

- **Draw on local knowledge**, which is linked to men's and women's gender-differentiated roles, and "is based on experience and adapted to the local culture and environment, it is continuously developing (...) [and is] an important asset for resource-poor people.²⁷"
- **Enhance local capacity to adapt**. "FAO has developed and tested a livelihood-based approach to promote climate change adaptation processes (...) building on the assumption that most rural communities in LDCs (as well as in other developing countries) work on the basis of day-to-day priorities rather than for the longer term²⁸."
- **Introduce tools in a locally-sensitive way**. FAO cautions "the availability of usable science-based climate prediction information needs to be tailored to farmer needs by matching it with traditional practices and incorporating existing local knowledge²⁹."

Moving forward

*More locally-based research on gender-climate links is needed*³⁰. An understanding of local gender dynamics is essential because **gender roles "vary across culture, class, ethnicity, income, education, and time"**³¹. Such research should ask:

- How do the different types of climate change impacts, such as droughts and flooding, differently affect men and women?
- In what ways do men and women adapt to climate variability and extreme events?
- How do men's and women's roles complement each other when coping with changing climate conditions?
- How may gender roles change when climate conditions change?

This type of research is critical to ensure they women and men are not burdened and made more vulnerable by changing responsibilities due to climate change, that inequalities between them are not increased and to identify opportunities that can collectively reduce vulnerability and enhance adaptive capacity.

Action on the gender dimension of climate change is needed at the policymaking level.

With recognition that there will always be a degree of uncertainty about the impacts of climate change, global preparations for the range of possible impacts must incorporate the gender dimension of climate change. The growing body of literature on gender and climate change combined with research on the biophysical impacts of climate change should be continuously fed into the formulation of people-centred climate change adaptation strategies and policies.

Incorporating the gender dimension of vulnerability and resilience into adaptation can be met by drawing on years of agriculture development and disaster relief experience and, perhaps more importantly, men's and women's existing knowledge and coping mechanisms.

This brief was prepared by
Sibyl Nelson (Consultant)
under the technical supervision
of **Yianna Lambrou, ESW, FAO.**

Contact:
Food and Agriculture
Organization of the
United Nations

Gender, Equity and Rural
Employment Division

Economic and Social
Development Department

Viale delle Terme
di Caracalla
00153 Rome, Italy
Tel.: (+39) 06 57052279
Fax: (+39) 06 57052004

Yianna.Lambrou@fao.org

¹ IPCC. 2007. *Climate Change 2007: The Physical Science Basis, Summary for Policymakers*. Intergovernmental Panel on Climate Change, Geneva, Switzerland.

² Parry M.L., O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds. 2007. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, UK, 1000 pp.

³ FAO. 2007. *Risks and Benefits of Liquid Biofuels Production: Gender Aspects*. Briefing Paper. Rome.

⁴ IPCC. 2007. *Climate Change 2007: Impacts, Adaptation and Vulnerability, Summary for Policymakers*, Intergovernmental Panel on Climate Change, Geneva, Switzerland.

⁵ FAO. 2007. *Adaptation to climate change in agriculture, forestry and fisheries: Perspective, framework and priorities*. Rome.

⁶ Ibid.

⁷ DFID. 2004. *Key sheet 03: The impact of climate change on the vulnerability of the poor*. Crown Copyright, UK.

⁸ FAO. 2007. Climate change web page. (available at http://www.fao.org/inr/clim/clim_en.htm)

⁹ Ibid.

¹⁰ FAO. 1996. *Farmers' Rights in the Conservation and Use of Plant Genetic Resources: A Gender Perspective*, by Sally E. Bunning and Catherine L.M. Hill. Rome.

¹¹ FAO. 2007. *Climate Change – The Issue*. (available at http://www.fao.org/clim/issues_en.htm)

¹² FAO. No Year. *Emergency and Rehabilitation Programmes: Does Gender Matter?* Rome.

¹³ FAO. 2002. *Gender and Development Plan of Action 2002-2007 Fact Sheet*. Rome.

¹⁴ Ibid.

¹⁵ UNFPA. No Year. *Frequently Asked Questions about Genderweb page*. (available at <http://www.unfpa.org/gender/resources3.htm>)

¹⁶ Quisumbing, Agnes R. and Bonnie McClafferty. 2006. Using Gender Research in Development. In *Food Security in Practice No. 2*. IFPRI, Washington, DC, USA.

¹⁷ Lambrou, Yianna and Grazia Piana. 2006. *Gender: The Missing Component of the Response to Climate Change*. FAO, Rome, Italy.

¹⁸ Quisumbing, Agnes R. and Bonnie McClafferty. 2006. Using Gender Research in Development. In *Food Security in Practice No. 2*. IFPRI, Washington, DC, USA.

¹⁹ Adger, W.N., S. Agrawala, M.M.Q. Mirza, C. Conde, K. O'Brien, J. Pulhin, R. Pulwarty, B. Smit and K. Takahashi. 2007. Assessment of adaptation practices, options, constraints and capacity. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 717-743.

²⁰ FAO. No Year. *Emergency and Rehabilitation Programmes: Does Gender Matter?* Rome.

²¹ FAO. 2006. *Livelihood adaptation to climate variability and change in drought-prone areas of Bangladesh*. Rome. (Full report available: <http://www.fao.org/docrep/009/a0820e/a0820e00.htm>)

²² FAO. 2004. *LinkS project case study No. 2: The Role of Social Relations in Farmer Seed Systems and Reconstruction of Agricultural Production in a Post-disaster Situation*. Rome.

²³ FAO. 2002. *Gender and Development Plan of Action 2002-2007 Fact Sheet*. Rome.

²⁴ FAO and WFP. 2005. *Socio-Economic and Gender Analysis (SEAGA) for Emergency and Rehabilitation Programmes*. Rome.

²⁵ FAO. 2001. *Gender and Development Plan of Action 2002-2007*. Rome.

²⁶ FAO. 2004. *What is Gender? from "Building on Gender, Agrobiodiversity and Local Knowledge"*. FAO, Rome, Italy.

²⁷ FAO. 2004. *Local Knowledge as Part of Agrobiodiversity, In Building on Gender, Agrobiodiversity and Local Knowledge*. Rome.

²⁸ FAO. 2007. *Adaptation to climate change in agriculture, forestry and fisheries: Perspective, framework and priorities*. Rome.

²⁹ Ibid.

³⁰ FAO. 2007. *Gender and Climate Change: Existing Research, Knowledge Gaps, and Priorities for the Future*. Prepared by Ulrike Röhr and Minu Hemmati (Consultants). Rome.

³¹ IPCC. 2001. *Climate Change 2001: Mitigation*. Intergovernmental Panel on Climate Change, Geneva, Switzerland. (available at http://www.grida.no/climate/ipcc_tar/wg3/431.htm)

PEOPLE-CENTRED CLIMATE CHANGE ADAPTATION: INTEGRATING GENDER ISSUES

THIS BRIEF EXPLAINS THE LINKS BETWEEN GENDER ISSUES AND CLIMATE CHANGE AND RECOMMENDS WAYS TO INTEGRATE GENDER INTO CLIMATE CHANGE ADAPTATION POLICIES AND ACTIVITIES.

Background

Scientists have determined that human activities since the Industrial Revolution, such as the use of fossil fuels and land use change, have led to an increase in the concentration of greenhouse gases in the atmosphere, trapping extra heat inside the atmosphere, and offsetting the earth-atmosphere energy balance¹.

This has led to an increase in the Earth's surface temperature, resulting or expected to result in shifts in the climate system, including sea level rise, changes in precipitation patterns, melting ice, increased frequency of extreme events, and changes in climate variability. This will have significant repercussions for human society and the environment².

Research has confirmed that *mitigation*³ – reducing emissions of greenhouse gases or sequestering emissions – is critical to slowing climate change. However, because of the long lifetime of the greenhouse gases already present in the atmosphere, **at least some amount of climate change will be inevitable**, and so *adaptation*, or coping with climate change impacts, is increasingly being recognized as critical⁴.

What is climate change adaptation?

Adaptation aims to reduce the vulnerability and improve the adaptive capacity, or resilience, of people who rely on climate-dependent resources for their livelihoods (see box 1). In the agriculture* sector, adaptation requires the use of good agricultural, forestry and fisheries practices to meet changing and more difficult environmental conditions⁵. Examples of adaptation practices in agriculture include changing timing of planting or sowing; applying new technologies; and promoting agro-biodiversity⁶.

Adaptation to variable climatic conditions has been an ongoing process; women and men are continually modifying their agricultural practices to naturally-varying climate conditions according to their specific needs, knowledge and

BOX 1. Vulnerability and resilience

"Vulnerability is an indication of people's exposure to external risks, shocks and stresses and their ability to cope with, and recover from, the resulting impacts. Vulnerability may differ seasonally or at different times within people's lives. It also differs across groups within communities or individuals within a household, owing to their livelihood activities or social standing. (...) People draw on a range of coping strategies in times of stress; however, those available to the very poor are likely to be more restricted and less resilient⁷."

access to resources. Governments and agencies play a critical role in improving farmers' capacities to reduce risk or make optimal use of climate variability⁸ through disseminating agro-meteorological data and tools; conducting vulnerability assessments; and providing policy advice to strengthen institutional approaches to disaster risk reduction⁹.

* As per FAO basic texts, the word agriculture includes crops and grasslands, livestock husbandry, forestry and fisheries.



The rural poor: urgency and need for adaptation

Adaptation at an accelerated and more targeted pace will be critical for the security and the development of vulnerable populations, like the estimated 1.4 billion rural people who are dependent on small-scale resource poor farming in developing countries¹⁰. The profound effects of climate change on agriculture¹¹, combined with the low resiliency and high vulnerability of this population to shocks, could severely alter their ability to manage natural resources, affecting their livelihoods, food security, and well-being. At risk are their jobs, their homes, and their access to basic resources, including food and water.

While adaptation research and activities targeting vulnerable populations are increasing in number, **limited attention has been given to the differences between men and women within at-risk populations.**

Experience shows that interventions to strengthen livelihoods and food security from external shocks are more efficient and effective when gender differences are properly understood and addressed¹², and yet research and policy-making have so far failed to examine extensively the gender aspects of vulnerability and adaptation to climate change.

Gender: a crucial dimension of climate change adaptation

In at-risk natural resource-dependent communities, men and women have distinct roles and responsibilities (see box 2), which give rise to differences in vulnerability and ability to cope with change. Some of the ways gender roles are linked to climate change adaptation are:

1. Due to a **gender-based division of labour**, men and women perform different jobs/tasks. Climate change will alter what they can do, exposing men and women to **different risks and opportunities**. Men may migrate for work while women may spend more time collecting fuel and water, for example.
2. Men and women have different **access to resources**, including physical resources like land, social resources like networks, and financial resources like income-generating work and credit. In times of change, they will have **different options and 'safety nets' for coping with change**.
3. Based on their distinct roles, women and men have different **sets of knowledge and skills**, such as knowing which seeds to plant during a dry spell or knowing how to dig a well. Recognizing their contributions will result in a wider **range of options for preparing for and coping with change**.
4. **Participation in decision making** and politics, and access to decision makers is not always equal for men and women and this may affect their **participation and the representation of their ideas in short- and long-term decision making on climate change**.

BOX 2. Key gender concepts

1. **Gender**¹³ refers to the social roles and relations between women and men. This includes the different responsibilities of women and men in a given culture or location.
2. **Gender roles**¹⁴ of women and men are socially constructed, unlike the sex of men or women, which is biologically determined, and such roles can change over time and vary according to geographic location and social context.
3. **Gender equality**¹⁵ means "equal enjoyment by women and men of socially-valued goods, opportunities, resources and rewards. Where gender inequality exists, it is generally women who are excluded or disadvantaged in relation to decision-making and access to economic and social resources. (...) [A] critical aspect of promoting gender equality is the empowerment of women, (but) (...) (t)he achievement of gender equality implies changes for both men and women (because) (t)he lives of men are just as strongly influenced by gender as those of women."



Lessons learned

Experience in development interventions shows that households do not act as one when making decisions, women tend to control fewer resources¹⁶, and women tend to be more vulnerable to external shocks due to already-present vulnerability from unequal access to resources, lower levels of education, increased burden and poorer health¹⁷ (see box 3). Increasing women's resources tends to benefit the whole family. In general, projects that acknowledge and monitor gender differences have improved impacts on development¹⁸.

"There is a body of research in disaster management that argues that women are more vulnerable than men to weather-related disasters. (...) (Gender-differentiated impacts) include numbers of deaths, and well-being in the post-event recovery period.¹⁹" It has been found that men and women farmers have distinct and critical knowledge to contribute to disaster recovery (see box 4). Disaster assistance after floods or droughts has proven more successful when men and women are equally involved²⁰.

BOX 3. Gender, development and adaptation

A study on livelihood adaptation to climate variability and change in drought-prone areas of Bangladesh²¹ recommended that "priority should be given to plans for rural development that incorporate climate change adaptation." The study further recommended that because "women and children are the most vulnerable groups within the communities"(...) "special contingency plans should be made in order to mitigate their suffering and ensure gender issues are mainstreamed in any development process." Another section of the study recommended that ensuring the sustainability of household-level income generation activities is one way to integrate women into the implementation of adaptation practices.

BOX 4. Farmers' adaptive capacity and gender-differentiated knowledge systems

Floods in 2000 had a devastating effect on the farmer seed systems in the Valley of Limpopo River, in the Province of Gaza, Mozambique²², "due to their abruptness and the timing of the disaster, occurring just before the harvesting time and lasting for about three months. All the lowland resources like livestock, seeds and shelters were destroyed."

In one region of the valley, multiple varieties of crops went extinct and farmers used external resources and informal networks to rehabilitate their seed stocks. In another region, farmers were able to recover their seeds after the flood in the lowland area because they had a practice of transferring seeds from the highlands to the lowlands in times of flooding.

In these communities, men are responsible for the cultivation of cash crops like maize, sugar cane, rice and bananas, while women have the responsibility and knowledge about food crops like cassava, sweet potatoes, groundnuts and cowpeas. The study found that the reconstruction of the agricultural systems, which also affects the conservation of genetic resources, may be affected by the differentiation of agricultural practices and responsibilities along gender lines.



How to incorporate gender issues into climate change adaptation

INTERNATIONAL AND NATIONAL POLICIES:

- **Mainstream a gender perspective** into the policy design process, which means making women's as well as men's concerns and experiences an integral dimension of the design and implementation, monitoring and evaluation of policies and programmes²³.
- **Gender analysis** can be used to understand women's and men's different activities and responsibilities, and their access to resources and decision-making²⁴, making programmes more efficient and relevant²⁵.

LOCAL AND COMMUNITY ACTIVITIES:

- **Use participatory approaches** to involve all members of the community in planning.
- **Understand local gender roles**, including different vulnerabilities. Failure to consider these differences between men and women leads to unsuccessful project activities²⁶.