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# GENDER IMPLICATIONS OF CLIMATE CHANGE FOR AN ECO-EFFICIENT AGRICULTURE

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The PRGA Program has launched a new initiative focused on mitigation efforts to adapt breeding techniques to the effects of Climate Change. These efforts are carried out in partnerships with ICARDA and stakeholder organizations in various regions.

- **Climate Change and Plant Breeding Strategies.** Participatory Plant Breeding (PPB) has been the flagship of the PRGA Program since its inception. Our work consists of supporting the development and application of PPB methods for a variety of crops across regions to help the poor diversify their livelihoods, looking for pathways out of poverty while sustaining crop diversity.

- **PPB, and the Effects of Climate Change.** The development of participatory and evolutionary breeding strategies, such as PPB, combines basic genetic-resources and farmers' (male and female) knowledge to adapt crops to cope with a changing environment. This approach will enhance crop adaptation, while mitigating negative effects related to rapid weather changes.

- **Food Security and Nutrition.** As the weather events become more extreme, farmers with little capacity to adapt and no access to newer varieties are directly impacted. PRGA Program is spearheading partnerships with CIAT's programs in Africa and Latin America to contribute to the enhancement of so-called food crops tended by women farmers which are central for good nutrition and a balanced daily diet.

**Opportunities for addressing Gender inequalities in Mitigation and Adaptation efforts at the policy level:**

- Analyzing specific gender patterns of use including land, forestry, water and energy
- Improving women's access to basic assets, namely, technology, information, credits and markets
- Recognizing women's vulnerability should a natural disaster strike (droughts, floods, disease and landslides)
- Supporting women's access to decision-making roles while considering mitigation and adaptation procedures at the grassroots level

These guidelines should help to find the needed balance between mitigation initiatives and other adaptation strategies related to climate change that directly affect resource-poor farmers, where in women are over-represented.



**Adaptation to Climate Change from the Bottom Up**

I am a rice farmer from the town of Tayabas in Quezon, Philippines. As a whole, Climate Change will decrease soil potential and lessen production. Women who prepare food will find it more difficult to ensure nutritious and adequate intakes for their families. Women in rice farming communities who are in charge of sowing seedlings during the planting season will face even less opportunities to be employed as farm laborers if severe droughts occurred. Women augment farm income by getting employed as hired labor, but there would be fewer options when the climate becomes unstable. An alternative that many women have chosen is to intensify backyard food production, which will require more support for basic services like water for their homes and additional nutritional supplements for their children.



Luisita Esmao, Philippines

St Jude Family Farm is an organic farm in Masaksa, Uganda. We work hard to improve our livelihood out of small-scale farming and we waste nothing. However, we have to learn about environmental protection, rain and water harvesting, irrigation and soil conservation. We are confronting the challenge of maintaining a good production level in animal husbandry and crop production with less water and more severe weather effects. At St Jude we strive to farm, utilizing environmentally sound techniques while trying to understand how to cope with uncertain weather. We practice organic gardening and produce biogas, make compost and also fertilize our soils to obtain healthy crops; our demonstration farm is an example of how to be prepared to confront climate change.



Josephine Kizza, Uganda

I am a rubber tapper from southern Thailand. Nowadays, we are experiencing long droughts in the region. Years ago we could not wade across the river but today the water level is extremely low. Our underground water supply dries up as early as March instead of May. Because of this situation many rubber trees have died and many more will continue the same fate. We have lost lots of income and farmers are increasingly competing for water to save their fruit trees. Sor Kor Por (our local farmers' organization) is involved in planting trees for debt, planting more trees will help lessen the impact of climate change and assist farmers in paying their debts.



Sudaporn Sittisathapornku, Thailand

My name is Alejandrina from Wapage, Northern Potosi in Bolivia. Our harvest is down and every year is worse. This is critical for people like us. We have no way to insure our food supplies which is a real problem because we live in the highlands far away from any town. It is not only the changing weather patterns; we are experiencing crop disease, plagues and soil erosion because of heavy unseasonal rains. (Katalysis Program)



Alejandrina, Bolivia