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SRC Policy Brief #2  
July 2021

# FOOD FOR THOUGHT POLICY BRIEF SERIES

## Part 1: An Overview of Food Security & Trade Across CARICOM



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**THE GLOBAL GOALS**



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## **FOOD FOR THOUGHT POLICY BRIEF SERIES**

### **About The Series**

Recognizing that food security is fundamental to human existence and sustainable development, the Shridath Ramphal Centre for International Trade Law, Policy & Services (SRC) of The University of the West Indies, Cave Hill Campus has launched a Food Security Policy Brief series entitled ***Food For Thought***. This series explores the trade-related aspects of food security and how trade can meaningfully contribute to Sustainable Development Goal (SDG) 2: Zero Hunger across the Caribbean Community (CARICOM). Throughout the series various trade-related food security topics will be addressed.

This series aims to sensitise readers to CARICOM's food security challenges and to propose practical recommendations capable of improving the situation, bearing in mind the overarching United Nations Sustainable Development Goals (SDGs). It is hoped that this series sparks innovative thinking, impactful dialogue, and targeted action capable of transforming the way food security is approached and ensuring that no one is left behind.

In **Part 1**, we provide an introductory overview of food security and its strategic importance, the state of food security across CARICOM, the interplay between trade and food security and the policy approaches towards food security in the Caribbean.

We hope that you enjoy this new SRC policy brief series and we encourage you to regularly check the SRC's website at [www.shridathramphalcentre.com](http://www.shridathramphalcentre.com) for updates and new releases!

### **Acknowledgements**

The author wishes to extend sincere appreciation to **Dr. Lystra Fletcher Paul**, **Mr. Sandiford R. Edwards**, and **Mr. Fransen Jean** in their personal capacities, for their insightful comments on previous drafts of this Brief, as well as to **the SRC research staff** who also provided invaluable feedback. Special gratitude is also conveyed to **Mr. Jody White**, Food Manufacturer and Founder of Slimdown 360 and **Mr. James Paul**, CEO of Barbados Agricultural Society, who kindly consented to be interviewed for the case studies included.

## EXECUTIVE SUMMARY

More than simply feeding people, food security is a broad concept. The most accepted food security definition is that developed at the World Food Summit in 1996 - *"Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life."* From this definition, the Food and Agriculture Organization of the United Nations (FAO) identified four pillars: (i) availability, (ii) access, (iii) utilization, and (iv) stability, noting that all four pillars must be simultaneously fulfilled for food security to be achieved.

Linked directly to the United Nations Sustainable Development Goal (SDG) 2 – Zero Hunger, food security is fundamental to human existence and sustainable development. Across the Caribbean Community (CARICOM), food security is threatened by the absence of widespread equitable food access, unhealthy food regimes, inadequate consumption and excessive dependence on external suppliers. While food self-sufficiency and trade are often presented as binary choices, it is important for the region to understand the complex relationship between trade and food security. This understanding coupled with a holistic approach towards food security will be pivotal for moving the region forward.

### Methodology

This Brief was compiled using desk research drawing on official reports, published articles, statistics, official public statements, and informal interviews, where necessary. The Brief forms part of the wider ***SRC Food For Thought Policy Brief Series*** and should be read in tandem with other submissions, which provide detailed insights on other trade-related aspects of the region's food security challenge.

### Outline

The Brief comprises four sections:

1. Conceptualizing Food Security and its Importance
2. The State of Food Security Across CARICOM
3. Food Self-Sufficiency and International Trade
4. Moving Food Security from Policy to Action

### Key Messages

- Food security is a broad concept built on four dimensions (availability, access, stability, and utilization) which are interconnected and must be achieved simultaneously.
- Food security is fundamental to human existence and sustainable development and has wider socioeconomic implications beyond just feeding people.
- Food security across CARICOM is being threatened by worrisome findings under the access, utilization, and stability dimensions. Food access is a function of socioeconomic components and is therefore impacted by rising poverty, unemployment, and inequality across the region. Unhealthy eating regimes characterize the region's food utilization which is reflected by the increased prevalence of chronic non-communicable diseases and obese and overweight conditions. Meanwhile, the region's extraordinary dependence on external suppliers increases its vulnerability to



global supply disruptions and limits foreign exchange reserves, potentially undermining the stability dimension.

- Food self-sufficiency and international trade are not binary choices. Food self-sufficient countries produce an amount of food that is equal to or greater than the amount of food they consume. Following this definition, countries seeking to increase their food self-sufficiency status can still engage in trade.
- The relationship between trade and food security is complex. Trade can have both negative and positive impacts in the short and long-run under all four food security dimensions.
- Going forward holistic approaches to food security must be championed. Greater emphasis must also be placed on the actual implementation of food security policies, plans and strategies.



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## INTRODUCTION

Food security is a global challenge. Some like FAO (2016) and Breene (2016) believe that a 60% increase in global agricultural production (and nearly double in developing countries) will be required to feed a 9 billion-plus world population by 2050. Others like Mandycyk and Schultz (2015) postulate that existing production can feed the world's growing population, but food waste and unequal distribution obstruct this reality. However, more than simply feeding people, food security is a broad concept. Across the Caribbean Community (CARICOM)<sup>1</sup>, major challenges still hinder progress under the United Nations Sustainable Development Goal (SDG) 2 - Zero Hunger (Sachs et al. 2020). Failure to reach these targets has wider socioeconomic implications which negatively impacts the achievement of other SDGs, further underscoring the importance of improving and achieving food security.

This first contribution to the *SRC Food For Thought Policy Brief Series* holistically explores the concept of food security across CARICOM. Undoubtedly, food security or the concept of 'Right to Food' is fundamental to human existence and sustainable development, making it a regional priority. However, trade and food security share a complex relationship, rendered even more visible in CARICOM's context, where trade's double-edged effects are observed under various food security dimensions. Therefore, the objectives of this Brief include: (i) to portray food security as a broad-based concept and highlight its strategic importance, (ii) to provide an overview of food security across CARICOM, (iii) to briefly explore the relationship between food security and trade, and (iv) to provide initial recommendations for advancing the region's food security agenda.

Inside this Brief are four substantive sections:

1. Conceptualizing Food Security and its Importance
2. The State of Food Security Across CARICOM
3. Food Self-Sufficiency and International Trade
4. Moving Food Security from Policy to Action

This Brief was compiled using desk research drawing on official reports, published articles, statistics, official public statements, and informal interviews, where necessary. As previously mentioned, this Brief forms part of the wider *SRC Food For Thought Policy Brief Series* and should be read in tandem with other submissions, which provide detailed insights on other aspects of the region's food security challenge.

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<sup>1</sup> CARICOM is a regional integration movement comprising fifteen Member States, which include: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago.

## CONCEPTUALIZING FOOD SECURITY AND ITS IMPORTANCE

### The Evolution of the Food Security Concept

Several definitions of food security exist, but the most accepted is the World Food Summit's (WFS) which explains that - *"Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life"* (World Food Summit 1996). By this definition food security is a broad concept stretching across four dimensions – (i) availability, (ii) access, (iii) utilization, and (iv) stability (FAO 2008).

To appreciate this four-pronged approach to food security, it is necessary to understand the evolution of the food security problem, which has largely been reflected by changes in official policy thinking (Clay 2002, Heidhues et al. 2004 and FAO 2006). During the 1970s, food security was considered a supply problem, resulting from food crises and famine outbreaks (Napoli 2011). Subsequently, emphasis was placed on **availability**, that is the adequacy of food supplies<sup>2</sup>. This dimension is still reflected today in the WFS (1996) definition through the term **'sufficient'**. Sen (1981) then broadened food security discussions by considering the interplay between access to food and poverty or lack of development, noting that *"starvation is not the characteristic of there not being enough food to eat"* but rather that it was an issue of denial of access to food. **Access**, that is individuals having adequate resources to acquire food, became an important component of food security. Within the WFS (1996) definition the access dimension is covered under **"physical and economic access"**. Around 1986 the temporal dimension was added to the food security definition (Napoli 2011). Driven largely by findings from the World Bank Report on Poverty and Hunger (World Bank 1986), a distinction was made between chronic and transitory food insecurity. Chronic food insecurity is more persistent and long-term, and typically associated with structural poverty. On the other hand, transitory food insecurity is more short-term and temporary, and usually results from intensified situations such as natural

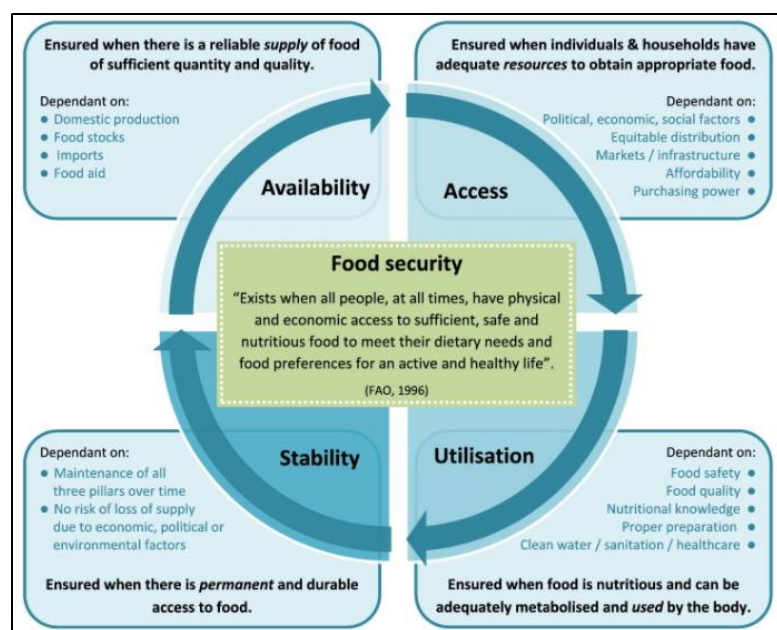


Figure 1: Food Security Definition & Pillars | Source: Adhikari (2018)

<sup>2</sup> Food supplies can come from domestic sources, imports and food stocks (FAO 2008).

## The Strategic Importance of Food Security

Food security is fundamental to human existence and sustainable development, and therefore has wider socioeconomic and environmental implications, making it a national, regional, and global priority.

Abdul Manap and Ismail (2019) found that food security has a significant positive impact on economic growth especially in dry-land developing countries. They further explain the impact of food security on economic growth in terms of life expectancy, total employment, and poverty. According to Timmer (2004), food security and economic growth are mutually reinforcing throughout the development process. Researchers like Torero (2014) demonstrate this by highlighting the negative impact of food insecurity on human capital and the associated negative economic consequences, including stagnated economic growth in the long-run and increased governmental fiscal costs. Statistics from the 2014 Global Hunger Index revealed that macronutrient and micronutrient deficiencies, resulting from food insecurity, produce global economic productivity losses of around 2-3% of GDP, and reduce GDP by 0.7-2% in most developing countries (Australian Centre for International Agricultural Research 2014).

However, although food security is found to be positively correlated with social and economic development by some researchers, environmentalists are concerned about the relationship between increased food production and environmental degradation. Empirical evidence from developing countries suggest a higher level of environmental degradation to be associated with a higher level of food security (Subramaniam and Masron 2019). Therefore, while food security is strategically important, unsustainable approaches may yield negative side effects.

Resolving these trade-offs requires sustainable food systems<sup>3</sup> which *“deliver food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised”* (Nguyen 2018). Sustainable food systems are critical not only for SDG 2 which has eight targets geared towards ending hunger (see Figure 2), but also for the achievement of all 17 SDGs (see Figure 3) (United Nations 2021c).

<b>SDG 2 Zero Hunger – Targets</b>
<b>2.1</b> By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.
<b>2.2</b> By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.
<b>2.3</b> By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.
<b>2.4</b> By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.
<b>2.5</b> By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.
<b>2.A</b> Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.
<b>2.B</b> Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round.
<b>2.C</b> Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility.

Figure 2: SDG Goal 2 Targets | Source: United Nations 2021a

<sup>3</sup> *“Food systems encompass the entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products that originate from agriculture, forestry or fisheries, and parts of the broader economic, societal and natural environments in which they are embedded”* (Nguyen 2018).



<p><b>Goal 1: No poverty</b> More than 700 million people, or 10 per cent of the world population, still live in extreme poverty. Sustainable food systems can contribute to the fight against poverty by creating good jobs, improving access to food, and supporting healthy communities.</p>	<p><b>Goal 2: Zero Hunger</b> About 690 million people were undernourished at the end of 2019 and absent rapid interventions, the COVID-19 pandemic could force an additional 130 million people into chronic hunger. Rebuilding our food systems to make them more sustainable, productive and resilient is essential--for solving long-term hunger challenges and managing acute shocks, like disease outbreaks and climate extremes.</p>	<p><b>Goal 3: Good Health and Well-being</b> Poor nutrition causes 45 per cent of deaths in children under five – 3.1 million children each year. Sustainable food systems support adequate nutrition, which helps people of all ages to achieve good health.</p>
<p><b>Goal 4: Quality education</b> As of April 2020, close to 1.6 billion children and youth were out of school because of the pandemic, and nearly 369 million children who rely on school meals were forced to find food elsewhere. Sustainable food systems can enable all students to have a healthy and balanced diet, which is critical to success at school.</p>	<p><b>Goal 5: Gender equality</b> Women produce between 60 per cent and 80 per cent of the food in most developing countries and are responsible for half of the world's food production. Sustainable food systems can empower and support women and bolster their livelihoods around the world.</p>	<p><b>Goal 6: Clean water and Sanitation</b> Water scarcity affects more than 40 per cent of the global population and is projected to rise. Sustainable food systems can ensure the sustainable use of this precious resource, while also reducing the amount of pollution in our natural water systems.</p>
<p><b>Goal 7: Affordable and clean energy</b> The energy sector is the single largest contributor to greenhouse gas emissions worldwide. Sustainable food systems maximize the use of clean and renewable sources of energy, reducing the food sector's environmental impact.</p>	<p><b>Goal 8: Decent work and economic growth</b> Agriculture is the single largest employer in the world, providing livelihoods for 40 per cent of the global population. Sustainable food systems can create decent jobs and support the incomes of billions of people around the world.</p>	<p><b>Goal 9: Industry, innovation and infrastructure</b> Recent innovations in climate-smart agriculture have shown that food production can deliver environmental gains, as well as social and economic benefits. Tech innovations as well as investments in food-related infrastructure are also key to improving the efficiency of the food system. By scaling up these and other innovations, sustainable food systems can deliver widespread benefits to people and planet.</p>
<p><b>Goal 10: Reduced inequalities</b> Some 1.5 billion people live in households that are supported by smallholder farms; many of those households are extremely poor. Sustainable food systems can help to lift up some of the poorest of the poor, providing them with decent work, a good income and a healthy and balanced diet.</p>	<p><b>Goal 11: Sustainable cities and communities</b> Since 2007, more than half the world's population has been living in cities, and that share is projected to rise to 60 per cent by 2030. Sustainable food systems can help to ensure that city dwellers everywhere and in particular the urban poor who have limited purchasing power, are adequately nourished.</p>	<p><b>Goal 12: Responsible consumption and production</b> Each year, an estimated one third of all food produced ends up rotting in the bins of consumers and retailers, or spoiling due to poor transportation and harvesting practices. Sustainable food systems reduce waste and spoilage, and empower consumers to make smart choices in their food shopping.</p>
<p><b>Goal 13: Climate action</b> Farming directly accounts for some 17 per cent of total greenhouse gas emissions. Sustainable food systems can reduce this impact by lowering emissions of critical climate-warming gases, including methane and carbon dioxide.</p>	<p><b>Goal 14: Life below water</b> Oceans serve as the world's largest source of protein, with more than 3 billion people depending on the oceans as their primary source of protein. Sustainable food systems can ensure the long-term viability of the world's fisheries, while also protecting the health of the ecosystems that host them.</p>	<p><b>Goal 15: Life on land</b> Over 80 per cent of the human diet is provided by plants. Sustainable agriculture can reduce deforestation and support healthy terrestrial ecosystems, while also providing critical sustenance to people around the world.</p>
<p><b>Goal 16: Peace, justice and strong institutions</b> Nearly 80 per cent of the world's 155 million stunted children live in countries affected by violent conflict. Sustainable food systems can reduce critical stresses facing families, communities and nations around the globe, preparing the ground for peace and strong institutions to take hold.</p>	<p><b>Goal 17: Partnerships for the goals</b> The total amount of development assistance worldwide has trended upward since at least the turn of the twenty-first century. At the same time, we have seen a proliferation of coalitions, multi-stakeholder partnerships, and South-South cooperation. A renewed focus on sustainable food systems can add momentum to this progress, while delivering tangible benefits to people and communities around the world.</p>	

Figure 3: Food Systems and the SDGs Source | United Nations 2021<sup>4</sup>

<sup>4</sup> These findings were taken wholly from the cited source and were only simply formatted by the author.

As part of the United Nations Decade of Action<sup>5</sup>, the World Food Systems Summit 2021 aims to “transform the way the world produces, consumes and thinks about food” (United Nations 2021c). The Summit is organized around five action tracks which are “designed to address possible trade-offs with other tracks, and to identify solutions that can deliver wide-reaching benefits” (United Nations 2021c).

- **Action Track 1:** Ensure access to safe and nutritious food for all
- **Action Track 2:** Shift to sustainable consumption patterns
- **Action Track 3:** Boost nature-positive production
- **Action Track 4:** Advance equitable livelihoods
- **Action Track 5:** Build resilience to vulnerabilities, shocks and stress

Evidently, food security is integral for sustainable development but its achievement is complex, stretching beyond agriculture and requiring coordinated action across multiple sectors and policy spaces.

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<sup>5</sup> During 2019 the United Nations Secretary General made a call for a decade of action across all sectors on three levels (global action, local action, people action) to accelerate the achievement of the SDGs by 2030 (United Nations 2021b).

## THE STATE OF FOOD SECURITY ACROSS CARICOM

### An Overview

The Food and Agriculture Organization of the United Nations (FAO) and the Caribbean Development Bank (CDB) released the “Study on the State of Agriculture in the Caribbean” in 2019 (FAO and CDB 2019). This study included an assessment of food security across the CDB’s nineteen Borrowing Member Countries (BMCs), which include the fifteen CARICOM Member States, along with Anguilla, British Virgin Islands, Cayman Islands and Turks and Caicos Islands. In this assessment, all four food security dimensions were analysed. A summary of the methodology and major findings from this study is given below in Figure 4.

DIMENSION	MEASUREMENT	FINDINGS
<b>Food Availability</b>	Measured by the dietary energy supply (DES) as a percentage of the average dietary energy requirement (ADER).	In all BMCs food availability exceeds the established food energy requirement guidelines, except in Haiti, where over the past two decades the DES fell below the required ADER.
<b>Food Access</b>	Measured by the depth of the food deficit. This indicator measures how many calories are needed to help the undernourished escape from their status, all things being equal.	Large island states (driven largely by Haiti’s high undernourishment levels pulling up the cluster’s average) have a higher food deficit than small island and continental states. Across all country clusters however, food access is concerning. For example, small island states like Grenada also have relatively large food deficits. The food access problem is strongly related to poverty, and consequently, in BMCs with large shares of populations living below the poverty line, food access is low.
<b>Food Utilization</b>	Measured by unhealthy food regimes.	Rising levels of obesity reflect the way that food is utilized in the region. In small island states the average obesity prevalence rate is 25% while in continental and large island states it is around 20%.
<b>Food Stability</b>	Measured by: <ol style="list-style-type: none"> <li>1. The ratio of food imports over total exports, which is a proxy for a country’s capacity to pay for imported food.</li> <li>2. The cereal import dependency, which indicates to what extent the available domestic supply of cereals is derived from the country’s own production.</li> </ol>	BMCs increasingly spend more than half of the value of total exports on food imports. This is particularly true for small island states that have a higher ratio than some continental states like Guyana that are net exporters of cereals.

Figure 4: Food Security Across the CDB’s BMCs | Source: FAO and CDB (2019)

The FAO and CDB (2019) findings are pre-COVID-19. Therefore, it is also worth considering the strain that the pandemic has placed on food security across the region. In the English-speaking Caribbean, the number of moderately food insecure people decreased from 2.5 to 2.2 million during June 2020 to February 2021, but the number of severely food insecure people has increased during the same period by 57% reaching 482,000 in February 2021 (United Nations World Food Programme and Caribbean Community Secretariat 2021). The Caribbean COVID-19 Food Security & Livelihoods Impact Survey<sup>6</sup> for February 2021 found the following:

<b>AVAILABILITY</b>	<b>ACCESS</b>
<ul style="list-style-type: none"> <li>Fresh foods are marginally less available than staple foods, but their availability seems to be increasing since 77% of respondents indicated that fresh foods are always available. Around 18% of respondents noted that fresh foods are still only sometimes available.</li> <li>The majority of households have some food supplies, but there are increasing reports of smaller amounts of food stocks or none at all. 44% of respondents had a week's worth of food stocks, a decrease from findings in April 2020 where the rate was 81% (however, note that this increased rate in April may be due to increased food stocking during lockdown periods). Low-income households have less food stock (49% had no food stocks and 13% had more than a week's supply) than higher income households (where 59% had a week's supply).</li> </ul>	<ul style="list-style-type: none"> <li>Lack of financial means is a major factor hindering food access, with respondents altering their shopping behaviours towards cheaper foods or smaller quantities. Households whose primary income sources are petty trade, informal/casual labour or external assistance and younger age groups were found to be disproportionately affected.</li> <li>71% of respondents reported increases in food prices. The respondents reporting food price increases varied across the region – 88% in St. Lucia and Belize, 84% in Trinidad and Tobago, 61% in Antigua and Barbuda and 56% in Barbados.</li> </ul>
<b>UTILIZATION</b>	<b>STABILITY</b>
<ul style="list-style-type: none"> <li>COVID-19 has negatively impacted dietary habits. 27% of respondents skipped meals or ate less than usual, 21% ate less preferred foods and 5% went an entire day without meals. These findings are worse than those previously reported in April 2020.</li> <li>Nutrition and the variety of foods consumed are also being negatively impacted, as many respondents struggle to meet food and nutritional needs on a monthly basis. 41% of respondents identified a time when they were unable to eat healthy and 50% reported a time when they ate only few kinds of food.</li> <li>Fear of illness (57%) is the main worry among participants, surpassing fear of unemployment (44%).</li> <li>Regarding food consumption, respondents from low-income households are disproportionately affected.</li> </ul>	<ul style="list-style-type: none"> <li>Impacts to livelihoods continue to be widespread with major concerns about the price and accessibility of livelihoods inputs. 9 out of 10 respondents predict at least moderate impacts to livelihoods in the future.</li> <li>Reports indicate that people are finding ways to meet food needs, but many are doing so at the expense of investing in health, education, or long-term income generation.</li> </ul>

Figure 5: Food Security-Related Findings from Caribbean COVID-19 Food Security & Livelihoods Impact Survey for February 2021 | Source: United Nations World Food Programme and Caribbean Community Secretariat (2021)<sup>7</sup>

<sup>6</sup> "While the survey contributes to a better overview of impacts, the data are not representative, and the use of an online questionnaire limits inputs from those without connectivity. Responses were skewed towards Barbados with 36% and Trinidad and Tobago with 26% of total responses" (United Nations World Food Programme and Caribbean Community Secretariat 2021).

<sup>7</sup> For the most part, these findings were taken wholly from the cited report but were re-arranged by the author to correspond with relevant food security pillars.

## Contextualizing the Findings

Food security requires simultaneous achievement of all four interconnected dimensions (FAO 2008). This means that even though pre-COVID-19 all BMCs, except Haiti, scored well under the food availability dimension (see Figure 4), their overall food security was still compromised by concerning findings under the other three dimensions (see Figure 4). Furthermore, the COVID-19 pandemic is exacerbating pre-existing challenges, thereby placing a strain on all four dimensions (see Figure 5). Considering both assessments the following can be deduced.

Pre-COVID-19, **food availability** was the most successfully achieved dimension with all BMCs, except Haiti, scoring well. Lowitt et al. (2016) found that regional and national actors often focused heavily on food availability and stability compared to the other dimensions. However, sole focus on success under this dimension can create a false sense of food security which fails to explain the region's significant lag in its SDG 2 commitments.<sup>8</sup> It is important to recognize that food availability does not automatically translate to food consumption, and therefore does not guarantee zero hunger. Additionally, with the majority of the region's food supply being sourced from external suppliers<sup>9</sup>, there were increasing concerns at the start of the COVID-19 pandemic that global supply chain disruptions would impact the region's food availability. Consequently, Member States were focused on ramping up local and regional agricultural production (Brathwaite, Nicholls and Remy 2020).

Even before COVID-19 **food access** was a problematic area for the region. Lowitt et al. (2016) found that food access received the least attention from both regional and national actors when compared to the other dimensions. Across CARICOM, 1 in 5 people live below the poverty line, unemployment rates average 25% (youth) and 8% (adults), and varying forms of inequality exist, especially among vulnerable groups (OECD 2019).<sup>10</sup> Recognizing that food access is a function of socioeconomic components such as income and purchasing power, equitable distribution, food prices and other factors, these statistics are likely to worsen with the economic fallout from COVID-19. Already, the Caribbean COVID-19 Food Security & Livelihoods Impact Survey is reporting food price increases and reducing financial means as limiting factors for food access (see Figure 5). Expanded social protection and improved food systems will be needed to guarantee food access during such times of crisis.

Concerning also is the **food utilization** component. The region is plagued with various lifestyle diseases, having some of the highest rates of overweight and obesity<sup>11</sup> and the highest non-communicable diseases (NCDs) mortality rate across the Americas (Cruickshank-Taylor 2021 and HCC 2017). FAO (2015) noticed a nutrition transition in the region's consumption patterns, highlighting a shift from domestic root crops and vegetables towards low nutrient, calorie dense, high fat, overly sweetened, oily foods. These foods form the bulk of the region's imports and are often more affordable than healthier alternatives (FAO 2015). Limited financial means as a result of COVID-19 are also impacting nutritional needs, as cash-strapped households are forced towards cheaper and sometimes less healthy foods, as well as less quantities and varieties which may be well below healthy dietary recommendations (United Nations World Food Programme and Caribbean Community Secretariat 2021).

**Food stability** has received increasing attention from national and regional actors (Lowitt et al. 2016). More than 50% of CARICOM Member States import 80% of what they consume (FAO 2015), leading to a food import bill in excess of US\$ 5

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<sup>8</sup> Under SDG 2, half of the CARICOM Member States are facing major challenges while the other half face significant challenges; progress is moderately increasing in 36% of Member States, decreasing in 7% and stagnant in 57% (calculated using data from Sachs et al. 2020).

<sup>9</sup> Almost all CARICOM Member States import more than 60% of the food they consume and half of them import more than 80%. Only Guyana, Belize and Haiti produce more than 50% of their consumption (FAO 2015).

<sup>10</sup> Findings from this report included all other CARICOM Member States except Haiti.

<sup>11</sup> The prevalence of obesity in Caribbean children is two to three times higher than the world (Cruickshank-Taylor 2021).



billion.<sup>12</sup> Apart from exhausting foreign exchange reserves, this inordinate level of external dependence increases the region's vulnerability to food shortages and price hikes during times of crisis and global disruptions. For example, the food price hikes experienced during the 2007/2008 global food price crisis, the current COVID-19 pandemic and fears of supply chain disruptions, port infrastructure damage during hurricanes and other natural disasters, etc. Even before COVID-19 CARICOM was challenged by then CARICOM Chair Prime Minister of Barbados Hon. Mia Mottley, to reduce the region's food import bill by 25% in the next 5 years (CARICOM Business 2018). This challenge now dubbed the "25 in 5" plan has gained even more traction amidst COVID-19, as the region seeks to develop more resilient food systems. Therefore, although imports are responsible for most of the region's food supply, excessive external dependence raises important sustainability questions. However, the solution is not as straightforward as moving to a system built solely on domestic supply since sustainability of the region's agricultural production is also threatened by climate change and natural disasters, below average labour and land profitability levels, and sizeably lower crop yields, among other factors (FAO and CDB 2019).

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<sup>12</sup> Data obtained from UNCTADstat 2021.

## FOOD SELF-SUFFICIENCY & INTERNATIONAL TRADE

### Advancing the Food Security Discourse

The food availability approach is one of the oldest and most influential approaches to food security.<sup>13</sup> Despite broader conceptualizations of food security, *“a narrow sectoral focus on agricultural supply, productivity, and technology still dominates international food security discourse and practice”* (Burchi and De Muro 2016). Nguyen (2018) notes that traditional food security programmes are typically production-focused and often pursue food security by increasing food supply, despite the fact that in many countries inadequate food production is no longer the major cause of food insecurity. Beckford (2012) and Lowitt et al. (2016) share a similar view for the Caribbean, where they believe that the majority of attention is attributed to the food availability and stability dimensions. Presently, at both regional and local levels, strong emphasis is being placed on reducing the food import bill by increasing local and regional agricultural supply (recall the previously mentioned “25 in 5” challenge which aims to reduce CARICOM’s food import bill by 25% during the next 5 years). This feeds into the popular food self-sufficiency versus international trade debate.

In the absence of a universal definition, some conceptualizations of the term food self-sufficiency have created a false dichotomy, where domestic food production and global food trade are seen as binary choices (Clapp 2015 and Clapp 2017). However, under a more realistic conceptualization where food self-sufficient countries are those producing an amount of food that is equal to or greater than the amount of food they consume (see Figure 6), the possibility of trade is not excluded (Clapp 2017). Here, food self-sufficiency is expressed as a percentage of consumption and is less concerned with where food is sourced (Clapp 2015). Following this logic, food self-sufficient countries and those aspiring to acquire such a status can still import and export food. Clapp (2017) highlights the utility of conceptualizing food self-sufficiency along a continuum, noting that this will allow for more constructive debates beyond “either-or” deadlock scenarios and better policy choices.

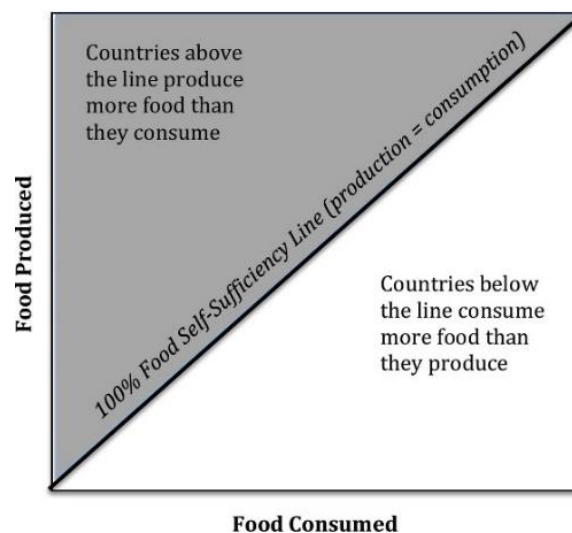


Figure 6: Food Self-Sufficiency | Source: Clapp 2015

### Trade and the Food Security Dimensions

Recognizing that a case for greater food self-sufficiency does not exclude international trade, it is important to understand trade’s doubled edged impact under all four food security dimensions. Gadhok (2016) graphically summarizes the effects of trade on the four dimensions of food security in Figure 7 on the following page.

<sup>13</sup> This approach focuses on the (im)balance between population and food, it looks particularly at the food availability dimension.

	SHORT TERM	MEDIUM TO LONG TERM
<b>Availability</b>	• Trade boosts imports and increases the quantity and variety of food available	• Food production may increase due to greater specialization and productivity improvements may be triggered by greater competition.
	• Trade may decrease the domestic availability of crops in net exporting countries	• In net food-exporting countries, domestic availability of staples may decline, as production is diverted toward exports; while in net food importing countries, some producers are likely to curtail production, forgoing the multiplier effects of agricultural activities in rural areas
<b>Access</b>	• Food and input prices are likely to decrease for net food importing countries	• Incomes would rise in competitive sectors, due to greater market access, and growth and employment would be supported by export growth and inflow of FDI
	• Domestic prices of exportable products may increase for net food-exporting countries	• Incomes may decline in import-competing sectors, with some producers transitioning out of agriculture. Also, unequal distribution of grains may occur due to enclave developments in export crops to the detriment of broad-based smallholder food crop production
<b>Utilization</b>	• Greater variety of food available may promote a more balanced diet	• Food safety and quality may improve if international standards are applied more rigorously
	• There may be greater consumption of food that is cheaper, high in calories and low in nutritional value	• Prioritization of commodity exports may divert land and resources from traditional and indigenous foods, which are often superior from a nutritional perspective
<b>Stability</b>	• Imports mitigate likelihood of shortages resulting from local production risks	• Global markets are less prone to policy - or weather-induced shocks
	• Countries may be more vulnerable to changes in trade policy by exporters, such as export bans	• Sectors at earlier stages of development may become more susceptible to price shocks and import surges

■ Possible positive impact    ■ Possible negative impact

Figure 7: Possible effects of trade on the four dimensions of food security | Source: Gadhok (2016)

The interplay between trade and food security in the Caribbean is complex.

CARICOM is a net food importer with a food import bill above US\$ 5 billion (see Figure 8). Although imports have increased the variety and quantities of food available to the region, which is advantageous to the **food availability** dimension, import surges triggered by free trade regimes, subsidies and dumping practises are displacing local agricultural production (FAO 2003). Furthermore, with the erosion of preferential access to European markets, the region has experienced a dramatic decline in its agricultural exports. On the one hand, while trade is contributing significantly to the region’s food availability, excessive imports are on the other hand undermining the expansion of local agricultural supply which struggles to find a market as confirmed by local agricultural professionals like Jody White<sup>14</sup> and James Paul<sup>15</sup> (see full interview in Box 1 in Annex). Additionally, binding commitments at the World Trade Organization limit the types of protectionists measures available, which also makes it difficult for local suppliers to compete with increasing imports of cheaper food supplies.

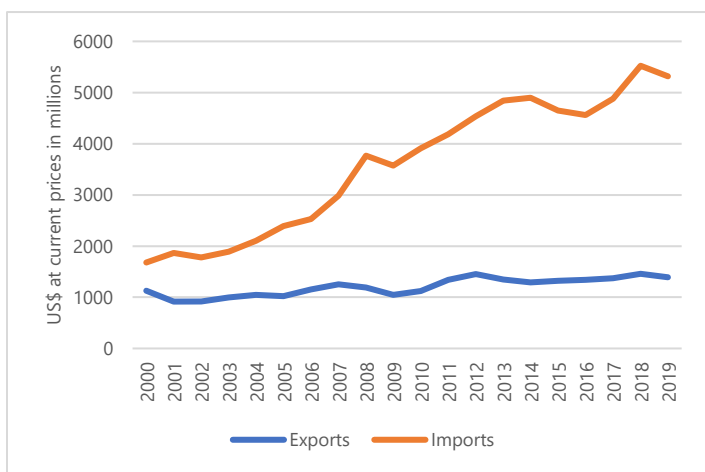


Figure 8: CARICOM Agri-Food Trade Trends | Source: UNCTADstat 2021

<sup>14</sup> Jody White is a food manufacturer and the founder of Slimdown 360 in Trinidad and Tobago.

<sup>15</sup> James Paul is the CEO of the Barbados Agricultural Society.



Dynamic synergies exist between trade and food security from a **food access** perspective. Firstly, as a net food importer CARICOM may benefit from “cheap imports” which directly lowers food prices. For example, Silva, Best and Tefft (2011) attribute Haiti’s high food import share to its extremely low import tariffs for staple foods<sup>16</sup>, among other factors. Additionally, when cheaper imported inputs are used this may translate to lower prices for final products. However, the region’s drastic decline in agricultural exports and its reduced agricultural production capacities limit the employment-based income earning opportunities from this sector. This negatively impacts the food access dimension when unemployed individuals lack the economic resources needed to purchase food supplies.

Although trade has the potential to increase the varieties and quantities of all food types, the bulk of the region’s food imports is low nutrient, calorie-dense, and high in fat, sugars, and oil (FAO 2015). Health practitioners have identified these imports as culprits in the region’s overall poor **food utilization** practices. Responsible for the introduction of westernized diets, trade has created a nutritional shift in consumption patterns away from traditionally healthier options towards less nutritious processed foods (FAO 2015). This has contributed to the increased prevalence of NCDs in the region, and is also impacting the successful development of the region’s traditional and indigenous foods as Jody White explained in his interview (see Box 1 in Annex for full interview). There is also the issue of front of package labelling and how outcomes from WTO dispute settlements in this area can impact future policy space.

Regarding **food stability**, trade is instrumental in overcoming potential shortages from local production, especially when natural disasters, climate change, and unfavourable conditions limit local supply. The problem though is the region’s overdependence on external suppliers, making it susceptible to global disruptions and price shocks. This was previously experienced in the 2007/08 global food price crisis (Le Valleé 2011) and depending on COVID-19’s impact on food security may occur again especially if major exporters of staple foods implement export restrictions. On the export-side, trade provides access to a variety of markets, which can encourage stable local agricultural production. However, the region’s inability to compete with other agricultural exports makes it difficult to secure this gain.

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<sup>16</sup> Compare for example: Haiti’s 3% tariff rate for rice compared to CARICOM’s Common External Tariff (CET) of 25%, Haiti’s 0% tariff rate for wheat compared to the CET’s 25% rate, or Haiti’s 15% tariff rate for fresh vegetables compared to the CET’s 40% rate (Silva, Best and Tefft, 2011).

## FROM POLICY TO ACTION

### National & Regional Food Security Policies & Approaches

Across CARICOM agriculture and food security policies are developed at both regional and national levels.

At the regional level under the auspices of CARICOM, Chapter Four Part Two of the Revised Treaty of Chaguaramas (RTC) outlines a Community Agricultural Policy (CAP). While mention is made of improved food and nutrition security in Article 56:1(b) as one of the CAP's goals, there is no further elaboration. However, in 2004 at the CARICOM Heads of Government Conference, President of the Republic of Guyana Bharrat Jagdeo presented a paper "A Framework for the Repositioning of Caribbean Agriculture" which called for a regional policy and strategy for strengthening food security and alleviating poverty, among other things (Private Sector Commission 2007). President Jagdeo's proposal dubbed the 'Jagdeo Initiative' became a landmark initiative for regional agriculture. Later on in 2010, CARICOM Heads of Government endorsed the CARICOM Regional Food and Nutrition Security Policy (RFNSP) which aims to achieve four overarching food and nutrition security objectives:

1. **Food Availability** - *Promote the sustainable production, processing, preparation, commercialization and consumption of safe, affordable, nutritious, high quality Caribbean food commodities/products.*
2. **Food Access** - *Ensure regular access of Caribbean households, especially the poor and vulnerable, to sufficient quantities of safe, affordable, quality food at all times, particularly in response to diverse socioeconomic and natural shocks.*
3. **Food Utilization/Nutritional Adequacy** - *Improve the nutritional status of the Caribbean population, particularly with respect to NCDs including diabetes, hypertension, overweight and obesity.*
4. **Stability of Food Supply** - *Improve the resilience of the region's national communities and households to natural and socio-economic crises*

(CARICOM Secretariat 2010)

A Regional Food and Nutrition Security Action Plan (RFNSAP) was also endorsed to support the implementation of the RFNSP which called upon a variety of policy actors across national governments, civil society and private sector to work together for the achievement of the outlined food security goals (CARICOM Secretariat 2011). The RFNSAP provides a detailed implementation work plan for six programme components including: (i) food availability, (ii) food access, (iii) food utilization/nutritional adequacy, (iv) stability of food supply, (v) cross-cutting/emerging issues and (vi) institutional and organizational development (CARICOM Secretariat 2011). As it relates to monitoring and evaluation "the RFNSP and the RFNSAP shall be reviewed periodically and their effects and impacts evaluated at the end of the first five year period in 2016, or more frequently as deemed necessary." (CARICOM Secretariat 2011). However, there appears to be no public record of the achievements and/or progress of the RFNSP and the RFNSAP. More recently though in 2019 the CARICOM Secretariat established an Action Committee on Food and Nutrition Security with the aim to support the monitoring of the RFNSP. Additionally, triggered by the COVID-19 pandemic, the CARICOM Secretariat launched a CARICOM COVID-19 Food Security and Livelihoods Impact Survey<sup>17</sup> and released the CARICOM COVID-19 Response Agri-Food Plan. Evidently, COVID-19 has been a catalyst for renewed regional attention towards agriculture and food security.

<sup>17</sup> This survey was launched in collaboration with the World Food Programme and the FAO.

At the national level all Member States have key Ministries (agriculture, health, education, etc.) capable of dealing with issues related to the four dimensions of food security. Additionally, most Member States have a national food and nutrition security policy and other food security-related policy instruments and strategies (FAO 2015). Some of the food and nutrition security priority areas outlined by Member States for the period 2020-2021 include addressing health related issues like malnutrition, promoting safe food production and consumption, increasing local food production especially of traditional crops, investing in social safety nets to improve food availability and access, strengthening data capabilities and information dissemination, among others.<sup>18</sup> However, many Member States have not approved their national food and nutrition security policies and action plans at the cabinet level.<sup>18</sup> These bureaucratic delays continue to hinder implementation at the national level. According to Ford (2016) the implementation of national food and nutrition security policies and action plans in Member States remains challenging and incomplete (Lowitt et al. 2016).

When analysing approaches towards food security across CARICOM Lowitt et al. (2016) found the following. CARICOM regional institutions adopted a narrower approach to food security than national governments (see Figure 9). In many cases CARICOM regional institutions focused more on one food security dimension typically aligned with their sectoral mandate, while more multidimensional approaches were observed at the national level, with Belize exhibiting the most balanced approach (see Figure 9). The food availability and stability dimensions received the most attention among national governments, while at both regional and national levels food access received the least attention. In advocating for a more holistic approach towards food security particularly at the regional level, Lowitt et al. (2016) emphasize the need for increased interaction among the different CARICOM institutions tasked with food security-related elements, or alternatively establishing food security as the mandate of fewer institutions but with a broader scope.

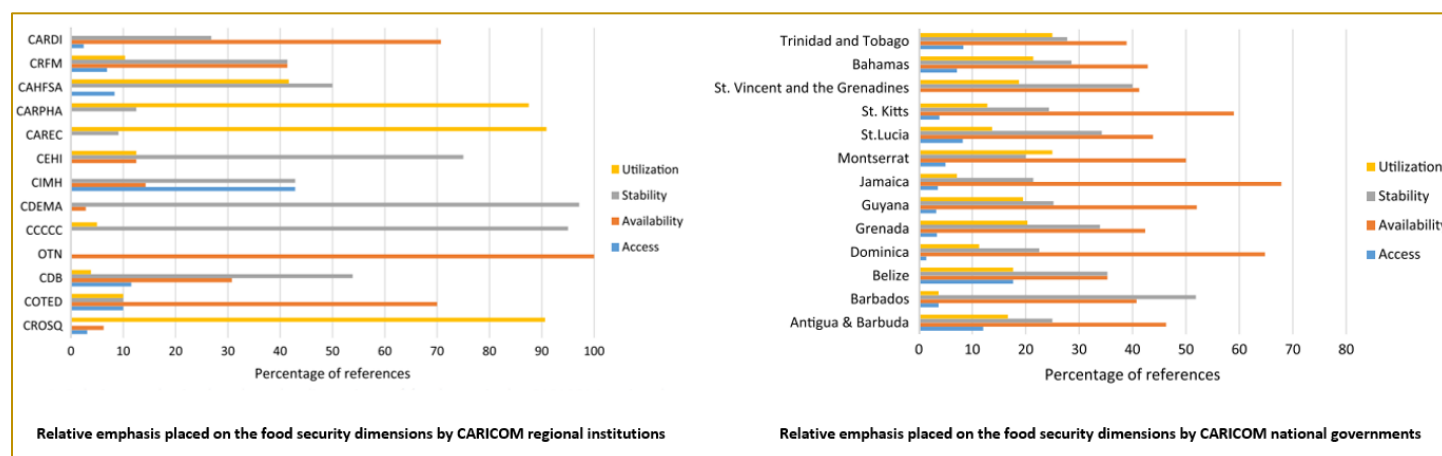


Figure 9: CARICOM regional institutions and national governments and their focus on food security dimensions | Source: Lowitt et al. 2016

## A Call To Action

To adopt a holistic policy approach towards the broad conceptualization of food security, the Organization for Economic Cooperation and Development (OECD) (2021) encourages countries to consider how policies influence all four dimensions, identify policy interlinkages, reform or remove policies creating negative spill-overs into other dimensions, ensure coherency, and seek diverse sources of finance. These recommendations are not unknown or novel to the region since many

<sup>18</sup> This information was provided by Mr. Sandiford R. Edwards, Development Specialist, (Report on the Status and Implementation of Food and Nutrition Security Action Plans in Member States).

were already outlined as next steps for implementing the Food and Nutrition Security Action Plan in Member States (see Figure 10).

The COTED has endorsed the following recommended Steps for immediate action for the implementation of the Food and Nutrition Security Action Plan in Member States:

- **Step 1 - Establish or strengthen a multi-sector government institution dealing with food and nutrition policy:** A multi-sector national governance mechanism is needed in order to reach different sectors through advocacy and the development of partnerships.
- **Step 2 - Revise current food and nutrition security action plans and sector policies:** The revised action plans should clearly identify the time scale for implementation of the different actions, the lead implementing agency and the allocation of resources. Member States should establish specific targets for each of the food and nutrition security goals, as well as specific food safety goals, taking into account available resources and priorities.
- **Step 3 - Prioritise the implementation of specific actions:** The choice of actions should be based on the stage of national policy and capacity development reached.
- **Step 4 - Operationalise the Action Plan through a combination of macro-economic policies, regulatory frameworks (legislation, regulations, etc,) and fiscal and other measures:** Actions should, *inter-alia*, be designed at both national and local levels, with particular attention paid to community interventions and the awareness building potential of settings such as schools, hospitals, and workplaces.
- **Step 5 - Establish dialogue and partnerships with all stakeholders:** Private non-profit, especially civil society and profit organisations should be engaged in the implementation of action plans, with clear identification of their expected roles.
- **Step 6 - Allocate resources:** Allocating the right mix of human, financial and temporal resources is crucial for successful implementation.
- **Step 7 - Monitor implementation and accountability:** The multi-sector governance mechanism on food and nutrition policy should periodically report to the government, as well as to international fora. The RFNSP and the RFNSAP shall be reviewed periodically and their effects and impacts evaluated at the end of the first five-year period in 2016, or more frequently as deemed necessary.

Figure 10: Recommended next steps for implementing the Food and Nutrition Security Action Plan  
Source: Garcia n.d.

Therefore, building from the steps outlined in Figure 10 the following additional recommendations are proposed.

1. **Increase data collection capabilities under all four food security pillars:** To support Step 7 (see Figure 10), Member States need to be properly trained in assessing the four pillars of food security. Organisations like FAO, IICA and The UWI can assist in providing specialized data collection and analysis training. Once collected, data for each of the four pillars should be regularly updated and made publicly accessible.
2. **Develop and efficiently manage sustainable food systems:** Food systems must satisfy both quantity and nutritional needs of the population, and be established in such a way that food access is guaranteed to the most vulnerable in society. Consider also the right combination of trade and local production to ensure that the system's sustainability is maintained (i.e. sufficient quantities can be guaranteed at all times). To improve resilience, disaster management and preparedness techniques must also be integrated into these food systems. Regarding meeting nutritional needs, consider taxing unhealthy foods to discourage consumption, making healthier options more affordable, and launching 'catchy' health initiatives such as the "No Sugar November" challenge in Barbados. Inspiration can also be drawn from existing models like the national school meals feeding programme which brings together various components of the food system. For example, these feeding programmes which aim to facilitate access to healthy and nutritious foods for

children, generally utilize local produce which in turn creates employment and income generating opportunities, reduces the food import bill and also aids in changing consumption patterns towards more healthy and nutritious diets.

- 3. Prioritize the food access dimension:** One of the key findings in this Brief is the lack of attention paid to food access which remains a challenging area for the region. Recognizing that food access is a function of socioeconomic components, this dimension will need to be supported by wider poverty reduction and eradication policies, the economic empowerment of vulnerable groups, greater job creation, equitable food distribution systems, and other similar initiatives. Social protection and safety net systems also need to be strengthened and be more innovatively developed especially given the economic fallout from the COVID-19 pandemic.
- 4. Encourage targeted agricultural research:** Research institutions like CARDI and The UWI must partner more closely with farmers and countries to better understand their research needs. For example, in Box 1 James Paul noted the need for research on pesticides. Therefore, it is important to identify where research gaps exist and then fill these voids with impactful research that has practical and tangible application. Greater collaboration among research institutions will also avoid duplication, lending to a more efficient use of resources and targeted research. Breaking down the silos between academics, agricultural practitioners and policy makers will be important. Modernized extension services will be useful in this regard in order to translate research findings into innovative and affordable technologies which can then be integrated into local farming networks.

Establishing policy priorities is only half the job done, the hard task lies with actual implementation. The Caribbean's implementation deficit is one of the single biggest impediments to the development of any sector. Therefore, taking food security from policy to action requires the region to appropriately embrace an A.C.T framework that includes:

- **Accountability:** identify the main focal/reference point for all food security programmes at the national and regional levels, publicly outline their roles, and provide relevant contact details.
- **Cooperation and Commitment:** at national levels all actors from farmers, to manufacturers, to academics, to governmental officials, to end consumers must work together and be committed to playing their part in the overall food security goal. While at the regional level member states must work together and create an environment that favours intra-regional trade especially of agri-food products. Tangible commitment from local governments is also needed through greater allocation of resources towards the agriculture sector.
- **Transparency:** progress reports and updates on various food security programmes that are launched like the RFNSP and the RFNSAP must be regularly provided to the public, breakdowns of how financial assistance is being used and can be accessed by relevant actors is also needed; use of properly managed websites can significantly increase transparency.



## CONCLUDING THOUGHTS

This Brief, which forms part of the wider ***SRC Food For Thought Policy Brief Series***, sought to portray food security as a broad-based concept while highlighting its strategic importance, to provide an overview of food security across CARICOM, to briefly explore the relationship between food security and trade, and to provide initial recommendations for advancing the region's food security agenda.

Look out for the next instalment in the ***SRC Food For Thought Policy Brief Series!***

## ANNEX

### Box 1: Caribbean agricultural professionals share their thoughts on food security, trade and food self-sufficiency

#### Jody White, Food Manufacturer & Founder of Slimdown 360, Trinidad & Tobago

From his work with farmers, Jody believes that Trinidad and Tobago – currently importing around 95% of their food consumption needs based on his assessments – has the capacity to increase its current level of food self-sufficiency. He challenges the land availability issue which is often cited in political circles as one of the country's main hindrances to increased agricultural production. Jody is convinced that Trinidad and Tobago can produce a lot more locally, citing the inability of small farmers to secure economies of scale as the main challenge. In his words, "the sector still operates like the wild, wild west, with prices fluctuating by as much as 3,000% to 4,000% depending on the time of year." He also mentions the lack of adequate storage and distribution facilities as a major issue, noting for example, that due to inadequate storage facilities farmers are unable to capitalize on increased tomato production in the first half of the year where production costs are significantly lower (around TT\$ 1 per pound) and then store excess to meet demand in the second half where production costs reach around TT\$ 8 per pound as a result of dry season conditions. Another challenge, particularly for agro-processors are expensive energy costs, which they are then forced to transfer into the final product prices, making local produce less competitive than imported goods price-point wise.

When advocating for greater food self-sufficiency, one must be mindful that demand for local produce is also impacted by consumer tastes. Using the example of tomatoes and bananas, Jody points out how market preferences for certain size (bigger), look (without blemish), and feel (firm) automatically favours imported products. Even as a local manufacturer of sweet potato fries and cassava and sweet potato pastas, only 5% of Jody's market is in Trinidad and Tobago. Battling a traditional food preference for English potato fries, Jody exports 95% of his products extra-regionally (a success made possible largely thanks to e-commerce platforms like Amazon), noting further the limitation of import substitution strategies, where for example, quality-wise cassava flour will always be inferior to wheat flour. While Jody would welcome mandatory local food content requirements for restaurants and hotels in order to increase local demand, his current exportation strategy is still economically beneficial for the country's balance of payments. However, some of the issues currently faced with exporting his products include limited distribution options<sup>19</sup>, expensive supermarket compliance requirements<sup>20</sup> and the absence of concrete export procedures<sup>21</sup>.

There is also a growing disconnect at the policy level, due largely to the fact that on the ground practitioners like Jody are often excluded in the policy formulation process. Jody believes that sound policy guided by the needs of the sector could produce a major shift towards greater food self-sufficiency. Among some of the areas where Jody would like to see improvement include cheaper product testing options especially for smaller players and access to better labs, more strategically situated industrial parks for agro-processing, better access to finance, and ultimately a greater voice for farmers.

#### James Paul, CEO of Barbados Agricultural Society, Barbados

The food security discussion in Barbados cannot focus solely on adequate quantities of food (the dimension which Barbados appears most successful), but must extend deeper to analyse the management of food systems as it relates to meeting the population's nutritional needs. Much debated is the high prevalence of NCDs in Barbados and its relation to unhealthy food regimes. James argues a case for greater food self-sufficiency based on the adage "fresh is best", noting that despite technological advancements and preservation

<sup>19</sup> Jody believes that a joint Caribbean distribution arm in the US can help with selling to certain customers and increasing the representation of certain Caribbean manufactured products.

<sup>20</sup> Some supermarket chains abroad charge as much as US\$ 150,000 to list a product's name on their systems and to place it on their shelves. Specialized certifications are also costly, for example, non-GMO certifications cost around US\$ 2,500 per year per product.

<sup>21</sup> Jody recalls various encounters with local customs authorities and health officials where each time he goes to export different documentation is required.

techniques, the longer food takes to reach its final destination and be consumed, the less nutritious it becomes. On this basis, replacing imported products with locally supplied ones may help improve Barbados' food utilization state.

James asserts another case for greater local agricultural production, this time highlighting its role in sustainable development. Recognizing the need to reduce the carbon footprint globally, James notes that the closer food production is geographically/distance-wise to its consumption point, the lower the carbon footprint in the transportation of these products. In his words, "despite our small size we still have a responsibility to use the environment around us in a balanced way to meet the nutritional needs of the population." Failure to do this increases the climate change phenomena, which then has its own negative impact on the agriculture sector. Following this logic, James is a strong believer that where possible, available land space should be used to cultivate food for the Barbadian population, rather than solely relying on imports.

Regarding local agricultural production capacity, James explained that this will be determined largely by the extent to which agricultural producers are incorporated into supply and value chains. He is confident that local farmers can produce consistently, noting that consistency is driven by market certainty. In this regard, the current approach of establishing pseudo supply and value chains that do not follow the normal laws of commerce and are not integrated into commercial relationships needs to evolve and such a transition must be guided by a developmental strategy. Fundamentally, sustainable agricultural production depends on the product having a market and this needs to be reflected and embedded within policy, cautioning also that policy, a much-overworked term, must be supported by action.

While James believes that we should not import things that we can produce, he is mindful that imports are influenced by customer tastes which is influenced by westernized mass advertising (primarily US driven). This too has created an environment that does not favour intra-regional trade, one only has to think about where the majority of the region's imports are sourced to see this. However, James sees the rise of social media as an opportunity for Barbados and the region to reassert its own culture, lifestyles, and foods to reach an even broader audience.

Attributing the success of farmers abroad to subsidies and supporting governmental systems, James notes that greater governmental support is needed for Barbados' farming sector. He further reveals that organizations like CARDI, FAO, IICA and The UWI don't have the type of impact that they should, explaining that many of their projects are disconnected from the sector's real issues, and too often these organizations are not readily accessible by the farming sector. Among areas where James would like to see improvement include finance and research in areas like pesticides



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