



CLIMATE CHANGE, GENDER AND FOOD SECURITY IN THE PACIFIC



BACKGROUND

Food insecurity and inadequate nutrition are key issues which threaten lives and well-being in Pacific Island countries and territories (PICTs), and changes in climate are likely to exacerbate existing vulnerabilities. The Intergovernmental Panel on Climate Change (IPCC) has acknowledged that climate change will seriously threaten food security across the world¹, as any changes to the global climate will impact on agriculture, and therefore the world's food supply².

In some PICTs such as Papua New Guinea (PNG), changes in rainfall patterns, droughts, floods, rising sea-levels, and salinisation will make it harder for communities to make a living out of agriculture. Climate change and its associated disasters are likely to make life even harder for women, who are responsible for the production of the majority of food for subsistence. Reduced food security threatens social and economic development and will prevent some countries from achieving sustainable development; in fact many PICTs are already struggling with food security. Climate change impacts on agriculture are likely to worsen this trend; as many of the key roles in the agriculture sector are the responsibility of women, their priorities, needs and concerns should be heard and reflected in planning, budgeting and decision-making in this sector. The effects of climate change also need to be considered alongside other evolving factors that affect agricultural production, such as changes in farming practices and technology.

This brief is part of UN Women Fiji Multi-Country Office's series on the links between climate change, gender, and a number of development issues including women's economic empowerment, health, food security, and energy. UN Women would like to acknowledge contributions from Development Alternatives with Women for a New Era and Secretariat of the Pacific Community in drafting these publications.

KEY MESSAGES

- Climate change will negatively impact food security in a number of ways, including by decreasing availability of local food through a reduction in agricultural yields, availability of arable land, fresh water, and availability of fish and marine life.
- Women and men experience different impacts from climate change, particularly regarding their roles as food producers.
- Strategies on climate change adaptation in agriculture need to take into account the different roles and knowledge that women and men have in food and crop production, as well as fisheries.
- Climate change strategies should focus on developing alternative livelihood options that take into account the impacts of climate change on agriculture and changing lifestyles.
- Women and men have different roles when it comes to agriculture production in their communities; women are therefore integral players in ensuring adequate long-term food security.
- More Pacific specific research on the inter-linkages between climate change, food security, gender, and development is needed to better develop plans for the post-2015 agenda.

50%

The projected percentage reduction in coastal fishery harvests by 2100 in the Pacific¹².

60%

of people who are undernourished in the world are women and girls¹³.

55%

of the gains made in reducing hunger were due to the progress in women's education and the levels of equality¹⁴.

80%

of the population in Papua New Guinea are engaged in agriculture production¹⁵.

DIFFERENTIAL IMPACTS

Agriculture is an important sector of Pacific economies. In addition to providing populations with food, crops, livestock, and fish, agriculture contributes billions of dollars to the regional economy each year³. However, the nature of the sector means it is dependent on specific climatic conditions, which, with increasing climate change impacts, could make it more difficult for PICTs to participate in traditional agricultural activities, in traditional locations.

Globally, 60% of people who are undernourished are women and girls. Empowering women and achieving gender equality is vital for economic growth, and to ensure food security⁴. A study of various developing countries from the period 1970-1995 found that 55% of the gains made in reducing hunger were due to progress in women's education and increased levels of equality⁵. There is a strong correlation between hunger and gender inequality; countries ranking highest on the index of global hunger, also score poorly on measures of gender equality⁶. Gender inequalities in families and communities in terms of decision-making, control over financial resources, land ownership, household tasks, and access to technology and information all threaten the ability of communities to effectively adapt to climate change risks⁷.

Pacific women's role in food production, whether through subsistence farming to feed their families or growing cash crops for income, is an indispensable part of food production and consumption practices. Given the unique knowledge and skills held by women, development planning for the region needs to acknowledge and effectively utilise women's contributions in order to adapt to climate change impacts. In Totoya Island in Fiji, for example, coastal flooding and erosion from climate change, in addition to unsustainable land management, reduced the land available to grow crops, leading to lower yields. The Totoyan women have existing knowledge on production of local nutritious food, and traditional food preservation methods. This knowledge is now being used to grow resilient crops in vegetable gardens, and to make flour, both of which will help to reduce reliance on imported products⁸.

Despite the critical role that women play in food production, they often face barriers to accessing agricultural land, training, credit and services. The agricultural production that women and girls perform also tends to be considered part of women's household responsibilities. Climate change impacts, combined with these challenges, will make it even more difficult for them to make a living from agriculture. Women may also struggle more than men in finding alternative livelihoods, entering the formal employment sector, or migrating, due to cultural barriers and lack of economic opportunities and education.

What is Food Security?

Food security is defined as "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life"⁹.

Food security usually considers both physical and economic access to food, and includes five aspects:

- i) adequacy: sufficient supplies of local food, supplemented by imports;
- ii) availability: ability of people and families to access food;
- iii) stability: whether people still have sufficient food after shocks like price increases and natural disasters;;

- iv) utilisation: whether foods eaten provide enough nutrition;
- v) safety and nutrition: whether foods that support good health, are eaten and whether they are cooked and stored properly¹⁰.

There are existing threats to most aspects of food security from land degradation, overfishing, pollution, poor food choices for nutrition, and unhealthy cooking practices. Climate change will worsen all aspects of food security, as food production will be affected at all stages from primary production to eating or sale¹¹.

CLIMATE CHANGE IMPACTS ON FOOD SECURITY AND NUTRITION FOR WOMEN IN THE PACIFIC

Agriculture: The combination of climate change impacts such as land erosion, sea water inundation, disasters, increased temperatures, and salinisation of water and soil, will likely reduce agricultural yields across the Pacific. Those particularly at risk are low-lying and atoll countries, as well as coastal areas¹⁶. Warmer temperatures and increased rain could benefit some crop types and increase the length of time when plants fruit. Changes in rainfall patterns, however, including increasing floods and droughts, may negate this benefit¹⁷. There is already limited arable land available to meet existing food requirements in some countries. Republic of Marshall Islands and Tuvalu, and Kiribati and Tonga use more than 60% and 40%, respectively, of total land area for agriculture¹⁸. The impacts of climate change will further limit the availability of locally grown food, and reduce income from agriculture.

Women and girls in most rural areas of the Pacific are responsible for producing food to be consumed in the home by growing food in homestead gardens and rearing small livestock; while men tend to be more involved in growing cash crops to be sold¹⁹. Women's ability to provide food for their families will decrease as crop yields decrease, which could lead to an increased work burden if they are unable to find profitable alternative livelihoods. Women can provide critical inputs to developing new farming techniques and crop types that are more resilient to the impacts of climate change. Empowering women to contribute their skills and knowledge, will be therefore key to addressing threats to food security and sustainable development.

Fishing and aquaculture: Increases in temperature and ocean acidification, exacerbated by overfishing, is expected to lead to dramatic reduction in coastal fishery harvests. Coastal marine life is more vulnerable than offshore fisheries and changes to tides and currents, as

well as ocean warming, are expected to move offshore fish stocks further east. This is likely to mean higher catches in Polynesia and Micronesia, and lower catches in Melanesia²⁰. Many PICTs rely on fish and sea life as their main source of protein, so declining fish stocks and marine life directly jeopardises nutrition in the region. Family income will also be compromised by a reduction in economic opportunities in the fishing industry²¹.

Women's distinct roles in fishing and harvesting marine life give them skills that can be used to respond to the impacts of climate change on access to protein. Women are most often involved in gleaning and harvesting fish and sea life from coastal and inshore areas, while men are more involved in offshore and deep sea fishing²². A 1995 study done in South Tarawa in Kiribati, for example, showed that women were responsible for 80 to 95% of seaweed farming, collection of shellfish, and lantern farming²³. Men, however, were responsible for 95 to 100% of rod fishing, gillnetting, line fishing, and trolling from the reef and ocean²⁴. Women's ability to provide food security and nutrition for their families, therefore, is at greater risk than men's, as coastal areas are likely to be more heavily impacted by climate change. This will also increase women's workload, as they will have to work harder to find sources of protein²⁵.

The reduced availability of locally grown food and fish stocks, as well as reductions in income from aquaculture and agriculture, threatens the reduction of extreme poverty and hunger, and future sustainable development. Women's increasing workload, as they work harder to find food for their families, means they will have less time available for income generation and education, limiting their opportunities and increasing rates of poverty. It also means they will have less time to contribute to community-level decision-making processes, including on climate change and disaster risk reduction.



RECOMMENDATIONS FOR SUSTAINABLE DEVELOPMENT GOALS

The above examples demonstrate the ways in which climate change will impact agriculture production and food security, as well as some of the likely effects on men and women. The relationships between these issues are highly relevant for the Pacific region, and the Sustainable Development Goals (SDGs) should therefore take into account the impacts of climate change on the ability of PICTs to produce their own food, the disproportionately negative impacts on women, and the opportunities for women to contribute to climate change solutions and adaptation. Long-term social and economic development for the Pacific will neither be effective nor sustainable unless measures to address climate change include strategies for promoting gender equality and women's empowerment. Recommendations for the development of SDGs include:

- An additional Pacific specific research base is needed to provide information on the distinct work that men and women do on a daily basis to ensure food security for their family, and how climate change will impact this.
- To lessen dependence on foreign food imports, PICTs should implement strategies to promote food security, including cultivating a diverse range of plants that grow in different conditions; preserving food during

times of plenty; communal systems of assistance; and reservation areas to be used as a source of wild foods²⁷. Policies and plans that aim to use this knowledge will be most effective when men and women are equally involved.

- Women should be an integral part of all decision-making on agricultural and aquacultural changes that aims to help PICTs adapt to the impacts of climate change.
- There are many opportunities to adapt to climate change, including identifying resilient crops and animals; improving understanding of how pests and diseases will change; enhancing aquaculture as a food source; and use of more sustainable land and ocean use practices²⁸. These involve training and information for those involved in food production. Any initiatives will need to consult with men and women equally, and ensure new technologies and training are equally accessible to men and women. Any actions which do not take into account women's knowledge and skills will be less successful.
- A stand-alone goal in the post-2015 agenda that seeks to address inequality must directly target the reasons why women are prevented from using their skills and knowledge to contribute to improving food security.



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Page 1: Suva market, Fiji, 2014. Credit: UN Women/ Olivia Owen
Page 3 and 4: Women selling local produce in Suva market, Fiji, 2014. Credit: UN Women/ Olivia Owen

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