (UNFCCC)	The Convention was agreed on 9 May 1992, and entered into force on 21 March 1994.	At its 45th session in 1990, the United Nations General Assembly established a negotiating committee and the UNFCCC was signed at the Earth Summit in 1992. To achieve its objectives, commitments were defined for the Signatory Parties, based on the principle of shared but differentiated responsibilities; however, some commitments apply to all of the states. The Convention outlined broad objectives to establish the concentrations of GHGs in the atmosphere, and to define adaptation measures that entail multilateral action. Nevertheless, although the Convention was approved, governments were aware that their regulations would not be enough to deal with climate change. At the first Conference of the Parties, held in Berlin (Germany) in April 1995, a new round of negotiations was begun in order to analyze firmer and more specific commitments.	NONE

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
Convention on Biological Diversity (CBD)	June 1992	The objective of the CBD includes the conservation of biological diversity, the sustainable use of its components, and fair and equitable participation in taking advantage of the benefits derived from the use of genetic resources.	The importance of biodiversity for human and natural systems is emphasized throughout the Convention and, although women are explicitly mentioned only in the Preamble, gender considerations are implicit in many of the articles in view of the emphases placed on the following points: Right of access to natural resources. Local communities' participation in managing and conserving resources. Assessing indigenous knowledge and traditional customs. Supporting management of ecosystems in order to ensure food security and health. Equal sharing of the benefits arising from the use and transformation of ecosystem goods and services. Preamble Give equal recognition to the role women play in the conservation and sustainable use of biological diversity, and affirm the need for women's complete participation at all levels in designing policies and implementing projects on the conservation of biological diversity.
United Nations Convention to Combat Desertification (UNCCD)	17 June 1994	The objective of the UNCCD is to combat desertification and mitigate the effects of drought in countries facing serious problems, particularly in Africa. The Convention's primary goal is to promote action on desertification and is supported by international cooperation and partnership arrangements.	Prologue (paragraph 18) Stresses the important role played by women in regions affected by desertification and/or drought, particularly in rural areas of developing countries. Emphasizes the importance of ensuring the full participation of both men and women at all levels in programmes to combat desertification and mitigate the effects of drought.

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
		The Convention adheres to a framework consistent with Agenda 21, with a view to helping to achieve sustainable development in affected areas.	Article 5(d) Promote awareness and facilitate the participation of local populations, particularly women and youth, with the support of non-governmental organizations, in efforts to combat desertification and mitigate the effects of drought. Article 10(1) and 10(2) The purpose of national action programmes is to identify the factors contributing to desertification and the practical measures necessary to combat desertification and mitigate the effects of drought. Facilitate effective local, national and regional participation of non-governmental organizations and local populations, both women and men. This refers particularly to users of resources, including farmers, shepherds, and the organizations that represent them. Article 19(1) and 19(3) The Parties recognize the significance of capacity building – that is to say, institution building, training and development of relevant local and national capacities – in efforts to combat desertification and mitigate the effects of drought. They shall promote, as appropriate, capacity-building: (a) Through the full participation especially of women and youth at all levels, and particularly at the local level, with the cooperation of non-governmental and local organizations.

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
			The Parties shall cooperate with each other, competent intergovernmental organizations and non-governmental organizations in undertaking and supporting public awareness and educational programmes in affected countries and, where relevant, in States Parties, to promote understanding of the causes and effects of desertification and drought and of the importance of meeting the objective of this Convention. To that end, they shall: (e) Assess educational needs in affected areas, elaborate appropriate school curricula and expand, as needed, educational and adult literacy programmes and opportunities for all, in particular for girls and women, on the identification, conservation and sustainable use and management of the natural resources of affected areas.

2 DECLARATIONS AND FRAMEWORKS FOR ACTION

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
Agenda 21	179 governments agreed to adopt the programme at the United Nations Conference on the Environment and Development, held in Rio de Janeiro in January 1992	Agenda 21 recognizes women's traditional knowledge and practices and stresses their contribution to biodiversity conservation. Specifically, Chapter 24 establishes a new development paradigm arising from the need to establish equity and equality between men and women for the successful implementation of the Agenda.	Section 24.2 (c). Stipulates that governments are called upon to make the changes necessary to eliminate constitutional, legal, administrative, cultural, behavioural, social and economic obstacles to women's full participation in sustainable development and in public life.

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
			Section 24 (f). Establishes that these objectives should be translated into clear governmental policies and national guidelines, strategies and plans for the achievement of equality in all aspects of society. These include the participation of women in key decision-making positions and in management of the environment, particularly as it pertains to their access to resources.
IV International Women's Conference	Held in Beijing, China, from 4-15 September 1995. The Conference's Platform for Action was signed by 189 countries.	Makes a substantive study of the most important contributions made by conferences held in this decade in favour of women and on gender equality. The Platform's premise is that women's rights are human rights. Its concrete proposals operationalize the protection of women's human rights in 12 spheres of special concern, including paragraph K, which deals with women's access to natural resources.	Strategic objective K.1 Involve women actively in environmental decision-making at all levels. Strategic objective K.2 Integrate gender concerns and perspectives into sustainable development policies and programmes. Strategic objective K.3 Strengthen or establish mechanisms at the national, regional, and international levels to assess the impact of development and environmental policies on women.
Millennium Declaration	Approved at the Millennium Summit in September 2000.	The Millennium Declaration established the Millennium Development Goals for the first fifteen years of the twenty-first century. The challenge is to comply with the stated commitments by designing effective public policies that reflect the stakeholders' differing voices and efforts. In this document, the Signatory States made a commitment to respect human rights and fundamental freedoms, and to respect equal rights for all without distinction as to race, sex, language or religion.	Development Goal 3: Promote gender equality and empower women. Target 4: Eliminate gender disparity between girls and boys in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015. Development Goal 7: Ensure Environmental Sustainability Among its targets are: Target 9: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
		They also considered certain fundamental values to be essential to international relations in the twenty-first century and, specifically, they affirmed that equal rights and opportunities of women and men must be assured.	Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. Target 11: Have achieved by 2020 a significant improvement in the lives of at least 100 million slum dwellers.
Hyogo Framework for Action 2005-2015	The World Conference on Disaster Reduction, held in Kobe, Hyogo (Japan), from 18-22 January 2005	The principal world mandate on gender quality in the context of disaster risk management comes within the framework of the World Conference on Disaster Reduction.	Stipulates that a gender perspective should be integrated into all disaster risk management policies, including those related to risk assessment, early warning, information management, and education and training.
United Nations Declaration on the Rights of Indigenous Peoples (DECRIPS)	13 September 2007	After more than 20 years of negotiations, the United Nations Declaration on the Rights of Indigenous Peoples was finally adopted.	Article 22.2. Specifically prohibits discrimination against women, stating that all rights and freedoms recognized in the Declaration shall be guaranteed equally to indigenous people, both men and women. Article 4). Establishes a norm to provide information about the implementation of the Declaration.

3 PROTOCOLS

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
Facultative Protocol to CEDAW	Entered into force in 2000.	The Protocol provides a mechanism whereby women can request investigations of violations of rights established in CEDAW.	All are relevant.

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
Kyoto Protocol	December 1997 Approved and entered into force on 18 November 2004, after being ratified by 55 Parties to the Convention.	This Protocol established obligatory targets for industrialized countries on emissions and created innovative mechanisms to help them comply with them. To date, 174 countries have ratified the Protocol.	NONE

4 OTHERS

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
Plan of Implementation of the World Summit on Sustainable Development (WSSD)	The WSSD was adopted in Johannesburg in 2002. It promotes equal access by women and their full participation in decision-making at all levels, on an equal basis with men.	Requires transversalization of gender perspectives in all policies and strategies, the elimination of all forms of discrimination against women and an improvement in the condition, health and economic wellbeing of women and girls by giving them full and equal access to economic opportunities, land, credit and health care.	

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL CONTRIBUTIONS	SPECIFIED ARTICLES
Resolution 2005/31 of the United Nations Economic and Social Council (ECOSOC)	United Nations Economic and Social Council 2005	This ECOSOC resolution established that incorporating a gender perspective in all United Nations system policies and programmes is a strategy accepted worldwide to promote equality between genders; it is fundamental to apply the Beijing Platform for Action and to obtain the results requested by the twenty-third extraordinary period of sessions of the General Assembly. Another important action recommended that all entities in the United Nations system promote coordination, cooperation and exchange of methodologies and good practices, which should include the development of tools and effective processes to monitor and assess the United Nations. ECOSOC also recommended that all agencies' internal mechanisms consider the gender perspective in their work. This resolution is evidence that the responses to climate change should incorporate the gender perspective in all mechanisms, methodologies, programmes and field of action in which they operate.	This legal instrument expressly exhorts all entities of the United Nations system to intensify efforts aimed at resolving the problems of integrating the gender perspective into their policies and programmes, by taking steps to: - Prepare action plans, if they do not already exist, with clear directions about the practical aspects of incorporating a gender perspective into policies and programmes. - Ensure that action plans include specific time periods and regulations about institutional mechanisms, both at headquarters and in field offices, and that they are fully coordinated with the general objectives and strategies of the Organization. - Fully incorporate a gender perspective in programme budgets, in multi-annual financing frameworks and in all budget process based on results. - Make personnel more efficient by ensuring continuous awareness building and training on questions of gender. - Encourage personnel to improve their capacity to analyze problems concerning gender, and require that they apply such analysis when making policy and working on programmes. - Ensure that senior executive officers make a full and firm commitment to include a gender perspective in their policies, programmes and projects.

INTERNATIONAL INSTRUMENT	EFFECTIVE DATE	PRINCIPAL ARTICLES	SPECIFIED ARTICLES
			- Strengthen account-rendering systems used by all personnel concerning the inclusion of a gender perspective; these should include evaluating professional performance. Include a gender perspective in operational mechanisms, in accordance with national development strategies. This includes evaluations common to all countries and the United Nations Development Assistance Framework, strategy documents on the fight against poverty and the frameworks on presenting reports and on execution, as well as documents related to achieving international development goals such as those cited in the Millennium Declaration. - Continue to support governments and to collaborate with civil society in their efforts to apply the Beijing Platform for Action and the results of the twenty-third extraordinary period of sessions of the General Assembly. - Continue to develop and institutionalise supervision and assessment instruments, as well as methodologies to analyze repercussions on the subject of gender. - Promote the collection, compilation and analysis of data itemized by gender and ensure that such data are used. - Promote the incorporation of gender perspectives in macro-economic policies and social development, and in the most important national development programmes.



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