# FOOD AND NUTRITION SECURITY POLICY

# GOVERNMENT OF JAMAICA

## Ministry of Agriculture and Fisheries
## and
## Ministry of Health

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## LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| ACHR | American Convention of Human Rights |
| AIDS | Acquired Immune Deficiency Syndrome |
| ALUP | Agricultural Land Use Policy |
| ASSP | Agricultural Support Services Project |
| FNS | Food and Nutrition Security |
| CEDAW | Convention on the Elimination of All Forms of Discrimination Against Women |
| CFNI | Caribbean Food and Nutrition Institute |
| CPI | Consumer Price Index |
| CRC | Convention of the Rights of the Child |
| CSOs | Civil Society Organizations |
| FAO | Food and Agriculture Organization |
| FDA | Food and Drug Administration |
| FNSP | Food and Nutrition Security Policy |
| FSMA | Food Safety Modernization Act of the Food and Drug Administration |
| FTI | Food Technology Institute of the Scientific Research Council |
| HACCP | Hazard Analysis Critical Control Points |
| HIV | Human Immunodeficiency Virus |
| ICCPR | International Covenant on Civil and Political Rights |
| ICESCR | International Covenant on Economic, Social and Cultural Rights |
| IDB | Inter-American Development Bank |
| ISFNS | Information System for Food and Nutrition Security |
| IICA | Inter-American Institute for Co-operation on Agriculture |
| JAMPRO | Jamaica Promotions Corporation |
| JMA | Jamaica Manufacturers' Association |
| JSLC | Jamaica Survey of Living Conditions |
| KMA | Kingston Metropolitan Area |
| MCSR | Monthly Clinic Summary Report |
| NCD | Non-Communicable Disease |
| NES | National Export Strategy |
| ODPEM | Office of Disaster Preparedness and Emergency Management |
| PATH | Programme of Advancement through Health and Education |
| PIOJ | Planning Institute of Jamaica |
| QMS | Quality Management Systems |
| RDA | Recommended Dietary Allowances |
| SRC | Scientific Research Council |
| VAP | Value Added Products |
| WHO | World Health Organization |

# EXECUTIVE SUMMARY

Low food production and high dependency on food imports combine to confront Jamaica with an unprecedentedly high and rising Food Import Bill (FIB) and a worrying food security vulnerability to external economic shocks and climate change.

Most of the food consumed in Jamaica is imported either raw or semi-processed for final processing, while a small and declining portion comes from national/regional production. At the same time a large and rising proportion of the final cost of that food to consumers is taken up by services – manufacturing, packaging, distribution and marketing costs. Thus, the food and financial crises of 2008 and 2009, and the resulting volatility of food prices that are currently above the previous highest level reached in mid 2008, have brought the national community face to face with the harsh consequences of its high dependence on food imports. This situation also renders Jamaica more vulnerable to external economic shocks.

So when there is drought in the northern hemisphere or floods in Australia and Pakistan, as happened recently, the prices of wheat, corn and sugar jump to new highs on the world market leading to similar increases in the national food import bill. And the cost of local chicken and domestically produced livestock soars because Jamaica imports the raw materials (corn, coarse grains and soybeans) that are the basis of the animal feeds on which they are fed.

At the same time, lack of access to food and its improper use have led to the emergence of the "double-burden" of malnutrition, which happens when both under and over-nutrition coexist in the same community. The diet of a majority of the population has shifted away from locally grown produce, with limited foods of animal origin, to diets consisting of more processed and energy-dense foods, more of animal origin, and more added salt, sugars and fats. Unfortunately, these new food consumption patterns have meant a shift in consumer preferences towards nutritionally poor diets that have led to the increasing prevalence of obesity, and nutritional related non-communicable chronic diseases (NCDs) such as diabetes, hypertension, stroke, heart diseases and some forms of cancers.

These diseases, that are costly to individuals and to economies, are now one of the main national public health problems. They exist alongside persistent pockets of undernourished population that confront socio-economic inequalities limiting their capacity to obtain food (high levels of unemployment, poverty and income inequality and inequitable access to resources).

Jamaica's food and nutrition security is also threatened by annual hurricanes, drought and floods and the spectre of climate change. Due to climate change, these cyclical natural events have increased in intensity over the recent past thus making Jamaica more prone to temporary food insecurity. Given the diverse ways in which climate change can affect food security, agribusiness entrepreneurs, including farmers, as well as policy makers, should focus on a number of key issues. Firstly, they should consider ways to reduce greenhouse gas emissions (mitigation measures) to lessen future effects of climate change. This can include activities such as the use of sustainable (both traditional and cutting-edge) technologies to reduce the reliance on imported inputs, and increasing the use of renewable energy e.g. solar, wind, geothermal and biofuels in all sectors, but particularly in the agricultural sector. Secondly, there should be a focus on the development of early warning systems (together with crop and livestock insurance schemes), which would be able to forecast periods of shortages, particularly for food production and the onset of extreme events. Thirdly, focus should be on finding ways in which Jamaican farming systems can adapt to climate change, particularly in reducing farmers' vulnerability.

Special attention has to be given to the adequate provision of water resources by increasing investment in water infrastructure and supply for the agricultural sector, providing a holistic water management plan for water allocation in the wet and dry seasons. Funds should also be allocated for short and long-term rural research, marketing and consumer data studies (for both residents and visitors), increasing and modernizing rural and urban markets and expanding farmer training programmes. Incentives for increased water harvesting on farms and in the residential sector, and for the provision of retention ponds and adequate drainage to reduce/avoid flood damage, should accompany incentives for other sustainable practices, such as active engagement in biodiversity conservation.

**The National Food and Nutrition Security Policy**

To confront the above challenges to national food and nutrition security, this Policy and the subsequent Action Plan will provide the strategies, actions and framework within which these critical issues of food and nutrition security will be addressed.

The policy is the result of an inter-ministerial consultative process started in 2010 among all ministries and state agencies which have a food security mandate so as to ensure that the national response should (i) address the areas of production, consumption and storage; (ii) provide coherence and coordination to the work of the many Ministries and State Agencies and the NGOs and private sector entities that work in these areas; (iii) not subvert the existing markets and the private sector; and (iv) ensure sustainability of the programmes and activities designed and effected.

Food security plays a major role in the nutrition status of the population. Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. Food security looks at food availability, food access, food consumption/utilization and stability of food supply. Therefore, the overall objectives of a food security policy are to ensure that all people have continued access to sufficient supplies of safe foods for a nutritionally adequate diet and in so doing achieve and maintain health and nutritional wellbeing.

Experiences in the region and elsewhere suggest that food production alone cannot guarantee food security and nutrition. Therefore, food security itself is treated in the policy as the output of a dynamic agricultural sector getting inputs from and providing inputs to the rest of the economy and to external markets. This is a departure from equating food security solely with food production and availability and recognizes the reality that food security is an integral part of the policies, strategies and actions of several sectors of the economy.

**Philosophy and Objectives**

The basic philosophy under-pinning food and nutrition security and the development of food production and allied services in Jamaica is defined as the achievement of the optimum degree of self-reliance through a strategy of feeding, clothing and housing the population, utilising to the greatest extent possible and feasible, indigenous raw materials and human and natural resources. In this context, the vision of the policy is that all Jamaicans at all times have universal physical, social and economic access to sufficient, safe and nutritious food to meet their dietary and food preferences for an active and healthy life. To this end, the long-term goal of the policy is to achieve sustainable food and nutrition security and eliminate all forms of malnutrition, by ensuring the full protection and realization of the right to food for all Jamaicans and residents of Jamaica, in order to have a well-nourished and healthy population that can fulfil its aspirations to good health and economic well-being and effectively contribute to national economic development.

**More specifically, the policy will seek to:**

- Ensure that a sufficient quantity of nutritious food of appropriate quality is available to all people in Jamaica, through increased domestic production and a sustainable level of imports (Food Availability).
- Ensure that all individuals in Jamaica have access to adequate resources to acquire appropriate foods for a nutritious diet (Food Access).
- Ensure that all individuals in Jamaica reach a state of nutritional well-being through food choices and consumption that reflect Recommended Dietary Allowances (Food Utilization).
- Ensure that all people in Jamaica have access to adequate, safe and nutritious food at all times, are not at risk of losing access to it due to shocks, and consume/utilize foods that reflect physiological needs (Stability of Food Supply).

The policy is delineated into four sub-sections, namely, food availability, stability of food supply, food access and food utilization. The main elements of each sub-section are highlighted below.

**Food Availability**

The objective of this pillar is to promote the sustainable production of safe, affordable, nutritious, good quality Jamaican food commodities/products. Under this pillar, it is being proposed that Government promote increased production of nutritious food at competitive market prices in a sustainable manner by creating an enabling environment to facilitate increased food production. Under this approach, priority commodities will be selected on the basis of the promotion of a nutritionally balanced diet comprised of local food products in line with the food based dietary guidelines. The cost efficiency of value added production for locally produced and imported semi-processed foods and livestock products and the improvement of food safety systems are also paramount to the thrust of supporting the food sector.

One of the main underpinnings of this pillar is the enactment of a Food Security Law to ensure the domestic production of a minimum threshold of a selected basket of foods for which there is production capability and national comparative advantage to meet domestic food, nutrition and health goals.

National comparative advantage means comparative advantage within different producing areas in Jamaica and not between Jamaica and other regional or extra-regional trading partners. Also, "threshold means that for a given food item in the selected basket of foods, a proportion must come from domestic production while the difference can come from imports. The threshold level for each major food item will depend on domestic production capability, whereby the greater the domestic capability, the higher will be the threshold and vice versa. The threshold will not be fixed in perpetuity, but will be subject to change from time to time depending on development in technology which could improve domestic production capability. Likewise, the composition of the basket will not be fixed but will change from time to time depending on domestic production capability, consumer tastes and preferences, and guided by the epidemiological profile of the population.

This law will be supported by appropriate production and trade policies to increase production and productivity of the domestic agriculture and agro-processing sectors and protect local industries from unfair external competition. The policy proposes that under this legislation, the Minister responsible for the agricultural sector should be empowered to determine and adjust the specific output levels and types of crops and livestock products from time to time in line with changes in the national food production and agro processing capability and national/regional trade policy. Imports of these products or close substitutes would be subject

to approval by the agriculture ministry. To the extent feasible, it is also being proposed that at least 75% of all food purchases made by Government directly or by public entities should be from domestic/regional food production.

In line with the National Food Security legislation, it is also being proposed that the Government will strongly promote the production of foods identified as critical to meeting the food, nutrition and health goals and for which there is a national production capability. This would be supported by an improved incentive framework, relevant trade policy support and a policy framework and programme for selected commodities.

**Food Stability**

The objective of this pillar is to improve the food and nutrition security resilience of the national community to natural and socio-economic shocks and climate change. It is recognized that there are recurring threats to food security, and that their intensity is exacerbated by climate change, the effects of which can be mitigated, and for which adaptation is essential to build resilience to this evolving threat. In this regard, the pillar emphasizes the implementation of adaptation and mitigation strategies as a means of enhancing the stability of food security.

To this end, therefore, policy recommendations include:

- Promote the creation of an Information System for Food and Nutrition Security (ISFNS) for food security development, as well as food crisis prevention and risk management and the construction of adequate risk profiles for the main crops;
- Pursue climate resilient development which focuses on adaptation as well as mitigation strategies for the food and agriculture sector;
- Enhance the capacity of relevant institutions to provide climate related information in collaboration with relevant regional bodies;
- Integrate climate management considerations into the National Agricultural Disaster Risk Management Programme;
- Reduce the impact of climate change on food production;
- Utilization of vulnerability analysis and mapping to provide timely nutrition and socio-economic information on vulnerable population groups to decision-makers to enable the design of more effective emergency and relief responses;
- Develop comprehensive agricultural insurance and risk transfer schemes;
- Subscription to a national and regional disaster fund.

The pillar also places emphasis on disaster risk mitigation and response mechanisms by proposing a national network of emergency food stocks for a minimum of three months, emergency food plans for vulnerable groups and households and contingency plans for recovery and rehabilitation in areas prone to natural disasters.

**Access to Food**

The objective of this pillar is to ensure access of households and individuals to sufficient, nutritious affordable food at all times. The pillar recognises the challenges facing individuals and families vulnerable to food insecurity. It proposes food security interventions that will ensure the target food insecure population gains access to productive resources to improve their livelihood status. Where a segment of the target food insecure population is unable to gain access to productive resources, then food security interventions will ensure that this segment gains access to income and job opportunities to enhance its power to purchase food.

Food security interventions proposed in this pillar are geared to ensuring that the targeted food insecure population is empowered to have nutritious and safe food. Where another segment of the target food insecure population is still unable to access sufficient food because of

disability, extreme conditions of destitution – food security interventions will ensure that the state provides relief measures that may be short-to medium-term and/or on a sustained basis, depending on the nature of given interventions. It is proposed that interventions be underpinned by analysis that is grounded on accurate information and that their impact be constantly monitored and evaluated.

**Food Utilization/Consumption/Nutritional Adequacy**

The objective of this pillar is to promote nutritionally adequate, safe, affordable dietary intakes and other positive lifestyle behaviours throughout the life course. The pillar recognizes the challenges facing the Jamaican population with respect to increasing levels of obesity, non-communicable chronic diseases, persistent iron deficiency anaemia and pockets of under nutrition. This pillar therefore aims to:

- Promote, protect and support appropriate infant and young child feeding practices;
- Promote consumption practices consistent with the national population dietary goals in line with international standards;
- Strengthen national nutrition surveillance systems in accordance with WHO standards, so as to monitor the nutritional status of the population and identify those at risk of nutrition-related disorders;
- Develop and implement national guidelines on physical activity and dietary intake to promote health and wellness in schools, workplaces and communities;
- Provide nutrition standards and guidelines to strengthen programme development and implementation in all sectors; and
- Implement policies and programmes to detect, prevent and manage all forms of malnutrition.

State institutions and schools provide an entry point for interventions to prevent and control some of the identified nutrition conditions and influence food tastes and preferences and will be targeted by this policy. Extensive public education and awareness campaigns will target the wider population to emphasize the benefits of eating healthy and nutritious local foods.

The pillar also targets the strengthening and enactment of legislation to foster the implementation/enforcement of food safety standards and food labelling, in keeping with international standards.

A strong research agenda has been included in the development of the policy, and it cuts across all four pillars with the aim of providing the necessary information to guide decisions. As such, Academia will be a critical stakeholder in the implementation process, specifically to provide the expertise and guidance in the conduct of all relevant research to guide evidence-based decision making.

**Institutional Framework**

Due to the multidisciplinary nature of food security, it is proposed that an Inter-Ministerial Committee on Food and Nutrition Security (IMCFNS), chaired in rotation by each of the constituent ministries and having a permanent secretariat provided by the Ministry responsible for Agriculture, be established to ensure joint and concerted action in the formulation and implementation of the programmes and measures under the Food and Nutrition Security Policy. It is proposed that private sector and non-government organizations be integrated into this Committee, with the possibility of the Chair also being drawn from the former grouping. It is proposed that the Committee report to Cabinet.

The IMCFNS may establish a secretariat to carry out the functions and responsibilities assigned to it by the Cabinet and would draw its funding, in the first instance, from existing

appropriations in the constituent Ministries; this procedure may be varied in future to provide the IMCFNS with assured funding, which may be of domestic and/or international origin.

Under the IMCFNS, a Technical Working Group will also be set up with responsibility for providing technical inputs as well as for the design, implementation arrangements, monitoring and evaluation of the IMCFNS's work programme.

# JAMAICA NATIONAL FOOD AND NUTRITION SECURITY POLICY

## 1. INTRODUCTION

### PREAMBLE

Food security requires an available and reliable food supply at all times. At the global, regional and national levels, food supply can be affected by climate, disasters, war, civil unrest, population growth, lack of effective agricultural practices, and restrictions on trade. Government initiatives that encourage a policy environment based on macroeconomic stability and competitive markets can improve food availability. At the household level, food security is essentially a matter of access to food and its appropriate use to ensure the health of individual family members.

Insecurity can be temporary or chronic. It may vary with age, status, gender, income, geographic location and ethnicity. Poverty is the main cause. Sustainable progress in poverty reduction is critical to improving access to food. Individuals need access to sufficient, safe and nutritious food. They need adequate health services, a healthy and secure environment and a safe water supply. Food security is therefore closely linked to the economic and social health of a nation, society and individual.

Good nutrition is essential for healthy and active lives and has direct bearing on intellectual capacity, which eventually impacts positively on national social and economic development. Underlying this principle is the practical application of appropriate diet and healthy lifestyles that, albeit a matter of individual choice, are dependent on stable and sustainable food security, knowledge on which to base nutritional choices, quality caring practices, healthy environment, adequate supplies of safe drinking water and accessible quality health services. Therefore in order to maximise the health and economic benefits for the population, there should be in place sound food and nutrition policies and strategies.

Given the onset of climate change the world over, current import trends that increase 'food miles' (the length of the supply chain and hence transportation costs), and dependency on imported food must be redressed. Moreover, traditional exporters of key agricultural commodities may choose to cut exports if droughts, floods or other natural disasters threaten their domestic markets. In 2007, droughts in Australia led to significant declines in dairy exports, which affected the availability of these products for the CARICOM consumer. In 2010, droughts in Russia resulted in reduced wheat exports which led to increases in global wheat prices. In 2012, drought in the northern hemisphere has once again reduced the availability of corn and wheat in international markets. Rapid price increases in these and other staples such as sugar, have had significant impacts on the Caribbean's food import bill. Wages have not risen to match higher food costs; therefore the price of food has risen in relation to that of other goods and services. Access to food, particularly for the most vulnerable, has been threatened.

Given the diverse ways in which climate change can affect food security, agribusiness entrepreneurs, including farmers, as well as policy makers, should focus on a number of key issues. Firstly, they should consider ways to reduce greenhouse gas emissions (mitigation measures) to lessen future effects of climate change. This can include activities such as the use of sustainable (both traditional and cutting-edge) technologies to reduce the reliance on imported inputs, and increasing the use of renewable energy e.g. solar, wind, geothermal and biofuels in all sectors, but particularly in the agricultural sector. Secondly, there should be a focus on the development of early warning systems (together with crop and livestock insurance schemes), which would be able to forecast periods of shortages, particularly for food production and the onset of extreme events. Thirdly, focus should be on finding ways in

which Jamaican farming systems can adapt to climate change, particularly in reducing farmers' vulnerability.

Special attention must be given to the adequate provision of water resources by increasing investment in water infrastructure and supply for the agricultural sector, providing a holistic water management plan for water allocation in the wet and dry seasons. Funds should also be allocated for short and long-term rural research, marketing and consumer data studies (for both residents and visitors), increasing and modernizing rural and urban markets and expanding farmer training programmes. Incentives for increased water harvesting on farms and in the residential sector, and for the provision of retention ponds and adequate drainage to reduce/avoid flood damage, should accompany incentives for other sustainable practices, such as active engagement in biodiversity conservation.

The emphasis on food, nutrition and health goals and the requirement for Jamaica's agriculture and food distribution system to meet these goals derive from three main observations. First, the country's main public health problems are food and nutrition-related, and this can be linked to lifestyle practices related to unhealthy diets, an observation which is reinforced by the types and quality of foods that are available (from domestic and import sources) to the Jamaican people. Second, despite a long history of food production and natural resource endowments (farmers, land, climate and water) that are favourable for food production, food imports into Jamaica have been increasing over the years (estimated at US$810 million in 2010), while at the same time livestock and crop production (with the exception of a few crops in the past two years) has been declining over the past 50 years. Third, Jamaica (like its CARICOM partners) has depended on food imports since its beginnings as a plantation society; it is now imperative that the ecological and socio-economic patterns of this history are adjusted to respond to new climatic and meteorological challenges. **This Policy and the subsequent Action Plan will therefore provide the strategies, actions and framework within which these critical issues of food and nutrition security will be addressed**.

## BACKGROUND

### Nutrition and Non-communicable Diseases

1.1 The Caribbean, including Jamaica, is undergoing a diet transition from a traditional diet with a limited range of staple foods towards a high-energy diet with more animal protein, saturated fats, sugars and highly processed foods[1]. This diet, often consumed away from the home as street food, and at local fast food or "cook shops", has resulted in a preponderance of over nutrition leading to obesity. Obesity is a major risk factor and a driving force in the prevalence of Non-communicable diseases (NCDs), such as diabetes, cardiovascular diseases and cancer.

1.2 Over the past decade, obesity levels have continued to spiral out of control with the prevalence of NCDs reaching epidemic proportions as demonstrated by the following data on NCDs and their risk factors in Jamaicans 15-74 years old[2]:

- Diabetes: prevalence of 7.2% in 2000, increased to 7.9% in 2008
- Pre-hypertension: prevalence of 29.9% in 2000 increased to 35.3% in 2008
- Hypertension: prevalence of 20% in 2000, increased to 25% in 2008
- Obesity: prevalence of 9.7% in 2000 increased to 25.3% in 2008
- Physical inactivity: 17% of the population in 2000, compared with 30% in 2008

[1] Labonté, R., Mohindra, K., Lencucha, R. **Paths linking trade and chronic disease I: Diet in: Trade and Chronic Diseases: An Overview.** Institute of Population Health, University of Ottawa. Canada, 2010

[2] Wilks et al. Jamaica Health and Lifestyle Survey 2007/8

NCDs account for approximately 56% of deaths in Jamaica annually, causing illnesses, disabilities, premature death, productivity losses, increasing costs of care, poor quality of life and poverty. Persons in the lower socio-economic groups bear the brunt of the impact, particularly those with diabetes and hypertension[1]. It is estimated that at least 5% of Jamaica's Gross Domestic Product (GDP) goes towards the treatment of diabetes and hypertension threatening our economic development[2].

1.3 Food security is being compromised mainly due to accessibility and consumption/utilization in Jamaica. Food insecurity may lead to weight gain and obesity as the less expensive foods tend to be high in calories and low in nutrients. In addition, households with limited resources tend to spend less on food overall and even less on healthy foods, which tend to be more costly[4]. Ensuring access to low cost healthy food options is paramount to contributing to the achievement of food and nutrition security and better health outcomes.

1.4 It is noteworthy that women are disproportionately affected, as one in four Jamaican women is obese. In a study on Californian women, food insecurity was found to be associated with increased likelihood of obesity[3]. It follows therefore that Jamaican women are at increased risk. Moreover, many are the main breadwinners and heads of households (45.5%) and care for children and the elderly[4]. They also have to care for partners that suffer from NCDs and other debilitating conditions.

1.5 Curtailing the NCD epidemic through interventions designed to improve food and nutrition security will require a life course approach. Whilst the role of obesity in NCDs is well recognized, there is also evidence that malnutrition suffered in the womb may lead to a predisposition to hypertension, coronary heart disease, and diabetes later in life[5]. This factor further compounds the problem, as it indicates that many children may be at increased risk.

1.6 Interventions to improve food and nutrition security should promote breast-feeding and appropriate infant and young child feeding practices, improving access to low cost healthy foods, creation of supportive environments for healthy eating and adequate access to appropriate health care.

**Soaring Food Prices**

1.7 In January 2011, the FAO Global Food Price Index surpassed the previous high level reached in 2008 which had led to food riots and social instability in several countries. It is now clear from an analysis, recently carried out jointly by ECLA, FAO and IICA[6], of the forces driving food prices (oil prices, expansion of ethanol production from corn, increased demand from developing countries such as China and India, climate change – giving rise to an increased frequency of natural disasters) that world food prices will continue to be volatile and remain at high levels in the foreseeable future.

1.8 The general consensus is that because of climate change, increases in the price of fuel, increased demand for food commodities tied to rising per capita incomes in China, India and other emerging economies as well as for bio-fuels, soaring prices are likely to be a permanent feature of international food commodity markets with greatly increased volatility.

[1] ibid

[2] Working Document for Summit of CARICOM Heads of Government on Chronic Non-Communicable Diseases: Stemming the tide of Non-communicable diseases in the Caribbean 2007

[3] Adams et al. Food Insecurity Is Associated with Increased Risk of Obesity in California Women. Journal of Nutrition, April 1, 2003 vol. 133 No. 4 1070 -1074

[4] Jamaica Survey of Living Conditions 2009

[5] Nutrition - A foundation for development. United Nations ACC Sub-Committee on Nutrition

[6] Price volatility in agricultural markets (2000-2010): Implications for Latin America and policy options. Newsletter 1/2011

This growing volatility of prices in international agricultural markets is a challenge not only for farmers, but also for consumers and decision-makers. Uncertainty regarding the direction that such prices will take in the future has complicated decision making for almost all economic agents.

1.9 High food prices are of concern to the Caribbean region, especially for poor households which spend a large share of their income on food. In Jamaica, the impact and implications of the 2007-08 global food crises were many and varied and characterized by:

- significant surges in domestic food price inflation, where food price inflation was higher than aggregate inflation and contributed to the underlying inflationary pressures;
- increases in the poverty level through its direct impact on the indigence line, which is defined as the food component of the poverty line[1];
- erosion of purchasing power of consumers resulting in negative impact on vulnerable groups;
- distributional effects in general on poor people, especially those located in urban areas; and
- negative impact on the food trade balance and therefore the balance of payments situation.

1.10 Given this situation, there is a growing concern globally, in the Caribbean region and in Jamaica that measures to address rising food prices should be initiated immediately, taking into account the experience and lessons from the previous crisis.

## GENERAL CONSIDERATIONS

1.11 Food security is the foundation of social and economic development. In essence, it means that all people in a society have access at all times to enough food for an active and healthy life. Faced with rapidly rising hunger and weak synergy and coordination in the governance of global and regional food security, the Government of Jamaica (Ministry of Health) initiated in 2007 the development of a comprehensive and coherent national response to the food security crisis facing the country, directed at updating the 1978 Food and Nutrition Policy, the development of which had been spearheaded by that Ministry.

1.12 Given the cross-cutting nature of the matters involved, it was agreed that the national response should (i) address the areas of food production, consumption, distribution and storage; (ii) provide coherence and coordination to the work of the many Ministries and State Agencies and the NGOs and private sector entities that work in these areas; (iii) not subvert the existing markets and the private sector; and (iv) ensure sustainability of the programmes and activities designed and effected.

1.13 A Committee was established to carry out this work. In view of the importance of national food availability, the committee was chaired by the Ministry of Agriculture and Fisheries with 4 sub-committees dealing with the four pillars of food security viz. availability, access, utilization and stability of supplies. The committee agreed to adopt a holistic approach to strengthen and coordinate expertise and action in the fight against hunger and food and nutrition insecurity. Indeed, given the varying dimensions of food and nutrition security, a collaborative effort by the ministries and NGO's with specific mandates in these areas is imperative.

[1] JSLC 2009

# KEY POLICY CONCEPTS, CONCERNS, AND ISSUES

## Concepts underpinning the JFNSP/RFNSP

### What is food security?

1.14 In the Caribbean, in reference to Food Security the definition that **"all people at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life"** (World Food Summit, 1996) has been agreed.

1.15 This definition goes beyond the traditional narrow vision of both food self-sufficiency and the physical availability of food supplies over time and space, to include the socio-economic and nutritional aspects of having adequate economic and physical access to safe and nutritious food supplies. From this perspective, therefore, food security is an integral part of a process of nutrition and health development and embodies four major pillars: Food Availability; Food Accessibility; Food Consumption; and Stability of the previous three components.

1.16 Food security, in all its dimensions, is under constant threat in the Caribbean. Essentially, food security can be described as a phenomenon relating to individuals. It is the nutritional status of the individual household member that is the ultimate focus, and the risk of that adequate status not being achieved or becoming undermined. **Food insecurity exists when people do not have adequate physical, social or economic access to food as defined above**.

### Linking individual food security to national and regional policy - dimension of entitlements

1.17 Individuals may acquire food in one of four ways[1]:

- They may produce it for themselves (production-based entitlement), which may be particularly important, for example, for small farmers who aim for self-sufficiency. It can be affected by policies altering the demand for and supply of factors used in production, some of which will relate to international trade.
- They may sell or barter physical assets (trade-based entitlement). Many farmers will augment their own production by exchanging either a surplus of some crops or an own-food product. The amount of food they can acquire will be influenced by policies that affect the level and variability of prices for food relative to what they are able to exchange.
- They may sell their labour power (labour-based entitlement). Rural landless labourers and urban employees all need to buy or barter food in the market. Their food security is determined by the level and location of employment opportunities which, in turn, may be altered by trade policy.
- They may receive informal gifts from individuals and formal transfers from government (transfer-based entitlement). These are important for those lacking other adequate means. Formal transfers such as food aid may be influenced by multilateral trade agreements.

### Contrasting Food Security and Nutrition Security

1.18 Food security, as against food production, is concerned with access to food and is a component of nutrition security: a household is food secure if it can reliably gain access to food in sufficient quantity and quality for all its members to enjoy a healthy and active life.

[1] A Conceptual Approach formulated by A.K.Sen

However, nutrition security is as concerned with food utilisation as it is with access. A household achieves nutrition security when it has secure access to food – that is, food security – coupled with a sanitary environment, safe drinking water supplies, adequate health services, and knowledgeable care to ensure a healthy life for all household members. In CARICOM, the problem is one of access to food, exacerbated by malnutrition, particularly over nutrition resulting in obesity and NCDs. It is clear then that the immediate, urgent problems concern household access and nutritional adequacy. This means a departure from equating food security with food availability.

**Sustainable Agriculture and Organic Farming**

1.19 Sustainable agriculture encompasses many different production methods, systems, and approaches that aim to meet the goals of profitability, stewardship, and quality of life. One of those approaches, but by no means the only one, is organic farming within the farming systems approach. Organic agriculture is generally considered to be under the sustainable agriculture "umbrella." But it is not exactly a subset, since organic practices may conflict with sustainability goals in certain situations. Opinions differ on the relative importance of organic agriculture to sustainable agriculture and on how much research, education, and extension efforts on sustainable agriculture should be directed to organic agriculture.

1.20 Three indicators (UN) that appear most frequently in a definition of sustainable agriculture are:

- Environmentally sound
- Economically viable
- Socially acceptable

However, two other indicators were added in the formulation of the RFNSP, which are:

- Technologically sound
- Politically acceptable

In this context, sustainable agriculture embraces all agricultural systems striving to meet these criteria. Many aspects of modern conventional agriculture are included in sustainable agriculture, just as are many aspects of alternative farming systems including organic agriculture.

**Food Security Interventions**

1.21 Food security policy is a set of government interventions, both direct and indirect, that are used to promote agriculture and food sector objectives by influencing the organizational and economic environment within which the food system functions. Food security policies must address all aspects of the food system, affecting the entire conceptual spectrum, ranging from production, marketing, processing, distribution, all the way to consumption and nutrition.

1.22 Food policy interventions require that both micro- and macro issues be addressed and must be so designed as to:

- Resolve issues of malnutrition and food security;
- Involve policy and programme design and implementation that cut across departmental divisions;
- Consider a wide array of data that can be disaggregated down to the household level (or even to the intra-household level); and
- Deal with conflicting policy objectives that arise between producers and consumer interests, urban and rural differences, primary and secondary production, budgetary

prioritization between consumption support and investment in agriculture, and short- and long-term decisions.

## SITUATION ANALYSIS

1.23 As the analysis in Appendix 1 shows, national agricultural production has stagnated in recent years despite increases in domestic demand for food. Food crop producers are characterized as having uneconomically small farms, low production and productivity levels, limited incorporation of new technologies, a high presence of small subsistence farming and a low recruitment and replacement rate (an ageing population group). These factors along with limited regional (CARICOM) cooperation within the sector have lowered the level of agricultural competitiveness, with the exception of sugar cane, rice and some tropical fruits such as citrus and bananas[1].

1.24 Here, it should be noted that both private and public investment in agriculture has not increased significantly. This translates into a lack of services that affects the ability, particularly of small farmers and fishermen, to access and adapt new technologies and reinforce advantageous traditional practices and seriously constrains their resilience to climate change.[2]

1.25 Most small scale agricultural activity is rain-fed, as very little irrigation is used outside of the large commercial farms. This circumstance renders Jamaican agriculture particularly vulnerable to the effects of climate change in the form of the increased frequency and intensity of droughts, storms and floods that result in crop losses. Key issues in respect of water resource development and management, water distribution systems and farmers' access to water in Jamaica are:

- Preparation of a national water policy based on an assessment of available water resources, and including allocation strategies which view food/agricultural production as an important economic sector.
- Development of a national water information system to provide reliable data to assess the available water supply and promote sustainable use of the resource.
- Improving the availability and productivity of water at farm level through a strategic mix of irrigation systems development, integrated Agricultural Water Management (AWM) approaches and water management technologies in both rain fed and irrigated agriculture;
- Enhancing economic benefits while containing environmental impacts at local, watershed basin or national levels, as a result of increased use of innovations and technologies for enhancing the farm level productivity of water in the upper catchments;
- Improving incentives (such as trade) and governance mechanisms to bring about beneficial uses and management of water in the upper catchments while maintaining or improving water availability for downstream or ecosystem needs;
- Combining indigenous knowledge with cutting edge information technologies to develop the most appropriate decision support tools for different stakeholders (including individual resource users) to improve planning for sustainable use of water; and,
- In-building adaptation to climate change in all agricultural and water development strategies and programmes.

[1] Challenges and Outlook for the Caribbean Region, FAO Regional Conference for Latin America and the Caribbean, 31st Session, April 2010.
[2] ibid

1.26 Historically, domestic food crop production has been a by-product of export agriculture, largely relegated to marginal lands. At the same time, the marketing and distribution system, port and transport infrastructure and customs procedures were geared to facilitating food imports[1]. This has given rise to a strong and continuing national preference for imported agricultural goods and services that is now being further fuelled by changing lifestyles and tastes. Indeed, together with the vested interests that have arisen around it and the strong acquired taste and preferences for foods that are not produced in the region, this situation has resulted in declining levels of demand for local food commodities that have constrained the growth of the national food sector and the emergence of a vibrant food processing and distribution sector based on domestic food production.

1.27 Moreover, the marketing system for domestically produced agricultural crops has been constrained by information asymmetries, infrastructural weaknesses, especially related to transportation, post-harvest handling and storage facilities and physical marketing of commodities. These impact the levels of efficiency in domestic food distribution as well as prices for local crops and contribute, in part, to high post-harvest losses, which are estimated at 40% of production.

1.28 Post-harvest loss reduction strategies are needed that provide economic incentives to all actors in the chain. Warehouse receipts systems, for example, provide professional storage management services that often reduce buyer costs and risks and enable farmers to access new markets and financial services and obtain better prices for their produce. Improvements must take the prevailing socio-economic conditions fully into account. Strategies also must recognize the central role of the private sector. There is a need for enabling environments that encourage private sector investment and the partnering of the public and private sectors in spearheading growth and development.

1.29 Agricultural commodities are mainly sold in municipal markets, supermarkets and other retail outlets. Physical commodity markets, controlled by Parish Councils are generally inadequate and lack the necessary amenities. There is no dedicated wholesale market as these markets operate as both wholesale and retail. The main semi-wholesale market is located in Kingston and persons from other parishes purchase agricultural commodities for resale in their respective parishes, which adds to the distribution cost and price of fresh foods.

1.30 Consequently, the greater (and increasing) part of the food products consumed in Jamaica is imported in a raw or intermediate state for further processing e.g. wheat, maize, soybeans, grains, to be transformed **inter alia** into flour, animal feed and beverages. Thus the country is almost entirely dependent on foreign producers and processors for supplies of the main food staples.

1.31 Over the recent past, therefore, the major component of the cost of food products to domestic consumers has consisted increasingly of processing and distribution services, now estimated to constitute upwards of 50% of the final market price to the consumer, especially for branded commodities. Domestic production of food commodities is confined mainly to fresh fruits and vegetables and roots and tubers.

1.32 It follows from the above considerations that a series of interlocking and mutually reinforcing constraints have, over the years, rendered farming and food production, manufacturing and marketing from local raw materials, an unattractive and challenging enterprise in Jamaica. Indeed, the terms of trade between domestic food crop production and

[1] A Keynote Address for the 1st plenary session of the conference: Food Security & Agricultural Development in the Americas July 28-30, 2009 Mona Visitor's Lodge & Conference Centre; Food Security: Fad or Trend Dr. Dunstan Campbell - FAO Representative in Jamaica, Bahamas and Belize July 28, 2009

the rest of the economy have remained unfavourable to the farming and allied service sector over the recent past.

**Market Opportunities and Threats**

1.33 In light of these considerations, it is clear that, given the scope and nature of the above-mentioned challenges and the failure of piecemeal approaches in the past, a concerted, simultaneous and holistic approach will need to be taken, inclusive of all spheres of activity that impinge on the farming, food, health and nutrition sectors: legal and regulatory, institutional, fiscal, trade, industry and education policy inter alia, **in order to create an enabling environment in which the productive energies in the farm sector may be released and encouraged, capital and labour are attracted to agriculture and the import bias in national food preferences is reduced.** To this end, it will also be imperative to give a strong and unambiguous signal that the State intends to provide a stable and predictable fiscal, trade and regulatory policy environment for agricultural and livestock production in the medium term. This will generate opportunities for production and investment in the agriculture, food production, manufacturing and services sectors. These opportunities include:

- the re-emergence of the primary production sectors-cocoa, coffee, bananas, spices, citrus and sugar as a source of raw materials for agro-processing;
- the economic growth and expansion of the food manufacturing, marketing and service sectors with strong and organic linkages with the domestic raw material/primary production base;
- increased exports of agricultural and food products and services incorporating greater added value, promoted and stimulated by appropriate trade and tariff policies.

1.34 The emergence and accessibility of these market opportunities will depend on the resolution of the following problems:

- Limited availability of and access to land for agriculture;
- Limited availability of and access to capital for agricultural production;
- High priority for irrigation and water rights for agriculture;
- Inadequate infrastructure (roads, transport, storage and markets) for food distribution and marketing;
- Raising soil fertility from current low levels and reducing soil acidity by stimulating the use of limestone and organic fertilizers;
- Reducing the current widespread and inappropriate use of pesticides and herbicides (in quantities far above recommended levels);
- Praedial larceny;
- Adoption and incorporation of international food grading and product standards, food safety and agricultural health standards into Jamaican law and the streamlining and reconciliation of the legal framework, regulatory ordinances and institutional arrangements for enforcement;
- Effective enforcement of plant protection and animal health certification systems and food grading and product standards, food safety and agricultural health standards;
- The implementation of the National Food Safety Policy for agricultural public health and food safety;
- The retooling of the national agricultural research system and programmes giving emphasis to the needs and requirements of small farmers, cottage and commercial processors and ecologically marginal areas. It would also be necessary to place emphasis on production or farming systems research, which can develop technological packages for the improvement of the existing farming systems, which are multi-

commodity. This would require multi-disciplinary as distinct from mono-disciplinary approaches to research and planning, project design and implementation;

- Ensuring that the agricultural research agenda is set by the farmers and agro-processors rather than by the research establishment;
- Improving and enhancing the treatment of agriculture in the school curriculum at all levels with a special focus on urban and suburban agriculture to increase household garden production;
- The stimulation of product and service development from the indigenous agricultural resource base and the application of creative design in agricultural and food products based on Caribbean cuisine and branded around Caribbean culture;
- Consumer tastes and preference for imported fruits, vegetables and processed food products;
- The strengthening and expansion of backward and forward linkages between tourism, agro-food distribution services, agro-food manufacturing and the farm sector;
- **Compensating for export subsidies and policies** in our major supply sources that give unfair competition to domestic crop and livestock production;
- Encouraging the **addition of value** through the expansion of the range and quality of crop, livestock and agro-food by-products as well as improved meat cutting, processing and manufacturing techniques;
- Upgrading of the physical supportive infrastructure (for grading, packing, and certification of agricultural commodities) for both the domestic and export market segments;
- Improving the quality of life in rural areas by urgent and massive increases in their access to stable and regular supplies of electricity, domestic piped water, connection to the internet etc.

1.35 The long term national interest, therefore, imposes on the national community the need to invest in public goods for the benefit of the farming, food production, manufacturing and marketing sectors as well as to sustain a certain level of subsidisation and tariff protection for employment and incomes in the sector in the context of a pro-active policy in support of domestic food production, manufacturing and marketing at all stages and levels of the value chain.

## REGIONAL CONTEXT

1.36 Food security plays a major role in determining the nutritional status of the population: it covers food availability, food access, food consumption/utilization and stability of food supply. Therefore, the overall objectives of a food security policy are to ensure that all people have continued access to sufficient supplies of safe foods for a nutritionally adequate diet and in so doing achieve and maintain health and nutritional wellbeing. In the CARICOM region, a recent study found that food security is compromised not so much by lack of food availability as by inadequate access to foods and dietary patterns that adversely impact on nutritional status.

1.37 The CARICOM Regional Food and Nutrition Security Policy (RFNSP) recognises that vulnerability to external shocks, poverty, social exclusion and a lack of participation in political decision-making processes are the main structural and acute causes of food insecurity in the region. The Policy calls for strategies that tackle the root causes of hunger and malnutrition and empower marginalised groups to participate actively and meaningfully in the policy formulation, implementation and monitoring process.

1.38 The CARICOM Single Market and Economy (CSME), established by the Revised Treaty of Chaguaramas, provides the wider context in which the RFNSP is being pursued and

development efforts in the CARICOM region in general are to be conceived. The RFNSP defines Pillar 1 in the CARICOM Community Agriculture Policy, which is the overarching policy framework for agricultural, food production and rural development in the region.

1.39 The CARICOM Regional Food and Nutrition Security Action Plan (RFNSAP) is set within the framework of the RFNSP, approved by the COTED (Agriculture) in October 2010, is in line with developments at the global and national levels and is designed to reap benefits of coordination, harmonization and concerted action. The RFNSAP contributes to four of the eight Millennium Development Goals: eradicating extreme poverty and hunger; promoting gender equality and empowering women; reducing child and maternal mortality; and ensuring environmental sustainability.

1.40 It is in this context that this National Food and Nutrition Security Policy (FNSP) has been prepared, taking into account relevant regional policies and initiatives to ensure that the national food production, processing, distribution, marketing, trade, and food safety and agricultural public health system is capable of providing safe, adequate, nutritious and affordable food for the national community at all times as well as the relevant enabling and supportive environment to ensure appropriate utilization and lifestyle choices thereby achieving food and nutrition security.

## 2. THE FOOD AND NUTRITION SECURITY POLICY

### Vision and Strategic Objectives of the Jamaica Food and Nutrition Security Policy (JFNSP)

**2.1** The basic philosophy under-pinning food and nutrition security and the development of food production and allied services in Jamaica is herein defined as the achievement of the optimum degree of self-reliance through a strategy of feeding, clothing and housing the population, utilising to the greatest extent possible and feasible, indigenous raw materials and human and natural resources. In this context, the **vision of the JFNSP, validated by the national consultations, is that all Jamaicans and residents of Jamaica at all times have universal physical, social and economic access to sufficient, safe and nutritious food to meet their dietary and food preferences for an active and healthy life**. This statement is also the internationally agreed definition of food security[1]. To this end, **the long-term goal of the Policy is to achieve sustainable food and nutrition security, to ensure the full protection and realization of the right to food for all Jamaicans and residents of Jamaica and to eliminate all forms of malnutrition in order to have a well-nourished and healthy population that can fulfil its aspirations to good health and economic well-being and effectively contribute to national economic development.**

2.2 More specifically, the Policy will seek to:

- Ensure that a sufficient quantity of nutritious food of appropriate quality is available to all people in Jamaica, through increased domestic production and a **sustainable** level of imports (**Food Availability**).
- Ensure that all individuals in Jamaica have access to adequate resources to acquire appropriate foods for a nutritious diet (**Food Access**).
- Ensure that all individuals in Jamaica reach a state of nutritional well-being through food choices and consumption that reflect Recommended Dietary Allowances (RDAs) (**Food Utilization**).
- Ensure that all people in Jamaica have access to adequate, safe and nutritious food at all times, are not at risk of losing access to it due to shocks, and consume/utilize foods that reflect physiological needs (**Stability of Food Supply**).

2.3 This will entail the formulation and implementation of the activities and programmes set out below in order to:

- Increase household food production and trading;
- Improve income generation and job creation opportunities;
- Improve nutrition and food safety;
- Increase safety nets and food emergency management systems;
- Improve analysis and information management system;
- Provide capacity building; and
- Facilitate stakeholder dialogue.

### Guiding principles for the National Policy for Food and Nutrition Security

#### Right to Food

Jamaica has ratified the following international conventions: International Covenant on Civil and Political Rights (ICCPR) 3/10/1975; International Covenant on Economic, Social and Cultural Rights (ICESCR) 3/10/1975; American Convention on Human Rights (ACHR)

[1] World Food Summit 2009

7/8/1978; Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) 19/10/1984; Convention on the Rights of the Child (CRC) 14/5/1991. These international legal instruments all relate to the right to adequate food and their provisions should be reflected in domestic policies and legislation. Moreover they are in line with Article 14 of the Constitution of Jamaica, which guarantees the "right to life". Recognizing that food security is a fundamental right of all citizens, regardless of their socio-economic status, and that poverty and social exclusion are among the main causes of food insecurity, this policy aspires to identify and focus on the welfare of the most vulnerable and to address pro-actively the underlying structural causes of hunger, while ensuring food availability and access for all citizens and residents of Jamaica. This means supporting strategies that tackle the root causes of hunger and malnutrition, and empowerment of marginalized groups so that all Jamaicans can participate fully in the formulation, implementation and monitoring of national programmes, as well as in community-based actions. It also means establishing and strengthening redress mechanisms and informing all Jamaicans on the procedures to follow to seek redress and claim their rights. These principles will be translated into actions to be taken as part of the action plan to implement this Policy.

**Protection of Forest and Fishery Resources**

Recognizing therefore that the forests, watersheds, wetlands and marine resources constitute a substantive resource for food and nutrition security to be safeguarded through the establishment of protected areas (for example national parks, forest reserves, marine parks etc.) and implementation of climate change adaptation measures.

**Agriculture and Food Production**

Recognizing the vital role of the food and agriculture (including forestry and fisheries) sector in the quest for national food and nutrition security and the need to strengthen its ability to attract youth and entrepreneurship as well as adequate investment in agricultural/forestry/fish production, post-harvest handling, storage, distribution and exchange as an integral part of the private sector of Jamaica and the Caribbean region and a major source of employment and incomes for a large segment of the population.

**Policy Coherence**

Coherent with the underlying tenets of the Jagdeo Initiative, the Liliendaal Declaration, Caribbean Cooperation on Health etc. and relevant national and regional policies, and focused on translating into action these political statements and policies related to and supportive of good health and nutrition, rural and food crop development and agro-food production, processing, marketing and distribution;

- Consistent with Vision 2030 and complementary and catalytic towards national policy on climate change and other relevant national/regional sector policies;
- Having inter-temporal coherence: short-term emergency measures are consistent with and non-distorting relative to medium and long-term sector policies.
- All national and sector policies must henceforth be coherent and consistent with the focus and priorities established in this Policy.

## Approach of the JFNSP

2.4 Food and Nutrition Security (FNS) is a cross-cutting issue, and the many linkages between the various national and regional development policies, strategies and programmes and FNS require that all relevant issues (trade, transport, education, health and nutrition, land and water resource allocation, distribution, conservation and use, agro-industrial and national security policy) be incorporated into the formulation and implementation of the latter. Indeed, the resolution of these issues calls for a multi-disciplinary and holistic approach and measures

that are a composite of policy, legislative, and institutional realignment actions, enhanced professional and technical capacity, improved processes, infrastructure and client-service orientation, and public-private sector partnership arrangements.

2.5 Historically, the different dimensions of food and nutrition security have been addressed separately, resulting in a mix of policies that have not had the desired results. The policy approach entrenches public/private civil society partnerships and focuses on household food security without overlooking national food security concerns.

2.6 Firstly, food security interventions will ensure that the target food insecure population gains access to productive resources. Secondly, where a segment of the target food insecure population is unable to gain access to productive resources, then food security interventions will ensure that segment gains access to income and job opportunities to enhance its power to purchase food. Thirdly, food security interventions will ensure that the target food insecure population is empowered to have nutritious and safe food. Fourthly, where another segment of the target food insecure population is still unable to access sufficient food because of disability, extreme conditions of destitution – food security interventions will ensure that the state provides relief measures that may be short- to medium-term and on a sustained basis, depending on the nature of given interventions. Fifthly, food security interventions will proceed from an analysis that is grounded on accurate information and the impact of which - in eradicating hunger, malnutrition and food insecurity – is constantly monitored and evaluated.

2.7 The overarching principles of this approach are that:

a) Food security programmes are a joint effort of all relevant ministries, public entities, private sector and civil society;
b) Their objectives must be comprehended by all stakeholders - government, the private sector and civil society;
c) The food-insecure should be empowered to be agents of their own development;
d) The necessary interventions should be targeted to achieve clear, simple and realistic goals and performance targets – with costs justified by delivering greater social benefits;
e) National food and nutrition security programmes, supporting legislation, norms and standards must support national priority programmes and action plans;
f) Implementation of FNS strategies is harmonized with the national governance structure;
g) The food and nutrition security policy and strategy should be aligned with and benefit from regional food security efforts; and
h) Notwithstanding the regional and national focus, the FNS Policy strategy maintains a household level focus.

## THE POLICY

### I. FOOD AVAILABILITY Objective - Promote the sustainable production of safe, affordable, nutritious, good quality Jamaican food commodities/products.

1. Government shall enact a Food Security Law to ensure domestic production of a minimum threshold of a selected basket of foods for which there is production capability and national comparative advantage, to meet domestic food, nutrition and health goals with timeliness and adequate quantities.

   National comparative advantage means comparative advantage within different producing areas in Jamaica and not between Jamaica and other regional or extra-regional trading partners. Also, "threshold means that for a given food item in the selected basket of foods, a proportion must come from domestic production while the difference can come from imports. The threshold level for each major food item will depend on domestic production capability, whereby the greater the domestic capability, the higher will be the threshold and vice versa. The threshold will not be fixed in perpetuity, but will be subject to change from time to time depending on development in technology which could improve domestic production capability. Likewise, the composition of the basket will not be fixed but will change from time to time depending on domestic production capability, consumer tastes and preferences, and guided by the epidemiological profile of the population.

   This law will be supported by appropriate production and trade policies to increase production and productivity of the domestic agriculture and agro-processing sectors and protect local industries from unfair external competition. Under this legislation, the Minister responsible for the agricultural sector shall be empowered to determine and adjust the specific output levels and types of crops and livestock products from time to time, guided by an assessment of nutritional needs, domestic/local supply and existing trade obligations, in line with changes in the national food production and agro processing capability and national/regional trade policy. Imports of these products or close substitutes shall be subject to approval by the Agriculture Ministry. To the extent feasible, at least 75% of all food purchases made by Government directly or by public entities shall be from domestic/regional food production.

2. Government shall promote increased availability of nationally produced nutritious food at competitive market prices through the utilization of an approach to production planning in which:

   i) Priority commodities will be selected on the basis of the promotion of a nutritionally balanced diet comprised of local food products.
   ii) Criteria for selection of the commodities/products will be guided by the national and regional Dietary Guidelines and the national epidemiological profile and based on: market demand, competitiveness, nutrient content, domestic natural resource endowment and their strategic importance.
   iii) Small producers (farmers, fisher folk, cottage food processors etc., **with a focus on women and youth**) shall be critical in the production of the identified food commodities/products.
   iv) Government will encourage continuous communication between the stakeholders to ensure that the varieties of products being demanded by the processors are consistently and adequately produced by the farmers.

3. While Genetically Modified Organisms (GMO) and Living Modified Organisms (LMO) may, in many cases be made to be pest resistant, flower and mature faster and

provide superior crop yields etc. research elsewhere appears to have shown that they are not totally safe and the nutrition content of such foods is significantly lower than that of non-modified foods. It is therefore imperative to include such work in the National Food and Nutrition Research Agenda and to develop and implement, in consultation with relevant research institutions and national and regional tertiary institutions, a research programme on these organisms to provide evidence-based support for a national policy in respect of GMO's and LMO's.

4. Government shall encourage and facilitate the production and productivity of the identified food and livestock commodities/products by creating and fostering an enabling environment for:

   i) Generation and transfer of appropriate technology through market driven research programmes at existing institutions (strengthened where appropriate) and cooperation with international development partners. In addition, Government shall facilitate the adoption of new and existing technologies in food crop cultivation and livestock management through the building of technical capabilities and capacities of producers through training and technology transfer in best practices.
   ii) Documentation and dissemination of best practices for identified food crops/livestock and other food commodities, including sustainable production practices.
   iii) Development of mechanisms for bulk purchasing and distribution of agricultural inputs with safeguards to ensure compliance with Chapter 8 of the Revised Treaty of Chaguaramas – Competition Policy and Consumer Protection, so that companies involved in the importation of inputs do not engage in anti-competitive practices and the abuse of dominant position.
   iv) Ensuring the production, conservation, importation, evaluation and distribution of high quality planting and genetic material through the development of a seed and genetic material plan, seed bank and implementation mechanism.
   v) Promotion of on-farm mechanization through greater use and improved access to modern and appropriate equipment/tools.
   vi) Promotion and dissemination of Good Agricultural Practices to producers to include, inter alia:

      (a) Promotion of appropriate fertilizer use through soil testing and collaboration with fertilizer manufacturers to provide the proper grades for farmers.
      (b) Promotion of soil conservation and soil fertility to facilitate land productivity on a sustainable basis.
      (c) Encouragement of more efficient and sustainable use of agrochemicals and pharmaceuticals in production systems.
      (d) Promote the use of Integrated Pest Management in production systems.
      (e) Promoting traceability in production systems.
      (f) Efficient use of water in production systems.
      (g) Encourage environmentally sound waste disposal and recycling systems.
      (h) Support and encourage sustainable fisheries practices.

5. In line with the National Food Security legislation, Government shall strongly promote the production of foods identified as critical to meeting the food, nutrition and health goals and for which there is a national production capability. Government shall therefore improve the incentive framework, provide trade policy support and implement a Policy Framework and Programme for selected commodities, which would:

(a) Identify strategic commodities that can be produced competitively and in required quantities.
(b) Facilitate the use of the national aquatic resources and promote aquaculture.
(c) Encourage the inclusion of locally produced raw material in feed production.
(d) Utilize a value chain approach to diagnose and address constraints in the development of the identified industries.
(e) Develop industry plans with all actors along the value chain.
(f) Facilitate stakeholder dialogue with all actors along the value chain to ensure consensus building on strategic actions.
(g) Formulate a comprehensive set of industry support measures to address identified challenges.
(h) Collaborate with producers in developing appropriate governance models for each targeted industry.
(i) Ensure an enabling environment for agro-industry development.

6. Improve the National Food Distribution System through:

a. Facilitation of greater linkages between buyers and sellers and reduction of information asymmetries through the implementation of a national market intelligence system.
b. Improvement of farm to market channels, e.g. access roads and post-harvest grading and handling (Support the rehabilitation and maintenance of the farm/feeder road network).
c. Development of wholesale and retail market facilities and packaging centres as public goods to facilitate efficient markets, which will improve availability and lower market prices.
d. Improvement of food safety systems and harmonisation of food standards in line with CARICOM.
e. Development of policies (outlined in the previous section) to ensure that the food distribution services industry (which includes fresh markets, supermarkets, food services and institutions) operates in a cost efficient manner and delivers the targeted basket of foods at optimal prices.
f. Establishment of a national network of reserve food stocks in partnership with the private sector as a Risk Mitigation Response.
g. Promotion of greater market integration through the construction and rehabilitation of post-harvest and distribution facilities in central locations. In this regard, Government shall utilize public and private sector partnerships for the establishment and operation of these post-harvest facilities with private sector and farmers' organizations.
h. Transportation - fostering greater use of refrigerated trucks to implement food safety standards. (Envisage granting of duty concession on refrigerated trucks). Appropriate packaging and transportation material, maintenance of cold chains for crops and livestock for quality assurance and food safety.
i. Formation of and support to producer organizations to assist in the collective marketing of agricultural produce.
j. Strengthening communications network among agencies, organizations and associations involved in agricultural marketing by integrating policies, practices and programmes.

k. Collaboration of key agencies and departments to establish and/or upgrade wholesale and retail market facilities for handling and selling produce and livestock to facilitate efficient markets and food safety/hazard control.
l. Strengthening existing food safety and traceability systems for food from farm to table through the implementation of the Food Safety Policy and supporting legislation.
m. Ensuring that food imports conform to all public health and commerce regulations and standards of food safety, including storage and transportation, as well as facilitate island-wide access to food;
n. Developing an information system to assess and monitor food access throughout the island, and specifically in the interior of parishes;
o. Developing rapid response mechanisms to assess and address general food accessibility at times of ad hoc shocks, such as natural disasters;
p. Through collaboration with health, national security, and industry and commerce authorities, ensuring that appropriate licenses and other standards are enforced throughout the food distribution system.
q. Collaborate with Local Authorities and commercial interests in each parish to ensure a dynamic and competitive food distribution industry.

6. Government shall create an enabling environment to facilitate increased production and productivity in the agricultural/food production sector by :

i) Creating an effective and modern institutional framework to facilitate the growth and development of the sector. To this end, Government shall restructure the Ministry of Agriculture & Fisheries (MOAF) and its Agencies to provide more effective support to producers.
ii) Ensuring that national and regional trade policies and regulations are consistent with national agricultural and FNS policies.
iii) Strengthening the institutional and technical capacities for research and development (placing emphasis on the integration of existing and new research institutions to realize greater synergies and efficiencies), so that it is demand driven and responsive to the needs of producers through the development, adaptation and adoption of appropriate technologies and methods to improve agricultural productivity and cooperation with data collection and research institutions such as the UWI.
iv) Fostering greater synergies between extension and research and development to ensure the effective dissemination of new and existing technologies to stakeholders.
v) Expanding and strengthening the institutional and technical capacity of extension services to provide better support and more rapid and extensive transfer of new and innovative technologies to primary producers and other actors along the value chain as well as for linking producers to markets.
vi) Increasing availability of supply and demand related information to allow informed decision making by private sector and policy makers;
vii) Strengthening the Agriculture Ministry's capacity to provide market intelligence and information to producers and end users, thereby reducing information asymmetries and creating greater marketing opportunities along the value chain.
viii) Encouraging greater use of market intelligence information among value chain actors.
ix) Developing and facilitating the implementation of grades and standards for fresh foods.

x) Providing business facilitation and critical support services to expand and attract new investments to the sector through investment promotion actions. Government shall also develop and implement greater investment facilitation mechanisms so as to attract new investments in the sector, especially by persons below age 40 and women.

xi) Continuing to provide institutional and technical assistance to public (and private) research institutions in support of product development for the agro processing sector. In this connection, Government will also facilitate the accessibility and affordability of credit to agro processors to enable them to invest in new agro-business ventures and technologies.

xii) Encouraging the establishment of increased infrastructure, know-how and management capability for the handling, storage and preservation of food commodities.

xiii) Measures to expand the existing pool of loanable funds and encourage the implementation of alternative models for on-lending to the sector.

xiv) Facilitating the delivery of credit to the agri-food sector by financial institutions and micro-credit enterprises by the strengthening of existing institutions.

xv) Reducing the incidence of praedial larceny through the implementation of a holistic approach involving improved traceability systems, legislation, monitoring, surveillance, enforcement and public awareness.

xvi) Strengthening the overall agricultural education framework and increase the effectiveness and responsiveness of the relevant institutions in providing leadership in education, research, training and policy formulation to support the sustainability of the agricultural sector.

xvii) Effective management of trade policy to ensure that it is conducive to agricultural development by providing local producers with a level playing field on which to compete with their foreign counterparts.

xviii) Creating a single, viable and sustainable approach to the development of agricultural lands through its Land Divestment Programme and the promulgation of an Agricultural Land Utilization Policy in order to improve access to and availability of land to facilitate the expansion of agricultural production.

xix) Establishing and enforcing provisions and institutional mechanisms under the relevant existing policies and legislation to limit the conversion of prime agricultural lands to residential and other uses.

xx) Establishing and enforcing provisions in the proposed Food Security legislation to ensure that a specific proportion of the land in all housing development schemes be set aside for environmental, recreational and food production/urban agriculture/backyard gardening purposes.

xxi) In collaboration with the private sector, implementing sub-sector agricultural production strategies for inter alia, roots, tubers, fruits, vegetables, rice, small ruminants, herbs, spices, and establish a private-public coordination mechanism for the management of strategy implementation;

xxii) Encouraging the adoption and promotion of new/improved technologies in livestock breeding, and production to ensure the preservation of existing and where necessary, the improvement of genetic stock.

xxiii) Providing access to low-cost funding and risk management mechanisms to the targeted farming population and processors.

7) Government shall seek to attract and retain the youth in agriculture by taking measures to:

a) Reduce the social stigma attached to farming and agricultural production and its perception among youth as a low income activity;
b) Improve opportunities for youth to access startup and working capital for agricultural activities whether through grants or low interest loans.
c) Disseminate information (on farming and food production, health and nutrition) effectively to the youth cohort through appropriate media, including (but not limited to) RADA, 4H, Youth Information Centres, Parish Youth Councils and Youth Clubs.

8. Government shall increase the production of processed food products and improve overall value added operations to achieve industry competitive advantage.

9. Government shall seek to increase the cost efficiency of value added production for locally produced and imported semi-processed foods and livestock products through:

i) Facilitating the creation of product clusters and value chains to satisfy increasing sophistication of consumer demand.
ii) Organization and capacity building of rural producers to facilitate collaborative production planning, supply to intermediaries and marketing of foods to meet consumer demand.
iii) Construction and operation of critical infrastructure such as post-harvest facilities, abattoirs, cold storage, packing houses through strategic public/private sector partnerships.
iv) Food safety- traceability, residue testing, standards and grades.
v) Development and facilitation of the implementation of quality standards for food processing, storage and distribution along the value chain.
vi) Development of Agro Parks to facilitate synergies within the production and processing, packaging and distribution of selected foods in one place in order to attract investment to the sector and strengthen the linkages between producers and end users of fresh and processed foods.
vii) Increase raw material supply from producers by organising and training through appropriate services.
viii) Provide assistance in strengthening the linkages among the actors along the value chain (processors, importers, hotels, restaurants, fast food, etc.) through dialogue, coordination and technical support and advice from the Agriculture Ministry and its Agencies.
ix) Increased efficiency of value addition in food processing based on regulated (using necessary safeguards) levels of imported raw materials, which impacts the cost of production and the price of food to consumers.

10. Under existing WTO agreements on food safety, countries will in the near future bar entrance to products from those countries that do not put in place Quality Management Systems (for example, Hazard Analysis and Critical Control Points-HACCP, ISO 9001:2008, ISO 17025, ISO 14001) throughout the food production and processing sector (FDA Food Safety Modernization Act (FSMA) and similar legislation in the European Union). Government shall put in place measures to ensure the certification of farmers and agro processors. To this end, it shall seek technical assistance from its trading partners for HACCP certification and also endeavour as far as possible to assist entities through institutional support and financing to attain ISO certification. Government shall support systems that improve equipment, quality, and food safety management that are more affordable to increase access to small companies.

11. Government shall create an enabling environment for the production and marketing of local foods through measures to:

i) Identify and progressively cover the infrastructure investment gap required to meet the food security needs of the most vulnerable groups.
ii) Improve market access for small producers through improved market information and buyer/seller coordination and by promoting the value chain approach.
iii) Develop national/regional training curricula with a strong practical element to certify relevant workers at various levels.
iv) Provide, in collaboration with stakeholders, a more conducive market environment for informal traders to facilitate easier access to consumers and also to provide greater opportunity for acceptable produce display.
v) Facilitate local produce appeal, in respect of attractive packaging, convenience and promotion while ensuring that there is adequate food inventory by providing increased assistance for the development of appropriate human resources through training.

12. Government shall formulate and implement land and water resource management plans and strategies.

i) Promote production systems that are appropriate to production zones and size of enterprises.
ii) Ensure more efficient use of existing irrigated lands and the expansion of the area of agricultural land under irrigation and promotion of greater use of on-farm water harvesting and management systems.

11. Promote sustainable exploitation of Jamaica's fisheries resources and greater investment in aquaculture to increase the availability of fish and fish products.

**II. FOOD STABILITY Objective – To improve the food and nutrition security resilience of the national community to natural and socio-economic shocks and climate change.**

1. Government recognizes that there are recurring threats to food security, and that their intensity is exacerbated by climate change, the effects of which can be mitigated, and for which adaptation is essential to build resilience to this evolving threat. In this regard, the policy will emphasize the implementation of **adaptation and resilience-building strategies** as a means of enhancing the stability of food security. To this end, therefore, Government shall:

a. Integrate climate management considerations into the National Agricultural Disaster Risk Management Programme as well as into programmes to develop farm management and build industry and farming community capacities to increase resilience through: (i) developing dynamic farm/agricultural management tools that integrate climate change risks into existing and emerging farm management systems; (ii) developing, where possible, environmental management systems for the agricultural sector; (iii) identifying and building on successful indigenous knowledge and strategies for adaptation.
b. Pursue climate resilient development which focuses on **adaptation** as well as mitigation strategies for the food and agriculture sector. In respect of **mitigation**, priority focus shall be placed on coastal management (which affects the fishing industry) as well as sustainable forest management for reducing emissions while improving livelihoods and ensuring their stability over time. This will also support a reduction in deforestation, improved watershed management and protection of carbon reservoirs.
c. Encourage capacity enhancement within relevant ministries and public entities, research institutions and the hydro-meteorological departments and foster links with UWI and the Caribbean Community Climate Change Centre (CCCCC) so

that they can provide accurate and timely climate information to the farming community. In this area, within the framework of the ISFNS, Government of Jamaica and CARICOM will seek technical and financial assistance for institution building and capacity development at regional and national levels from bilateral and multilateral partners and the International Finance Institutions.

d. Promote the creation of an Information System for Food and Nutrition Security (ISFNS) for food security development as well as food crisis prevention and risk management and the construction of adequate risk profiles for the main crops[1].
e. Facilitate reduction in tariffs on 'green' and cleaner technologies, and related material and equipment or capital goods that could assist in the reduction of Greenhouse Gas emissions by the agricultural and agro-processing industries. For example, liberalization of environmental goods, solar panels, etc.; since with the drive to increase agricultural production and agro-processing, there is the threat that carbon emission will also increase. Special attention will also be paid to technologies for the reduction of carbon emissions and the use of crops/livestock/food waste as an input to biogas production.
f. Promote the inclusion of adaptation and mitigation strategies in the curricula of all training institutions and extension training mechanisms for farmers and other producers e.g. farmer field schools.

2. In order to reduce the impact of climate change on food production, incomes and livelihoods, Government shall enhance the stability of food supply by:

a. Adopting an integrated climate change management approach
b. Developing and adopting sustainable land and water management practices to mitigate and adapt to climate change
c. Developing sustainable land, water, forest and fishery management systems inter alia to address shortages and excessive rainfall and protect the natural resource base in the face of climate change.
d. Integrate climate adaptation into agricultural adjustment programmes through a risk management approach.
e. Retraining and retooling of farmers in appropriate production practices (e.g. conservation farming, zero tillage etc.) to adapt to the changing environment Zoning of agricultural production as necessary to reduce vulnerability.
f. Development of a national cropping plan, taking into consideration prevailing weather hazards, in order to reduce overall production risks.
g. Integration of the pest, weed and disease implications of climate change and weather risks into strategies that minimize their impact on the agricultural and natural resource systems.
h. Support and fund increased water use efficiency across irrigated agriculture.
i. Investment in new or existing water management and control infrastructure.
j. Promote cost-effective alternatives to fossil fuels that improve energy efficiency in agriculture.

[1]This will entail the harmonization and coordination of the collection and collation of information ***inter alia*** on : a) markets – sources and volume of commodity supply to the market, number of traders and prices of commodities, agricultural labour and livestock and terms of trade including trends; b) production-type and level; c) income sources and reliability; d) government policies affecting trade and distribution of food products; e) Baseline information on food availability, access, utilization; f) Population numbers and distribution; g) Infrastructure – roads, financial institutions, etc. h) Household coping mechanisms; i) Rainfall information (volume, water deficit, flooding, drought and climate outlook; j) Crop and livestock diseases; k) Monthly state of crops in the fields; l) Security conditions-extent of praedial larceny; m) Health and nutrition situation; n) areas affected by food crises and/or chronically food-insecure; o) the number of food insecure persons; p) level of food insecurity (long term or short term); q) major causes of food insecurity (structural and cyclical) etc.

k. Fostering Institutional/Capacity Building
l. Support the improvement of national monitoring and forecasting systems for weather and natural phenomena and endorse the development of a Regional monitoring and forecasting system for the same.
m. Facilitate continuous training of stakeholders in preparedness and mitigation strategies.
n. Strengthen capacity, including systems of governance at the local/community level to empower communities to adapt to the changing climate.
o. Public education campaign using a multiplicity of media forms to raise awareness of CC and its implications for livelihoods to effect behavioural change.

3. Enhancing Resilience through Risk Reduction strategies – Monitoring, Adaptation and Mitigation
4. Implement a Weather Risk Management Strategy.
5. Improve the systems for the collection of agro-meteorological data (for key climate variables such as rainfall, river flow/levels, temperature, sea level rise and the incidence of extreme weather events (e.g.. hurricane, flood, drought) at the national and parish levels.
6. Improve existing disaster preparedness and mitigation systems/plans especially in food producing areas.
7. Develop a preparedness strategy and an early warning system (short-medium-long term) dealing with climate change parameters.
8. Develop a communication plan to disseminate accurate and timely climate and weather information to the farming/fishing community.
9. Develop comprehensive agricultural insurance and risk transfer schemes.
10. Subscription to a national and regional disaster fund.
11. Maintain a functional national germplasm bank and subscription to a regional germplasm bank.
12. Utilization of vulnerability analysis and mapping to provide timely nutrition and socio-economic information on vulnerable population groups to decision-makers to enable the design of more effective emergency and relief responses.
13. Harmonize and coordinate the collection and collation of information inter alia on markets, production-type and level, income sources and reliability, policies affecting trade and distribution of food products, baseline information on food availability, access, utilization, population numbers and distribution, infrastructure, rainfall information, crop and livestock diseases, monthly state of crops in the fields, security conditions-extent of praedial larceny, etc.
14. Construct resilience indicators and develop comprehensive risk profiles for the main economic and food crops.
18. In collaboration with ODPEM, outline steps to be taken by Government, private sector (agro processors, importers, and distributive trade), farmers and their respective organizations and donors in the event of a national and/or global food shortage and national emergencies caused by natural hazards:

    a. Emphasize collaborative efforts with all suppliers of food to establish a national network emergency food stocks for a minimum of three months as a risk mitigation response measure in the event of a food crisis.
    b. Identify and monitor national and regional supplies of key staple food commodities/products for storage at an agreed minimum level and managed by an institution with a specific mandate, which would be available for

distribution in times of crisis. This aspect of the plan will form part of CARICOM's effort to establish a regional network of reserve food stocks.

c. Identify specific trade policy recourse measures for ensuring national food supply availability for key foods which are deemed critical to the food security and nutrition of the population
d. Propose emergency food plans for vulnerable groups and households, placing emphasis on nutrition and cost, storage and preservation technologies.
e. Prepare contingency plans for recovery and rehabilitation in areas prone to natural disasters.

**III. FOOD ACCESS Objective – To ensure access of households and individuals to sufficient, safe, nutritious and affordable food at all times.**

2.8 Access to food is a basic survival need for all citizens. The Food and Nutrition Security Policy views this aspect as a critical pillar for establishing food security. While being an important imperative at all times, access to food becomes of major significance in times of crisis or disaster, when opportunities for purchase, retrieval or other sourcing of food become threatened. A major plank of food access is also the recognition of persistent vulnerabilities and circumstances, for example poverty and indigence, that impact on the abilities of persons with little or no income to sustainably access appropriate food for themselves and their families. The Food and Nutrition Security Policy will therefore recognize these nuances of food access, and endeavour to create the environment that supports responsive food systems, as well as adequate social protection for vulnerable population groups.

2.9 Government shall therefore ensure that the population has economic and physical access to food at all times by:

**1. Improving access to Livelihood Assets through:**

i. Identification and mapping of vulnerable groups[1] (taking a gender-sensitive approach) that are prone to chronic or transitory food insecurity and establishment of a national database of this information, recognizing that each group may require a different intervention, to ensure their access to livelihoods based on self-sufficiency and sustainable income earning activities. This will be effected through collaboration among its agencies, and with external partners and extensive and continued consultation with vulnerable groups, to provide timely socio-economic and nutrition information on vulnerable population groups; this will further enable the design of more effective and targeted interventions.
ii. Government shall also promote inter-ministerial collaboration to design specific programmes to improve the livelihoods and food security of these groups.
iii. Improving rural livelihoods, especially those of small producers, agricultural labourers and marginalized urban dwellers, through the promotion of entrepreneurship, home food production (small ruminant rearing and backyard/container/protected environment gardening) and programmes to pay for environmental services. Micro-credit and carbon credit schemes to encourage diversification of economic activity in rural and peri-urban areas will be promoted. In addition, action will be taken to strengthen the linkages between agriculture and food crop post-harvest

[1] Households that cannot meet basic food needs- People living with HIV/AIDs, children, the elderly and the physically and mentally challenged.

handling, food processing and preparation as well as with other alternative livelihood activities, employment opportunities and incentives for farmers, to broaden the household income base.

iv. Widening and deepening vocational training programmes for artisans, farmers, fishermen and vulnerable groups (especially women) to improve their skills and employability.

v. Revision of poverty reduction programmes to encompass productive safety net mechanisms/interventions and complementary measures to preclude a dependency syndrome and promote sustainable livelihoods and food and nutrition security safety nets

**2. In keeping with the Vision 2030 Jamaica - National Development Plan, Government shall improve mechanisms for measuring and monitoring poverty through:**

i. Improved measurement and identification methodologies to improve the design and targeting of programmes and interventions for the poor;

ii. Enhanced data collection methodologies;

iii. Evidence-based research as a basis for poverty measurement and monitoring;

iv. Strengthening of technical capacity of relevant agencies to monitor vulnerability factors with a focus on FNS.

**3. In keeping with the Vision 2030 Jamaica - National Development Plan, Government shall ensure that economic opportunities for sustainable livelihoods are created and/or expanded by:**

i. Promoting increased access of vulnerable groups to affordable and innovative means of credit through new and existing microfinance credit schemes and relevant business support services to finance new and existing business ventures. In particular, Government shall create and strengthen economic opportunities for persons with disabilities.

ii. Development of appropriate mechanisms and programmes for transition and absorption of displaced workers, especially in rural areas.

iii. Promotion of human capital development among poor and vulnerable groups through the widening of the scope and reach of vocational training programmes, adult learning certification programmes, and continuous learning programmes. Government shall also seek to expand apprenticeship and other welfare-to-work programmes in collaboration with the private sector to equip these groups with the necessary skills in preparation for entry in the workforce. Through the appropriate agencies, the extension service will continue to provide training and marketing assistance to the farming community and empower urban households to produce their own food through backyard gardening. In addition, the extension service, through its social services programme will continue to train and empower rural women to undertake income generating activities in order to enhance their quality of life and that of their families.

iv. Strengthening of community support systems through capacity building of NGOs, CBOs and producer organizations to provide greater support to their members and communities for livelihood creation and enhancement.

4. **Improving and ensuring equitable access to basic public goods and services (such as water, electricity, sanitation, education, roads, healthcare, and other amenities) and community infrastructure and through existing programmes and institutions to improve human welfare and facilitate investment.**
5. **Interventions to enable poor individuals and households to formalize asset ownership; identify, build on, or acquire economic assets.**
6. **Continued review and enforcement of the minimum wage and promotion of policies that support decent work for the population.**
7. **Government shall continue to ensure access of the population to minimum basic food items providing recommended dietary allowance, through:**
    i. Appropriate fiscal measures
    ii. Use of moral suasion in collaboration with private sector business interests;
    iii. Statutory regulations and appropriate market interventions as necessary;
    iv. Periodically reviewing the minimum wage food basket and tracking and monitoring food prices;
    v. Promotion and strengthening of school gardens and youth in agriculture programmes with technical support and backstopping from existing agricultural institutions at secondary and tertiary level;
    vi. Strengthening national laboratory capacity to monitor/verify labelling requirements and nutrients of concern;
    vii. Ensuring access to healthy alternatives low in sodium, sugar and fat (in particular trans and saturated) content;
    viii. Facilitating comprehensive and accurate market information dissemination to the population.
8. **Government shall create a public policy framework that is responsive to the needs of the population with particular emphasis on the needs of the vulnerable poor through:**
    i. Mainstreaming of poverty reduction measures, including gender, into all public policies.
    ii. Promoting macroeconomic policies that protect the real incomes of the poor and vulnerable.
    iii. Developing a structured national policy and plan of action for poverty reduction and revision of the national poverty eradication programmes, ensuring that participatory approaches to policy and decision-making for poverty reduction are followed.
9. **Government shall seek to improve the existing social welfare system which provides coverage for vulnerable groups by:**
    i. Strengthening the systems for identification and selection of beneficiaries of public assistance programmes which provide cash transfers to purchase food. Promoting collaboration among its agencies, working closely with private sector, NGOs, and CBOs, to assist in identifying vulnerable and food insecure persons for social welfare interventions.
    ii. Including consideration of food security status in the identification of social assistance beneficiaries.
    iii. Increasing general awareness of the existence and provisions of social assistance programmes.

iv. Identifying the unique needs of various vulnerable groups and expanding the range of programmes to meet their practical and strategic needs.

v. Establishing reliable mechanisms for sustained financing of the requisite range of welfare support programmes. In this regard, in addition to traditional means of funding, Government shall also seek to promote and encourage multi sector partnerships between state and non-state sectors to address the needs of the poor and vulnerable.

vi. Encouraging and strengthening the capacity of families to provide for their vulnerable members; fostering general awareness about the needs of poor and vulnerable groups so as to engender greater participation by civil society in helping to meet their food and other needs.

vii. Improving and expanding the national school feeding programme in order to provide adequate and nutritious food for children in schools.

viii. Providing appropriate access to food for all wards of the state in institutional care.

ix. Setting nutrition standards and guidelines for schools, training and other community based institutions such as orphanages, hospitals, nursing homes, prisons and others.

**10. Government shall ensure that persons who become vulnerable and food insecure during emergencies caused by natural hazards/economic shocks and food shortages, have adequate access to safe, nutritious and culturally acceptable food through:**

i. Provisions in the National Food Emergency Plan outlining the national strategy (zonal response) for collaboration with the private sector, NGOs, CBOs, churches, donor agencies and disaster relief agencies for temporary assistance to meet the basic food needs of vulnerable and food insecure persons.

ii. Integration of food security provisions into emergency assistance strategies for extremely vulnerable groups under existing social welfare programmes and social safety nets.

iii. Making provisions/accommodations for the special dietary needs of certain groups, for example, the chronically ill, infants, the elderly and persons with disabilities.

**iv.** Use of fiscal measures and trade policy to ensure the accessibility of a low cost basket of nutritious food to the vulnerable population.

## IV. FOOD UTILIZATION/CONSUMPTION/NUTRITIONAL ADEQUACY Objective – To promote nutritionally adequate, safe, affordable dietary intakes and other positive lifestyle behaviours throughout the life course

1. In recognition of the challenges facing the Jamaican population with respect to increasing levels of obesity, non-communicable chronic diseases (NCDs), persistent iron deficiency anaemia and pockets of under nutrition, Government shall:

**a. Promote, protect and support appropriate infant and young child feeding practices:**

i. Finalize, implement, monitor and evaluate a comprehensive national policy and national plan of action on infant and young child feeding.

ii. Identify and allocate adequate resources – human, financial and organizational – to ensure the plan's timely and successful execution.

iii. Constitute a multi-sector body with the requisite expertise to perform an advisory role on all matters concerning infant and young child feeding.
iv. Ensure that every facility providing maternity services implements relevant international best practices and follows the Ten Steps to Successful Breastfeeding set out in the joint WHO/UNICEF statement "Protecting, promoting and supporting breastfeeding: the special role of maternity services".
v. Take action to give effect to the aim and principles of all Articles of the International Code of Marketing of Breast-Milk Substitutes and subsequent relevant World Health Assembly resolutions in their entirety.
vi. Enact/Review legislation to protect the feeding rights of working women and establish the means for its implementation/enforcement.
vii. Strengthen/implement mechanisms for making foods available to vulnerable groups such as Prevention of Mother to Child Transmission Programme, Supplementary Feeding Programmes.
viii. Develop and implement a framework and/or mechanisms for promoting the responsible marketing of foods and non-alcoholic beverages to children, in order to reduce the availability to them of foods high in saturated fats, trans-fatty acids, free sugars and salt.

**b. Promote consumption practices consistent with national population dietary goals in line with international standards through:**

i. Establishing and implementing food-based dietary guidelines and healthier composition of food by:
   - reducing sodium/salt levels
   - reducing industrially produced trans-fatty acids
   - decreasing saturated fats
   - limiting free sugars
ii. Establishing the technical capability within the relevant ministries for operating an updated system for monitoring the cost of a nutritionally balanced food basket;
iii. Implementing a National Social Marketing Campaign to promote local foods based on their nutritional value;
iv. Implementation of programmes for incentives and dis-incentives where appropriate for nutritious and less-nutritious foods;
v. Advocating changes in the CARICOM Common External Tariff with a view to lowering tariffs on foods that will reduce the risk of chronic diseases and/or more importantly, provision of incentives for production of low sodium, low sugar and low fat- containing foods.
vi. Providing accurate and balanced information for consumers to enable them to make well-informed, healthy choices by implementing social marketing programmes (schools, workplace, communities)

**c. Strengthen national nutrition surveillance systems in accordance with WHO standards, so as to monitor the nutritional status of the population and identify those at risk of nutrition-related disorders:**

i. Implement a strategy of universal assessment for all children (0 to 18 years old) to identify those at risk of malnutrition (deficiency diseases, overweight, obesity and non-communicable diseases).

ii. Surveillance of dietary intake, physical activity, related disease burden to include food borne illnesses and behavioural risk factors for under/over-nutrition.

**d. Promote a supportive environment that will increase physical activity in line with national and WHO recommendations**

i. Develop and implement national guidelines on physical activity for health.
ii. Implement school-based programmes in line with WHOs health-promoting schools initiative.
iii. Ensure that physical environments support safe, active commuting.
iv. Create space for recreational activity, by the following:
- Ensuring that walking, cycling and other forms of physical activity are accessible to and safe for all.
- Introducing transport policies that promote active and safe methods of travelling to and from schools and workplaces, such as walking or cycling.
- Improving sports, recreation and leisure facilities.
- Increasing the number of safe spaces available for active play.

**e. Provide Nutrition Standards and guidelines to strengthen programme development and implementation in all sectors by:**

i. Incorporation of nutrition principles into competency development and core curricula in schools and in professional and industry training.
ii. Increasing the proficiency of persons giving nutrition information to the public.
iii. Strengthening training programmes for nutrition and dietetic professionals to meet the needs of the Jamaican population by establishing on a sustainable basis an internship programme as an integral element of the curriculum.
iv. Promoting nutrition training among food producers to assist the development and promotion of healthy, desirable food products and the development of standardized portions and labelling.

**f. Implement policies and programmes to detect, prevent and manage micronutrient deficiency:**

i. Promote healthy practices among women of child bearing age and in the prenatal period placing emphasis on micronutrient rich foods such as those containing iron, folate, zinc and other micronutrients of interest.
ii. Monitor and strengthen the distribution system for iron/folate supplements in antenatal clinics.
iii. Implement and/or strengthen existing food and nutrition supplementary programmes for vulnerable groups such as women of childbearing age, pregnant and lactating women, the elderly, children and adolescent girls.
iv. Conduct systematic reviews of available evidence on effective approaches to food fortification of staple products.
v. Pilot fortification of commonly used staple foods based on available evidence and best practices.
vi. Review and strengthen food fortification programmes and legislation.

2. Institutions and schools provide an entry point for interventions to prevent and control some of the identified nutrition conditions and influence food tastes and preferences. In this regard, the policy shall seek to address the following areas:

**a. Early Childhood Institutions, Primary and Secondary schools through**

i. Preparation and implementation of a national comprehensive school nutrition policy.
ii. Support for the development of curricula at different levels of the education system - teacher training, early childhood institutions, primary and secondary schools - that include nutrition and health education for making lifestyle choices.
iii. Development of national guidelines for the preparation and sale to children of school meals that promote health and wellness.
iv. Adopting a policy that the local content of the meals provided under national school feeding programmes should be increased in keeping with the import replacement strategy.
v. Reviewing the school gardening programmes to identify strategic areas for intervention, including the provision of technical support, promotional and other relevant materials.
vi. Developing national social marketing campaigns to encourage nutritious food choices in schools and communities.
vii. Recruitment of qualified nutrition officers to monitor implementation of school nutrition policy.

**b. Health Care Facilities through:**

i. Development and implementation of National Standards of Care for nutritional management of chronic conditions.
ii. Provision of adequate resources to strengthen primary care renewal and hospital dietetics departments (human, financial, physical) to facilitate the highest quality of care, reduce length of stay and decrease health care costs.
iii. Adopting a policy that the meals provided in hospitals should include local food content in keeping with the import replacement strategy.
iv. Strengthening of the supplementary feeding programmes in primary health care.
v. Provision of adequate resources for nutrition education in the training of health personnel and other key stakeholders, such as agricultural extension officers.

**c. Residential Facilities through**

i. Development of nutritional standards of care for the elderly, mentally challenged and persons living in institutions e.g. child care institutions and prisons.
ii. Adopting a policy that the meals provided in such facilities should include local food content in keeping with the import replacement strategy.

3. Strengthen existing legislation and regulations and enact new laws, where necessary, to foster the implementation/enforcement of food safety standards in keeping with international standards.

a. Coordinate national guidelines for maintaining food safety and traceability programmes along the food chain.

b. Review the Food and Drug Act to incorporate standards for food and nutrition labelling.
c. Develop consumer protection legislation to include accurate labelling of food for nutrition content and redress measures.
d. Ensure prevention and management of infectious diseases through standardized food safety programmes including inspection of restaurants and food shops and certification of food handlers.

4. Promote, through the mass media, good nutrition practices, wise purchasing, storage and utilization of food products:

i. Implement a promotional campaign that emphasizes the health and nutritional benefits of selected national/regional foods.

ii. Creative approaches will be used to promote the consumption of nutritious national/regional foods, for example, using Outstanding National and Caribbean Personalities.

5. Increase awareness among policy makers and planners of the extent and severity of nutritional problems and of their causes, of the economic benefit of interventions and of how activities under their control can affect the nutritional status of different socio-economic groups.

6. Encourage and support the inclusion of the community in the identification of their own nutritional problems and the implementation, monitoring and evaluation of programmes.

7. Facilitate linkages with civil society, private sector and consumer advocacy groups to increase their participation in the process of food and nutrition security planning and implementation.

8. Government shall make adequate investments in potable water, sanitation and waste disposal especially for vulnerable populations:

a. Strengthen regular water and sanitation monitoring of communities and institutions;
b. Provide facilities to communities for waste disposal.

9. Collaborate with relevant organizations to coordinate a nutrition response in emergency situations.

a. Nutrition in shelters (before, during and after disaster);
b. Appropriate food items, storage, transportation, preparation, distribution and rationing.

10. Develop and implement, in consultation with relevant national and regional tertiary institutions, a National Research Agenda for Nutrition, to provide evidence-based support for policies and programmes, in support of food and nutrition security, to mitigate the impact of nutrition-related disorders:

a. New and existing national health surveys including nutrition and physical activity components;
b. Surveillance studies inter alia on the trans fat content and other nutrients of interest in the national food supply as well as the concentration of contaminants in food products and the extent of iron deficiency anaemia in the country;
c. Research on more effective approaches to food fortification of staple products

d. Five-yearly food consumption and special surveys, as necessary;
e. Research on the ecological suitability and nutrient content of GMOs and LMOs; and
f. Studies to investigate the levels of genetically modified organisms (GMOs) and living modified organisms (LMOs) in the food supply and their impact on the health of the population.

# 3. INSTITUTIONAL FRAMEWORK

## General Considerations

3.1 To improve food security and general nutrition levels, effective leadership, development, and good governance are central elements of policy execution. Leadership must be exercised and building political awareness of the deleterious effects of malnutrition on welfare and on development prospects at the local level is crucial. The message that poverty is an intrinsic component of food and nutrition insecurity must be disseminated widely.

3.2 Advocacy is a critical element of any effort to raise the policy profile of food security and nutrition. Indeed, a key component of the advocacy effort will be raising the general level of knowledge among the population at large of the importance of good nutrition so that malnutrition becomes a political issue for which political leaders, the government, and individual sectors of government are held accountable by Civil Society Organizations (CSOs) and by the general public.

## Empowerment

3.3 Reflecting a human-rights approach to food and nutrition security, empowerment of duty-bearers and rights-holders is an essential component of the policy and implementation strategy. It is important that the comparative strengths and weaknesses of various actors be recognised. Each group of actors needs strengthening to differing degrees and in different ways. Duty-bearers must be assisted to recognise their responsibilities and have sufficient capacity to fulfil them, while rights-holders must be assisted to recognise their rights and engage in the policy process to argue for their fulfilment. Capacity and knowledge must be built among local government leaders and officers so that they are able to carry out their duties effectively in order to ensure that the right-to-food of all citizens is respected adequately.

## Decentralisation

3.4 Ultimately, food and nutrition security needs to be attained by households and individuals where they live. The devolution of action under this policy to local governments is therefore essential.

## Gender Mainstreaming

3.5 It is crucial to mainstream gender within the implementation strategy to achieve lasting success. Improving nutrition inherently requires a strong gender perspective due to the predominance of female-headed households and the positive influence of females in communities. In the end, all children born in the country will be raised so that they are enabled to attain their full potential over their lifespan. It is the care that they receive from conception through the first two years of life that is biologically the most critical for them in this regard.

## Human Resource Capacity Building

3.6 Improved nutrition requires access to knowledge on how to prepare nutritious meals, maintain healthy lifestyles and how to provide proper feeding, care and medical attention to children and other dependents. At all levels of policy implementation individuals must be empowered to know how to make use of available resources to achieve good nutritional status and a healthy, active life. The nutrition education messages that need to be learned include: components of a balanced diet and information on how locally available foods can be used to create balanced diets, the value of exclusive breastfeeding, the importance of prenatal care and regular child growth monitoring, the control of infant and childhood illnesses, maintaining clean water, sanitation and a healthy environment.

**Current Institutional Framework**

3.7 There are various Government institutions with responsibility for food and nutrition security in Jamaica. The institutional framework for food and nutrition security cuts across seven core Ministries, supporting ministries and other key public entities. The following Matrix shows the responsibility of each Ministry in respect of the four elements of food and nutrition security.

**Table 1: Institutional Framework for Food Security**

| Ministry | Availability | Access | Utilization | Stability |
|---|---|---|---|---|
| **Core Ministries:** | | | | |
| Ministry of Agriculture& Fisheries | ■ | ■ | ■ | ■ |
| Ministry of Industry, Investment and Commerce | ■ | ■ | | ■ |
| Ministry of Health | ■ | ■ | ■ | ■ |
| Ministry of Labour and Social Security | | ■ | | ■ |
| Ministry of Education | ■ | ■ | ■ | |
| Ministry of Water, Land, Environment and Climate Change | ■ | ■ | | ■ |
| Ministry of Finance and Planning/Planning Institute of Jamaica | ■ | ■ | ■ | ■ |
| **Supporting Ministries/Agencies:** | | | | |
| Ministry of Local Government and Community Development | ■ | | | ■ |
| Ministry of National Security | ■ | | | ■ |
| Ministry of Science, Technology, Energy and Mining | ■ | | | ■ |
| Ministry of Foreign Affairs and Foreign Trade | ■ | | | ■ |
| Office of the Prime Minister/ Office of Disaster Preparedness and Emergency Management | | ■ | | ■ |

**Roles of the Portfolio Ministries and Respective Agencies**

- The Ministry of Agriculture & Fisheries - Implements programmes and projects to increase production and productivity in the agriculture and fisheries sectors and ensure the welfare of producers as well as enforcing plant and animal quarantine and veterinary regulations.

- Ministry of Industry, Investment and Commerce - Provides policy and programme support for agro industry and the distributive trades sector. This Ministry also oversees efforts for job creation, export promotion and investment facilitation and enforces standards and safety regulations inter alia through the Bureau of Standards.

- Ministry of Health - Responsible for formulating and facilitating development of policies and programmes and the implementation of public health, nutrition, maternal and child health programmes among others, as well as projects to ensure a healthy population and the enforcement of public health regulations.

- Ministry of Labour and Social Security - Implements programmes to improve social welfare, especially among vulnerable groups, and also facilitates employment for the more vulnerable segments of the society through its overseas employment programme.

- Ministry of Education- Implements the school feeding programme in primary and high schools, thus ensuring access to food for vulnerable children and adolescents.

- Ministry of Finance and Planning/Planning Institute of Jamaica - The PIOJ, as the agency charged with the mandate of effective social and economic planning for sustainable development of the country, and as the seat of monitoring for the Vision 2030 Jamaica outcomes, will continue to offer policy advice, technical support in monitoring and evaluation, and assessment of gaps in scope, reach and delivery of programmes and initiatives, particularly as they impact vulnerable population groups and communities.

- Ministry of Local Government and Community Development - Oversees local authorities, that is, the Kingston and St. Andrew Corporation (KSAC), the Portmore Municipal Council and the 12 Parish Councils. These local authorities are responsible for developing, managing and maintaining infrastructure and public facilities such as parish roads, water supplies, drains and gullies, markets and abattoirs.

- Ministry of National Security – Role in combating praedial larceny and in enforcement of regulatory framework.

- Ministry of Water, Land, Environment and Climate Change – Role in management of environmental resources and in addressing climate change and facilitating security of tenure (land registration/titles).

- Ministry of Science, Technology, Energy and Mining – Role in oversight of scientific and research institutions e.g. Scientific Research Council etc.

- Ministry of Foreign Affairs and Foreign Trade – Role in trade relations and in negotiation and monitoring of relevant international treaties and conventions.

- Office of the Prime Minister/Office of Disaster Preparedness and Emergency Management – Responsible for advancing disaster preparedness and emergency measures nation-wide by facilitating and coordinating the development and implementation of integrated disaster management systems (disaster preparedness, management and mitigation measures).

- The Ministry of Agriculture & Fisheries - Implements programmes and projects to increase production and productivity in the agriculture and fisheries sectors and ensure the welfare of producers as well as enforcing plant and animal quarantine and veterinary regulations.

3.8 A strong research agenda has been included in the development of the policy, and it cuts across all four pillars with the aim of providing the necessary information to guide

decisions. The coordination of this research agenda will be paramount, given the plethora of institutions involved in food and nutrition security. As such, Academia will be a critical stakeholder in the implementation process, specifically to provide the expertise and guidance in the conduct of all relevant research to guide evidence-based decision making

3.9 It should be noted that there is at present no entity or body responsible for coordinating food and nutrition security policies and programmes as these issues are normally considered to be the responsibility of the agriculture ministry due to the lack of awareness of the multi-sector and inter-disciplinary nature of the issue.

**Nature and Scope of FNS actions and activities**

3.10 The JFNSP does not deal directly with those issues of food availability that fall within the exclusive purview of the Ministry of Agriculture and Fisheries (land and water availability, conservation and management, agricultural production and yield increasing measures etc.). This policy focuses on the wider issues of food and nutrition security that have not until now been properly addressed since they are at the interface between agriculture, health and nutrition, education, trade etc., and have been addressed separately because the institutional framework and mechanisms for dealing with such multi-sector issues did not exist.

3.11 An effective policy framework for national food and nutrition security to address these concerns will require agreement on the following issues that are set out in the preceding sections:

- The main gaps and constraints that limit food security effectiveness in terms of food availability, access, utilisation and stability in the short, medium and long term as well as the opportunities and comparative advantages to achieve competitiveness and stable, affordable supplies of staple food commodities, particularly by vulnerable populations;
- Key policy actions and investment programs and projects to move Jamaica towards self-reliant food and nutrition security within the next 15 years;
- Concrete joint and collective actions (policies and programmes) by all public and private sector entities to achieve national food and nutrition security;
- Institutional framework, needs and capacity gaps for effective Food Security Monitoring, Evaluation and Learning;
- The implementation strategy as well as the respective roles and functions of the interested parties (government, civil society, farmers, traders etc.) and the institutional context in which these actions are to be implemented, and any changes therein that may be necessary.

3.12 The issues addressed by the JFNSP have ramifications which transcend the agricultural and rural sectors and cut across the existing division of functions and responsibilities of the various ministries and agencies of the public sector as currently structured. A number of national efforts (policies and programmes) have been developed through a participatory process to promote food and nutrition security at national and parish levels and a favourable policy framework for growth of agriculture and allied services in the areas of food processing, preparation and distribution. Existing and emerging international and regional responses seek to promote and reinforce integration, coherence and consistency of national level efforts. The drive for greater policy and implementation coherence is also evident in the efforts of donor coordination through the Paris Declaration and the Accra Agenda for Action.

3.13 The role of the private sector should not be underestimated as well as that of the food industry, which has substantial research and development capacity and extensive supply

chains and market penetration. Working together, these stakeholders can contribute more effectively towards eliminating chronic hunger, food insecurity and malnutrition and preventing future food security crises from occurring.

3.14 The attainment of food and nutrition security entails actions in areas that fall within the purview of diverse ministries and institutions in the public and private sectors. The diversity in the scope and nature of these issues underscores the need for a holistic, multi-disciplinary, uniform and coordinated approach for their resolution, being mindful of five important concerns:

- the requirement of an economically feasible and sustainable degree of food self-sufficiency (food availability);
- the assurance of adequate soil and environmental conservation measures (food availability/stability of supplies);
- the need to improve linkages among health, nutrition, food retailing, manufacturing and production (food utilization/nutritional adequacy);
- the protection and expansion of agricultural and other employment and incomes in a value-chain approach and the use of productive safety nets in the context of national poverty reduction and social programmes (household food access); and
- the need for effective disaster prevention, mitigation and management systems and climate change mitigation and adaptation measures (stability of supplies).

3.15 Food and nutrition security involves cross-cutting issues. In light of this, it is recommended that the implementation of the food and nutrition security policy be placed under the purview of a multi-sector inter-ministerial committee consisting of the relevant agencies, civil society and the private sector. The transformation of this body into a National Food and Nutrition Security Council/Commission or otherwise, will depend on the evolution of the national food and nutrition security situation and fiscal considerations.

3.16 It is therefore proposed that an Inter-Ministerial Committee on Food and Nutrition Security (IMCFNS), chaired in rotation by each of the constituent ministries and having a permanent secretariat provided by the Ministry responsible for Agriculture be established to ensure joint and concerted action in the formulation and implementation of the programmes and measures under the Food and Nutrition Security Policy, with the following Terms of Reference:

- Recommend/advise on policy measures (fiscal, trade, tariff, educational, quality assurance, market location and management etc.), provide oversight for the preparation of legislation to be submitted to the Attorney General for approval (including the amendment of existing laws and regulations) and the proposal and implementation of changes in the institutional/administrative framework, processes and procedures of the relevant departments and agencies of the State that may be required for the achievement of food and nutrition security as well as the revitalisation of agriculture at all stages of the value chain, with continuous reviews and modifications as necessary;
- Making representation to Cabinet for additional financial assistance that may be needed from time to time, and the issuance of special orders, regulations or proclamations;
- Providing oversight and coordination of the implementation of the National Food and Nutrition Security and Action Plan as approved by Cabinet, and carried out by the relevant departments of the State, implementing and regulatory agencies and stakeholders;

- Consulting and communicating with the national stakeholders on food and nutrition security;
- Reporting to portfolio Ministers of Agriculture and Fisheries; and Health./ or Permanent Secretaries

3.17 The IMCFNS may co-opt such other persons as it deems necessary to the efficient and timely execution of its mandate. Representatives from collaborating Regional and International Cooperation agencies, such as the Inter-American Institute for Cooperation in Agriculture (IICA), the Food and Agriculture Organization of the United Nations (FAO), and the Caribbean Public Health Agency (CARPHA) inter alia, may be requested to serve in an advisory capacity.

3.18 The IMCFNS will establish a secretariat to carry out the functions and responsibilities assigned to it by the Cabinet and draw its funding, in the first instance, from existing appropriations in the constituent ministries; this procedure may be varied in future to provide the IMCFNS with assured funding, which may be of domestic and/or international origin.

3.19 Under the IMCFNS, a Technical Working Group will have responsibility for providing technical inputs as well as for the design, implementation arrangements, monitoring and evaluation of the IMCFNS's work programme. The details of its mandate will be determined by the IMCFNS. The Working Group will be composed as follows:

- A representative of the Ministry of Agriculture and Fisheries
- A representative of the Ministry of Finance
- A representative of the Ministry of Labour and Social Security
- A representative of the Ministry of Industry, Investment and Commerce;
- A representative of the Ministry of Local Government and Community Development;
- A representative of the Ministry of Health
- A representative of the Office of the Attorney General (Law Reform Commission)
- A representative of the Ministry of Water, Land, Environment and Climate Change
- A representative of the Ministry of Science, Technology, Energy and Mining
- A representative of the Ministry of National Security
- A representative of the Ministry of Foreign Affairs and Foreign Trade
- A representative of the Ministry of Education
- A representative of the Office of Disaster Preparedness and Emergency Management
- A representative from the universities
- Representatives of the private sector and civil society

## LINKAGES WITH OTHER POLICIES AND PLANS

3.20 Despite the absence of a food security policy, there are other policies that have been approved or are being drafted that address various aspects of food security. These are outlined in this section.

### Vision 2030 Jamaica National Development Plan

3.21 The Vision 2030- National Development Plan aims to put Jamaica in a position to achieve developed country status by 2030. The Plan aims to transform the country from a middle income developing country to one which affords its citizens a high quality of life and world-class standards in critical areas including education, health care, nutrition, basic amenities, access to environmental goods and services, civility and social order.

3.22 Vision 2030 Jamaica is built on four strategic goals and sixteen national outcomes for the country's development. These are:

- **Goal 1: Jamaicans are empowered to achieve their fullest potential**

National Outcomes:

- ✓ A Healthy and Stable Population
- ✓ World-Class Education and Training
- ✓ Effective Social Protection
- ✓ Authentic and Innovative Culture

- **Goal 2: Jamaica's society is cohesive and just**

National Outcomes:

- ✓ Security and Safety
- ✓ Effective Governance

- **Goal 3: Jamaica's economy is prosperous**

National Outcomes:

- ✓ A Stable Macro-Economy
- ✓ Enabling Business Environment
- ✓ Strong Economic Infrastructure
- ✓ Energy Security and Efficiency
- ✓ A Technology-Driven Society
- ✓ Internationally Competitive Industry Structures

- **Goal 4: Jamaica has a healthy natural environment**

National Outcomes:

- ✓ Sustainable Use and Management of Environmental and Natural Resources
- ✓ Hazard Risk Reduction and Adaptation to Climate Change
- ✓ Sustainable Urban and Rural Development

3.23 The Vision 2030 National Development Plan is complemented by 32 sector plans, some of which are relevant to the food and nutrition security thrust and are described below.

### Vision 2030- Agriculture Sector Plan

3.24 The Agriculture Sector Plan seeks to increase the competitiveness and productivity of agricultural output, including: increasing the application of capital equipment, small tools and mechanization; developing economies of scale through clustering of activities and facilities; strengthening the use of modern farming systems and best practices;

diversifying into higher value-added production; and strengthening the application of technology, innovation, research and development to agricultural production. The plan includes specific strategies for the development of key agricultural sub-sectors, including traditional and non-traditional crops and fisheries.

3.25 The drive for increased productivity is complemented by measures to enhance the marketing of agricultural products locally and internationally. These include: strengthening the collection, evaluation and dissemination of marketing information; development and upgrading of marketing networks and infrastructure; and enhancing market access and promotion.

3.26 The plan also seeks systematically to improve the most important aspects of the supporting environment for agriculture in Jamaica. It has an explicit goal towards improving food security through three main outcomes:

- Increased access to adequate and safe food supplies for the population;
- Increased domestic food production; and
- Improved nutritional status of the population through consumption of healthy foods.

Some of the strategies listed for the attainment of food security include: promotion of the use of appropriate technology and techniques to increase efficiency of staple food production at lower costs and prices; encouraging home food production including backyard gardening; undertaking key food security projects; and promoting the consumption of healthy foods.

**Vision 2030- Manufacturing Sector Plan**

3.27 The Manufacturing Sector Plan seeks to develop a highly competitive sector supported by an enabling environment that fosters the establishment, survival and growth of manufacturing enterprises. It also seeks to bring into being an agricultural sector with strong linkages (backward and forward) with other sectors, environmental sustainability and capable of fulfilling the expectations of its customers. The plan emphasizes innovation, human capital development, value addition, branding, research and development, technological advancement and capital improvement as key elements for moving the sector forward.

3.28 The plan does not explicitly address the agro processing sector and its linkages to food and nutrition security.

**Vision 2030- Poverty Reduction Sector Plan**

3.29 The Poverty Reduction Sector Plan aims to ensure that each person has the opportunity, capability and support needed to enjoy a sustainable and socially acceptable quality of life. The plan has one main goal which is to reduce the incidence and manifestation of poverty in line with established targets which seek to reduce poverty to 10.5 percent in 2015 and 9 percent in 2030. This is to be done by improving human capabilities (education, health, public goods and employment) and providing and expanding economic activities, facilitating access to basic goods and services, mainstreaming poverty into public policy and establishing effective, consistent and inclusive service delivery.

**Vision 2030- Social Welfare and Vulnerable Groups Sector Plan**

3.30 The plan focuses on three outcomes, namely:

- A society in which the vulnerable population is identified and included in the social support system (government, private sector, NGOs, FBOs, family support etc.);
- A society that adequately meets the basic needs of vulnerable persons; and

- A social welfare programme which is delivered in a professional manner, ensuring that clients are valued and treated with dignity.

3.31 The plan recognizes the different types of vulnerabilities and the need to differentiate among vulnerable persons based on age, gender and disability. It focuses on improving the system of targeting and identification of those eligible for assistance, increasing the level of assistance provided to them and improving the quality of service delivery. It also makes provision for the design of a system of financing that will ensure the continuity of support programmes on a sustainable basis.

3.32 The plan addresses vulnerabilities such as: homelessness; impact of natural disasters; deportee and refugee status; human trafficking; poverty and chronic illnesses. It also addresses the needs of vulnerable children, youth and the elderly. The aim is to create within the various arms of the social assistance network, the capacity to treat with a variety of needs, whether, temporary or permanent.

3.33 The plan envisages a clear role for the State in the care of vulnerable groups, while promoting increased participation of families, communities, the private sector, community-based organizations and other civil society organizations.

3.34 The plan expresses the need to ensure the provision of adequate nutritional needs of children and youth in schools and institutions through existing programmes. It also examines the provision of adequate nutritional and dietary content of meals provided in approved shelters. However, there is not much emphasis on addressing groups that are vulnerable to food insecurity in terms of targeting mechanisms and in designing social welfare systems across the board that allow for some level of household food security for these groups.

**Vision 2030- Social Security Sector Plan**

3.35 The Social Security Sector Plan aims to create a social security system for Jamaica that will comfortably mitigate the risks affecting individuals who face income instability. The main goals of the plan are:

- Social security coverage for all;
- An efficient and effective social security system; and
- Sustainable system of financing for social security.

3.36 The plan seeks to increase the proportion of the population that is covered by social insurance and occupational pensions and increase the participation of Jamaicans in pension schemes. It also seeks to increase the administrative efficiency of public pension schemes and improve the management, administration and contributions of the population to social security and pension schemes.

**Vision 2030- Natural Resources and Environmental Management & Hazard Risk Reduction and Climate Change Sector Plan**

3.37 The plan identifies four areas for priority attention, namely, biodiversity and ecosystem management, natural resource management, environmental governance and natural hazard mitigation and climate change. It specifically addresses risk mitigation and climate change by seeking to:

- Develop mechanisms that integrate disaster risk reduction in development planning;
- Build awareness of natural hazards among all stakeholders;
- Implement best practices for hazard risk management;
- Support community based approach to hazard risk reduction;

- Create mechanisms to enable all government policies and plans fully consider the implementation of climate change;
- Identify strategic priorities for climate change; and
- Adopt best practices for climate change adaptation.

**National Policy for the Promotion of Healthy Lifestyle in Jamaica**

3.38 The National Policy for the Promotion of Healthy Lifestyle in Jamaica adopts a multi-sector approach, involving the public and private sectors, government and non-governmental organizations and communities to address critical health problems affecting the nation.

3.39 The goal of the policy is to decrease the incidence of chronic diseases, high risk sexual behaviour/violence and injury through adaptation of appropriate behaviours by the population and particularly young children, adolescents and young adults.

3.40 In keeping with the goal, specific objectives have been defined for the main components of the policy. These are:

- Chronic diseases -with regards to the level of physical activity, increased availability and consumption of healthy foods resulting in no excess increase in body weight and a reduction in the incidence of smoking among the Jamaican population.
- Reproductive health- aimed at increasing the adoption of appropriate reproductive health behaviour with emphasis on the pre-adolescents, adolescents and the youth.
- Reduction in the risk behaviours that lead to violence, unintentional injury and suicide.

**National Strategic Plan for the Promotion of Healthy Lifestyle in Jamaica**

3.41 In complementing the policy, the National Plan seeks to promote healthy lifestyles in the population, so as to reduce the prevalence of heart disease, diabetes, hypertension, obesity, cervical cancer and HIV/AIDS and reduce the incidence of violence and injury.

3.42 The broad objectives of the plan are to:

- Increase the number of persons participating in moderate levels of physical activity practiced for 30 minutes daily;
- Increase the consumption of fruits and vegetables and reduce the consumption of fat, sugar and salt with no excess increase in body weight in the young children and the adolescent population;
- Ensure the production and marketing of healthy foods;
- Reduce the incidence of smoking within the population;
- Increase the adoption of appropriate reproductive health behaviour by the total population with special emphasis on the pre-adolescents, adolescents and the youth; and
- Reduce risky behaviours that lead to violence, unintentional injury and suicide.

It was developed and implemented in collaboration with other agencies of government, private sector, NGOs, other international organisations, including PAHO/WHO, UNICEF and USAID.

**National Infant and Young Child Feeding Policy**

3.43 The Ministry of Health obtained permission from the Cabinet in April 2012 to develop the National Infant and Young Child Feeding Policy. This policy aims to create supportive environments and ensure effective interventions for assisting families to make

informed decisions about, and commitment to, optimal infant and young child feeding practices.

3.44 This policy will support optimal infant and young child feeding by promoting:

- Exclusive Breast Feeding for the first 6 months of an infant's life- This implies that no other food or drink (including water) should be given, with the exception of drops or syrups containing medicine as prescribed by a doctor.
- Continued Breast Feeding and Complementary Feeding- Children should continue to be breastfed for up to two years of age and beyond while receiving appropriate and adequate complementary foods.
- Education of mothers so that they are able to make informed choices should they choose not to breastfeed or for whom breastfeeding is contraindicated.

**Draft Strategic Plan for Non-Communicable Disease Prevention and Control in Jamaica (2012-2017)**

3.45 In recognition of the prevalence and burden of non-communicable diseases on the population of Jamaica, the Ministry of Health, has spearheaded the drafting of a strategic plan for non-communicable diseases. The plan has five priority areas:

- Priority Action #1: Risk Factor Reduction and Health Promotion
- Priority Action #2: Integrated Disease Management and Self-Management Education
- Priority Action #3 Surveillance, Monitoring and Evaluation and Research
- Priority Action #4: Public Policy, Advocacy and Communications
- Priority Action #5: Programme Management and Capacity Building

With respect to nutrition security, the plan aims to reduce overweight/obesity, hypertension, diabetes and cholesterol and increase consumption of fruits and vegetables. Priority area two seeks to increase the disease screening and treatment among persons with NCDs.

**Food Safety Policy**

3.46 The Food Safety Policy was crafted in response to the need to improve the food safety system, especially as it relates to the regulatory and institutional framework. In addition, emphasis is now being placed on the ability of all stakeholders in the food chain to be able to demonstrate adequate traceability of all food sources, especially in the global trading arena.

3.47 The Food Safety Policy covers all aspects of national, regional, and international practices, principles, guidelines, standards and agreements governing food safety systems. The policy addresses issues such as legislative gaps and overlaps in the regulation of the food safety system, coordination of the food safety function, traceability, risk analysis, research, surveillance/epidemiology, locally accredited laboratories for food safety analysis, monitoring of food production and distribution systems, national food safety emergency response systems and public awareness and education.

3.48 The goals of the policy are to:

- Establish one integrated Food Safety System;
- Ensure that food consumed is safe, sound and wholesome;
- Implement a system of traceability for food from production to consumption;
- Institute a formal risk analysis system to enhance food safety;

- Integrate institutional arrangements and capabilities for the efficient and effective management of the food safety system;
- Promulgate appropriate legislation to support food safety; and
- Effect behavioural change through heightened public awareness about food safety issues.

3.49 The policy is underpinned by a national food control strategy; strengthening of infrastructure and institutional framework; compliance policies which establish specific or general limits to which products, processes and practices must comply, and accompanied by effective and efficient food control systems and legislation.

**Draft Agriculture Land Utilization Policy**

3.50 The Agriculture Land Utilization Policy (ALUP) seeks to address the challenges being faced with agricultural lands in order to encourage expansion and greater production in the agricultural sector. The policy framework details defined objectives and its associated policies and strategies that will facilitate the utilization of land to its optimum potential and ensure sustainable development of natural resources. The policy aims to accomplish the following outcomes:

- Preservation and conservation of prime agricultural lands for agricultural use;
- Reduction of underutilization of large parcels of prime lands and encourage production;
- Promotion and facilitation of greater access to land and broad based ownership of land;
- Strengthened partnerships between public and private sector stakeholders;
- Allow for strategic decisions to be made based on consultations with relevant authorities;
- Minimization of land degradation; and
- Enhancement of knowledge and skills for optimum utilization of lands.

3.51 The policy also proposes amendments to existing legislation to encourage improved land use through incentives and penalties to impact on land use and developmental activities. The policy is awaiting approval from Cabinet.

**Draft Agricultural Disaster Risk Management Plan**

3.52 The Agricultural Disaster Risk Management (ADRM) Plan aims to reduce the impact of hazards and natural disasters on the lives and livelihoods of stakeholders in the agricultural sector. The Plan focuses on hydro-meteorological hazards (including chained hazards) as well as crop and livestock infestation. Specifically, it addresses hurricanes (wind storms), floods and related landslides, droughts and related bush fires and crop and livestock infestation.

3.53 The ADRM Plan outlines strategies and activities for:

i) Mitigating, preventing and preparing for the impact of disasters on the agricultural sector;
ii) Promoting appropriate and effective emergency response to the impact of hazards and disasters;
iii) Ensuring timely and effective recovery and rehabilitation from the impacts of disasters; and
iv) Establishing a monitoring and evaluation framework that will effectively measure progress in ADRM.

3.54 The Plan is intended to address domestic cash crops, protected agriculture, coffee, fruit tree crop, roots & tubers, sugar cane, banana, livestock, aquaculture, marine fisheries and apiculture subsectors.

# 4. MONITORING AND EVALUATION

## Information for Decision Making

4.1 Both horizontal and vertical information flows need to be considered and this requires close coordination among national sector agencies, relevant public and private sector entities and international organisations. Food and nutrition security issues and actions are multi-sector and multi-disciplinary in nature. Thus information from different sources (such as ministerial information management systems, research studies, national surveys and those conducted by non-governmental organizations) needs to be brought together to support comprehensive measurement of policy outcomes and impacts over time. This issue will receive special attention through the implementation of an information-sharing and exchange mechanism for the collation of information from different sources.

4.2 In order to facilitate effective decision making and monitoring and evaluation of activities, an assessment will be made of the information/data requirements necessary for monitoring and evaluation of the policy implementation process as well as the nutritional adequacy of the food supply. In respect of the establishment of a national ISFNS, steps will be taken to harmonize FNS data collection and analysis systems across the relevant ministries and public and private entities with uniform criteria for the various databases and linkages among them at all levels so as to prepare and provide updates, analysis and recommendations relating to on-going and planned actions in the medium to long term for self-reliant sufficient availability of staple food commodities/products, and preparedness for shocks. Expansion of data collected by the National Data Bank will also be undertaken in order to provide consistent, reliable data to facilitate decision making and inform the policy process.

## Monitoring and Evaluation (M&E)

4.3 As noted above, the country's vulnerability to natural disasters, exacerbated by the effects of climate change, and its dependence on external markets for the greater part of its food supplies, has underlined the importance of having access to timely, reliable and accurate information on domestic food output, availability and prices, the nature, extent and geographic distribution of vulnerability and food insecurity as well as the state of the crops in the fields, so as to have early warning of the probability of crop failures etc. There is need, therefore for an M&E system at national and parish level for two purposes:

- to inform the national decision-making process for disaster management, mitigation and response through an Early Warning System; and
- to inform the oversight and management of the process of implementation of the JFNSP.

4.4 The M&E system will be implemented, managed and overseen by the MoAF in collaboration with PIOJ and provision will be made for independent evaluation of the Policy. The nature and scope of the M&E system for the second of the above-mentioned objectives will be determined on the basis of the activities agreed on in the Action Programme/Implementation Strategy that will need to be prepared to give effect to the JFNSP in each of the sectors that it encompasses. At national level, the main issues to be resolved arise from a diverse array of objectives across the country (M&E for sector, project and/or programme objectives rather than national issues of food security, vulnerability and nutritional status). In this regard, it will be imperative to integrate the National Food Emergency and Disaster Preparedness and Emergency Plan in the FNS Action Plan and to establish a national food security and nutrition early warning system. Once, the National FNS Action Plan has been agreed and approved, there will need to be a consensus on the respective

roles of local and central government agencies as well as indicators of achievement etc., and a mechanism put in place for coordinating M&E at parish and national levels.

## Appendix I Situation Analysis

### Food Availability

**Domestic Production** Agriculture's contribution to GDP has declined by 13.4% over the past 20 years, from 6.7% in 1991 to 5.8% in 2010, albeit peaking at 8.4% in 1996 and reaching its lowest point at 4.8% in 2008. The trend in the contribution of the sector reflects the overall decline of production and decreasing public and private sector investment therein. All subsectors, with the exception of livestock experienced a decline in production over the 1996 to 2010 period. The export, domestic crop and fisheries subsectors declined by 68%, 25.2% and 6.7%, respectively. Post-harvest activities also declined by 43%. On the other hand, livestock production increased by 41%.

Since 1996, the decline in production has been mainly due to adverse weather conditions, high interest rates on farm loans and the consequent contraction of investment in the sector, as well as the overall decline in the economy. The impact of adverse weather conditions during particular calendar years continued to have negative impacts on successive periods of production as farmers tend to plant less in the ensuing years because of reduced funds available for replanting. In addition to prolonged droughts in 1997-1998 and 1999-2000, the sector had to confront disease problems for papaya, banana and citrus.

Between 1996 and 2001, the increase in agricultural imports began to have a negative impact on domestic production as some locally produced agricultural commodities were displaced by more competitively priced and packaged imported products. The first decade of the 21st century brought greater challenges as the agricultural sector was plagued by droughts and floods followed by hurricanes and tropical storms between 2001 and 2010. The negative impact of these natural disasters was, however, mitigated by Government policies and programmes aimed at improving output and productivity and attracting new investments in the agricultural sector.

**Livestock production** has been affected by the decline in spending power of the population. This has especially impacted poultry, which is the main source of protein for most people. Thus, in the livestock sector between 2006 and 2010, while beef and veal production declined and poultry meat remained stable, production of sheep, goat and pork meat increased and the decline in dairy production was reversed. At the same time, domestic crop production recorded increases in several categories, viz. condiments, cereals, plantains, potatoes, yams, other tubers and sorrel. The performance of vegetables and fruits, which tend to be affected by hazards, fluctuated over the same period.

**Fish resources** in Jamaica consist mainly of marine capture fisheries and aquaculture, with inland fisheries, not being economically significant. With the exception of industrial conch and lobster fisheries and the artisanal fisheries on Pedro Bank, all fisheries are operated on an open-access basis. Access to fisheries resources in international waters is limited only by the technical capabilities of the local fishing industry so that intensity of fishing effort is a major determinant of production. Available fish stocks within the inshore fisheries are, however, considered inadequate to support a viable fishing industry due to significant reduction in commercial fish stocks as a result of overfishing and the degradation of coastal and marine ecosystems over time.

**Post-Harvest Losses** To cope with increasing food demand, emphasis has traditionally been placed on increasing food production. However, significant amounts of food are lost after harvest, thereby aggravating hunger and resulting in inputs such as seeds, fertilizer, irrigation water and human labour being wasted. Indicative figures of minimum overall quantitative losses cited by experts for planning purposes are in the range of 10% for cereals and legumes,

20% for roots and tubers and 30 - 40% for fruits and vegetables. There is growing recognition that interventions in PHL reduction and increased attention to value-addition are an important means of reducing food insecurity.

An efficient post-harvest sector not only improves food security, but through its forward and backward linkages produces significant multiplier effects that enhance supply chain efficiencies, generate rural income and create on- and off-farm employment. With the transition to market-driven systems and a greater reliance on the private sector, interventions to reduce post-harvest losses must be considered within the context of commodity value chains, and focus on improving the efficiency of the chain as a whole, rather than disjointed, single-point interventions.

Reduction of PHL and related value addition and marketing activities are consistent with the emerging consensus in the Caribbean region at the policy level [explicit in the Regional Food and Nutrition Security Policy (RFNSP), the CARICOM Agribusiness Programme and the Common Agricultural Policy (CAP)] that investments in agriculture should go beyond improvements in on-farm productivity to also address the post-harvest sector and complementary areas of agribusiness and agro-industry, whose potential as engines of economic growth is widely acknowledged.

**Land Use** In line with the downward trend in domestic agricultural output, there has been a secular decline in agricultural land use: farm acreage fell by 46% from 602,665 acres in 1968 to 325,810 acres in 2007. The proportion of farmland in active use remained stable, at just over 60% throughout the period, albeit with some changes in land use: land in crops and pasture fell by 13% and 49.6%, respectively, when compared with 1996 data. This trend is attributed to several factors, inter alia deforestation leading to land degradation (erosion) and the decline in riverine, coastal and marine ecosystems that support fisheries, population growth, leading to increased demand for lands for residential use, industrial and commercial expansion; the secular decline in agricultural investment; and the diminished attractiveness of agriculture as a business venture (and its low social esteem) particularly for young people, resulting from the emergence of better alternative opportunities. As a result, the farming population is ageing, with 54% of farmers aged 45 years and over in 2007.

Land fragmentation has increased inasmuch as the number of farms rose by 21.7% to 228,683 over the period 1996 to 2007 while their average size fell from 2.2 ha to 1.4 ha. At the same time, farmers classified as landless (holdings in which the minimum criteria for land acreage are not satisfied but those for size of herd are fulfilled) increased by 87.4% to 28,070 farms, while those under 1 hectare increased by 31.8%. All farms over 1 hectare declined over the 1996 to 2006 period, with much of the decline in farms over 50 hectares being attributed to lands taken out of sugar and banana production. These trends do not augur well for the agricultural sector as they constrain farming output and productivity.

**Water Use and Irrigation** Most small scale agricultural activity is rain-fed, as very little irrigation is used outside of the large commercial farms. This circumstance renders Jamaican agriculture particularly vulnerable to the effects of climate change in the form of the increased frequency and intensity of droughts, storms and floods that result in crop losses. The main types of irrigation are surface, sprinkler and drip irrigation systems. According to the National Irrigation Development Plan (NIDP), areas suitable for irrigation are classified into three land categories: i) lands which may be irrigated with all common techniques of irrigation; ii) lands suited only for sprinkler and micro-irrigation techniques; and iii) lands with generally steep slopes (>10percent), shallow top soils which are productive with careful management and manual irrigation. This third category applies mainly to small hillside farmers.

It is estimated that 90,000 hectares of the total arable area are irrigable, but only 30,100 hectares currently have irrigation infrastructure and of this some 9,000 hectares require rehabilitation. Half of the total irrigated area falls within public schemes, managed by the National Irrigation Commission (NIC), while the other half consists of individual private systems and commercial estates, where banana, papaya and sugar cane are the major crops grown.

The NIC is responsible for the management, operation and maintenance of all public irrigation systems in Jamaica. Activities include the harnessing and distribution of groundwater and surface water for allocation to farmers and also non-agricultural users. The NIC's primary mission is to maximize effective use of irrigation water through improved conveyance and distribution infrastructure, and to provide guidance and training in on-farm water management techniques so as to increase productivity and profitability in the agricultural sector and thus ensure the economic and financial viability of the irrigation infrastructure. The general decline in the level of agricultural activity has hindered the achievement of this objective. Indeed, in 2010, the Ministry of Agriculture & Fisheries reported that only 50% of NIC irrigation infrastructure was being utilized. Most of these irrigation command areas are in the plains of St. Catherine and Clarendon, where most of the Class I and II agricultural lands are located. In response, a programme was launched by Government to bring some of these lands back into productive use.

**Constraints** It is clear from the experience of the past forty years that, despite the consistent efforts of Government to increase agricultural production, productivity, incomes and competitiveness, many fundamental constraints remain. These include:

- Small and uneconomic size of land holdings;
- Over-reliance on rainfall to meet water needs;
- Under-utilization and inefficient use of large areas of arable lands;
- High incidence of praedial larceny;
- Low labour productivity;
- High post-harvest losses of up to 40% of production;
- High production costs, especially for labour and agricultural chemicals;
- High incidence of pest and diseases;
- High cost and inappropriate use of inputs, especially agricultural chemicals;
- Insufficient and decreasing levels of public and private sector investment;
- Limited access to credit due to onerous collateral requirements resulting from insecure land tenure arrangements;
- Poor quality of feeder and farm roads which raise transportation costs and post-harvest losses;
- High incidence and susceptibility to natural disasters, that is hurricanes, storms, protracted droughts and flooding in periods of heavy rainfall;
- Competition from lower priced imports which reduce demand for local produce and create a disincentive to domestic producers;
- Unpredictable policy environment which makes long term investments unattractive;
- Low linkages between the domestic agricultural, agro processing, service and distribution sectors;
- Absence of clear agricultural land use zoning/districts;
- Poor organization of farmers due to weak farmers' organizations;
- Limited use of Good Agricultural Practices by small farmers;
- Limited size of market constrains production due to easy saturation; and
- Limited information for decision making on production and marketing.

**Agro Processing** Jamaica's food manufacturers include: sugar, molasses, and rum manufacturers; cocoa and coffee primary processors; meat, poultry and fish processors; dairy products processors, including ice cream and yoghurt manufacturers; citrus processors; fruit and vegetable processors; manufacturers of wine, beer and non-alcoholic beverages; flour mills; feed mills; rice mills; cereal and breakfast food manufacturers; processors of oils and fats; confectionery manufacturers; snack food manufacturers; and bakeries.
Raw material for many food manufacturers is normally sourced externally with the duty being waived or free. Due to their small volumes, cottage industries normally access their main raw materials from producers within the country. Inputs such as packaging materials, food additives and other chemicals are imported.

The sugar, rum, cocoa, coffee and citrus juice industries are the larger processors/exporters that utilize local raw material. Other processors using local raw material include vegetables, fruits, ackee, tubers, condiments etc., to make canned, bottled or other packaged products for the domestic and export markets. There are also some primary processors of fruit puree who also sell to secondary processors. The livestock industry also supplies various meats such as poultry, beef, pork, fishery products etc., for their respective industries.

A limited survey {21 respondents-members of the Jamaica Manufacturers' Association (JMA) and Jamaica Agro-Processors' Association (JAPA)} conducted by the Scientific Research Council (SRC) in February 2011, found that only 45% of the respondents had Hazard Analysis Critical Control Points (HACCP) Management Systems in place and 5% reported the use of renewable energy in their operations. The most popular locally produced fruits utilized by Jamaican agro-processors over 2007 and 2008 were oranges, ackee, grapefruit, june plum and sorrel (28.5 million kilograms in 2007 and 34.2 million kilograms in 2008).

The main constraints highlighted in this survey were land tenure, availability of quality local raw material, inefficient marketing and market linkages, lack of consistency in production and post-harvest handling, limited investment in research and development, high energy and transportation costs and limited access to affordable financing. Other challenges include limited ability to meet international quality standards, especially for exporters; high costs of implementation of international standards; high costs and variable quality of some basic services, such as product testing and certification by the private sector; and the fact that the testing and laboratory services necessary to ensure that food exporters meet international food safety and traceability standards are scattered across a multitude of Government agencies.

In addition, the linkages between the domestic agricultural and food manufacturing sectors are inadequate. A study conducted by IICA revealed that Jamaica lagged behind other countries in Latin and North America (for which a similar study was conducted) in terms of value added to primary agricultural output. Jamaica also had 39% of its agricultural production going to intermediate demand, compared with 79.8% in the United States and 54.1% in Colombia. This finding points to the need for an enabling environment to foster stronger linkages between both sectors.

Clearly, a viable agro-processing industry requires an integrated production system between processors and farmers whereby processing operators produce a core portion of their key raw material requirements and engage farmers in adjacent communities through contractual arrangements to produce the additional amount required according to an agreed production schedule and at pre-determined contract prices.

**External Trade** Given the uneven performance of the domestic food production sector and the inadequacies in its structure and the composition of its output, Jamaica's food requirements are currently met from both domestically produced crops and imported foods. Food imports have contributed significantly to Jamaica's food security, as the country does

not have the capacity to produce all of its food needs. As shown above, this is a result of a combination of factors such as declining availability of land for agricultural use, inadequate organization of the agricultural sector, the historical pre-eminence of export agriculture (bananas, sugar, cocoa and coffee), and natural constraints on the production of some commodities. The country is an importer of raw and semi-processed products for the agro-processing sector and finished goods for direct consumption. The food import bill is high and has risen over the past 20 years, from US$153 million in 1991 to US$819.4 million in 2010, peaking at US$885 million in 2008.

The main food imports consist of meat and meat preparations, cereal and cereal preparations (paddy rice, corn and wheat, primarily for further processing into food commodities for human consumption and livestock feed), fruits, vegetables, fish and fishery products, dairy products, processed foods, sugar and sugar preparations, coffee, cocoa, tea, spices and other miscellaneous foods. An analysis of the average food imports for the period 2006-2010 shows that the top seven food categories were cereals, sugars, food preparations, dairy products, fishery products, meat and vegetables/fruits.

Despite the high food import bill, there are possibilities for import substitution according to a study conducted by the Ministry of Agriculture and Fisheries, which indicated that approximately 35% of total current food imports could be substituted with local production, given appropriate trade and agricultural development policies to foster the creation of an enabling environment for domestic food production and agro processing.

**Food Access and Vulnerability to Food Insecurity**

With Gross National Income per capita of US$4,990 in 2009, Jamaica is ranked by the World Bank as an upper middle income country; over 50% of the population lives in urban areas. The main economic sectors include agriculture, mining, manufacturing, construction, services (tourism, distributive trades, telecommunications, transportation, restaurants, financial, real estate, health, etc.), which employed 1.275 million persons in 2010. Given that compensation of employees (wage income), gross domestic product (GDP) at current prices and national disposable income for the period 2005 to 2009, grew at a slower rate than the overall consumer price index (CPI) and the food and non-alcoholic beverages component of the index, it is clear that household food security has worsened. However, although between 2000 and 2009, Jamaica's GDP in constant prices increased by only 4.7%, this was still just above the population growth rate so that GDP per capita remained stable.

In addition to prices rising faster than incomes, the unemployment rate, which was trending downwards between 2005 and 2007, began to rise again in 2008, reaching 12.4% in 2010, due to the contraction in the economy. Female unemployment has been substantially higher than male unemployment. This is of particular concern, as female headed households tend to be larger (with more dependants - women, children and elderly persons) than those headed by males; and the female labour force participation rate is lower than that for males. Therefore food insecurity may be more prevalent in female headed households, especially where the women have lost their source of income and employment.

Poverty, despite its decrease over the period 2000 to 2009, has trended upwards from 2006, pointing to increasing hardship for persons as a result of the impact of the global downturn on the national economy in the form of contraction in real GDP, reduced purchasing power, remittances and increased unemployment levels. The distribution of poverty is highest in rural areas, followed by the Kingston Metropolitan Area (KMA). Poverty, like unemployment, is greater among females than males.

At household level, poverty has been precipitated by a combination of factors such as limited access to productive employment opportunities; inadequate physical assets, such as capital

and credit even on a small scale; and poor access to markets. The worst affected are female headed households, small farmers, urban slum dwellers; landless rural workers (e.g., sugar workers, fisher folks), street children, orphans, persons with disabilities, households headed by the elderly; pensioners; the unemployed and those in low-paying formal and informal employment; and persons living with HIV and AIDS.

Poverty in Jamaica has therefore both a rural and a gender dimension. This is confirmed by a study conducted by the Caribbean Food and Nutrition Institute (CFNI) in collaboration with the Food and Agricultural Organization (FAO) between 2006 and 2007, which found that 70.8% of the fisher folk and 76.9% of the sugar cane workers surveyed were food insecure. In addition, 61.3% and 70.8% of subsistence farmers and inner city poor, respectively, were food insecure. Severe food insecurity was limited to 16% of subsistence farmers, inner city poor, fisher folk and sugar workers, while mild food insecurity affected 56.4% of the inner city poor and fisher folk and 30.4% of subsistence farmers and sugar workers.

Average per capita food and beverage consumption as a percentage of total consumption has been increasing since 2005, from 42.25% to 45.9% in 2009, and is probably now over 50%. Persons in rural areas are more at risk as they spend even more than the national average on food. In 2009, persons in rural areas spent 52.1% of their total consumption expenditure on food and beverages, while Other Towns and the KMA spent 44.2% and 41.5%, respectively. Meals away from home now account for the highest category of food expenditure, followed by meats, poultry & fish, cereals & cereal products and dairy products. Thus, Jamaicans spend a greater proportion of their incomes on imported food, as opposed to local foods. Interestingly, vegetables & juices, starchy roots & tubers and fruits which are mainly produced locally only account for 6%, 6% and 4%, respectively of total consumption expenditure.

The Ministry of Health estimated that the minimum cost for feeding a family of five for a week in the first quarter of 2008 was $5,194.72, only 71.2% of which was then covered by the minimum wage. Minimum wage earners, including agricultural workers, are thus unable to cope with price increases of basic food items and therefore face greater food insecurity (to update). To some extent, this is mitigated by the flow of remittances (representing 14.2% of GDP in 2011 and 139% of the value of exports), which have risen from US$672.9 million in 2000 to US$1.76 billion in 2011, with a slight interruption in 2008-2009 when they fell by 9% due to the global financial crisis.

As part of the work required for the revision of the poverty estimates, the minimum food basket with the recommended dietary allowances for a reference family of five was recently reviewed by CFNI at the request of the Planning Institute of Jamaica (PIOJ). The weekly cost for the basket of the required 2400 kilo calories for a family has now been raised to $7,439 ; the poverty line was also shifted to US$1.25 per day from US$1.00, which has ramifications for the minimum standards being set. Data for Jamaica indicate that there are pockets of under-nutrition, and also an increasing incidence of obesity. The CFNI study confirms the existence of dietary and epidemiological transitions brought about by demographic shifts in the population, increasing levels of non-communicable diseases, and shifts away from locally grown indigenous staples, legumes and fruits, to more high-energy and processed foods.

**Food Utilization and Food Safety**

Food utilization brings out the importance of non-food inputs in food security and refers to the utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met. Effective food utilization depends in large measure, on knowledge within the household of food storage and processing techniques, basic principles of nutrition and proper child care. It is therefore imperative that

balanced diets which supply all the necessary nutrients and energy without leading to over consumption should be encouraged, along with proper distribution of food within the household.

Constraints on food utilization include nutrient losses associated with food preparation, inadequate knowledge and practice of health techniques, including those related to nutrition, child care and sanitation, and cultural practices that limit consumption of a nutritionally adequate diet by certain groups or family members.

The availability of safe food not only improves the health of people but is also a basic human right. However, in Jamaica, food safety is challenged. Microbial hazards and the foodborne diseases they cause are an increasingly important public health problem. In Jamaica, there have been reports on the incidence of diseases caused by microorganisms transmitted mainly by food, such as Salmonella spp32. The true dimensions of the problem are not known as some cases are not reported. It is important that preventive measures be put in place as foodborne diseases have a significant impact on health and on national development.

In Jamaica, food is often prepared by street vendors. Given that 23.5% of the household food budget is spent on food prepared outside the home, this may lead to situations in which a single source of contamination can have widespread consequences. Also of importance to food safety is the globalization of the food trade which may challenge safe food distribution. Chemical contaminants are also a source of food borne illness. They include natural toxicants, for example mycotoxins; environmental toxicants, such as lead; and naturally occurring substances in plants, such as hypoglycine in ackee.

Food safety in Jamaica is now being addressed under the National Food Safety Policy. Most food safety concerns are related to inappropriate use of agricultural chemicals, poor storage of food, limited food inspection, insufficient awareness about food safety and hygiene, insufficient information about the hazards and risks involved.

**Health and Nutrition** Although Jamaica has made impressive progress in achieving some of the objectives of the 1978 Food and Nutrition Policy, the country still falls short of the goal of adequate food and nutrition for all. Moreover, Jamaica is now faced with the challenge of a double disease burden. The problem of malnutrition caused by nutritional deficits still exists while at the same time, there is a steady increase in the prevalence of obesity, diabetes, hypertension and other cardiovascular diseases. Approximately 30% men and 60% women are obese and overweight. In addition 20% are hypertensive and 8% are diabetic. Cardiovascular diseases, diabetes, obesity and cancer account for 56% of deaths annually.

Jamaica has experienced a rapid change in dietary habits and activity levels. This may have resulted from a change in the economic structure. Research shows that in developing countries there has been a shift from a pre-industrial economy to industrialization and as a result, there is a change towards occupations that expend less energy. This shift is linked to increases in the Body Mass Index (BMI) and therefore obesity. Jamaica appears to be following this trend. In 1998, a CFNI study found that there was under consumption of fruits and vegetables and overconsumption of oil/fats, starches, and other highly processed foods. This appears to indicate that Jamaica has moved towards a higher fat, more refined diet. This may be as a result of an increase in the availability of high fat, salt and sugar foods, an increase in the number of meals eaten away from home and an increased number of fast food outlets. There has also been an increase in the female employment rate. This implies that women spend less time at home and thus tend to prepare fewer meals there. High fibre foods that usually have long preparation times are now seldom chosen.

**Water for agriculture**

The supply of water is skewed both temporally and spatially. In most cases, it is the temporal variations rather than the amount of rain which brings most problems to rain fed systems. However, it is important to pay attention to rain fed crop and livestock systems as they currently supply most of the food produced in Jamaica and the Caribbean region. There is plenty of rainwater but more than 60% often goes back to the atmosphere unutilized for any productive purposes. The main requirements are management interventions which enable beneficial plants to use effectively, through transpiration, the rainwater available on-farm. The basic principles are simple and have been known for a long time:

a. Optimizing infiltration – the main purpose being to reduce non-productive depletion of the rainwater through evaporation and run-off, while reducing erosion and increasing re-charge of ground water;
b. Increasing the water-holding capacity of soil within the root zone – to make most of the captured water available to plants;
c. Ensuring an efficient water uptake (i.e. high ratio of transpiration/evapo-transpiration) by beneficial plants – achieved through appropriate agronomic and husbandry practices;
d. Optimizing the productivity of water used by plants, in value of products – through the choice of crops with sufficient demand in accessible markets.

With the decline in the agricultural sector in Jamaica, there has been increased policy emphasis on the tourism sector, with the construction of a number of new hotels, condominiums and guest houses. Notwithstanding the decline in tourist arrivals due to the financial crisis, the number of tourist arrivals to Jamaica is expected to increase in the coming years. This increase in arrivals will place greater demands on the national water resources, not only to meet the demands of the tourism sector but also that of the growing population, housing and manufacturing.

For the agricultural sector to be competitive there must be adequate supplies of all inputs, particularly water and the application of new and improved technologies in irrigation and drainage is required. Where such schemes already exist, there is need for improvements. Irrigation development has focused more attention on civil engineering structures for water diversion rather than the management practices needed to optimize water use efficiency at field level. In most cases, once a field is treated to meet the four principles above, irrigation may only be required as a strategic supplement to mitigate the effect of dry spells. There is a role for the national research entities to strengthen the capability of the national extension service in this area.

The severe drought experienced throughout the region over the recent past may be indicative of the water stress that is likely to occur as a result of climate change. There is, therefore, need for an assessment of available water resources. Most importantly, water policy should include allocation strategies which view the agricultural sector as an important component of the economy, so that water for agriculture is not sacrificed during periods of drought. Moreover, there is need to develop national water information systems to provide reliable data to assess the available water supply and promote sustainable use of the resource. The information system would also assist in developing Early Warning Systems as an important planning tool for sustainable water management. There is also a need for increased capacity in rainwater harvesting and other water efficient technologies including managed aquifer recharge, run off capture and water conservation techniques, which promote integrated water resources management to enable farmers to produce and be competitive even under conditions of reduced water availability. Incentives for the development and improved management of water systems also need to be addressed.

Most of the river flow in the country has not been mobilized and the installed capacity for storage of water is quite limited. In the USA or Australia the installed water storage capacity is more than 5,000 m3 per capita. Nothing demonstrates the important role of water control infrastructure more than the sheer scale of investment on such infrastructure by the rich countries. For example, in Japan, heavy investment in water control infrastructure since the 1970s has reduced annual economic losses due to floods from 20% of GNI, to less than 0.5%. In both the developed world and developing countries, investments on infrastructure to harness water for agriculture have led to tremendous positive impacts in the creation of wealth and improvement of food security. Furthermore, experience from both rich and developing countries shows that, apart from securing water supply, infrastructure plays a major role in protecting people and their properties against the vagaries of floods and drought.

Two other important emerging issues that need to be addressed are water pollution and water reuse and recycling. In the case of water pollution, land based sources of pollution, for example from agricultural activities, have implications for the pollution of groundwater supplies as well as coastal ecosystems in Small Island Developing States. By extension, the destruction of the coastal ecosystems could adversely affect the livelihoods of coastal communities (for example fisher-folk) and the tourism industry. Water reuse and recycling in agriculture are often applied in water management of golf courses but not widely used in other areas of agriculture. In situations of water scarcity for example with climate change, in may be considered among the adaptation strategies which can be used by farmers.

Key issues in respect of water resource development and management, water distribution systems and farmers' access to water in Jamaica are:

- Preparation of a national water policy based on an assessment of available water resources, and including allocation strategies which view food/agricultural production as an important economic sector.
- Development of a national water information system to provide reliable data to assess the available water supply and promote sustainable use of the resource.
- Improving the availability and productivity of water at farm level through a strategic mix of irrigation systems development, integrated Agricultural Water Management (AWM) approaches and water management technologies in both rain fed and irrigated agriculture;
- Enhancing economic benefits while containing environmental impacts at local, watershed basin or national levels, as a result of increased use of innovations and technologies for enhancing the farm level productivity of water in the upper catchments;
- Improving incentives (such as trade) and governance mechanisms to bring about beneficial uses and management of water in the upper catchments while maintaining or improving water availability for downstream or ecosystem needs;
- Combining indigenous knowledge with cutting edge information technologies to develop the most appropriate decision support tools for different stakeholders (including individual resource users) to improve planning for sustainable use of water; and,
- In-building adaptation to climate change in all agricultural and water development strategies and programmes.

**Stability of Food Supplies**

**Climate Change** Jamaica, being a Small Island Developing State (SIDS), is among the most vulnerable to the effects of climate change. Major sectors, such as agriculture and tourism,

will be devastated by the impacts of climate change, which may affect the country in the following areas:

i. Sea level rise. The majority of the population is located along the coast which is low lying and therefore extremely vulnerable to sea level rise. Rising seas may inundate coastal areas destroying human settlements and tourist facilities thereby adversely affecting the resources required to sustain economies;
ii. Coral bleaching resulting from increased temperatures will have deleterious effects on the tourism industry, the economic base of many of the islands;
iii. Increased rainfall and drought will have serious implications for water availability and accessibility, impacting on the agricultural sector, public health and tourism. Increased rainfall will increase the probability of flooding especially in low-lying areas;
iv. Increased intensity and frequency of hurricanes. This would require quick recovery times and financial stability to address the costs associated with such disasters and events.

**Natural Disasters** Jamaica's location, geology and geography, make the island prone to several natural hazards such as landslides, hurricanes, floods, droughts and earthquakes. In recent times, Jamaica has experienced an increase in the frequency and intensity of such natural events, primarily floods (related to inclement weather, tropical depressions, tropical storms and hurricanes), droughts and landslides. This has heightened concerns about the impact of climate change, especially given the fact that Jamaica's agriculture is primarily rain-fed. A mere 2.8 per cent of Jamaica's farmlands are irrigated, leaving the remainder to depend exclusively on rainfall. A large proportion of agricultural activities are also concentrated along the coast, which has suffered most of the destruction of life and property from natural hazards over the years (hurricanes, storm surges, coastal flooding, river overflows).

Moreover about 82% of the population lives along the coastline, where the major cities and towns are located, and consequently are highly vulnerable to coastal hazards , the severity of which is exacerbated by situations of high social and economic vulnerability, further aggravated by the effects of climate change. For Jamaica, the most visible impact of climate change has been the increasing vulnerability to severe storms such as Hurricanes Ivan (2004) and Dean (2005) and the increased frequency and intensity of flood events. This creates an inextricable linkage between climate change and food insecurity given the potential of the former to increase the risks faced by countries and vulnerable communities of food supply and income disruptions. Over the past twenty years, climate-related natural hazards have had a significant negative impact on general economic activities, (but especially the export sectors of agriculture and tourism), individual and public property (including infrastructural investments), human welfare and natural resources. These impacts have been conservatively estimated J$105.1 billion.

In addition to the severity of damages caused by natural hazards, the phenomenon of global climate change poses a major threat to the stability of domestic food supplies. The agriculture and fisheries sectors are vulnerable to natural hazards which have significantly damaged the livelihood of producers and dislocation to domestic food supply. Total damage and loss to the agricultural and food processing sectors from floods, tropical storms and hurricanes for the period 2002-2010 amounted to J$23.4 billion, with damage mainly being on crops, livestock, infrastructure, etc. Much of these losses are borne by producers, especially the small and vulnerable and Government, which plays a critical role in the rehabilitation efforts in the sector. It is therefore critical that mitigation strategies be developed to help reduce the impact of natural hazards, and adaptation strategies and programmes be implemented to assist in building resilience to the evolving threat of climate change.

**External shocks** Rising food prices during 2007-2008 and the economic crisis of 2008-2009 have affected all countries, increasing unemployment, reducing income opportunities, tourist arrivals and remittances and decreasing purchasing power with very serious impacts on the poor. In addition to the external economic challenges derived from increasing prices of imports and loss of export demand due to the global recession, Jamaica is also particularly exposed to the ravages of natural disasters (hurricanes, floods and drought). This vulnerability is compounded by a number of structural constraints related simultaneously to size and distance that affect the economic performance of the national agricultural sectors. The data from the latest Jamaica Survey of Living Conditions (SLC) appear to show that these phenomena have significantly increased poverty and malnutrition and the incidence of NCDs.

## Appendix II- Regional Context

### Regional Dimension

CARICOM countries are recognized as Small Island Developing States (SIDS) and Low Lying Coastal States (LCS) by the United Nations. Their special characteristics make these countries particularly vulnerable to food insecurity. The factors and conditions impacting on vulnerability are economic, social and environmental. Economic vulnerability includes, inter alia, the openness of the economies, indicated by volatility of income and the high proportion of total trade (imports plus exports and their limited diversification) in GDP. Social vulnerability takes expression in several forms, including the brain drain, educational performance and health services that have not kept pace with the requirements of a changing region and issues related to crime, unemployment and HIV/AIDS. CARICOM countries are also prone to natural hazards that are frequent and which result in direct losses in terms of deaths and significant damages to property and income generating assets.

Small populations and land masses in the small island CARICOM Member States, as well as distances from other Caribbean countries and trading partners and insufficient strategic planning have tended to reduce the possibilities of exploiting economies of scale. These factors also result in higher import prices for inputs and higher costs of export products, as smaller purchasing and sales volumes increase product, transaction and transportation costs. This situation constrains potential competitiveness. In the last two decades, Caribbean trade balances have been increasingly negative, debt burdens have risen and domestic inflation, high interest rates and low returns to agricultural investment have deterred investment in the agricultural sector.

The discussion on food and nutrition security must always consider the development challenges that CARICOM countries face in terms of their small size, vulnerability to natural disasters and a challenging new economic environment characterized by, inter alia, international competitiveness, loss of preferential markets for traditional agriculture and a rules-based approach to agriculture policy. Income distribution in the region is highly unequal, with some countries among the most unequal in the world. These challenges are further complicated by high international debts in many countries, which divert resources away from government investments, especially social programs, and place severe pressures on the fiscal side of government policy.

In fact, unacceptably high levels of poverty and inequality of income and access to resources occur together with an increasing prevalence of chronic nutrition-related diseases. Nevertheless, although Jamaica's food security may not be compromised by lack of food availability, there are issues related to the declining trend of food production, and increasing trends in favour of imports (and the related expenditure of scarce foreign exchange).

The geopolitical strategy of the major food exporting countries and the emergence of a bio-fuel industry have serious implications for the future supply scenarios in respect of food staples (wheat, corn and soybean) .Commodity projections of food availability and prices suggest a rising trend in the medium to long term. This will have significant impact on small food importing countries like Jamaica. In this connection, it is noteworthy that CARICOM Heads of Government agreed that there is need for a different strategy to achieve a resurgence of the regional agricultural potential and set in train a consultative process that culminated in a meeting of the Forum of Ministers of Agriculture of the Alliance in January 2005, which endorsed the Jagdeo Initiative. This proposal, approved by CARICOM Heads of Government in February 2005, identified a range of key binding constraints, including:

- Limited financing and inadequate levels of new investments;

- Deficient and uncoordinated risk management measures;
- Fragmented and disorganized private sector;
- Inadequate research and development;
- Outdated and inefficient agricultural health and food safety (AHFS) systems; and
- Weak land and water distribution and management systems.

The need for action, through a number of interventions, was summarized under broad themes as:

- Financial, Physical and Institutional Arrangements that underpin the enabling business environment;
- Expanding supply capacity and competitiveness;
- Strengthening of Private Sector Organizations (especially their resource management capabilities for business and trade efficiency) in agriculture, including farmers and commodity associations, as a medium to facilitate, develop and empower entrepreneurial capacity throughout the value chain; and
- Efficient Resource Management, as a prerequisite for economic, social and environmental sustainability.

The key binding constraints, identified by the Jagdeo initiative, have particular relevance for Jamaica. For the lack of domestic agricultural supply response over the recent past can be attributed to the conflicting effects of the various policy instruments employed and shortcomings and deficiencies in the administrative design for implementation. Thus, the positive effect of the fiscal incentives and the sub-sector support programmes has been counterbalanced by the operation of three negative forces: the high bias towards imported products implicit in the import and tariff regime and reflected in the marketing structure; the conflict between the objective of reducing food prices to the consumer while maintaining farm gate prices, without a policy for the value-chain-middle men, processors etc.; and the high level of, and rate of increase in, input prices.

In this regard, there is a range of issues that require close attention and urgent and concerted action across the board:

1. The extent to which trade policy affecting non-agricultural product markets might influence outcomes in agricultural markets needs to be considered in determining trade and tariff policy.
2. How regional commitment to integrated markets might be translated into more significant regional level collaboration among governments and private enterprises within and across different states.
3. The need to pay as much attention to tastes, quality and cultural preferences as to reducing cost (especially through labour saving interventions).
4. Information system development, its spread and use in rural areas need to be improved with urgency. More and relevant information needs to be readily accessible to economic agents. Information Technology needs to be more integrated into rural development approaches.
5. Returns to agriculture are increasingly concentrated at the retail level; this points to the need for more integrated production and distribution systems. Attracting high productivity labour throughout the commodity chain is essential to redressing this factor.
6. The current disconnect between production, trade and investment policies needs to be bridged to avoid negative impacts and implications of trade policies on the productive sectors.

In addressing these issues, four important concerns must be kept in mind:

a. the requirement of an acceptable degree of food security;
b. the need to improve linkages between food retailing, manufacturing and production;
c. the protection of agricultural employment and incomes; and
d. the assurance of adequate soil and environmental conservation measures.

As noted above, national agricultural and rural development policy must be set in the context of a mix of pro-actively linked national and regional policies (National Food Safety Policy, National School Feeding Policy, Dairy Development Policy, Vision 2030-National Development Plan, CARICOM Community Agricultural Policy-CCAP, Common Fisheries Policy-CFP, Caribbean Cooperation in Health-CCH etc.) in support of health and nutrition and domestic food production and allied services at all stages and levels of the value chain. To be effective, these policies require a uniform legal and regulatory environment that guarantees food safety, health, nutrition standards and institutional arrangements for implementation.

Recent events have underscored the importance of safe, secure and nutritious food supplies at reasonable prices for socio-political stability, human development and economic competitiveness. The spectre of climate change and a greater frequency of natural and socioeconomic shocks contribute to the growing interest in and recognition of the value of a joint multi-sector approach to food and nutrition security and the need for national and regional food production and distribution systems that ensure the manifold benefits of stable food availability, food access and appropriate food utilization for good health and nutrition with lower external costs to society and the environment.

These considerations highlight the need for an urgent and coherent national and regional response to the food security and allied public health and nutrition challenges confronted by Jamaica and other CARICOM Member States. They have led to the formulation of the CARICOM Regional Food and Nutrition Security Policy (RFNSP), which was approved by CARICOM Ministers of Agriculture in October 2010. Clearly, a common approach that builds on the comparative advantage of individual Member States will improve availability, accessibility and affordability of food, especially for the most vulnerable. However, a consideration of paramount importance in support of a regional approach and policy for food and nutrition security is that it will enable Member States to secure for their private and public sectors as well as for households and communities throughout the region, benefits and economic externalities that they would be unable to access acting in isolation, and at a lower cost than they would otherwise face.

**The Regional Food and Nutrition Security Policy**

The policy is grounded in the commitments made by Member States in adhering to the Right to Food Convention as well as those made at the World Food Summit in 2009, especially Principle 3: Strive for a comprehensive twin-track approach to food security that consists of: 1) direct action to tackle hunger immediately for the most vulnerable and 2) medium and long-term sustainable agricultural, food security, nutrition and rural development programmes to eliminate the root causes of hunger and poverty, including through the progressive realization of the right to adequate food. It will also enable them to achieve Millennium Development Goal 1, namely, to reduce respectively the proportion and the absolute numbers of people who suffer from hunger and malnutrition by half by 2015 and to measure progress towards its achievement.

The policy is set in the context of a mix of pro-actively linked national and regional policies including the Community Agricultural Policy (CAP), Common Fisheries Policy (CFP), Caribbean Cooperation in Health (CCH), Community Agribusiness Strategy (CAS) in support of health and nutrition, domestic food production and allied services at all stages and levels of

the agri-food supply chain. There are also on-going discussions on Agricultural Risk Management and Crop Insurance Policy and Programmes.

The CARICOM Council for Trade and Economic Development (COTED) acknowledged that regional food security is not the exclusive remit of the agriculture sector and that the resolution of particular problems requires complementary inputs and coordination among different sectors (agriculture, education, health, trade, industry and infrastructure,) and at different levels (household, community, national and regional). They also agreed that the policy should be adopted as the sole, comprehensive and integrated framework for actions to achieve the objectives of adequate availability, access, utilisation and stability of food supplies throughout the Region. The RFNSP has also been accepted by CARICOM's international development partners as the framework to guide their interventions in the field of Food and Nutrition Security in the Region.

The RFNSP established 4 goals:

- Food Availability - Promote the sustainable production, processing, preparation, commercialization and consumption of safe, affordable, nutritious, high quality Caribbean food commodities/products. This concerns food, agricultural, rural, infrastructural development, land use and trade issues.
- 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. Prices, incomes, agricultural public health, food safety and social development issues.
- Food Utilization/Nutritional Adequacy - Improve the nutritional status of the Caribbean population, particularly with respect to NCDs including diabetes, hypertension, overweight and obesity. Healthy lifestyle choices from early childhood-education, health, nutrition and social welfare issues.
- Stability of Food Supply - Improve the resilience of the region's national communities and households to natural and socio-economic crises Information and early warning systems, disaster preparedness and management, and adaptation to climate change issues.

It is clear, given the scope and nature of these goals, that policy and investment actions for their achievement require a holistic approach.

**THE WAY FORWARD**

COTED agreed that the next step in the process would be the preparation of an Action Programme/Plan, giving priority inter alia to the following areas:

1. Promotion of increased availability of regionally produced nutritious food (looking at the whole supply chain from farmer to consumer) at remunerative market prices so as to increase production, productivity and returns to farmers;
2. Identification and mapping of vulnerable groups (who are the food insecure, why are they food insecure and where are they located?) with special emphasis on women, children, the elderly and the physically and mentally handicapped, and establishment of a national and regional database of this information;
3. Removal of non-tariff barriers to trade (SPS-TBT barriers) that increase marketing costs and hinder access to and distribution of food within the Region, as well as the development of strategies to address regional transportation so as to reduce distribution costs and improve the movement of food commodities across the Region;

4. Promotion of healthy Caribbean diets and optimal nutrition to reduce Non-Communicable Diseases (NCDs), obesity and malnutrition, especially at all stages of the education system;

5. Building of resilience to the recurring threats to food security bearing in mind that the Region is prone to the risks posed by climate change and natural disasters, through the establishment of a Regional Information and Early Warning System for Food and Nutrition Security, the construction of risk profiles for the Region's main crops in support of emergency preparedness, agricultural risk management and crop insurance.

The Thirty-Eighth Special Meeting of the COTED (October 2011, Dominica) endorsed the proposed Regional Food and Nutrition Security Action Plan (RFNSAP) and focus is now being placed on its execution. The COTED has endorsed the following recommended steps for immediate action for the implementation of the RFNSAP:

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 - Operationalize 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.

The RFNSP provides an opportunity to reassess and refocus national agricultural development policies, programmes and investments implemented at the national and regional (CCAP, CFP) levels, by introducing the aspects of food access, safety, stability of supply, and nutritional security, health and well-being, viewed from the perspective of the consumer rather than that of the producer, as is normally the rule.

The formulation and implementation of the RFNSP, therefore, seeks to unify and reinforce the various efforts made so far at national and regional levels, providing the Community with an empirically-grounded, feasible and widely supported operational frame of reference for the

achievement of food and nutrition security providing the equilibrium for consumers to access food at affordable prices while producers get a fair price for their products.