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Gender Links in Agriculture and Climate Change

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Climate change has emerged as the most serious issue to affect the world. However, its disproportionate impact can be most felt in already marginalised sectors. One of them is agriculture. This is the case even though small scale farmers have contributed comparatively little to the greenhouse gases that choke the Earth's atmosphere.

Farm to Market. Women are quite dependent on their own produce. In many cases, they themselves sell these in market places such as this one in Luang Prabang in Laos.

Photo from Wikipedia Commons Many continue to live in communion with the environment, despite the pressures of migration to urban areas. Many still heavily derive their livelihood and culture from the land. But these are changing with the usual droughts, floods, storms, heat, pests and diseases, which spell insecurity, illness, disaster, hunger and even death to farmers.

Asian farmers are among those who have been hit by these unpredicatable climactic patterns, given the region's proneness to tropical disasters. As the United Nations Framework Convention on Climate Change (UNFCCC) report explained, "Small scale men and women farmers have fewer resources for coping with storms, with floods, with droughts, with disease outbreaks, and with disruptions to food and water supplies. They are eager for economic development themselves, but may find that this already difficult process has become more difficult because of climate change."

Of all farmers, women have the least leverage to adapt with and prepare for

extreme weather conditions and disasters. Women farmers are often the poorest and quite dependent on their harvests. Thus, when climate patterns drastically change or when disasters strike, nothing is left for women farmers.

As Jang, a member of South Korea's Women's Advanced Farmers' Federation shared, "Climate is an important factor in agriculture since it can affect every step of the crop's growth. Extreme floods and droughts means death to our crops, and spells loss of income."

Jang is also concerned with the unpredictability of the weather, that affects women in preparing for disasters like floods. She noticed that there has been much more rainfall, causing the rare floods. As she recalled, "My mother has experienced only two floods in her lifetime. In my lifetime, I have experienced five floods already. And there may be some more in the near future, although I surely hope they will not happen again." Agriculture in South Korea has changed significantly over the years especially with the agro-based industrialisation, technology development and mass production. But it has also suffered with the increasing scarcity of natural resources like agricultural lands and water.

Women's vulnerability also stems from their multiple roles. One of which is providing food on the family's dining table. They prepare the food that they themselves have grown along with the staples that they traded. This is also why women play a critical role in ensuring good nutrition and food safety across the region. As climate change directly impacts food supply, women farmers tend to be more

Effect of climate change	Women's roles
Greater uncertainty and higher risks in agricultural production due to changing weather patterns and increased incidence of extreme weather conditions such as droughts, heavy rainfalls and typhoons, among others	Women as food producers
More difficult access to water for drinking and other household uses	Women's role in fetching water, food preparation, maintaining the household
Increased incidence of sickness and diseases as a result of changes in the weather as well as poor water supply	Women's role in caring for the children
Less income for food and other expenses as a result of crop failures due to unpredictable and changing weather patterns	Women as the ones in charge of managing resources for food and other needs
Less participation in community and other social activities	Women as a multi-tasker involved in both productive and reproductive work

burdened for they are the first to problematise how they would feed their families.

As Thai woman farmer Amonrat Mingrod said, "Our work in the house and in the fields starts from the morning until the evening. We have to cook. We have to feed our children. We also have to work in the fields." Mingrod, who heads a local group of women's farmers, SorKorPor added that one of the impacts of climate change is the increasing migration of people towards urban areas to work in factories.

In a consultation that was run by the Asian Framers Association, one Cambodian farmer said that when their harvest is poor, women, unlike men, find it hard to sleep because they are thinking of where and how to get food for their family. She also said that food insecurity and economic hardships due to crop failures brought about by unpredictable weather patterns also tend to create an environment that supports domestic violence, as men often take out their frustrations on women.

Indeed in times of crisis, women tend to sacrifice the most. In fact one of the coping strategies cited by women farmers from Cambodia, Indonesia and Timor Leste was for women to reduce their food intake. Some changed the diet of their families. Still others had to ask food from their neighbours and other sources.

But women farmers are not only a vulnerable sector. They are also active stakeholders in responding to climate change. Thus, the second set of strategies of women farmers include their own ways of diversifying agriculture and food production as well as the communities' increased protection of common resources such as forests and watershed systems. Some communities indeed practiced reforestation programmes, stone and hedge row terracing and in-row and in-hole tillage.

As a MADRE report cited, "Women's skills and leadership are crucial for people's survival and recovery. Therefore, defending the full range of women's human rights within the context of addressing climate change is essential both to protecting women themselves and cultivating their capacity for leadership—



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Wasted Harvest.

The ricefields would have been ready for harvest in a matter of days but a typhoon severely struck Laguna in Northern Philippines, dashing the farmers' expectation of a modest income and in some cases, plunging them in deeper debts.

Photo by the International Rice Research Institute from Wikimedia Commons. on which so many lives depend."

Women farmers have the knowledge and skills in understanding the fields that they work and their surrounding environment. Together with their male counterparts, they have grown familiar with the land and have developed methods of keeping it productive while nuturing it. As added, "Farmers have the methods to defend ourselves from global warming. We conserve the environment by using organic bags instead of plastic bags. We plant trees to make the world cooler. Our women farmers really care about food security. So we ensure that the food we serve is chemical-free. We grow our 'vegetables' by ourselves and use organic and chemicalfree soil."

The study that AFA is conducting in several countries in the region such as Cambodia, Indonesia, Laos, Philippines, Timor Leste and

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Thailand yielded interesting conclusions. There are three factors that influence the impact of climate change on food security.

The first is the state of their immediate physical environment. Farming communities where there is much deforestation are more vulnerable since the environment limits the farmers' abilities to cope with prolonged and extremely dry weather or with heavy rains that often result to flash floods. Farmers reported that they were more able to cope with extreme weather events when they decided to stop adopting slash and burn farming techniques and instead implemented community reforestation programmes and watershed preservation and management techniques.

The second factor is the level, quality and appropriateness of support given by government and non-government organisations (NGOs). Training activities extended on organic farming, crop diversification, system of rice intensification, terracing, and watershed management, among others, increased the farmers' capability to adapt to the emerging weather patterns.

The absence of irrigation facilities limits the farmers' capability to produce food during periods of drought or extremely dry weather. Meanwhile, farmers from Cambodia, Indonesia and Timor Leste reported that government extension programmes, which mostly promotes chemical-based farming were not adopted by most farmers as they entail higher cost of production.

The third factor is the level of awareness and capabilities of farmers and of farmers' organisations. Farmers who are more aware of the link between the environment and agriculture are willing to stop the use of slash and burn techniques and undertake reforestation programmes. Women farmers in Cambodia also argued that families with fewer children are more food secure. Jang captured the sentiment of most farmers, "We should make agriculture a fusion of life and science industry which includes processing, marketing, local and international market information, technology information and ethics information." "The future of value creation of agriculture depends on women farmers. We should be able to develop traditional knowledge, culture, environment, local resources and family farmer resources and make an income out of them to be prepared for the uncertain future," she added.

Sources:

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Recommendations

The main recommendations from the consultations conducted can be categorised into local, national and regional levels.

Local Advocacies

- 1. Implement the following climate change mitigation and adaptation policies and programmes:
- · Undertake a campaign to increase farmers' awareness on the negative impact of slash and burn farming.
- · Intensify and popularise reforestation programmes by ensuring the participation of local communities in its implementation.
- 2. Implement community programs aimed at helping farmers improve food production in a sustainable manner, while enabling them to cope with the problems brought about by climate change.
- Provide trainings and technical capability development in seed development, watershed management, organic farming, terracing and value adding technology, among others.
- Allocate resources for the development of community irrigation systems and other mechanisms to facilitate community members' access to safe water.
- · Provide men and women farmers with essential tools to help them improve agricultural output.
- Increase budget allocation for extension work on soil management and sustainable farming technologies and practices that encourage climate resilience.
- 3. Provide sanitation facilities and health care support to lessen people's vulnerability to sickness and diseases as a result of extreme weather conditions brought about by climate change.

National Advocacies

- 1. Allocate resources for climate change mitigation and adaptation measures for women in agriculture.
- 2. Adopt a bottom up approach in developing and implementing climate change mitigation and adaptation programmes.
- 3. Improve short and long term weather forecasting and timely dissemination of weather information to help farmers better plan their cropping calendar.
- 4. Restructure farm production policies and programmes to support sustainable farming practices.
- 5. Ensure small farmers and civil society's participation in the drafting of NAMAs and in formulating reports for the UNFCCC national communication.
- 6. Enact and implement national legislation supporting sustainable resource management.

International Advocacies

- Ensure that the current negotiation on climate change mitigation in agriculture is framed in the context of the sector's importance to the attainment of developing countries' objectives of food security, sustainable livelihoods and poverty alleviation, and not merely on the promotion of production efficiency.
- 2. Support calls for immediate and drastic reduction of green house gas emission of Annex 1 countries in order to more strategically address the issue of climate change.
- 3. Support calls for increased funds for climate mitigation and adaptation sourced from Annex 1 countries, for adaptation projects in least developed and developing countries.
- 4. Create a mechanism to ensure that the fund should be used to finance climate adaptation projects that are developed and endorsed by local communities.