

Food Security, Women Smallholders and Climate Change in Caribbean SIDS

By Nidhi Tandon

1. Introduction

Two waves of change—long-term climate change and immediate-term economic crises—are bringing the issue of food security into sharper relief—particularly in those Caribbean countries where food security is already volatile and faces a series of risks and challenges. Climate change adds urgency and the need for renewed focus and prioritisation as well as ensuring that adaptation is wholly integrated into natural resource management, land use policies and, especially, into broader long-term macro-economic frameworks.

Within this general context, there is need for concurrent change and adaptation at three distinct but interrelated levels: at the community level, where women are most engaged; at national government level, to address the country's diverse needs; and at the international community level, which still perseveres in supporting industrial farming methods and export over domestic markets. Without a synergy of effort between these three levels, food security will continue to be compromised.

Caribbean islands must make their own policy determinations on how to manage these changes; otherwise, their agendas could be predetermined by the priorities and terms set by donors and private-sector interests² who, while well intentioned, might not fully grasp the ethno-cultural and gender sensitivities of development in small island developing states (SIDS). Field research shows that smallholders in general and women farmers in particular are generally left out of emerging discussions and decisions around farming, food security and climate change. *This is an important juncture for Caribbean peoples to frame their own solutions to food and nutritional security—and what this entails in an unpredictable climate context.* Furthermore, the Caribbean nations have a lot to offer each other, and sharing mechanisms need to be established at many levels.

Given that hunger and poverty are concentrated in rural areas, targeting local food systems represents the single biggest opportunity to increase food production, boost food security and reduce vulnerability. Local, ecologically sound food systems have huge potential to provide livelihoods, occupations, employment, healthy lifestyles and socio-cultural meaning to a very large share of the Caribbean working population.

The key premise of this study is that small-scale ecologically sensitive farming and fishing in the Caribbean present a critical way to deliver on three distinct but interrelated fronts:

- to **anchor the local food security** of rural populations—by integrating sound farming practices while reducing import dependence;
- to **shelter domestic food markets** from international commodity prices, protecting those most exposed to food price hikes; and
- to **protect and secure the full biodiversity** of Caribbean SIDS ecosystems and biomes³—through local farming and fishing practices that work to 'optimise' natural resources (instead of 'maximising' natural extraction) and by building reserves and contingencies.

The summary research findings from Antigua and Barbuda, the Commonwealth of Dominica and Haiti that follow are analysed to better understand what these experiences hold in common, how they differ and, more broadly, what they tell us about the Caribbean SIDS experience in this context. This research was undertaken as part of a collaborative research partnership involving UN Women Regional Offices for the Caribbean and Southern Africa and the Rural and Sustainable Development Team of the International Policy Centre for Inclusive Growth (IPC-IG).

II. The Caribbean SIDS Context

In the Caribbean, the number of hot days in the year has been rising and the number of cool days declining. Climate models suggest that there will be drier wet seasons and longer dry seasons in future. Rising sea levels are expected to increase the saltwater intrusion of coastal freshwater aquifers. Rising temperatures have already led to coral bleaching and declines in marine biodiversity in many parts of the tropics. Climate change will have a significant impact on fisheries and aquaculture, which

currently provide a living for around 500 million people and are the main source of animal protein for many of the world's poorest countries.

Poverty aggravates the issue of destruction of the natural resource base; chopping away coastal sea grape or mangrove swamps for coal for personal use damages the coastline's natural defence systems against the ravages of hurricane-related erosion. The long-standardised and established principles of land use methods need to be 'unlearned' and reversed, the vested interests of an entrenched agro-industrial system⁴ and its system of subsidies dismantled, and by the same token, *those people who would be the natural stewards of natural resources need to be recognised, valued and empowered to take bold new strides in the context of climate change.*

A recent typology study of food security ranks most of the Caribbean SIDS in the 'high soil fertility' and 'favourable climate' categories, but none as a 'high food security' category—because, by definition, their trade regimes are insecure (International Food Policy Research Institute, 2010). Trade security is however, only one key variable in measuring food security. The fact is that a number of food imports actually undermine local food production and are a market disincentive to local producers—leading to food insecurity and import dependency.

The tensions between small- and large-scale, between foreign and domestic investment and between food and other crops is subject to intense power politics. While the region as a whole is a net food exporter, food price inflation has a detrimental impact on the nutrition, health and income of low-income populations. Between 2006 and 2008 the price of wheat increased by 152 per cent and that of maize by 122 per cent, whereas the price of bananas rose by just 24 per cent.

At the time of writing, Dominica had just reconfirmed its commitment to increasing banana exports.⁵ Rising food prices and changing trade patterns create negative consequences even for those countries that are net food exporters.

III. Tackling the Food Security–climate Change Nexus in the Caribbean: Challenges Remain

The compounding effects of a contracting global economy and rising food prices have served to refocus people's attention on the everyday realities of their own food security. Over the course of meeting with farming women some trends in local food interest and awareness among women and a growing constituency of producers were clearly discernible. The constituencies include:

- health consciousness;
- educated farmer entrepreneurs;
- diversifying livelihoods;
- environmental consciousness; and
- young farmers and entrepreneurs.

Box 1

Levels of Women's Roles in Food Systems

Farm production level:

- Women and men work together on the farm as family members;
- Increase in number of female-headed households; higher dependency ratio and need for adapted policies;
- Women grow a wide range of produce to supplement purchases, in addition to raising livestock and poultry;
- Closer examination of gender in fisheries reveals a more complex interrelated situation than the common portrayal of men as catching fish and women as sellers.

Household consumption/allocation level:

- Women, more so than men, have an immediate role in allocating resources within the household;
- Providing and planning household meals falls to women generally more than men;
- Women have a direct vested interest in ensuring clean and safe water use.

Societal/environmental level:

- Women have long-term viewpoints on what food security entails;
- Women have much to say about sustainable practices in nutrition, health provision and production;
- Women and men have different resources/experiences at their disposal to deal with climate change and climate variability;
- Therefore, climate change responses/policies should be gender-sensitive and respond to women's capacities and vested interests.

Appreciating and supporting these roles can be the deciding factor as to whether rural adaptation/mitigation is an efficient use or a waste of resources, and whether community responses are reactive or proactive, spontaneous or planned, sustainable or unsustainable.

A weaker, although growing, constituency of food security stakeholders are the women involved in the fishing sector. Women's activities range from shallow-water fishing in artisanal fisheries to waged labour in the commercial fishery sector. They are important contributors to both national and household food security—though unrecognised and undervalued in a sector that in many developing countries is recognised as one of the most depressed sectors in society.

The following are key field observations from Antigua and Barbuda, Dominica and Haiti pertaining to food security, agricultural policy, gender and climate change.

IV. Antigua and Barbuda

The Ministry of Agriculture is shackled by a systemic lack of trust and institutional memory, and has no functional Planning Unit. Public recognition of the poor state of the food system has increased, and quite a few groups are beginning to ask questions. The general mood is ready for a 'buy local, grow local' campaign. Most of the produce in Antigua is consumed locally.

Farming has become a new income security strategy, cracking the societal stigma previously attached to farming

in Antigua. The challenges facing agriculture such as finance, drought, availability of land, marketing and the price of labour remain, although the new Agricultural Policy is intended to make farming 'less of a risk'. The current economic crisis has limited research funds allocated to the farming sector, although it has forced governments to be more efficient.

Women are innovative and hardworking in developing some superb processed food products but are still challenged by coordinating raw material supply. OECS reports on agricultural policy make no reference to women or gender and only tangentially deal with small farmers. The current government has determined that the road for agriculture is to concentrate on selective, high-value agriculture linked to the tourism sector, and to other areas of domestic demand, with output of quality and capable of competing with imports. It has acknowledged the need to upgrade farmers and to support an institutional infrastructure that allows for the application of knowledge and techniques through which even small-scale operations can produce competitive rewards for producers. Although agriculture presently makes a small contribution (4 per cent) to the gross domestic product (GDP), the government is seeking to increase this percentage in the future. As a net importer of food, Antigua and Barbuda's food supply patterns may be affected both in terms of price and availability if climate change affects global food production.

V. The Commonwealth of Dominica

Village women grow most 'provision' (sweet potato, yam, cassava, dasheen) and some vegetables, herbs and spices but rely on the import markets for rice, sugar, flour, lentils, milk, oil, meat, onions and garlic. The women speak of the weather in terms of 'unpredictability' and extreme seasonal variations (heavy rains, strong winds or very dry spells). The way they address this on a day-to-day basis is by growing a range of crops with different needs.

The 2003 Country Poverty Assessment commissioned by the Caribbean Development Bank estimated that 37 per cent of households were headed by women. The average size of these female-headed households is between five and six people—larger than most male-headed households. The level of poverty in the rural areas and, especially, among the indigenous Kalinago is reported to be relatively high. Most men and women in the Kalinago community are involved in subsistence farming and fishing as their primary occupation. The level of Dominica's food imports does not match the food and nutrition security policy that it is developing. The country is importing about US\$24 million worth of food annually.

For Dominicans, fish protein represents 13 per cent of their diet, a far greater share than both the Caribbean and world averages of 7 per cent and 6 per cent, respectively. While fishing generally uses little in the way of technological advancements, it remains central to Dominican culture, employing thousands of fishermen and supplying successive generations with sustained economic possibilities.⁶

Like Antigua, Dominica has a Bureau of Gender Affairs and a gender policy. During 2009 several public meetings were

held to acquaint the population with its gender policy. The policy now has an action plan attached to it. The Institutional Framework of Gender Mainstreaming consists of a Gender Management System (GMS) comprised of a Gender Management Team and Gender Focal Points. The Dominica National Council of Women also appears to be very active and could play a role in supporting women in agriculture but seems to have prioritised violence against women as a natural response to an unmet and growing societal need.

VI. Haiti

Haiti imports at least 60 per cent of its food, including as much as 80 per cent of the rice it consumes.⁷ According to the Center for Economic and Policy Research (CEPR), the 2010 UN humanitarian appeal included US\$365 million for food aid, in comparison to \$30 million in funding for agriculture. This food aid was mostly in the form of foreign foodstuffs and has a negative effect on the productivity of local farmers. Preliminary results from a survey carried out in 2011 by the National Coordination for Food Security (CNESA), in collaboration with the World Food Programme (WFP), the Food and Agriculture Organization (FAO) and others indicate that 4.5 million Haitians—45 per cent of the population—suffer from food insecurity. Of this number, 800,000 people face severe food insecurity, which means that they do not have regular access to basic food.⁸

Haiti is the most vulnerable country to increases in food and oil prices in the region. Structural adjustment conditions on two loans from the International Monetary Fund (IMF), in 1986 and 1995, forced the government to reduce tariffs on food imports to as low as 3 per cent from former levels of up to 150 per cent. This made it cheaper to buy food from US agribusiness than from the farmer in the next field over, effectively putting domestic farmers out of business. Haiti's food insecurity was arguably partially triggered by these agreements.

Haiti has a higher proportion of economically active women than any other developing country except Lesotho.⁹ Women head almost 40 per cent of Haiti's rural households and are involved in all aspects of agriculture. They can and do own, buy, sell and inherit land¹⁰ and pass it to their heirs, although they do not enjoy fully equal inheritance rights in practice. There is a gendered division of labour in rural areas, and where men are present, they are invariably considered the head of the household.

While the need to foster women's right to participate in the national decision-making structure has now been formally acknowledged in the country's constitution, real progress needs to be made in involving women in discussions and recognising their contribution to society and the economy. Despite their substantial contribution, the participation of rural women in agriculture is not equitably integrated into the production system. They suffer from exclusion, as seen in the agricultural labour market through lower wages earned than men in similar positions. This work is not accurately reflected in statistics, which affects the formulation of public policies.

Some significant steps have already been taken by the Gender Action Plan (GAP), such as a consultation exercise

with women agricultural workers, the design of preliminary project indicators to monitor gender in the agriculture sector, and the creation of a plan for financial literacy training programmes for women. A crucial outcome so far was the acceptance of gender as a Ministerial priority through the launch of the Agriculture Public Services Project in February 2010.¹¹ The 'Fostering Economic Empowerment for Women Agricultural Producers in Haiti' project, funded by the GAP, has integrated gender issues within the framework of the larger IDA¹² 'Strengthening Agriculture Public Services' project, implemented by the Ministry of Agriculture, Natural Resources and Rural Development.¹³

The creation of these plans and policies should present a window of opportunity for addressing pressing issues faced by women in small-scale farming; however, it is only the first step on a long road towards improving the livelihoods of those who struggle daily to survive. These plans must involve the stakeholders who are building the movement from the grassroots up.

VII. Policy Implications

In 2009 the Shridath Ramphal Centre drew the following conclusion about food security in the region: "the Caribbean is still struggling to develop a new agricultural model. While small-scale agriculture and land ownership continues to have a deep rooted and emotional appeal, large-scale farming with its echo of servitude—in the Anglophone Caribbean at least—remains far from attractive."

Agricultural thinking in the region continues to be dominated by efforts to save commodity-based agriculture that largely only flourished because of trade preferences—and that while there are various attempts to produce more for domestic consumption, or to turn crops or agricultural waste into bio-ethanol, as yet "none of this is about creating regional food security" (Shridath Ramphal Centre, 2009).

The successful roll-out of a food security policy in the Caribbean SIDS rests on one single factor: the meaningful and comprehensive engagement of the farming and fishing communities—both women and men—in working together to determine solutions. By the same token, if the functions, roles and needs of the small-scale farmer and fisher and particularly the role of women are not integrated into the overall agricultural/land use and climate change strategy of the region, then governments will not reap the benefits of investing in this constituency. Caribbean SIDS can no longer afford to discount or underplay women's role in local fisheries, farming and food security.

In the context of changing climates and increased stresses on the natural environment, women farmers need consistent, relevant and intelligent support to enable them to 'scale up' their critically important roles in food security, health and biodiversity conservation. They need to be central to the solution by managing a peer-to-peer network of training, sharing of technical knowledge and distribution of information to ensure their sustainable livelihoods and the long-term sustainability of their communities.

It is necessary to put agriculture at the heart of international climate change negotiations. Investing in a food-secure

model using small-scale fiscal stimuli that mobilise the untapped potential of local producers is imperative. Small-scale processes can provide a mechanism to foster sustainable solutions to the problems of food and water security and spread benefits more evenly across communities of farmers and consumers alike.

Small-scale farmers and organic, agro-ecological methods are the way forward to solve the current food crisis and meet the needs of local communities. The benefits of organic farming as a means to address food security and ecosystem resilience abound, including inter alia:

- Shifting to organic farming is an attractive alternative for small farmers in the Caribbean, as the demand for organic produce and products continues to grow.
- Organic farmers are able to apply local resources and knowledge as well as non-chemical inputs to their farming systems, conserve their soil and land quality and revive indigenous agricultural practices. This in turn can have a positive long-term impact on local food security and promote a return to cultures and systems of holistic environmental management.
- The principles of organic farming can be extended to the fishing sector.
- Greening agriculture in developing countries and concentrating on smallholders can reduce poverty while investing in the natural capital on which poor people depend.
- Greening the small-scale farming sector by promoting and disseminating sustainable practices could be the most effective way to make more food available to poor and hungry people, reduce poverty, increase carbon sequestration and access growing international markets for green products (UNEP, 2011).

VIII. Conclusions

The farming sector in many Caribbean islands sits at a decisive juncture. Options include sustaining 'business-as-usual' practices—which will take their ecology, economy and food security down one (disastrous) trajectory—or the adoption of a long-term vision and transformative pathway which invests in the country's food economy while shifting the structural foundations of both economy and ecology to better adapt to climate change.

'Business-as-usual' practices will continue to favour capital- and input-intensive technological solutions above all else, and will disregard units of production that are considered economically 'unviable' or of no importance because they do not contribute to conventional measurements of GDP.

In other words, women smallholder farmers and their productive, regenerative, stewardship and conservation roles will continue to be ignored. On the other hand, if advanced to the full extent of their innovation and investment, ecologically sound farming methods and nurturing of local biodiversity, both commercial and family plots could lead to a new way to farm in the era of climate change. ■

1. The World Economic Forum in Davos 2010 presented a New Vision for Agriculture – led by 17 global companies that championed the initiative, including Archer Daniels Midland, BASF, Bunge, Cargill, The Coca-Cola Company, DuPont, General Mills, Kraft Foods, Metro, Monsanto Company, Nestlé, PepsiCo, SABMiller, Syngenta, Unilever, Wal-Mart Stores and Yara International.

2. A biome is a large area with similar flora, fauna and microorganisms, such as a tropical rainforest or a coastal biome. Each of these large communities contains species that are adapted to its varying conditions of water, heat and soil. An ecosystem is much smaller than a biome. A biome can be thought of as many similar ecosystems grouped together.

3. What makes our food system really unsustainable is the predominance of the globalised commodity trade that has

resulted in the integration of the food supply chain and its concentration in the hands of a few transnational corporations. This in turn has greatly increased the carbon footprint and energy intensity of food production and consumption.

4. This Caribbean nation is one of 10 receiving funding from the European Commission through the BAM (Banana Accompanying Measures) programmes related to the development of that crop. Some €190 million was allocated to provide additional support to the countries involved in the initiative so that they can adapt to new market conditions. From that number, Dominica expects to receive next year around €14–15 million, and it will try to make its banana production more competitive (Roseau, 2012).

5. World Resources Institute 2011.

6. IFAD, 2008.

7. UN, 2011.

8. Oxfam, 2010.

9. Unlike many other countries in the region, Haiti does not have a dualistic land tenure system, where tiny subsistence farms coexist with large plantations. Instead, following

independence in 1804, a class of urban rentiers developed, living off rents from real estate, leaving a large mass of poor farmers to try and eke out a living. A tradition of dividing land equally among children upon the landowner's death has contributed to land fragmentation, with many tiny plots called *mouchwa* (handkerchiefs). This trend is somewhat offset by steady outmigration and the custom whereby married women join their husbands' households and grant their inherited land to their brothers. Rural Haitians generally have access to land and livestock. Eighty per cent of rural households own, rent or sharecrop land; 82 per cent of farms are owner-operated; and 70 per cent of rural households engage in cultivation. Nearly 80 per cent engage in animal husbandry, with livestock serving as a form of savings (sales are a key means of coping with shocks).

10. World Bank, 2012.

11. The International Development Association (IDA) is the part of the World Bank that helps the world's poorest countries.

12. MARNDR, 2011.

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