

**Caribbean Food and
Nutrition Institute**

2008

Annual Report

Mission Statement

To cooperate technically with member countries*
to strengthen their ability to analyze, manage
and prevent the key nutritional problems and
to enhance the promotion of good nutrition and
healthy lifestyle behaviours.

*The Caribbean Food and Nutrition Institute (CFNI) is a specialized centre of the Pan American Health Organization/World Health organization (PAHO/WHO) serving 18 countries: Anguila, Antigua & Barbuda, Bahamas, Barbados, Belize, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Christopher-Nevis, Saint Lucia, St. Vincent & the Grenadines, Suriname, Trinidad & Tobago and the Turks & Caicos Islands



**To: The Director and Staff of the Pan American Health Organization
and Member Countries of the Caribbean Food and Nutrition
Institute**

I have the honour to submit the Annual Report of the Caribbean Food and Nutrition Institute for the year ending 31 December 2008.

Respectfully yours,

A handwritten signature in black ink, which appears to read "Henry".

Fitzroy J. Henry
Director, CFNI

Contents

Director's Note	v
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PART I: TECHNICAL COOPERATION - REGIONAL

Planning and Policy Formulation

Food and Nutrition Policies and National Plans of Action on Nutrition	1
Food Security	2
Institutional Dietetics	3
PAHO Caribbean HIV/STI Plan for the Health Sector, 2007-2011	5
Food Safety and Quality	6
Food Standards	8

Surveillance/Research

Preventing Diabetes and Other Chronic Diseases through a School-based Behavioural Intervention in Four Caribbean Countries	11
Evaluation of School Meal Options in Trinidad and Tobago	15
Montserrat Food Consumption Survey	16
Survey of Information on Food Labels	16

Human Resource Development

Development of Training Programme for Rural Agricultural Development Agency	17
Nutrition and HIV/AIDS	17
Partnerships/Collaborations/Technical Consultations	21
Major Presentations	23

Promotion and Dissemination

Promotion of Young Child Nutrition	25
Promoting Healthy Lifestyles in Schools	26
Marketing Training for Small-Scale Food Processors	27
Food-based Dietary Guidelines	27
Conference of National Nutrition Coordinators	28
Regional Nutrition Competitions	29
Caribbean Nutrition Day	33
Nutrition Promotion	34
Cajanus and Nyam News	35

PART II: CFNI DEVELOPMENT

Staff Development and Changes	43
Budget and Finance	43
CFNI Building	43
CFNI Transition	43
Information Technology Services	44
Library	44
Material Production Unit	48

ANNEXES

Annex I:	Organization Chart	52
Annex II:	Types of Expenditure as a Percentage of Total Operating Budget 1999-2008	53

Food Price Inflation in the Caribbean

In 2008, the world experienced the climax of the most profound food price inflation in recent history. Commodity prices, particularly food and beverages, dramatically increased in the previous two years, a trend that started as early as 2002. Specific agricultural commodity prices including maize, wheat, rice, dairy products, and meat more than doubled within a few years. The social effect of this food crisis was revealed in street riots in various cities across the globe.

The Caribbean did not escape this worldwide phenomenon. These world price changes have impacted with varying degrees on regional economies. Since 2000, the Consumer Price Index (CPI) has increased by 16-18% (Antigua, Bahamas, Dominica), 22-30% (Belize, Grenada, St. Lucia, St. Vincent and the Grenadines, St. Kitts and Nevis), 59-63% (Trinidad and Tobago, Guyana) and 133-230% (Jamaica, Dominican Republic, Suriname, and Haiti).

Soaring food prices present a crisis which has devastating consequences on nutrition, particularly in children. However, to truly assess the impact of such a crisis, food price increases should be related to the purchasing power of those most vulnerable in society.

CFNI uses the method of 'nutrient cost analysis' to assess the impact of the crisis. The analysis specifies the minimum cost of obtaining a nutritious basket of commodities for a family of given size. This basket of commodities usually reflects foods that are currently available in local markets and with considerations to cultural preferences. Basically, the analysis requires a list of foods; their respective prices; and a computer software to generate the minimum cost-nutritious basket of commodities.

We use this method because:

1. It provides guidance to consumers on how to allocate their food purchases under prevailing food prices while simultaneously meeting minimum nutrition criteria;
2. The cost of the basket of food can be expressed as a proportion of the minimum wage and tracked over time to gauge the purchasing power of low income earners;



3. It can be used in poverty analysis to estimate the number of persons below some given poverty threshold;
4. It can be used as a policy tool (e.g., to set wages) by governments, trade unions and the private sector.

In 2008, estimates from this nutrient cost analysis demonstrated increased vulnerability in almost all Caribbean countries because a larger portion of the minimum wage was required to obtain a balanced diet. With the minimum wage constantly increasing, the data showed that food price inflation had outstripped the minimum wage increase in most countries. This crisis therefore threatened the ability of the poor and vulnerable to cope with nutritional challenges.

Further, poor households that were faced with rising food prices and fixed wages/incomes tended to reduce not only the quantity but also the quality of food-intake. This could lead to undernutrition and thereby reverse the gains made in the past in this area of public health. Moreover, persistent undernutrition contributes not only to widespread failure to meet the first Millennium Development Goal (MDG)—to halve poverty and hunger—but also to meet other goals in maternal and child health, education and gender equity.

This is so because nutrition has crucial roles to play in poverty alleviation and safety net programs; the health sector reform processes; the global food trade issues; and human rights entitlements. Further, undernutrition has an inter-generation transmission effect by affecting children's learning, growth and future-adult earning potentials. The importance of nutrition therefore goes

well beyond the MDG targets and has an even more profound role in health for all and other aspects of national and regional development.

As we strive to meet the challenge of increased food prices, CFNI contends that cheap food is not an end in itself – just the means to an end. That end must be better health and quality of life. We must not dig a hole to fill a hole. The current food price rise should lead us to develop policies that consider domestic production, imports and the health consequences of the resulting available/accessible food. The importance of a health-oriented food policy was recognized since 1996 in The Bahamas Declaration of our region's Ministers of Agriculture that "Food and nutritional security in the Caribbean is also related to chronic nutritional life style diseases [NCDs] such as obesity, stroke and heart attack". This emphasized that health should be a driving force in efforts to attain food security.

As the year 2008 ended, the world moved from the crisis of high food prices towards another crisis, equally profound, of a global economic recession. These successive crises could have major inter-generational effects on the nutrition of children if not mitigated. Lessons learned from preserving nutrition during one crisis, could be invaluable for those which inevitably will follow. Let us use the responses to these crises wisely.

Dr. Fitzroy Henry
Director, CFNI

Part I:

Technical Cooperation - Regional

What We Do



Planning and Policy Formulation

Food and Nutrition Policies and National Plans of Action on Nutrition

CFNI provides technical assistance to member countries to develop their food and nutrition policies and national plans of action on nutrition. These policies are established by governments to meet the countries' critical food and nutrition goals. The National Plans of Action on Nutrition (NPAN) are the vehicles for the operationalization of the food and nutrition policies. These policies are of particular value to the countries, because they contain policy statements about ensuring adequate supply of, and accessibility to safe and nutri-

tious foods for all members of the countries' population, and the strategies and programmes to achieve these objectives. The policies and national plans of action on nutrition draw attention to the inter-relationship between food, nutrition and health, and the need for a multi-sectoral approach to address the key food and related nutrition and health issues in a coordinated manner. Thus, although the thrust of the policies is to achieve identifiable food and nutrition objectives, they also seek policy coherence and synergies with other sectors of the economy. This is especially important for the region where, inter alia (i) Nutrition-related chronic diseases are the main burden to the health sector; (ii) Dietary habits have changed and mirror typical diets of developed countries;

Status of National Food and Nutrition Policies and Plans of Action for Nutrition in CFNI Member Countries

Country	Current Food and Nutrition Policies and Plans of Action	Status*	National Food and Nutrition Security Councils/Food and Nutrition Councils/Committees
Anguilla	✓	submitted	×
Antigua	✓	3	×
Bahamas	✓	3	×
Barbados	×	5	×
Belize	✓	1	✓
British Virgin Islands	✓	1	✓ (awaiting the list of representatives)
Cayman Islands	×	6	×
Dominica	✓	3	✓
Grenada	✓	3	✓
Guyana	×	6	×
Jamaica	×	4	×
Montserrat	✓	2008	×
St. Kitts and Nevis	✓	2 (since 2004)	×
St. Lucia	×	5	×
St. Vincent and the Grenadines	✓	1	✓
Suriname	×	6	×
Trinidad and Tobago	✓ (being revised)	4	×
Turks and Caicos Islands	✓ (awaiting acceptance from Cabinet)	2 (2008)	×

- *1 – Accepted by Cabinet/Executive Council
- *2 – Submitted to Permanent Secretary for submission to Cabinet/Executive Council
- *3 – Final document being collated
- *4 – Policy and Plan of Action being developed/revised
- *5 – Request made but no action to date
- *6 – No request for the revision or development of national policies

(iii) Anaemia still affects children and lactating mothers; (iv) Under-nutrition and obesity co-exist, reflecting a maldistribution of food supplies; and (v) Some of the changes arising from globalization and liberalization can compromise food security.

Food Security

In 2008 rapid increases in food and commodity prices threatened to erode gains made in the past to reduce poverty, malnutrition and food insecurity in the region. Against this background, CFNI took a leadership role in engaging regional and international agencies to address this issue as a matter of public policy and to find appropriate responses to secure gains made in the past in public health and nutrition. In this regard, the Institute partnered with the Food and Agriculture Organization (FAO) to organize a Symposium on Food Security in the Caribbean: Risks and Responses, on November 25-27, 2008 in St. Kitts and Nevis. Other agencies that participated in the symposium included the Inter-American Institute for Cooperation on Agriculture (IICA), the Caribbean Agriculture Research Institute (CARDI), the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), the University of the West Indies (UWI) and the CARICOM Secretariat. The objectives of the symposium were to:

- Analyze the implications of the current food price inflation on food security in the Caribbean.
- Analyze the challenges of achieving food security in the Region.
- Assess and evaluate the measures adopted by regional agencies to combat soaring food prices and reduce vulnerability to food insecurity.
- Articulate policies and practical approaches to positively influence food security.
- Agree on a strategy for partnerships towards preparing country and community level plans of actions to assist populations most vulnerable to food insecurity in the OECS.

Over forty persons attended the Symposium. The main keynote speaker was The Honorable Sam Condor, Deputy Prime Minister, St. Kitts and Nevis. He discussed the urgency of finding solutions to rising food prices and pointed to the increasingly significant role that regional agriculture must play to

provide food and livelihoods for the peoples in the Caribbean. Other presenters included Dr. Fitzroy Henry, Director, CFNI, Mr. Hesdie Grauwdie, Agriculture Policy Analyst, FAO and Dr. Ranjit Singh, Lecturer, UWI, Mona Campus. The presenters provided information on the effects of rising food prices on food purchases as well as the opportunities for policy action to address these rising prices within the current policy regime. Specific points emphasized by presenters at the workshop included:

- Response programmes to crises emanating from natural disasters and the newest sources, viz., rising food and fuel prices, and financial melt-down, must be robust, with strong nutritional components targeting the most vulnerable to withstand setbacks resulting from crises;
- World inflationary tendency, reallocation of resources for bio-fuel production and food shortages have adversely affected regional and household food security. This situation requires fostering anti-inflationary policies, promoting domestic food production and implementing social programmes;
- Improving competitiveness is critical to advancing food security in the region. Four priority areas for increasing competitiveness were identified:
 - building a strong science and technology support for agriculture
 - providing critical public infrastructure
 - facilitating efficient markets; and
 - providing more effective farmer/entrepreneur training and business support.

The conference also provided an opportunity for the national nutrition coordinators to share and discuss their respective country's responses to the recent food-price crisis and their experiences with developing and implementing food based dietary guidelines. Initiatives taken by countries included: reduced import tariffs and taxes on food; subsidies on certain food items and fertilizers; price controls; increased investment in agriculture; school meal programmes; targeted assistance to vulnerable groups; and the promotion of backyard/container gardening.

Finally, the conference participants worked on a position paper on a list of prioritized food items to

meet nutritional requirements which are essential for Caribbean people. This paper will be developed and transmitted to the CARICOM Secretariat.

Evaluation of Jamaica's Basic Cost Food Basket

CFNI was requested by the Planning Institute of Jamaica to undertake a review of the Basic Food Basket that is used in the calculation of the Poverty Line. The Institute was asked specifically to:

1. Review patterns of food expenditure (1997-2007) from the Survey of Living Conditions for the poorest two quintiles bearing nutrition in mind.
2. Analyze Jamaica's Basic Food Basket in terms of cost and acceptable nutritional criteria.
3. Compute the cost of an "ideal" basic food basket for low income persons based on acceptable nutritional criteria and in tandem with cultural/expenditure practices/patterns.
4. Provide recommendations for a revised Jamaica Basic Food Basket for low income persons based on acceptable nutritional criteria and prevailing health concerns in Jamaica.

During 2008, work began on this project with a review to the nutritional content of the current basket and computation of its cost. Work was also done on the definition of an "ideal basket" and comparisons made with the current basket. The activities will be completed during the first quarter of 2009.

World Food Day

The Institute is represented on, and actively engages in planning the activities of the World Food Day Committee in Jamaica. The Food and Agriculture Organization (Jamaica office) chairs the Committee. The theme of World Food Day, 16 October 2008, was "World Food Security: The Challenge of Climate Change and Bioenergy" and an exposition was held in 2008 at the Manchester High School, Mandeville. CFNI had a booth at the venue focusing on the theme, with special emphasis on food and nutrition security.

Institutional Dietetics

Institutional dietetics is an important public health strategy in the region to promote and address health issues in the context where people live and work. Institutions provide a captive audience of persons that can be targeted collectively through the creation of conducive environments and supportive settings. In addition, through primordial and primary care health promotion strategies, vulnerable individuals may be identified and appropriate intervention provided with minimal or no interruptions to daily lives.

CFNI continued to provide technical support to its member countries in this programme area in this biennium (2008-2009) with emphasis on establishing and disseminating sub-regional standards for core aspects of institutional dietetic services, supporting the assessment of these services in member countries and increasing human resource capacity to ensure the delivery of relevant standardize services appropriate across Caribbean countries and within the capacity available in individual states.

While many CFNI member countries seem to have an appreciation for the importance and need for appropriate services in institutions targeting persons at varying stages of the life cycle, their efforts still require technical expertise and resources that are either limited or lacking at a country level. CFNI, under its mission to support member states in managing and preventing key nutritional problems, especially for vulnerable groups, continued in 2008 to respond to the technical cooperation requests of several countries to provide technical assistance with various activities to improve or strengthen dietetic services in institutions such as schools, hospitals, and children and senior citizen homes. The main activities for which assistance were requested included:

1. Preparation of nutrient and meal standards.
2. Assessment of institutional nutrition programme.
3. Standards for institutional nutrition and dietetic services.
4. Training of dietary staff.

Preparation of Nutrient and Meal Standards

The provision of nutritionally well balanced meals for residents, inmates or clientele of institutions represents both an opportunity and responsibility for member states. It is a responsibility specifically for vulnerable persons for whom access to nutritional adequate meals may be only while at the institution. Additionally it serves as an opportunity to ensure that the general public have access to meals where they live and work without increasing their risk for developing nutrition-related disorders associated with indiscriminate food intake. Establishing nutrient standards is the ultimate tool in implementing the policy of serving nutritionally adequate meals in institutions as well as for determining and allocating resources. In support of member states achieving this goal, the Institute recommends a 12-step systematic process (as a sub-regional standard) that includes the:

1. Collection of patient profile data.
2. Determination of reference patient profile.
3. Establishment of reference nutrient standard.
4. Distribution of nutrient in meal plan based on meals provided by institution.
5. Use of meal plan to establish meal standard.
6. Conversion of meal standards to menus.
7. Expansion of menus to include various target groups for age and medical condition where appropriate.
8. Use of meals standard and menus to prepare standard recipes.
9. Compilation of standard recipes into menus and meal manuals as standard production procedures.
10. Preparation of procurement lists for production of recipes.
11. Determination of equipment needs.
12. Identification of supporting resources to implement the standard meals.

In 2008, five countries were assisted with different aspects of this process. Details of the procedure were disseminated by CFNI at the Nutrition Conference hosted by the Early Childhood

Commission as applied to the development of nutrient and meals standards for early childhood institutions in a pilot test conducted in St Mary, Jamaica. In addition, Jamaica collected patient profile data from selected children's homes to initiate the preparation of nutrient and meal standards for these institutions. CFNI supported the analysis of these data to determine a reference profile and establish reference nutrient standards. Montserrat initiated the documentation of country-specific nutrient and meal standards for the Glendon Hospital with information related to steps 1-7. The drafted sections of this document were reviewed by CFNI and continue to be updated in country. Anguilla continued the collection of patient profile data from previous years towards their preparation of country-specific meal standards for the patient population at the hospital. Guyana continued to work on developing and implementing a system to generate and support the collection of patient profile data to embark on this process. The dietitian in Grenada provided a dataset that was reviewed and recommendation given by CFNI on the collection of missing variables required to generate country-specific patient profile data and determine reference nutrient standards.

Assessment of Institutional Meal Services

Three countries – Grenada, the British Virgin Islands and Trinidad and Tobago – sought assistance with assessment of various aspects of meals/meal service provided in schools. To this end, meetings were held with a multidisciplinary planning committee in Grenada to prepare a work plan, determine resource needs and set a timeline for the evaluation of the school meals and feeding programme in Grenada. CFNI also conducted preliminary visits of 10 schools in Grenada to gather background information on the operation of the programme as a guide to planning and conducting the evaluation. Plans proposed from the committee meetings are under discussion in country and will be executed with CFNI assistance as requested. The British Virgin Islands also held meetings to initiate an assessment of the access of meals by students and plan for improved provisions of healthy meal options to schoolchildren. Trinidad and Tobago embarked on a national assessment of their school meals options available to students.

Standards for Institutional Nutrition and Dietetic Services

Two countries, Barbados and Jamaica, worked on the preparation of guidelines to standardize meal service in schools and administrative and clinical dietetic services in health care services respectively.

Barbados expressed an interest in developing standard guidelines for the provision of meals in schools. CFNI provided background information towards the drafting of these standards in Barbados and will review the prepared guidelines slated for completion in 2009.

Jamaica initiated the preparation of standards of care for the assessment of nutritional status and nutritional management of its main medical conditions as well as the implementation of core foodservice systems through primary and secondary care institutions. Twelve standards were drafted in 2008 by a team of dietetics and nutrition experts in Jamaica supported by technical expertise on a standards development process by CFNI. These standards are being compiled into a document that will undergo a process of testing, revision and dissemination in 2009.

Training Plan and Guide

Since 2005, CFNI developed a three level/module training course to equip foodservice supervisors involved in planning for and delivery of institutional nutritional and dietetic services. This training package is being promoted in this biennium as the sub-regional standard of minimum competence for employees of institutional foodservice operations. The package consists of a course guide for training of foodservice supervisors (and workers) for institutional foodservice operations as well as the tutors and participants manuals for each module in draft (final) format:

1. *General Nutrition for Institutions* – Minimum training proposed for all persons involved in the foodservice in institutions (hospitals, schools, prisons, homes – children, elderly, early childhood institutions, employee cafeterias).
2. *Principles and Processes of Foodservice Subsystem* – Training in minimum procedures for operation of

foodservice subsystems for persons working at levels of cooks and above in foodservice institutions.

3. *Supervising Foodservice Operations* – Training in resource management for head cooks and foodservice supervisors involved in planning for and guiding the use of resources in institutional foodservice operations.

While many countries have expressed interest in having persons in varying institutions trained according to the proposed standard, to date the logistics to operate a regional course have been futile. The main obstacles include collaborating with an academic institution in one country to undertake the training using a strategy that can include participants from other countries, most of which do not have the number of participants, financial or technical resources to conduct training in country.

Resultant to the assessment of the hospital dietetic services conducted previously, Anguilla embarked on planning and implementing a training programme for its dietary staff. As requested, CFNI provided these draft course guidelines and training materials in its draft form to support standardization of the competence and skills. Levels 1 and 2 materials were requested by the country. These materials were provided by CFNI and are currently being used by local personnel to carry out the training in country.

PAHO Caribbean HIV/STI Plan for the Health Sector, 2007 to 2011

CFNI participated in the review and submitted comments for consideration in finalization of the PAHO Caribbean HIV/STI Plan for the Health Sector, 2007 to 2011. This Plan is aligned with the overall strategies and targets endorsed by Caribbean Governments under the broader Regional HIV/STI Plan for the Health Sector, 2006–2015 for Latin America and the Caribbean. CFNI was designated as the “lead” institution for the nutrition component and a collaborator for some other aspects of this Plan and was expected to participate in the revision and updating of guidelines particularly from the nutrition perspective.

Food Safety and Quality

The food safety activities at the Institute were strengthened to include additional components of the food supply system with the relocation of the Sub-regional Veterinary Public Health Advisor from the Office of Caribbean Programme Coordination (OCPC) to the Institute in May 2008. The food safety emphasis was expanded to include:

- Supporting the development of early warning signs in food preparation and rapid response to emergencies.
- Providing support for the strengthening of the PAHO Food Safety programme in surveillance, control and prevention of food-borne disease.
- Strengthening alliances and leadership in food safety through enhanced collaboration with other sub-regional, regional and international institutions and organizations.

Development of Early Warning Signs

The Institute recognized the importance of the functions and responsibilities of the national authorities whether from Ministries with responsibilities for agriculture, health and trade, to the success in the food safety programme, by having early warning signs put in place. However, it was further noted that in the member states, there remained fragmentation in the delivery of the programme. Efforts were made to encourage the member states to reduce this fragmentation in order to facilitate greater efficiency and effective delivery of the programme.

The comparative advantage of its food safety programmes at CFNI positioned PAHO to serve the Caribbean as a clearing house for the dissemination of information; to provide overall support for capacity building (training, diagnostics, policy development, modernization of the legislative framework); and to help in finding solutions to food safety problems. Therefore, during 2008, CFNI began mobilizing resources in keeping with the current sub-regional work plan of PAHO for the biennium 2008/2009, and in accordance with the Strategic Objectives, particularly Strategic Objective 9, that is aimed at improving “nutrition, food safety and food security throughout

the life-course, and in support of public health and sustainable development”. The objective has been to work with the sub-regional partners to allow member states to attain the level of competence and capability to meet their national requirements. This was deemed critically important, as many of these countries, particularly the Small Island States in the English-speaking Caribbean do not have the absorptive capacity in-country to meet all the national requirements. Therefore, in light of the emerging food-borne diseases and zoonoses as well as the challenges brought on by the new International Health Regulations (IHR), attempts were made to mobilize resources and develop a strengthened alliance.

Supporting the Strengthening of Surveillance in Food

CFNI and the Pan American Center for Foot-and-Mouth Disease (PANAFTOSA), conducted a joint review of the Caribbean Epidemiology Center (CAREC), another of the Collaborating Centers of PAHO/WHO in the Caribbean Sub-region, during the period 2 – 5 September 2008, resulting in the following observations:

- Based on the findings, the food-borne disease (FBD) activities and strategies at CAREC, linked to epidemiology and surveillance, have been running effectively, working towards achieving established goals, and staying consistent with the WHO global strategy for Food Safety.
- A majority of Caribbean countries assessed by CAREC had reported using the skills they acquired through the support of the CAREC activities.
- The evaluation showed that CAREC has been playing a critical role in the FBD prevention and control activities in the sub-region with emphasis on laboratory capacity building and FBD epidemiology and surveillance, mentioned above.

It was further recommended that:

1. The FBD prevention and control programme at CAREC should remain as an important component of technical cooperation for the sub-regional food safety programme.
2. The existing technical capacity at CAREC should continue to provide for a well designed integrated

approach to the epidemiology and laboratory-based surveillance of FBDs.

3. Given the successes of the CAREC FBD activities, it would be imperative to establish greater partnerships and networking with the respective PAHO Country Representatives in the Caribbean, so that where necessary, those representatives could become more involved in providing advocacy at the country level, and in achieving greater sustainability in the country programmes.

Strengthening Alliances and Leadership

The Sub-regional initiatives for food safety were pursued by CFNI in a spirit of partnership in the following manner:

1. Provision of advocacy to support decision-making at the political and administrative levels, by acting as a clearing house for the development of the sub-regional food safety programme in accordance with the relevant strategic objective for food safety and food security as enunciated by PAHO in the food safety programme of the Commission on Food Safety (COPAIA). Efforts were made to establish greater alliances with other international and sub-regional partners – the Food and Agriculture Organization (FAO), the Inter-American Institute for Cooperation in Agriculture (IICA), the World Organization for Animal Health and the CARICOM Secretariat, among others such as the Centre for International Research and Agricultural Development (CIRAD) located in Guadeloupe, the University of the West Indies, etc.
2. Specifically, the strengthening of partnership was encouraged among all PAHO entities that serve the Caribbean sub-region – CAREC, PANAFTOSA and the Caribbean Environmental Health Institute (CEHI).

Specifically, there was heightened alliance with the School of Veterinary Medicine, Faculty of Medical Sciences, University of the West Indies, St Augustine. This was aimed at obtaining evidence regarding the manpower needs of the sub-region with regard to food safety and animal health issues. A questionnaire was designed and distributed to chief veterinary

officers and presidents of national veterinary associations to obtain data on human resource availability and gaps. The analysis revealed the following:

- (i) There is an urgent need for a general restructuring of national veterinary and public health services in the Caribbean to establish modern entities capable of carrying out their food safety mandate for protecting animal health, facilitating trade, enhancing environmental health, producing and preparing safe foods for public consumption and for the overall advancement of public health.
- (ii) There is an acute shortage of well trained technical staff as well as inadequate appropriate equipment and materials and overall facilities. These are compounded by existing out-dated regulatory systems and legislation. This causes the national services in their current state to be incapable of delivering quality, timely and cost-effective services.
- (iii) An absence of national animal health and food safety policies resulting in mainly oral conceptual views as to the mission, objectives and activities of the services provided. The absence of policies has prevented the services from undertaking their functions in a rational manner and instead allows for an adhoc approach based on crisis management.
- (iv) An apparent lack of adequate public and private sector cooperation and inter-sectoral collaboration which in modern times is deemed to be critical in the mobilization of social, economic, as well as, political will to undertake such services.
- (v) A notable lack of veterinary public health inputs into the animal health services in the vast majority of the countries mainly due to the absence of a cadre of duly trained and qualified veterinary public health personnel. This is reflective of possible budgetary constraints, a lack of inter-sectoral collaboration and inadequate manifestation of political will.
- (vi) There was an urgent need for revisiting the issue of the establishment or strengthening of veterinary public health programmes in all the countries of the sub-region.
- (vii) A unanimous endorsement for conducting a forum of experts to deal with issues related to the Animal-Human interface.

Food Labelling

Food labelling received some emphasis as it was deemed to be an important component in food safety initiatives. The use of food labels in helping consumers to make wise food choices is even more important in the current climate of high food prices and increasing levels of obesity and chronic nutrition-related diseases. In 2008, CFNI initiated a study of the information on food labels available to consumers in Jamaica and in Trinidad and Tobago. Major supermarkets in the two countries were visited and data collected about information printed on the labels of foods according to category. Analysis of the data will be used to enable the development of policies and educational tools and programmes for the Caribbean consumers.

During the period, 26-28 May 2008, the Caribbean Food and Nutrition Institute conducted a technical workshop at the Ministry of Infrastructure, Communication, Utility and Housing (MICUH), Anguilla. The title of the workshop was *"Marketing Value-Added Products from Fruits and Vegetables for Small-Scale Food Processors in Anguilla"*.

Dietary Supplements

The use of dietary supplements has been on the increase worldwide and has become a billion dollar business. The items marketed under this title range from vitamins and minerals to various botanicals, and may even be expanded to include a variety of energy drinks. Among the problems which frequently arise are use of unproven or even dangerous ingredients, spurious health claims and insufficient or inaccurate labelling. Notwithstanding the health and safety issue,

the manufacture and sale of these products continue without proper regulatory monitoring by some governments. Even as the governments of the different countries now explore ways of regulating this growing industry, consumers must also recognize they also have a part to play in protecting their health. CFNI is currently preparing a Caribbean guide to regulation and use of these products. The guide will include information about the range of supplements available, health effects of selected supplements, interactions with foods and drugs, labelling and claims.

Food Standards

In the current climate of increasing international trade and influx of new foods into the region, while at the same time the countries of region strive to increase exports, the safety and quality of food remains a concern. CFNI has continued to assist member countries in setting and adhering to standards.

CFNI is a member of several committees of Jamaica's Bureau of Standards which have, over the past year worked on developing or reviewing standards for:

- Labelling of pre-packaged foods
- Starch (including derivatives and by-products)
- Ketchup
- Labelling of aerosol insecticides.

CFNI is a member of the National Codex Committee and the Jamaica Standards Network and also maintains representation on the Food Advisory Committee in Trinidad and Tobago which also develops and reviews national and regional food standards.

Summary of Technical Cooperation Requests and Outcome Indicators by Country for 2009

Country	Areas of Assistance Needed in 2009
Anguilla	<ul style="list-style-type: none">• Anaemia Prevention and Management• Young Child Nutrition• Food and Nutrition Policy• Institutional dietetics
Antigua	<ul style="list-style-type: none">• Young Child Nutrition• Food Based Dietary Guidelines• Food and Nutrition Policy• Institutional Dietetics Services
Bahamas	<ul style="list-style-type: none">• Food and Nutrition Policy• Nutrient Cost

Country	Areas of Assistance Needed in 2009
Barbados	<ul style="list-style-type: none"> • Young Child Nutrition • Institutional Dietetics Services • School Feeding • Nutrient Cost Analysis
Belize	<ul style="list-style-type: none"> • Food Based Dietary Guidelines • Food and Nutrition Security Commission • Institutional Dietetics • Human Resources Development
British Virgin Islands	<ul style="list-style-type: none"> • Young Child Nutrition • Project Lifestyle • National Food and Nutrition Policy • Assessment of School Meals • Institutional Dietetics
Cayman Islands	<ul style="list-style-type: none"> • Diabetes Education • Food Consumption Survey
Dominica	<ul style="list-style-type: none"> • Young Child Nutrition • Food Based Dietary Guidelines • Food and Nutrition Policy • Food and Nutrition Council • Anaemia Prevention and Survey
Grenada	<ul style="list-style-type: none"> • Young Child Nutrition/Communication • Food and Nutrition Surveillance Systems • Nutrient Cost Analysis • School Feeding Evaluation • Healthy Lifestyle in Schools
Guyana	<ul style="list-style-type: none"> • Anaemia Prevention and Management • Young Child Nutrition • Food and Nutrition Surveillance Systems • Institutional Dietetic Services
Jamaica	<ul style="list-style-type: none"> • Food Based Dietary Guidelines • Young Child Nutrition • Chronic Diseases • Institutional Dietetics • Human Resource Development in Nutrition and Dietetics • Food Safety • Nutrient Cost • Food Security • Food and Nutrition Policy

Country	Areas of Assistance Needed in 2009
Montserrat	<ul style="list-style-type: none"> • Young Child Nutrition • Adolescent Nutrition • Food Based Dietary Guidelines • Food and Nutrition Policy • Chronic Diseases • Institutional Dietetics • Food Consumption Survey • Evaluation of School Meals
St. Kitts	<ul style="list-style-type: none"> • Young Child Nutrition • Food Based Dietary Guidelines • Food and Nutrition Surveillance Systems • Development of Educational material and messages
St. Lucia	<ul style="list-style-type: none"> • Young Child Nutrition • Adolescent Nutrition • Food and Nutrition Surveillance Systems • Nutrient Cost Analysis • Food and Nutrition Policy
St. Vincent	<ul style="list-style-type: none"> • Young Child Nutrition • Food Based Dietary Guidelines • Prevention of NCDs and Promotion of Healthy Lifestyles • Institutional Dietetic Services • HIV & Nutrition • School Feeding • Food Consumption Survey • Nutrient Cost Analysis
Trinidad & Tobago	<ul style="list-style-type: none"> • Young Child Nutrition • Non-Communicable Diseases • Human Resource Development • School Meals Evaluation Project • Food and Nutrition Policy • Food Security • Institutional Dietetics • Healthy Lifestyle in Schools
Turks & Caicos Islands	<ul style="list-style-type: none"> • Food and Nutrition Council • HIV & Nutrition

Surveillance/Research

Preventing Diabetes and Other Chronic Diseases Through a School-based Behavioural Intervention in Four Caribbean Countries

As part of the ongoing efforts to reduce the incidence of obesity and the related diseases, CFNI embarked on a project entitled “Preventing Diabetes and other Chronic Diseases through a School-based Behavioural intervention in Four Caribbean Countries”. The project is partially funded by the World Diabetes Foundation and will be conducted over the period 2007 - 2011 in St. Kitts and Nevis, Trinidad and Tobago, Grenada and St. Vincent and the Grenadines. The project targets a cohort of students in Grade 7 (Form 1) who will be followed through to Grades 8 and 9 (Forms 2 and 3) for three years. Two schools will serve as intervention schools and two as control schools.

The overall goal of the project is to improve the nutrition and health status of children in schools in four countries of the Caribbean. The Project will promote the adoption of healthy lifestyle behaviours in children in selected schools specifically as it relates to the

improvement of their dietary habits and physical activity patterns. It will focus on instilling knowledge, skills and providing motivation for adopting these positive behaviours. More specifically the project will:

1. Evaluate the effectiveness of the intervention to improve diet and physical activity behaviours in schoolchildren.
2. Improve the diet and physical activity patterns among schoolchildren.

The project's behavioural components are shown in Figure 1. The project has four phases:

Phase 1 - Problem assessment and awareness raising.

Phase 2 - Development of programme materials and training of project teachers.

Phase 3 - Implementation of a lifestyle intervention through classroom teaching, building support in the school and home environments.

Phase 4 - Evaluation of the intervention.

During 2008, Component 1 was well developed. For Component 2, one Promotional Day (World Diabetes Day) was observed with a variety of school activities. Activities from Trinidad and Tobago shown in Figures 2, 3, and 4.

Figure 1: WDF School-based Project – Behavioural Components

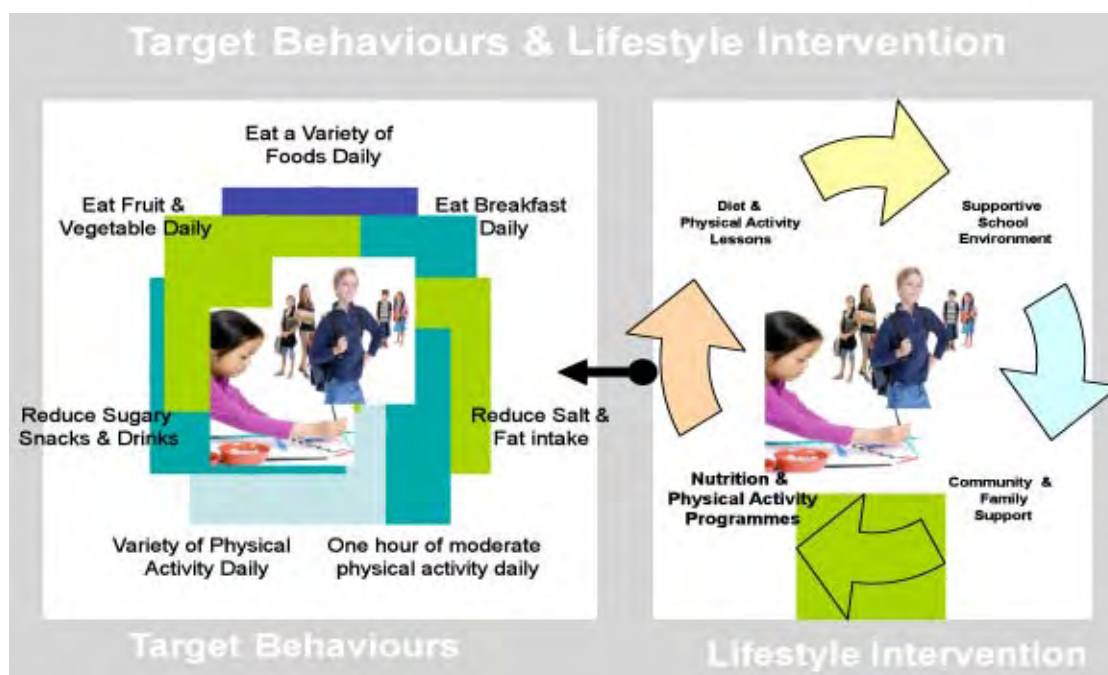


Figure 2: Home Gardening Project – Ministry of Agriculture, Land and Marine Resources (Trinidad)



Figure 3: Nutrition Table World Food Day (Trinidad)



Figure 4: Special PTA Meeting and DVD "No Child Should Die of Diabetes" Video Playing (Trinidad)



In 2008, Phase I was completed. During the phase, sensitizations were done with key Ministry of Education personnel and other stakeholders to give feedback on the Needs Assessment Survey done in 2007 and to give more concrete details of the implementation. The sensitization also served to gain renewed commitment to the collaborative process.

Most of 2008 was devoted to the development of materials for classroom teaching and in-service teacher training (Phase II). Country Co-ordinators were oriented via the UWIDEC system to equip them for the in-country co-ordination of the implementation.

For the classroom teaching, lessons were developed for teaching over the three school terms. Support materials such as charts, posters, CDs and worksheets were also developed. The materials were pre-tested, finalized and used in five-day in-service teacher training sessions which were conducted in all countries to prepare teachers to deliver the lessons.

Trained data collectors collected the baseline data on the students following which the implementation of the project (Phase III) commenced.

The students completed a self-administered questionnaire; measurements of weights and heights were taken; and fitness assessment of all students in Form 1/Grade 7 conducted in the 2 intervention schools of all four countries. Data entry has been completed and data analysis will begin in 2009.

Physical Activity - Adolescents

A needs assessment on physical activity among adolescent schoolchildren was carried out to identify and assess factors affecting physical activity patterns among this target group. Both quantitative and qualitative data were used in the analysis. The quantitative data were drawn from four cross-sectional surveys with an overall sample size of 2,643 students from grades 7 -9 (Forms 1-3) and 257 teachers from 18 secondary schools in Grenada, St Kitts and Nevis, St Vincent and the Grenadines, and Trinidad and Tobago. Schools were selected from both urban and rural communities within each country. Additional information on perceptions and practices were gleaned from six focus group discussions with students in similar grades in two schools in Jamaica. Sixty-eight students participated in the discussions. In-depth interviews were also conducted with physical education teachers. Some of the key findings are summarized below.

Participants in Teacher Sensitization at Thomas Saunders Secondary School,
St. Vincent and the Grenadines



Curriculum Review Workshop, Trinidad and Tobago



Teacher Training in St. Vincent and the Grenadines



Teacher Training in Tobago



Physical Activity Patterns

When asked about frequency of participation in a number of selected activities during the past week, 84.6% of students reported engaging in at least one type of physical activity on a daily basis during the previous week. The activity that most (57%) students participated in on a daily basis was household chores followed by walking (41.7%). Gender differences in daily participation were observed: males were more likely to do daily stretching or strengthening exercises, swimming, and cycling; females were more likely to do dancing and household chores daily. More females participated daily in sedentary activities such as watching TV/playing video or computer games, and sitting at home reading.

Participants at the WDF Data Collectors' Training in Trinidad and Tobago 25-26, 29 September 2008



Participants at the Data Collectors' Training in Trinidad and Tobago 25-26, 29 September 2008



Attitudes and Views Towards Physical Activity

More than 80% of students in each country reported that they enjoyed physical education (PE) at school. The most common reasons for enjoying PE were that they thought it helped to strengthen their bodies and/or kept them fit, or regarded it as fun or enjoyable. Less than 3% of the students mentioned its role in weight management. Generally, students who did not enjoy PE thought that either the classes were "boring" or the activities were "too hard" or "tiring".

Overall, 96% of students agreed that exercising daily was good for them, with approximately 75% thinking that it would be enjoyable. Male students (81.1%) were more likely to believe that daily exercise would be enjoyable than female students (71.1%). The younger students in Form 1 (80.4%) were more likely to believe that exercising daily was enjoyable than Forms 2 (74.1%) or 3 (71.2%).

Although the majority of the students were aware of the benefits of daily exercise, about one-third thought that this was only necessary for those who wanted to lose weight.

Social Influences

Less than one-quarter of students (23.1%) agreed that most of their friends were active on most days of the week, with males (30.9%) being more likely to agree than females (18%). Less than one-half (41.2%) reported that their friends encouraged them to be more physically active. Overall, males (44.8%) were more likely than females (38.8%) to agree. Most (81.8%) felt confident that they could exercise even if their friends were not interested. Female students (85.1%) were more likely to agree than male students (76.9%).

The majority (80%) of students agreed that their mothers were pleased when they were involved in sports/exercise. Female students (81.9%) were significantly more likely to agree than male (76.5%) with this statement.

In the qualitative study, many students mentioned the impact that role models in their family and social network, as well as national and international athletes, have on the type of physical activities in which they wish or choose to participate.

Factors Hindering Participation in Physical Activity

Some of the common factors identified by both teachers and students included the lack of proper equipment or facilities in schools/communities which limited the range of opportunities for physical activity; the lack of attention to options for students who preferred non-competitive activities; insufficient interest and support in the home environment; security concerns in some communities; lack of motivation and interest displayed by students.

The report highlighted the need for interventions to increase motivation and change attitudes of the target group towards physical activity. Additionally, the recommendations called for the improvement of physical education programmes in schools and an increased focus on strategies for promoting habits among youth which lead to the adoption of lifelong physical activity.

Evaluation of School Meal Options in Trinidad and Tobago

The Ministry of Health in Trinidad and Tobago requested the assistance of CFNI to undertake an evaluation of school meal options in the country. The 12-month project which began in April 2008 was seen as the first phase of an overall programme to promote

healthy eating practices among schoolchildren in Trinidad and Tobago.

The objectives were:

1. To identify and describe the existing school meal options (including breakfast) that are available to students in Trinidad and Tobago.
2. To determine the participation of students in the options.
3. To determine the perceptions of participants/students toward the meal options.
4. To determine the perceptions of providers, principals, teachers and parents towards the various meal options.
5. To assess the quality and nutrient content of a sample of the meals available on the compound and/or the immediate school environment.
6. To determine the BMI (Body Mass Index) status of schoolchildren in a representative sample of primary and secondary schools.
7. To examine specific aspects of the operations, including food safety.
8. To identify resources and policy/programme changes necessary for the provision of improved school meal options.

The study is being conducted in a sample of approximately 5,000 students drawn from 41 primary and secondary schools across Trinidad and Tobago. Both quantitative and qualitative methods were used to collect the required data.

Reasons given by students (%) for enjoying physical education

Reason	St. Kitts/Nevis (n = 593)	St. Vincent (n = 548)	Grenada (n = 514)	Trinidad & Tobago (n=606)
	%	%	%	%
It is fun/enjoyable	28.2	20.1	35.8	32.8
It strengthens/builds the body/muscles/bones; keeps me fit/healthy/ is important for my health	40.0	48.4	34.6	35.8
I am able to play games/sports/ love to play games	13.8	12.4	18.5	15.2
Learn about the body/how body works/ new exercises	5.9	13.0	3.7	9.4
It keeps me in shape/ helps me to lose weight	1.3	5.3	2.9	1.3
Other/no response	10.8	0.8	4.5	5.5

During 2008, Focus Groups and Key Informant Interviews were conducted among, teachers, parents, meal providers and vendors. These were aimed at determining the perceptions of the target groups about the meal options and facilities that are available in the schools.

The quantitative survey also commenced and was preceded by the development of a survey instrument, Interviewer's Guide and training for data collectors and supervisors. The survey provided information on the meal options that are available to students, their preference for and participation in the various options as well as their BMI status.

It is expected that the focus groups and data collection from students will be completed by the middle of March 2009. The final component which involves observations of the facilities, key informant interviews with principals and meal analysis will begin in 2009 and all project activities will be done by the end of the Easter term of 2009.

Montserrat Food Consumption Survey

During 2008, CFNI provided technical assistance to Montserrat in the planning and implementation of a food consumption survey.

The food consumption survey was linked to the activities carried out under the Montserrat Survey of Living Conditions (MSLC) Project which was funded by the Caribbean Development Bank.

The Survey was aimed at determining current dietary patterns among members of the population aged 18 years of age and older and the main factors influencing these patterns. The specific objectives were:

1. To determine the usual food and nutrient intakes of adults in Montserrat.
2. To determine the proportion of the population below or above the recommended levels of dietary energy and nutrient intake.
3. To identify factors that might impact food intake (e.g. socio economic and demographic).
4. To measure Body Mass Index (BMI), and describe patterns of obesity and under-nutrition.

5. To provide baseline data that can be used to develop appropriate nutrition interventions.

The 24-hour dietary recall method was used to collect information on the food eaten by one person 18 years and older in each sample household of the MSLC. Two days of dietary recall data were collected.

Information was also collected on the person's chronic disease status and selected lifestyle practices. In addition, heights and weights were measured and used in conjunction with the dietary and other data for the assessment of the nutritional status of the population.

The dietary and anthropometric data were linked to the socio-economic and demographic characteristics of the respondents such as age, education, occupational status, etc. collected in the MSLC.

CFNI provided training for a group of trainers in Montserrat who in turn would be responsible for the training of data collectors responsible for the collection of the dietary data and other data. A six-day training programme was conducted for the trainers in April 2008 and focused on building the skills necessary for the collection of the dietary and anthropometric data through role play, and practical field trials.

Survey of Information on Food Labels

The food label is an important tool for educating and guiding consumers to select foods that will contribute to having a healthy diet every day. Inclusion of the nutrition facts panel is becoming more widespread in the Caribbean, and nutrient and health claims are increasingly being used to guide consumers in their choices.

In 2008, CFNI initiated a study of the information on food labels available to consumers in Jamaica and Trinidad and Tobago. Major supermarkets in the two countries were visited and data collected about information printed on the labels of foods according to category. In Jamaica, data were collected from the labels of 669 food items examined in nine supermarkets. In Trinidad and Tobago, labels of 292 foods from four supermarkets were examined.

Analysis of the data will provide important information to guide development of policies and on which to base education programmes for the Caribbean consumer.

Human Resource Development

Development of Training Programme for Rural Agricultural Development Agency

As part of CFNI's continuing work in the area of Food Security, the Institute collaborated with the Rural Agricultural Development Agency (RADA) in Jamaica to develop a training of trainers programme for the social service home economics officers within RADA. The training was required to enhance the capacity of these workers in the area of food and nutrition. Currently, the officers are responsible for providing farmers and farming families with information on appropriate food and nutrition practices as part of their overall technical support to the sector.

The information currently provided was drawn from a variety of sources and often delivered in an ad hoc manner. In addition it was determined by RADA that the technical information being delivered required substantial updating based on current scientific knowledge and guidelines.

CFNI was therefore requested to develop a training programme and training materials to provide technical updates for the staff of RADA and more standardized approaches for the delivery of information to farm families about food and nutrition issues.

The training programme was divided into two modules viz:

1. *Communication strategies for nutrition and health information*

This module aimed at strengthening communication and basic counseling skills of the officers. Emphasis was on developing in the trainers, skills that would improve their communication and interaction with farmers in the area of health and nutrition.

2. *Food and the Body*

A functional approach was used in looking at the body's need for food and nutrients. The food and nutrient needs through the life cycle were used as

the framework in providing the technical updates, e.g.:

- Infant and young child nutrition – updates on breastfeeding and complementary feeding, best practices, issues and challenges
- School age child
- Adolescents
- Adults – NCDs, pregnancy
- Elderly persons.

Cross cutting issues such as food safety and HIV and nutrition were also covered in the training. Lesson plans and supporting materials were prepared to support a two week training programme for the RADA officers.

Nutrition and HIV/AIDS

Production of the thematic set of nutrition and HIV/AIDS booklets was completed. Distribution was extensive. In the CFNI member countries, they were sent to all Ministries of Health and other selected Ministries, nutrition units, numerous community and faith-based organizations and HIV support groups. Additional recipients included other regional and international organizations including CIDA.

The slides used during the region-wide nutrition and HIV workshops were edited and finalized for uploading to the CFNI website.

Preliminary work was carried out towards integrating the nutritional management of HIV/AIDS into the training curricula of healthcare professionals in the Caribbean. A survey was conducted to determine the extent to which the nutritional management of HIV/AIDS was included in tertiary level curricula for healthcare providers in the region. Responses were received from nine countries. Using the information provided by the Nutrition Coordinators in these countries, an updated list of tertiary level institutions was compiled.

It was determined from the survey that some programmes already had nutrition and HIV/AIDS included in their curricula and that others were contemplating

its inclusion within 12 months. However there appeared to be no core content across all the institutions and it was decided that a Delphi process would be used to arrive at a consensus on the core content for such courses in all institutions. Coordinators of the programmes were written to requesting the main topics relating to HIV currently taught in order to create a listing of key topics to begin the Delphi process. Responses were only received from three institutions:

1. University of Belize, Faculty of Nursing, Allied Health and Social Work
2. Northern Caribbean University, Nursing Department, Jamaica
3. University of Technology, Faculty of Health and Applied Science, Jamaica.

Subsequent to a Caribbean HIV/AIDS Regional Training Network (CHART) meeting that CFNI attended in

2008, it was decided that since many groups also seemed desirous of having HIV/AIDS education included into curricula of healthcare professionals, collaboration would be sought towards the preparation of one comprehensive HIV/AIDS component inclusive of the nutritional aspects of care.

Plans for 2007-2009 biennium were outlined. These included:

- development of a series of algorithms and associated guidelines for the creation of toolkits which would have been used to train selected healthcare providers who would have been responsible for integrating nutrition into overall clinical care of Persons Living with HIV/AIDS (PLWHA), and
- development of appropriate curricula for integration in healthcare providers' education/ training programmes.

Summary of CFNI Training Programmes – 2008

COUNTRIES SERVED	TOPIC	DURATION	AUDIENCE (N)
Anguilla	Marketing value-added products from fruits and vegetables	3 days	Local farmers, agricultural officers, nutrition and dietetics personnel, environmental health officers. (24)
Grenada	Interviewing Techniques and Data Collection	3 days	Data collectors, nurses and physical education (P.E.) teachers. (17)
	Nutrition information and teaching strategies	5 days	Teachers in intervention schools in WDF Schools project. (30)
	Second Sensitization of the WDF Schools Project	1 day	Representatives of the Ministry of Education including the Chief Education Officer, Curriculum Officers; School Feeding Programme; Representative from the Ministry of Sport; Grenada Food and Nutrition Council (GFNC). (8)
	Dietary Management of Chronic Diseases (Obesity, Diabetes and Hypertension)	3 days	Various categories of workers from Ministry of Health and the Grenada Food and Nutrition Council including nurses, nurse practitioners, physicians, nutrition and dietetics personnel, pharmacists, health promotion officers, counselors and diabetes educators. (32)

COUNTRIES SERVED	TOPIC	DURATION	AUDIENCE (N)
Guyana	Maternal Nutrition	2 days	Tutors from training programmes for health workers and personnel from Food Policy Unit. (12)
Jamaica	Nutritional Management of Obesity, Hypertension and Diabetes	2 days	3rd and 4th year students in the Nutrition and Dietetics programme at the University of Technology. (39)
Montserrat	Interviewing techniques and data collection (Training of Trainers)	5 days	Montserrat Survey of Living Conditions (MSLC), and National Assessment Team (NAT) personnel. (8)
St. Kitts and Nevis	Second Sensitization of the WDF Schools Project	1 day	Representatives of the Ministry of Education including the Chief Education Officer; Curriculum Officers; School Feeding Programme; Representative from the Ministry of Sport; Grenada Food and Nutrition Council (GFNC). (8)
	Nutrition information and teaching strategies	5 days	Teachers in intervention schools in WDF Schools project. (22)
	Interviewing Techniques and Data Collection	3 days	Data collectors, nurses and physical education (P.E.) teachers. (24)
St. Vincent and the Grenadines	Interviewing Techniques and Data Collection	3 days	Data collectors, nurses and physical education (P.E.) teachers. (16)
	Nutrition information and teaching strategies	5 days	Teachers in intervention schools in WDF Schools project. (12)
	Second Sensitization of the WDF Schools Project	1 day	Representatives of the Ministry of Education including the Chief Education Officer; Curriculum Officers; School Feeding Programme; Representative from the Ministry of Physical Education and Sport; Primary Health Care; Chief Health Educator; Nutrition Unit. (9)
	Food Security: A General Overview: and Conceptual Issues in Food Security and Vulnerability	1 day	Participants included members of the St. Vincent and the Grenadines Food and Nutrition Security Council; Representatives of the Nutrition Unit, Ministry of Health; School Feeding Programme; Youth Department; Sports Department; Community Development Division; Economic and Social Planning; Agricultural Diversification Programme; Ministry of Education, Adult Education Unit; Central Statistics; Pre-school Services Association; and St. Vincent and the Grenadines Christian Council. (15)

COUNTRIES SERVED	TOPIC	DURATION	AUDIENCE (N)
Trinidad and Tobago	Sensitization School Meals Project	1 day	Representatives of MOH, National Schools Dietary Services, Schools Supervisors. (20)
	Food and Nutrition Security	1 day	UWI BSc Nutrition Final Year Students. (30)
	Nutrition and HIV/AIDS	1 day	UWI BSc Nutrition Final Year Students. (30)
	CFNI, Who We Are, What We Do	1 day	Nutrition and Dietetic Interns. (4)
	Trans Fats; and Food Labels	1 day	Health Professionals of the ERHA (2 sessions with 20 persons per session); SWRHA (20) ; NWRHA (20)
	Breastfeeding Counselling: A Training Course	5 days	Health Professionals (Trainers only) (7) ; Health Professionals (Trainers and Counsellors). (21)
	Interviewing Techniques and Data Collection (WDF Project)	3 days	Sports Officers; CSO Data Collectors; PE Teachers; Nurses; Country Co-ordinator (Trinidad). (12)
	Interviewing Techniques and Data Collection (School Meals Project)	3 days	CSO Data Collectors (18) ; CSO Supervisors. (4)
	Food Safety (For the Trinidad and Tobago Bureau of Standards	3 days	Local small businesses and entrepreneurs. (30)
	Nutrition information and teaching strategies	5 days	Teachers in intervention schools in WDF Schools project. (8)
	“Physical Activity: Towards a Caribbean Strategy”	2 days	Representatives of the Ministries of Health, Education, Sports, Youth, Local Government; Town and Country Planning; PAHO, CAREC. (50)

Partnerships/Collaborations/ Technical Consultations

1. The Institute participated in a workshop organized by the Centre of Technical Cooperation (CTA) and the Caribbean Agricultural Research and Development Institute (CARDI) on “Understanding the Role of Information in Development”, Castries, St. Lucia, 17-18 November 2008. The course attracted middle-level policy makers and technocrats drawn mainly from the Ministries of Agriculture in the Caribbean. The workshop was conducted during 7-11 May 2008 in St. Lucia.

2. CFNI participated in the Caribbean Kick-Off Workshop (KOW) held 1-3 April 2008, at the Rose Hall Resort, Montego Bay, Jamaica. The Workshop was part of the regional consultations held throughout the African Caribbean and Pacific (ACP) under the “All ACP Agricultural Commodities Programme” to define, in a participatory manner, the priority needs of ACP countries that can be addressed by partner international organizations under the Programme mandate. The objectives of the regional kick off workshop were to:

- i) present and promote programme components
- ii) share information on the state of development of ACP commodity chains
- iii) initiate the constitution of national/regional ACP stakeholder teams, and
- iv) elicit inputs from stakeholders so as to define agricultural sector development priorities and guide the drafting of the programme work plans in line with national and regional priorities, and taking into account other ongoing/planned development activities.

The workshop focused on four sets of agriculture commodities (spices and herbs, roots and tubers, fruits and vegetables, including beans and pulses), and tree crops (coconuts, nutmegs, coffee). CFNI commended the organizers and stakeholders of the conference for the initiative and especially for investments to increase fruits and vegetable production in the Caribbean. The Institute’s main contributions at this workshop included:

- raising the concern that the focus of the initiative was on supply/production side issues while assuming that demand side issues –

addressing poverty and vulnerability and the promotion of fruit and vegetable consumption – would be logical outcomes of the main fact of solving agriculture production problems;

- articulating the inter-relationship between agriculture and other sectors and particularly the critical role agriculture can play in health and nutrition; and
- acknowledging the potential health/nutrition benefits forthcoming from the proposed activities, but raising the concern that the ad hoc approach the initiative was taking will not optimize on policy coherence and synergies within the countries and the region.

3. As a partner in the CARICOM Agriculture-Cluster Group, CFNI participated in a Meeting on “Preparation of a Project to Revive Agriculture in the Region” on 28 September 2008, at the Institute of Critical Thinking, UWI, St. Augustine, Trinidad and Tobago. The meeting agreed that the project would take a holistic approach to the problems of food and nutrition security in the region. Additional highlights of the meeting included, *inter alia*:

- i) identifying a priority list of commodities for countries to focus on;
- ii) identifying a menu of specific constraints to regional agricultural development;
- iii) acknowledging the need to review market demand, import costs and application of existing commodity competitiveness models; and
- iv) promoting nutritional values of products to facilitate Caribbean consumers’ taste change and acceptability of products.

The Group planned to prepare a concept note to the Council for Trade and Economic Development (COTED) for guidance as to whether a full proposal can be submitted for ministerial consideration.

4. CFNI participated in a meeting in May 2008, which was organized by the Caribbean Development Bank (CDB) to discuss the issue of rising food prices and impact on food security. As a result of this meeting a seminar was organized by the CDB in June 2008 on the theme rising prices and food security in the region. CFNI staff also participated as discussant at

one of the sessions in this seminar. CFNI's contribution at this seminar included, *inter alia*:

- i) to explain food security and impressing participants on the need to situate the discussion of rising prices within this framework of food availability, accessibility, consumption/utilization and stability. This was very important because many of the presenters were still posing food security mainly in terms of 'self-sufficiency'; and
- ii) to explain how the food-price shock can erode gains made in the past in undernutrition and the need to sustain/increase efforts to address the prevalence of NCDs.

With respect to providing a clear road map out of the food-crisis, the main proposals from CARDI, IDB and CFNI follow:

- i) CARDI focused on developing agriculture (investments, research, repositioning the sector as an essential and important sector to national development, etc) as the way forward towards increasing agricultural production by reducing/eliminating the constraints to agriculture.
- ii) The IDB made the case for investments in agriculture (infrastructure, marketing intelligence, research and development, drainage and irrigation, extension services, etc.) as the real foundation for productivity increases.
- iii) CFNI endorsed efforts at increasing production but stressed the food security/agri-health link. The Institute also supported the proposal for increasing roots and tubers and proposed, in addition, that fruits and vegetables be added to the list of initiatives to increase agriculture production. Finally, CFNI emphasized the importance of monitoring of vulnerability (via regularly produced nutrient-cost analysis and food security bulletins), promotion of healthy diets and lifestyle behaviors (via food-based dietary guidelines, and other advocacy tools), and a multisectoral approach to solving food security problems in the region. CFNI's work in these areas was highlighted, including the Institute's work in assisting countries with their food policies, National Plans of Action in Nutrition (NPAN) and coordinating mechanisms, and the role of a small grants programme (CFNI's model) in empowering vulnerable groups to take charge of their own livelihoods.

5. CFNI technical staff participated in the COTED Meeting, 21 May 2008, in the session that discussed the rapidly increasing food prices in the region. CARICOM's policy response was to focus on the production of key food commodities (rice, cassava, root crops, tubers and breadfruit, coconuts, papaya, poultry, small ruminants, rabbits, and marine and aquaculture fishing) within the context of a prioritization of the key binding constraints to agriculture production. CFNI prepared and circulated a brief on the issue of rising food prices. The brief drew attention to, and emphasized:

- i) These rising prices (which reduce the ratio of wages to prices), constrain the ability of the population, especially the poor and vulnerable groups, to purchase food and basic non-food items.
- ii) Poor households that are faced with rising food prices and fixed wages/incomes, as a first resort, tend to reduce both the quality and quantity of food-intake, thus leading to under-nutrition and thereby reversing the gains made in the past in this area of public health.
- iii) Persistent undernutrition will contribute not only to widespread failure to meet the first Millennium Development Goal (MDG) – to halve poverty and hunger – but to meet other goals in maternal and child health, education, and gender equity. Moreover, undernutrition has an inter-generation transmission effect by affecting children's learning, growth and future-adult earning potentials.
- iv) There are also new dimensions to increasing food prices that must be considered – diet-related non-communicable diseases (NCDs) are spreading in the region.
- v) The intersecting, non-conflicting but distinct objectives of agriculture policy (generally, to raise agricultural production and productivity through capital and technology), rural development (oriented towards benefiting primarily the poor through human capital and incentives) and food policy (designed to meet well-defined food and nutrition criteria);
- vi) Six lines of programmatic action to address rising food prices and negative impacts on food security, viz.,
 - a) Support the establishment of national food and nutritional goals so that the

sub-region's agriculture and food systems can deliver adequate and nutritionally appropriate quantities of food, especially to low-income and vulnerable groups;

- b) Support multi-sectoral interventions that would (a) reduce diets high in fats and sugars in total energy intake and increase intakes of fruits and vegetables in diets; (b) reduce relative food energy from animal sources; (c) monitor food imports relative to health goals; and (d) develop a food-price policy that takes into account all components of food security;
 - c) Assist in the process of galvanizing official (political) support for, and facilitate the passage through to Cabinets, of National Food Policies, National Plans of Action for Food and Nutrition Security (NPANS) and multi-sectoral coordinating mechanisms;
 - d) Explore the development of appropriate incentives that encourage the production and consumption of regionally produced foods, particularly fruits and vegetables. These actions must be supported by national food based dietary guidelines with adequately funded promotion strategies;
 - e) Support for the establishment of formal planning linkages between the agriculture sector and other sectors (especially, health, tourism, trade and planning) in order to ensure a more integrated and coordinated approach to policy and programme development; and
 - f) Develop a regional Food Security Strategy to addresses emerging food security issues, the prevention and control of NCDs, and the monitoring and evaluation of the 2007 Heads of Government and Caribbean Agriculture Ministers' Declarations (1996, 2007).
6. CFNI supported the development of food safety, food quality and other standards through its participation in various standards committees of the Jamaica Bureau of Standards. The Institute participated in the development or review of the following national and regional standards:
- Labelling of pre-packaged foods

- Labelling of pre-packaged goods
- Starch (including derivatives and by-products)
- Labelling of aerosol insecticides.

7. CFNI participated in the 12th plenary meeting of the International Organization for Standards – Technical Committee for Starch (ISO/TC 93) held in March 2008 in Kingston, Jamaica. The event was hosted by the Bureau of Standards, Jamaica.
8. CFNI continued its representation on the Latin American and the Caribbean (LAC) Working Group for the ten-year strategy for reduction of vitamin and mineral deficiencies and participated in several teleconference meetings.

Major Presentations

1. *Eating Patterns in Barbados*, National Chronic Disease Commission, Task Force Meeting, Barbados, January 2008.
2. *Childhood Malnutrition and Food Security in the Caribbean*. Presentation to FAO Medium Term Planning Meeting, Barbados, February 2008.
3. *Food & Nutrition in Natural Disasters: Key Issues for the Health Sector in Disaster Preparedness and Management*. Presentation to students in the Masters in Public Health (MPH) programme at the UWI Mona, Jamaica, March 2008.
4. *Childhood Obesity: A Weighty Problem in the Caribbean*. Presented a paper at the Twelfth Special Meeting of the Council for Human Development (COHSOD) (Children), Guyana, March 2008.
5. *Physical Activity: Towards a Caribbean Strategy*. Presented a paper at the Physical Activity Planning Team for the Regional Workshop on Physical Activity, Hotel Normandie, Trinidad, May 2008.
6. *Preserving Nutrition in Crises: The Caribbean Experience*. Presentation to Inter Ministerial Conference on "Towards Eradication of Child Undernutrition in Latin America and the Caribbean", Chile, May 2008.
7. *Food Safety: Issues for the Caribbean*. University of Technology (UTECH) 50th Anniversary Celebrations, University of Technology, Jamaica, May 2008.

8. *Food Safety Is In Your Hands*. Launch of Food Safety Week, National Agricultural Health and Food Safety Coordinating Committee, Jamaica, June 2008.
9. *Food Safety: A Major Challenge to Development*. Presentation to Kiwanis Club of Kingston, Jamaica, July 2008.
10. *Iron Deficiency Anaemia in the English-speaking Caribbean: Prevalence and Programmes*. Presentation to International Federation of Medical Students' Associations (IFMSA) General Assembly, Ocho Rios, Jamaica, August 2008.
11. *Nutrition and HIV/AIDS*. Lecture to the Third Year Students of the UWI BSc Nutrition and Dietetics, UWI St. Augustine, Trinidad, September 2008.
12. *CFNI, Who We Are; What We Do*. Lecture to UWI Nutrition and Dietetics Interns, UWI St. Augustine, Trinidad, September 2008.
13. *Food and Nutrition Security*. Lecture to the Third Year Students of the UWI BSc in Nutrition and Dietetics, UWI St. Augustine, Trinidad, October 2008.
14. *Nutrition in Obesity and NCD Control: The Role of Civil Society*. Presentation to Healthy Caribbean Conference, Barbados, October, 2008.
15. *Food Security in St. Kitts and Nevis: Global Effects and Implications for a National Response*. Presentation to Conference of Caribbean Nutrition Coordinators, St. Kitts and Nevis, November, 2008.
16. *Food Related Crises on Nutrition and Food Security*. Presentation to Conference of Caribbean Nutrition Coordinators, St. Kitts and Nevis, November, 2008.

Participants at the Update Seminar on Fats and Trans fats from the Eastern Regional Health Authority (ERHA), Trinidad and Tobago



Participants at the Update Seminar on Fats and Trans fats from the North West Regional Health Authority (NWRHA), Trinidad and Tobago



Promotion and Dissemination

Promotion of Young Child Nutrition

In this thematic area, the Institute continued to give priority to supporting country efforts at implementing the recommendations of the Global Strategy for Infant and Young Child Feeding. Technical cooperation activities were related to capacity building for implementing strategies to improve feeding practices and supporting efforts towards the introduction of the new WHO child growth standards.

Implementation of the Baby Friendly Hospital Initiative

In Trinidad and Tobago and Jamaica, CFNI strengthened efforts aimed at promoting the implementation of the Baby Friendly Hospital Initiative (BFHI).

At the Sangre Grande Hospital in Trinidad and Tobago, an informal assessment of the status of the implementation of the Initiative was carried out based on the Global criteria for the implementation of the BFHI. The assessment included observations of procedures, interviews with senior hospital personnel and interviews with mothers and health staff in the maternity unit. In the written report on the assessment, the status of implementation of each of the “Ten Steps” of the BFHI was described and, where necessary, recommendations for achieving the stated criteria were outlined.

At the Mount Hope Women’s Hospital, Trinidad and Tobago, CFNI conducted a seminar for physicians working in the maternity and pediatric special care units. The presentation focused on the criteria for achieving the requirements of the BFHI. A similar presentation was also made at a meeting of heads of departments chaired by the hospital administrator. In addition, discussions were held with the BFHI committee and trainers on the preparation of a training plan in accordance with BFHI criteria.

In collaboration with the UNICEF country office in Jamaica, support was provided to the National Breastfeeding Committee in monitoring the implementation of the Baby Friendly Hospital Initiative.

Training was conducted for Committee members to upgrade knowledge/skills in the assessment of hospital practices using the revised Global criteria for a Baby Friendly Hospital and supporting and guiding hospital personnel working to transform their facilities into baby friendly institutions or maintaining the best practice standards of the BFHI. A 1-day follow-up workshop was also conducted to provide additional guidance for the implementation of monitoring activities.

Improving Nutritional Care in Maternal and Child Health Services

In five countries, CFNI collaborated with the Ministry of Health in planning and conducting training programmes to upgrade health workers’ knowledge/skills in providing more effective counselling support to mothers and families. In Suriname and Trinidad and Tobago, trainers were trained to deliver the WHO courses: Breastfeeding Counselling and Infant and Young Child Feeding Counselling. They were taught how to plan and organize the training courses and also had supervised practice in teaching the different types of sessions. The courses were aimed at providing health workers with the required competencies for counselling and supporting mothers to carry out recommended feeding practices for their infants and young children from birth up to 24 months of age.

A workshop on the promotion of young child nutrition was conducted in Barbados. Community health nurses, community nutrition officers and community health aides involved in nutrition counselling in the polyclinics participated in the 4-day workshop. Topics discussed included: counselling mothers about appropriate infant and child feeding practices, strategies for the prevention and management of childhood obesity, and provisions of the International Code of Marketing of Breastmilk Substitutes.

In Antigua and Barbuda, CFNI collaborated with the Ministry of Health in planning and conducting a seminar for physicians on topics related to infant and young child nutrition. Topics discussed included the scientific basis for the revised infant and young child feeding recommendations, and the development of the new WHO child growth standards and their interpretation.

Related activities in Guyana included a workshop on maternal nutrition for tutors in health training institutions. The workshop agenda included a review of competencies required for assessing and improving maternal nutrition, presentations on relevant subject areas and the planning and delivery by participants of sample lessons on specific topics related to maternal nutrition. Another training activity, focused on upgrading the skills of regional - level supervisors of maternal and child health services in planning, monitoring and improving nutrition-related services delivered in health centers and communities.

Introduction of the New WHO Child Growth Standards

CFNI continued its support to national efforts for the introduction of the new WHO Child Growth Standards in three countries. In Guyana, a training course was developed and a workshop conducted for trainers. The 3-day training programme was based on required competencies for effectively assessing and monitoring child growth using the new growth standards. In St. Vincent and the Grenadines and Antigua and Barbuda, assistance was provided with the revision of existing child health records incorporating the new WHO child growth standards, the planning of the pilot-testing of the draft records and the training of health workers from pilot sites. A training manual was also developed to guide health workers in the use of the revised records.

Promoting Healthy Lifestyles in Schools

During the year in review, CFNI continued to focus on the prevention of the chronic nutrition-related diseases. Project Lifestyle, the Institute's School-based intervention programme, continued in the British Virgin Islands. The Institute continued to support the Project Lifestyle Committee. In order to continue the project in its original form, plans for the review of the curricula were discussed with a view to indicate areas best suited for infusion. Plans were also made for further training of the committee members and the data collection team. This will continue in 2009.

CFNI continued the implementation of the WDF project, *"Preventing Diabetes and other Chronic Diseases through a School based Behavioural Intervention in Four Caribbean Countries"*. The school intervention began in September 2008. Materials for classroom teaching for Form 1/Grade 7 were developed. These were used in the Teacher Training Workshops conducted in all four countries. Draft lessons for Form 2/Grade 8 and Form 3/Grade 9 were also developed. These will be finalized early in 2009. Sample Infused lessons were developed for use in training early in 2009. Baseline data collection was done. The promotional activities to mark World Diabetes Day were implemented. The following documents were developed for training:

- Worksheet 1 – Foods Vary
- Worksheet 2 – The Foods Around Me
- Worksheet 3 – Foods and Nutrients
- Worksheet 4 – What's Inside the Foods Around Us?
- Worksheet 5 – Personal Reflection Foods and Nutrients
- Worksheet 6 – Grouping Caribbean Foods
- Worksheet 7 – Eating From the Six Caribbean Food Groups
- Worksheet 8 – Grouping the Foods Around Me
- Worksheet 9 – Personal Reflection Eating from all the Food Groups
- Worksheet 10 – To Which Food Groups Do the Foods That I Eat Belong?
- Worksheet 11 – Assessing the Foods Around Me
- Worksheet 12 – Personal Reflection: Getting it Right
- Worksheet 23 – My Activity Recall
- Worksheet 24 – Personal Reflection: My Activity
- Worksheet 25 – Planning My Activity
- Worksheet 26 – Assessing My Physical Activity Plan
- Worksheet 27 – Personal Reflection: How Do I Feel About Me
- Worksheet 28 – My Health Habits.

Marketing Training for Small-Scale Food Processors

A workshop on marketing value-added products from fruits and vegetables was conducted in Anguilla. Twenty-four (24) persons attended the workshop, including representatives from the local farming community, agricultural officers from the Ministry of Agriculture, environmental health officers, nutrition and dietetics personnel. The training was designed and conducted as a follow-up to the Food Processing, Preservation and Storage for Farmers and Backyard Gardeners in Anguilla, conducted in 2007.

The purpose of the training was to assist small-scale food processors, farmers and backyard gardeners to have a better understanding and appreciation for adding value to primary products and be more competitive in the local and international marketplace. The training included information on adding value to locally grown fruits and vegetables while ensuring that the principles of Good Manufacturing Principles (GMP) and Good Agricultural Practices (GAP), as it relates to the harvesting of the produce, are followed to produce safe and high quality product. The topics covered during the training were:

- Quality Assurance/Control within the Food Processing industry
- Food Legislations and Standards
- Taking Agricultural Products to the next level
- Food Labelling and Presentation
- Marketing Strategies
- Benefits of a Good Marketing Strategy.

Participants also made a site visit to the hydroponic farm at CuisinArt Hotel and Spa.

Food-Based Dietary Guidelines

Food-based dietary guidelines provide nutrition information to the public in a way that is easy to understand. They are used to translate quantitative nutrient-based dietary guidelines which are targeted at nutrition and health professionals into information

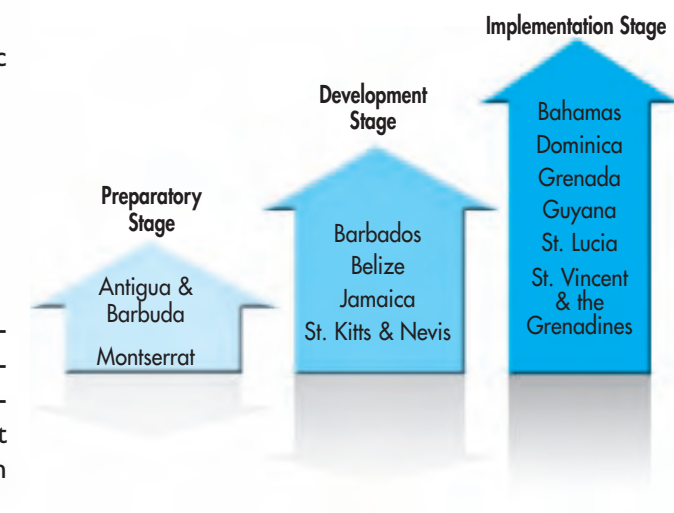
that the consumer can use, and can therefore be a useful component of food and nutrition policy.

For the past few years CFNI has worked with member countries in the development of food-based dietary guidelines, in collaboration with the Institute of Nutrition of Central America and Panama (INCAP) and the Food and Agriculture Organization (FAO). Figure 1 shows the status of these guidelines in member countries. Guidelines have been implemented in six CFNI member countries and are in development in four others while the process has been initiated in two countries, Montserrat and Antigua and Barbuda.

The Institute provided technical input into the identification of the priority issues to be addressed through Jamaica's food-based dietary guidelines and assisted in the development of technical guidelines which will serve as the basis for setting qualitative guidelines. CFNI was asked to serve on the task force which will continue the process.

In St. Kitts and Nevis, a multisectoral meeting was held to present the country's health and nutrition situation, discuss strategies for alleviating them, determine priority problems and set national objectives. The meeting saw the participation of 28 persons from several sectors such as health, nutrition, agriculture, consumer affairs, education, social security and the private sector. A task force was formed to continue the process.

Figure 1: Status of Food-Based Dietary Guidelines in CFNI Member Countries



Conference of National Nutrition Coordinators

The 2008 Conference of National Nutrition Coordinators was hosted by the Ministry of Health, Government of St. Kitts and Nevis, in collaboration with CFNI and the Food and Agriculture Organization (FAO). The conference was held at the Marriott Resort, Frigate Bay, St. Kitts, November 25-27, 2008. The theme of the Conference was *"Food Security in the Caribbean: Risks and Responses"*. The Conference brought together some 40 professionals and experts in their fields, to share in an opportunity for discourse and strategic planning. The participants included nutritionists and agriculturalists; economists and policy analysts; business and trade experts; and representatives from leading regional and international organizations, including CARICOM Secretariat, Caribbean Agricultural Research Development Institute (CARDI), the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), FAO, Inter-American Institute for Cooperation on Agriculture (IICA), Pan American Health Organization/ World Health Organization (PAHO/ WHO), and the University of the West Indies (UWI).

The objectives of the Conference were to:

1. Analyze the implications of food-related crises for food security in the Caribbean.
2. Identify key challenges of achieving food security in the region.
3. Assess and evaluate the measures adopted by countries and regional agencies to combat soaring food prices and reduce vulnerability to food insecurity.
4. Articulate policies and practical approaches to positively influence food security.
5. Agree on a strategy for partnerships towards preparing country and community level plans of actions to assist populations most vulnerable to food insecurity.
6. Plan the 2009 Technical Cooperation Activities with member countries.
7. Celebrate the winners of the Caribbean-wide Nutrition Competitions.

The Opening Ceremony was chaired by Mr. Elvis Newton, Permanent Secretary in the Ministry of Health, Social and Community Development and Gender Affairs, and Opening Remarks were made by The Honorable Cedric R. Liburd, Minister of Housing, Agriculture and Fisheries, St. Kitts and Nevis, Dr. Gina Watson, PAHO Representative for Eastern Caribbean countries, Dr. Barbara Graham, Caribbean Sub-Regional Representative, FAO, and Dr. Fitzroy Henry, Director, CFNI. The Deputy Prime Minister of St. Kitts and Nevis, the Honorable Sam Condor delivered the Feature Address and officially opened the conference. The Governor-General of St. Kitts and Nevis, Sir Cuthbert Sebastian, also graced the occasion.

The Conference was organized around four thematic areas, within which several presentations were made by professionals and experts, followed by open-floor discussions. The thematic areas included:

1) Implications of Crises on Food Security -

The presentations under this theme focused on several sources of crisis – natural disasters, re-allocation of resources away from food production towards bio-fuels, etc. – and how these impact on all the components of food security, viz., food availability, accessibility, utilization/consumption and stability. Additionally, nutrition coordinators of Antigua and Barbuda, Barbados, Jamaica and Montserrat shared their country's experiences in responding to the recent food-price crisis. Initiatives included: reduced import tariffs and taxes on food; subsidies on certain food items and fertilizers; price controls; increased investment in agriculture; school meal programmes; targeted assistance to vulnerable groups; and the promotion of backyard/container gardening.

2) Focus on St. Kitts and Nevis - In an evening session a panel of experts discussed the critical food, health and nutrition issues facing St. Kitts and Nevis. Initiatives within the government's Agricultural Development Strategy were highlighted and research findings of a study on women working in the free zone area in St. Kitts were presented.

3) Challenges to Achieving Food Security - The presentations under this theme covered several critical areas including: the many initiatives to strengthen food security at both the regional and national levels; factors affecting the competitiveness of Caribbean agricultural goods; the impact of

high food prices on Caribbean countries; opportunities for a food replacement strategy for the region, etc.

- 4) Policies and Practical Approaches to Enhance Food Security** - The presentations under this theme discussed existing policies to address food price inflation and specific actions implemented to promote national and regional food security. Issues discussed included: effective (multi-sectoral) food and nutrition, and food safety policies; regional collaborative initiatives with entities such as CARDI, CDB, IICA, FAO and the UWI to increase the production of indigenous staples, fruits and vegetables; and current programmes/initiatives that can guide consumers to make healthy food choices, such as nutrient-cost analysis and national food-based dietary guidelines.

The Conference also celebrated the winners of the Institute's regional school nutrition quiz and the regional promotion awards.

Regional Nutrition Competitions

2008 Caribbean Schools' Food and Nutrition Quiz Competition

The objectives of the quiz competition follow:

1. to improve the image of food and nutrition within the region;
2. to promote good nutrition and healthy lifestyles in schools and communities; and
3. to help students in their preparation for local and regional examinations in Food and Nutrition.

Fourteen countries participated in the preliminary rounds (up to semi-finals) of the 2008 competition which was conducted on 22 - 23 October 2008 through the audio conference facilities of the University of the West Indies Distance Education Centre (UWIDEC) on the Mona Campus, University of the West Indies. A list of the 14 national teams, and the schools and countries they represented, is shown in Box 1.

Box 1 - List of National Teams/Countries participating in the Caribbean Schools Food & Nutrition Quiz Competition, 2008

- **Anguilla:** Albenia Lake Hodge Comprehensive School
- **Antigua & Barbuda:** Jennings Secondary School; Antigua Girls High School; All Saints Secondary School
- **Bahamas:** Old Bight High School; Queen's College
- **Barbados:** Christ Church Foundation School
- **Belize:** San Pedro High School; Orange Walk Technical High; Sacred Heart College
- **British Virgin Islands:** Bregado Flax Educational Centre; Elmore Stoutt High School
- **Cayman Islands:** John Gray High School
- **Dominica:** Dominica Seventh Day Adventist Secondary School; Portsmouth Secondary School; St. Martin's Secondary School
- **Grenada:** Bishop's College (Carriacou)
- **Guyana:** St. Joseph High School
- **Jamaica:** Holy Childhood High School
- **St. Lucia:** Vieux Fort Comprehensive Secondary School - Campus B
- **St. Vincent & the Grenadines:** St Joseph's Convent; Mountain View Seventh Day Adventist Academy; Bequia Community High School; Emmanuel High School,
- **Trinidad & Tobago:** Bishops High School (Tobago)

The preliminary rounds were conducted on a knock-out basis as follows: Round 1, Round 2 and Semi-finals. An outline of the proceedings up to the Semi-Final round of the competition is given in Box 2.

The finals of the 2008 competition took the form of a face-to face contest which was staged on Monday, 24 November at the Ocean Terrace Inn, Basseterre, St Kitts and Nevis. The two finalist teams from Belize and Antigua and Barbuda, along with their coaches, were awarded a free trip to St Kitts and Nevis to take part. Approximately 130 students and teachers from secondary schools in St Kitts and Nevis were there to witness the contest, which was videotaped for circulation to audiences around the region.

Belize took the lead early, scoring 130 points to their opponents' 90 points in the first round. In the second round, Antigua and Barbuda closed the gap, scoring 100 to Belize's 110. The last round ended in a dead heat with both teams scoring 40 points. So, in what turned out to be the closest scoring finals in the competition so far, the team from Belize emerged victorious in the 2008 Caribbean Schools Food and Nutrition Quiz Competition, defeating Antigua and Barbuda 280 to 230.

The individual champion of the 2008 competition was Tyla Peterson from Vieux Fort Comprehensive Secondary, St Lucia.

Sponsors 2008 - Caribbean Schools Food and Nutrition Quiz Competition

- Caribbean Food and Nutrition Institute/ Pan American Health Organization
- Dominica Coconut Products
- LIAT: The Caribbean Airline
- ADM - Jamaica Flour Mills
- Caribbean Association of Home Economists (CAHE).

Box 2 - Summary of the proceedings of the 2008 Caribbean Schools' Food & Nutrition Quiz Competition – up to the Semi-Final Round

ROUND 1: 14 Teams - At the end of Round 1, the six lowest scoring teams were eliminated. The eight teams going forward were:

- Dominica - 14 points
- Bahamas - 14 points
- St. Vincent & the Grenadines - 14 points
- British Virgin Islands - 14 points
- Belize - 13 points
- St. Lucia - 13 points
- Anguilla - 13 points
- Antigua & Barbuda - 12 points

At the end of Round 1, thirteen students participated in tie breakers before Tyla Peterson from Vieux Fort Secondary School, St. Lucia emerged victorious with the highest individual score to become the Individual Champion of the competition.

ROUND 2: 8 Teams - The scores at the end of Round 2 were:

- Bahamas - 9 points
- Belize - 8 points
- St. Lucia - 8 points
- Antigua & Barbuda - 7 points
- British Virgin Islands - 6 points
- Dominica - 6 points
- St. Vincent & The Grenadines - 6 points
- Anguilla - 5 points

The teams from Anguilla, British Virgin Islands, Dominica, and St. Vincent & the Grenadines were eliminated and the four other teams moved on to the Semi-final.

SEMI-FINAL ROUND: 4 teams - The scores at the end of this round were:

- Belize - 8 points
- Antigua & Barbuda - 6 points
- Bahamas - 4 points
- St. Lucia - 4 points

After having tie breakers, the team from Bahamas emerged as the third place winner. The teams from Antigua & Barbuda and Belize moved on to the final round.

2008 Caribbean Nutrition Promotion Competition

Seventeen entries were received for the 2008 Caribbean Nutrition Promotion Competition from eight countries, reflecting a range of activities from government and non-governmental agencies and organizations. As in previous years, the call for entries stipulated the competition's two-tiered objectives as follows:

- To provide visibility to exemplary projects or activities aimed at improving food and nutrition.
- To promote the sharing of information on efforts to improve food and nutrition in the Caribbean.

Entries were judged on the following criteria: relevance of objectives; creativity; appropriateness of communication strategies and channels; and achievements/impact in relation to stated objectives.

The judging of entries took place at CFNI. Ms. Clare Forrester, Communication Consultant, chaired the panel of judges, which included, Dr. Julie Meeks Gardner, Coordinator/Tutor, Early Childhood Development Centre, University of the West Indies, Ms. Vanessa White, Acting Programme Director, Dietetics and Child Care Development Unit, University of Technology, Jamaica, and Mrs. Beverly Lawrence, Food Policy Analyst, CFNI.

The first, second and third place award winners were:

- 1st place – “Mile Gully Income Generation Programme”, submitted by the Ministry of Health, Jamaica.
- 2nd place – “Move for Health – Community Walking Clubs Initiative” submitted by the Ministry of Health, Trinidad and Tobago.
- 3rd place – “Christ Church Foundation School – Building a Healthy Foundation” submitted by Christ Church Foundation School, Barbados.

Sponsors 2008- Caribbean Nutrition Promotion Competition

- Caribbean Food and Nutrition Institute/ Pan American Health Organization

- Chin Yee's Travel Service
- Manpower & Maintenance Services Limited
- Specialised Offset Services Limited
- WB Trophies Limited.

The Awards Ceremony

An awards dinner provided the forum for highlighting the accomplishments of the winners of the Quiz and the Nutrition Promotion Competitions. The function was held on Wednesday, 26 November 2008 at the St. Kitts Marriott Resort, and was covered by the print and electronic media.

The event was attended by the Prime Minister of St. Kitts and Nevis, the Hon. Dr. Denzil Douglas. In his keynote address, the Prime Minister congratulated the winners, and commended CFNI on its successful hosting of the Conference of National Nutrition Coordinators. He expressed confidence that the discussions of the conference would provide valuable guidance to efforts targeted to relieve the effects of the global food crisis on the most vulnerable of the region's population.

Other special guests at the awards dinner included the Hon. Cedric R. Liburd, Minister of Housing, Agriculture and Fisheries, St Kitts and Nevis; Mr. Elvis Newton, Permanent Secretary, Ministry of Health, Social and Community Development and Gender Affairs, St Kitts and Nevis, Dr. Gina Watson, PAHO Representative for Eastern Caribbean Countries, Dr Patrick Martin, Chief Medical Officer in the Ministry of Health and Mrs. Rita Cable, Senior Education Officer in the Ministry of Education.

Dr Fitzroy Henry, Director, CFNI, thanked PAHO and FAO and the corporate sponsors for their support in staging the conference and the two competitions. He also expressed appreciation to the Government of St Kitts and Nevis and in particular the Permanent Secretary and staff of the Ministry of Education for their assistance in the successful staging of the 2008 Quiz finals.

Presentations

In the Food and Nutrition Quiz Competition, Belize's team of students from San Pedro High, Orange Walk Technical and Sacred Heart College copped the first place award. The Hon. Cedric Liburd presented the

team with a trophy, cash and book prizes and individual medals through the sponsorship of **Dominica Coconut Products**. Their prize trip was sponsored by **Dominica Coconut Products** and the **PAHO/Belize country programme**. Their coach, Mrs Sandra Collins accompanied the team on the prize trip and also received a cash award.

A team from Jennings High, Antigua Girls' High and All Saints High captured the second place prize for Antigua and Barbuda. They accepted the **LIAT** trophy from the airline's representative, as well as book and cash prizes and medals donated by **Dominica Coconut Products**, presented by Dr. Gina Watson, PAHO Representative for Eastern Caribbean Countries. Their coach Ms Clara Parks also received a prize trip sponsored by **LIAT** and a cash award donated by **Dominica Coconut Products**.

The Bahamas claimed third prize with its two participating schools, Old Bight High and Queen's College. Book prizes from CFNI, medals and cash awards sponsored by **ADM Jamaica Flour Mills** were accepted from Dr Patrick Martin on the team's behalf by Ms Carmelta Barnes, Senior Public Health Nutritionist at the Ministry of Health in Bahamas.

Tyla Peterson of Vieux Fort Comprehensive Secondary, St. Lucia, was crowned individual champion of the Food and Nutrition Quiz Competition for

attaining the highest individual score in the competition. Mr. Hesdie Grauwde, representing FAO, presented Tyla with cash and book prizes and a medal sponsored by **Dominica Coconut Products**. She also received the **Caribbean Association of Home Economists (CAHE)** trophy, presented by Mrs. Audrey Jones-Drayton, Vice President, CAHE. **LIAT** sponsored the prize trips for Tyla and her coach. Her coach Mrs Julie Augustin-Charlery also received a cash prize sponsored by **Dominica Coconut Products**.

The prizes for the two finalist teams, the individual champion, and their coaches also included the tours of both islands sponsored by **CFNI**.

In the Caribbean Nutrition Promotion Competition, the entry submitted by Jamaica's Ministry of Health entitled "Mile Gully Income Generation Programme" came out on top out of sixteen entrants. The programme's goal was to improve the nutritional status and income of households with malnourished children attending the nutrition clinic in the district. Mrs. Tracia Thomas-Gayle of the Manchester Health Department accepted her prizes from Dr Fitzroy Henry, Director, CFNI. Her prizes included prize trip, country tour, cash prize sponsored by **CFNI** and trophy by **FAO**.

Trinidad placed second with its "Move for Health – Community Walking Clubs Initiative". A CFNI cash

The Hon. Dr. Denzil Douglas, Prime Minister of St. Kitts and Nevis (centre) poses with the winning Belize team and coaches of the 2008 Caribbean Schools' Food and Nutrition Quiz Competition.



2008 Caribbean Schools' Food and Nutrition Individual Champion, Tyla Peterson (centre) of Vieux Fort Comprehensive Secondary, St. Lucia poses with her coach Mrs. Julie Augustin-Charlery (left) and Mrs. Audrey Jones-Drayton, Vice-President Caribbean Association of Home Economists (right).



The 2008 Caribbean Schools' Food and Nutrition Quiz Competition winning team of students from San Pedro High, Orange Walk Technical, and Sacred Heart College - Belize, pose with their coach Mrs. Sandra Collins (second left).



Mrs. Tracia Thomas-Gayle (left) of the Manchester Health Department, Jamaica, accepts the 2008 Caribbean Nutrition Promotion Competition 1st place trophy from Dr. Fitzroy Henry, Director, CFNI (right).



prize and a trophy donated by **Manpower and Maintenance Services Ltd.**, Jamaica were accepted from Mr. Augustine Merchant, IICA's representative in St. Kitts and Nevis by Ms Diane Charles, Regional Nutritionist on behalf of the winner, Dr Jacqueline Shafe of Trinidad and Tobago's Ministry of Health.

'Christ Church Foundation School – Building a Health Foundation' from Barbados placed third in the region. Ms Diane Broome, Nutrition Officer, Ministry of Health, Barbados, received the trophy by **Chin Yee's Travel Service**, Jamaica and cash prize from CFNI on behalf of the winner, Mrs. Margot Aquan. The presentations were made by Mr. Maurice Wilson of CARDI, Trinidad.

Ms Juanita James, Chief Nutrition Officer in the Ministry of Health, Antigua, received a special award for activities organized to celebrate Caribbean Nutrition Day 2008. The initiative aimed to promote healthy eating and active lifestyles and to increase awareness about effects and sources of different types of fats. Ms James received a plaque donated by **WB Trophies**, Jamaica and a cash prize which was donated by **Specialised Offset Services**, Jamaica and presented by Mr. Elvis Newton, Permanent Secretary in the Ministry of Health, St. Kitts and Nevis.

To close the ceremony, Gaby Miranda of San Pedro High School, a member of the Belize quiz team, and individual champion Tyla Peterson came forward to express appreciation to CFNI and the organizers of the competition, as well as their teachers and coaches. Mrs. Tracia Thomas-Gayle also thanked the CFNI and all the sponsors and urged them to continue the good work.

Caribbean Nutrition Day

CFNI continued to support countries in celebrating Caribbean Nutrition Day, June 1. Under the theme: "Healthy Eating Active Living – Be Aware of Trans Fat", activities targeted health centres and schools to increase awareness of sources of trans fat in our diets and the possible impact on our bodies. The Institute provided member countries with a PowerPoint presentation that it prepared with facts on trans fats along with a supporting information

brochure and other CFNI materials such as the booklet of 40 small changes that persons can make towards healthier eating and a more active lifestyle. Several countries including Antigua, Jamaica, British Virgin Islands and Trinidad and Tobago participated and shared with CFNI their activities for the day.

Nutrition Promotion

At the request of FAO, CFNI participated in a live television interview and discussion in observance of the "International Year of the Potato."

Amidst rising food prices, CFNI welcomed the opportunity to participate in three live television interviews on two different local stations in Trinidad and Tobago. These early morning programmes were viewed by many and included a call-in component.

CFNI also participated in live radio programmes with discussions on topics such as *"The Basics of Healthy Eating"*; *"Making Wise Food Choices"* and *"Fats and Trans Fat."*

Two private sector companies (Citi Bank and Trac Mac) in Trinidad and Tobago also benefitted from the expertise of CFNI when their staff participated in presentation/discussion sessions entitled *"Healthy Eating Makes a Lifelong Difference"*. Staff of the head office of the Ministry of Health also benefitted from this presentation.

During the national observance of World Home Economics Day, CFNI delivered a brief presentation to the attending secondary school children and teachers about CFNI's Regional School Nutrition Quiz during a one-day Symposium and Awards function organized by the Trinidad and Tobago Home Economics Association.

In collaboration with the Trinidad and Tobago Association of Nutritionists and Dietitians, CFNI contributed to the development of a nutrition screening tool which will be included in the Trinidad and Tobago Health Passport being developed by the Health Promotion Division of the Ministry of Health. It is planned that this tool will be used throughout all communities in the country.

COUNTRIES	CAJANUS (Number of Copies)	NYAM NEWS (Number of Copies)
Anguilla	7	8
Antigua & Barbuda	42	37
Bahamas	28	29
Barbados	52	46
Belize	17	15
British Virgin Islands	11	14
Cayman Islands	5	7
Dominica	29	33
Grenada	34	39
Guyana	46	81
Jamaica	296	273
Montserrat	17	11
St. Christopher-Nevis	16	31
St. Lucia	33	50
St. Vincent	34	60
Suriname	5	4
Trinidad and Tobago	165	107
Turks & Caicos Islands	7	8

CFNI participated in preparation of articles for a newspaper supplement for observance of Caribbean Nutrition Day as well as Nutrition Awareness Week.

Cajanus and Nyam News

Distributed issues of Cajanus (CFNI's journal) and Nyam News (CFNI's newsletter) to numerous professionals in the health, education, agriculture, and information sectors.

The contents of the issues are summarized below:

Cajanus Issues Published in 2008

(1) Common Caribbean Foods and Your Health – Part I

This issue focused on the nutrient content and health benefits of some commonly used foods in the Caribbean. Staples, legumes and nuts, fruits and vegetables make up a significant portion of the food basket for almost all Caribbean families. A historical perspective, its health contribution and some dietary issues are covered for each of the selected food items. Selected food items included in this issue are:

Breadfruit: Known scientifically as *Artocarpus altilis*. In general, the breadfruit can contribute appreciable amounts of energy, protein, carbohydrates and dietary fibre. It also makes a valuable contribution to daily intakes of calcium, magnesium, phosphorous and potassium.

Banana: The banana is immensely popular and eaten all year. The ripened banana is eaten in virtually every country and in some the green fruit is treated as a staple food which must be cooked, usually by boiling before eating. The main nutrient in banana is starch (carbohydrate) and contrary to popular belief it provides very little protein or iron.

Sweet Potatoes: *Ipomoea batatas* are one of the oldest root crops known to man. The presence of unique storage proteins has been observed to have significant antioxidant effect. The sweet potato is a very good source of vitamin C and manganese and a good source of copper, dietary fibre, vitamin B₆, potassium and iron. The yellow or

orange sweet potato is an excellent source of vitamin A.

Legumes: The term used to identify plants that grow as a vine or bush bearing pods with one or more edible seeds. Legumes are the best source of concentrated protein in the animal kingdom. Legumes commonly used in the Caribbean include black eyed peas, kidney beans, chickpeas, pigeon peas, green and yellow split peas, lentils, lima beans, pinto, soya bean, broad bean and navy beans.

Peanuts: These are technically not nuts but legumes. They grow on small bushes unlike most nuts which grow on trees. Peanuts provide about 25-30% protein, iron, magnesium, phosphorous, zinc, copper, fibre and more B-vitamins except B₁₂ than most nuts. Most of the fat found in peanuts is monounsaturated.

Fruits and Vegetables: Generally fruits are succulent, fleshy or pulpy and usually sweet with fragrant aromatic flavours. Vegetables are plants or parts of plants that can be used as food. Fruits and vegetables are important and highly beneficial foods for the maintenance of health and the prevention of disease.

(2) Common Caribbean Foods and Your Health – Part 2

This companion issue provided pertinent information about the remaining food groups of the six Caribbean food groups, that is, foods from animals and fats and oils.

Meats: Foods from animal sources include the subcategories, meat, poultry offal, dairy products and eggs. These foods are generally rich in protein, fats, vitamins A, B₁, B₂, B₁₂, D, niacin, calcium, iron, and zinc.

Fish: are often classified on the basis of their fat content, but regardless of the type of fish, the edible flesh has similar nutritive value providing a range of nutrients including protein, fats, minerals such as iodine, phosphorous and calcium, vitamin A, riboflavin, niacin and water.

Eggs: The most commonly used eggs are those from chickens. Eggs are an excellent source of protein and they contain most of the recognized vitamins, including the B vitamins, vitamin A, D and E. Eggs are also an excellent source of iodine, zinc, calcium and iron.

Cheese: There are more than 400 different types of cheese, with more than 2,000 different names. Cheese can be classified into six categories based on moisture content. Cheese is a concentrated source of all the valuable nutrients found in milk such as protein, vitamins and minerals as well as fat and cholesterol. The content of nutrients varies depending on the milk used.

Milk: Most of the world's milk is produced by cows. A lesser amount comes from goats buffalo and sheep. Milk contains a good balance of the macronutrients. It is also a very important source of calcium and riboflavin and provides significant amounts of most other essential nutrients with the exception of iron.

Sugars: Generally the term sugar is taken to mean "table sugar" or sucrose. There are many terms that either describe sugar or refer to sugar. These include corn syrup, dextrose, fructose, molasses, sorbitol, mannitol, invert sugar, white/granulated sugar, brown sugar. Sugar is the cheapest instant source of energy and can have therapeutic and medicinal value.

Coconuts: These have been an integral part of the diet in many tropical countries. As a cooking oil it is highly resistant to heat and spoilage and is therefore very stable. Shredded coconut can be used in making snack items and the milk can be incorporated into punches and desserts. Coconut milk is traditionally used in cooking for its flavour.

(3) What's New on Diabetes

This issue focused on Diabetes at the Caribbean, regional and global levels. An article on the "*Prevalence of Diabetes in the Caribbean*" collates the available published data on the epidemic, which is an ever increasing problem in the region.

In another article, the role of glycosylated haemoglobin in the control of diabetes mellitus was

discussed. This article gave a detailed review of the action of haemoglobin A1C and the ways in which it is used as a predictor of glycaemic control.

A research paper looked at the dietary habits of two generations of Caribbean people in London, England, and compares the diets of persons living with diabetes to those who are without the condition. It also explored the issues of what is "a proper meal" and what is the understanding of "healthy eating" as well as the relationship between food and health.

Quality care was also discussed in an article by the education committee of the Declaration of the Americas (DOTA) which outlined the conditions and standards that patient diabetes education programmes should meet. The committee emphasized that in order to be effective, the education requires a series of conditions such as formation, knowledge and pedagogical skills, good capacity of communication and the ability to listen and negotiate.

The article "*Global Guidelines for Type II Diabetes*" was reproduced with the kind permission of the International Diabetes Federation. The new guidelines stressed the importance of structural patient education as an integral part of the management of people with Type II diabetes.

(4) Non-Communicable Diseases

This issue highlighted several important aspects of chronic diseases. The opening article on "*Non Communicable Diseases*" examined the economic development and the epidemiological transition; it stressed that an important goal of this type of analysis in the region is to determine if a particular subtype of the epidemiological transition is currently taking place within the Caribbean. The article went on to elaborate on the burden that chronic diseases (CVD, cancer, stroke, etc.) place on the Caribbean region.

An article on the "*Causes of Chronic Diseases*" summarized the extensive evidence on the causes of the chronic disease epidemics. The evidence came from a full range of laboratory, clinical and population based studies conducted in all regions of the world.

“Chronic Disease: Burdens and Health Impacts” covered definitions of the various chronic diseases then went on to summarize the impact of chronic diseases in different populations around the world. It also included detailed projections based on estimates used by the WHO using standard methods to maximize cross-country comparisons.

Obesity was treated in a separate article outlining the epidemiology, cost and public policy options for this epidemic. It was treated separately because of the potential for this growing epidemic to overwhelm our health systems and ultimately retard our overall health and development. This article was based on an extract from *“Report of the Caribbean Commission on Health and Development”*.

Two articles by the International Diabetes Federation dealt with the issue of patient care for persons living with Type II diabetes. The articles covered *“Lifestyle and Nutritional Management”* and *“Control: Measures Levels and Monitoring”*.

Continuing the focus on diabetes care, the article *“Cardiovascular Risk, Blood Pressure and Kidney Damage”* reviewed a considerable number of effective ways of improving the health of people with Type II diabetes.

Nyam News Issues Published in 2008

- 1. Food Labels** – This two-part series sought to demystify food labels by explaining the terms used on food labels and how we should interpret them.

In much the same way that a Table of Contents explains what is inside a book, so too does the Nutrition Facts Food Label tell what the food we eat contains. With today’s food labels, consumers are able to:

- Obtain nutrition information about almost every food item on a grocery shelf.
- Compare the nutrient values in similar products.
- Quickly find information they need to make healthy food choices.
- Determine the amount per serving of nutrients, especially those of major health concern.

In Part 1, the layout of the Nutrition Facts Panel was presented and explained.

Part 2 aimed to address nutrition claims made on food labels.

Readers are reminded that while food labels provide guidance to consumers, they do not tell them what foods to eat.

- 2. Healthy Fast Foods** – Fast foods are quick, reasonably priced and readily available alternatives to home cooking. However, they are also typically high in calories, fat, saturated fat, sugar and salt. Many fast food outlets are responding to consumers’ complaints and offering “healthier” fast food options. A fast food qualifies as part of a healthy diet if it:

- Contributes to part of one or all of the basic food groups.
- Allows you to keep sugars, fat (especially saturated and trans fat), salt and calories low in the diet.
- Allows you to choose fewer calories and more nutrients.

Since few foods meet these guidelines, it is necessary to make smart choices, e.g., to reduce fats, avoid fried foods, and skip dessert; to limit sugar, use less ketchup, and avoid sweetened sodas.

- 3. Trans Fats** – The partial hydrogenation of vegetable oils results in the development of an alternative to animal fats that have an increased shelf life. However, in this process, the resulting fatty acids have a “trans” instead of the usually “cis” formation. Generally about 40% of trans fat can be obtained from commercially packaged goods e.g. cereals, crackers and cakes.

Clinical studies show that consuming either trans fatty acids or saturated fat has an effect on cholesterol levels but the effect of trans fat is considered to be worse than saturated fats. Trans fat increases the blood level of low density lipoproteins and decreases the level of high density lipoproteins. This combined effect increases the risk for cardiovascular disease and diabetes.

In the Caribbean there are no food labeling regulations that mandate indication of the amount of trans fat contained in a product. Generally though,

if the ingredient list includes the words “partially hydrogenated” or “hydrogenated” you can infer the food contains trans fat.

In order to limit the intake of trans fat, there are many guidelines that the consumer can follow, e.g., read food labels and use naturally occurring unhydrogenated oils.

4. Four issues of Nyam News were dedicated to specific food items:

(i) Ackee – Ackee is the national fruit of Jamaica with the main producing areas being Clarendon and St Elizabeth. As it is high in fat, it is included in the Fats and Oils Caribbean Food Group. The fruit bears in clusters, turn red on reaching maturity and splitting open along the seams with continued sun exposure. When open, it reveals three large black shiny seeds and bright yellow flesh.

Studies conducted show that linoleic, palmitic and stearic acids are the major fatty acids contained in ackee. This delicacy is enjoyed by many at breakfast or as an entrée. When boiled, drained and simmered in oil with dried salted cod fish and a choice of vegetables, seasonings and hot peppers, it becomes Jamaica's national dish ackee and saltfish.

(ii) Avocado – Avocados grow abundantly in warm climates. The fruit is normally pear shaped and the skin may be varying shades of green or purple. Avocados ripen only after they are picked. While they have high oil content and are placed in the Fats and Oils Caribbean Food Group, the fat they contain is highly monounsaturated. Avocados contribute valuable calories, protein, vitamins A, C, E and fibre. As with other plant foods, it is cholesterol free.

Avocados can be served in salads, stuffed and seasoned, sliced and diced and combined with other vegetables or in making guacamole (a blend of the pureed flesh of lemon or lime juice and a variety of seasonings). They are also good in sandwiches.

The best strategy is to buy avocados when they are still a bit green and firm and ripen them at home. Hard avocados ripen at room temperature in 3-6 days.

(iii) Honey – Honey has been described as man's oldest sweetener. Chemically, its composition is the same as sucrose but in honey all the monosaccharides are not bonded to form disaccharides. The main uses of honey are in cooking, baking, spreading on bread or toast, and as an addition to various beverages such as tea.

Honey appears in many traditional remedies and is used as a mild antiseptic to treat minor burns and wounds, as a remedy for sore throats, to boost the body's natural defenses and in the treatment of seasonal allergies.

(iv) Irish vs. Sweet Potato – Irish potatoes, or white potatoes, are a very popular food source. Unfortunately, many people eat potatoes in the form of greasy French fries or potato chips, and even baked potatoes are typically loaded down with fats such as butter, sour cream, melted cheese and bacon bits. Irish potatoes are a very good source of vitamin C, a good source of vitamin B₆, copper, potassium, manganese and dietary fibre. They contain a variety of phytonutrients that have antioxidant activity. Among these important health-promoting compounds are carotenoids, flavonoids and caffeic acid, as well as unique tuber storage proteins, such as patatin, which exhibit activity against free radicals.

Sweet potatoes are good contributors of traditional nutrients and are a sweet source of good nutrition. They qualify as being an excellent source of vitamin A (in the form of beta carotene), a very good source of vitamin C and manganese and a good source of copper, dietary fibre, vitamin B₆, potassium and iron.

5. Magnesium, Nutrition and Your Health - Magnesium is one of the essential minerals although it makes up only approximately 0.05% of body weight. Approximately 50-60% of this magnesium is found stored in bones and teeth while the remainder is found in muscles and soft tissues.

Magnesium in the body is involved in energy production and proper functioning of the heart and circulatory systems, muscle contraction and blood clotting, preventing dental caries, regulating blood

pressure, carbohydrate metabolism and bone health.

Most of our dietary magnesium comes from plant sources. Dark green vegetables are good sources. Most nuts, seeds and legumes have high amounts of magnesium. Other sources are soy products, nuts, whole grains, particularly wheat (especially the bran and germ), millet and brown rice.

6. Selenium, Nutrition and Your Health –

Although selenium is an essential nutrient, there is very little selenium in our body. Most of it is in the liver, kidneys and pancreas and, in men, the testes and seminal vesicles.

Selenium has many functions in the body as part of a nutritional antioxidant system since it protects cell membranes from lipid peroxidation and it slows the loss of youthful elasticity. Selenium may also have an anti-carcinogenic effect, appears to help stimulate antibody formation in response to vaccines, aids in protein syntheses, helps in reducing menopausal symptoms and is needed for proper functioning of the thyroid gland.

Selenium is widely available from many foods, e.g. human milk, brewer's yeast, wheat germ, liver, and butter. Dietary deficiency is the most common cause of selenium deficiency. Selenium deficiency causes illness and also makes the body more susceptible to illnesses caused by other nutritional, biochemical and infectious stresses.

7. Milk and Your Health –

The role of milk in health relates to its relationship to several major health problems, such as osteoporosis, cardiovascular disease and dental caries.

Milk is a good mixture of useful and numerous essential nutrients including protein, vitamin A, thiamin, vitamin B₆, calcium and phosphorus. The nutritional and health benefits outweigh the negative views held by some. Today, there are many types of milk available to consumers who can exercise informed choice and select a type that is appropriate for their dietary needs. Like many other food items, milk is versatile and can be used alone, as a beverage or incorporated with other items to prepare many of the sweet and savoury dishes that abound in the Caribbean. Unless contraindicated, persons should be encouraged to include some milk in a healthy balanced diet.

8. Drug-Nutrient Interactions –

Two Nyam News issues focused on this important topic. The first examined how drugs affect nutrient availability while the second looked at how the diet affects drug absorption and bioavailability.

Drug nutrient interactions occur when the nutrients in the food a person eats reacts with the drug the person is taking in such a way that prevents both the drug and the nutrients from working the way they should. An individual's nutritional status and diet may affect the drug action by changing its absorption, distribution, metabolism and excretion. Conversely, drugs can alter nutrient absorption, metabolism, utilization and excretion. These potential interactions can affect either a person's nutritional status and/or the efficacy of the drug being used.

9. A Little Salt in Your Life -

Salt or sodium chloride is a crystalline chemical compound made up of the elements chlorine and sodium. It is produced either through mining from inland deposits in the ground or through evaporation from seawater.

Sodium, one component of salt is an essential nutrient, meaning that the body cannot manufacture it for itself and therefore it must be taken in by the body.

Sodium serves many important functions including regulation of extra cellular fluids, muscle contraction and transmission on nerve impulses. The three main sources of sodium are processed and prepared foods, condiments and natural occurring sources e.g. meat and dairy products.

Sodium intake can be controlled by eating less processed foods, removing salt from recipes where possible and by using herbs and spices instead of salt.

10. Sucralose: Is It Safe? –

Sucralose is a non-nutritive sweetener or sugar substitute formed by a multi-step process that replaces three hydrogen-oxygen groups on the sugar molecule with three chlorine atoms.

Although sucralose tastes like sugar, it is 600 times sweeter than sugar. It provides no calories because the body is unable to recognize it as a carbohydrate and therefore it is not broken down like

sucrose in the body and used for energy. When sucralose replaces sugar in foods and beverages, the caloric value of these food items is reduced or in some cases, practically eliminated.

Sucralose does not appear to affect blood glucose or insulin levels and can be safely consumed by people with diabetes. It is also considered safe for women who are pregnant or breastfeeding. However, the use of artificial sweeteners or foods made with them is not recommended for feeding young children as they need energy-dense meals to support healthy growth.

11. Phytochemicals - Phytochemicals are naturally occurring, biologically active chemical compounds in plants. They are protective and disease-preventing particularly for some forms of cancer and heart diseases. The most important action of these chemicals is their protective action against free radicals that damage body cells.

Flavanoids are a type of phytochemical that have been known to enhance the effects of vitamin C and is known to be biologically active against liver toxins, tumors, viruses, allergies and inflammation. Some important flavonoids include phytoestrogens, phytosterols and carotenoids.

It is advised that we consume a wide variety of fruits and vegetables in order to gain maximum benefit from the nutrients and phytochemicals they contain. Some good food sources of phytochemicals include broccoli, pak choi and spinach.

12. Probiotics – Probiotics are essentially helpful, live organisms, usually bacteria, that are used to change or re-establish the intestinal or gut flora and improve our health. They are usually given as part of our food, but can be introduced into our bodies in other ways.

Probiotics are believed to be helpful in the prevention and treatment of various diseases especially diarrhoea. Other benefits of probiotics include the improvement of lactose tolerance, improved immune function, decreasing cancer risk and in allergy treatment and prevention.

In addition to being used as additives in foods, probiotics can also be administered in a powdered or capsule form or can be injected into a body site or administered topically. The way it is given depends on the type of culture and where it is needed.

Part II: CFNI Development



Mrs. Christine Bocage makes a special presentation to 2008 CFNI retiree Mrs. June Holdip (right).



2008 CFNI retirees Dr Pauline Samuda and Mr Oswald Love.



Dr Grace Allen-Young,
Permanent Secretary,
Ministry of Health, Jamaica,
presents the PAHO Long
Service Award to Miss Lisa
McNamee (right).

Staff Development and Changes

The staff complement for the Institute stationed in Jamaica and Trinidad comprised the following for 2008:

Technical Staff	8
Administrative Staff	<u>17</u>
Total	25

Please see Organization Chart – Annex I.

The following persons retired in 2008: Mr. Oswald Love, Driver; Dr. Pauline Samuda, Nutrition Educator and Mrs. June Holdip, Nutritionist from the Trinidad office.

Transfers included Mr. Godfrey Xuereb, Public Health Nutritionist to WHO, Geneva and Miss Janice Tai, Data Processing Technician to the PAHO-Jamaica office. Dr. Lloyd Webb was transferred from the Office of the Caribbean Programme Coordinator to CFNI.

The Institute contracted several persons to assist with the technical programme during 2008. The areas of assistance included the CFNI/IDB project, World Diabetes Foundation project and health promotion.

Interns

In 2008, CFNI hosted one intern – Mr. Johnathan Anderson – a student of Brigham Young University in the USA who interned at CFNI from 11 Feb to 11 April 2008. Mr. Anderson worked in the area of diet and physical activity.

Staff Development and Achievement

PAHO Long Service award was given to Miss Lisa McNamee, in celebration of 10 years of service to the Institute. The following training activities were supported by the Director, CFNI:

- Mrs. Enett Noble: Association of Caribbean Research and Institutional Libraries (ACURIL) Regional Conference.
- Mr. Brian Nichols: Defensive Driving Course conducted by the United Nations Development Programme, Jamaica.

- Miss Karlene Russell: CompTIA A+ IT Technician Course.
- Miss Jacinth Waugh: Training in PAHO's planning process and AMPES.
- Mrs. Michelle Tappin-Lee: Training in PAHO's planning process and AMPES.
- Dr. Ballayram: Training in PAHO's planning process and AMPES.

Budget and Finance

The total operating budget for 2008 was US\$2,141,670. See Annex 2 for further information on the breakdown of the budget by expenditure types.

Quota contributions from CFNI member countries totaled US\$379,933.00.

Extra-budgetary funding accounted for 18% of the operating budget with a total of US\$385,937.00.

The financial activities were carried out in accordance with the procedures and systems of the Pan American Health Organization. The terms and conditions of the grant agreements for the various extra-budgetary projects guided their expenditures.

CFNI Building

The Office building remains in good condition. Routine maintenance was carried out to building and equipment as required.

CFNI Transition

In September 2007, the Caucus of CARICOM Ministers of Health agreed to proceed with the establishment of CARPHA (to which CFNI will transition) and established a Steering Committee and a Project Management Team to oversee and manage the process. The Ministers also agreed that the CARICOM Secretariat and PAHO would collaborate closely to support the implementation of this initiative.

The Steering Committee met in 2008 and outlined a process to be undertaken.

In October, the Institute was visited by Ms. Dianne Arnold, Area Manager, Personnel Department, PAHO, as well as Dr. Scott Schauf of the Legal Department. The purpose of the visit was to discuss administrative concerns of staff in relation to the transition.

Information Technology Services

In 2008, the Institute's network continued to be upgraded with new equipment provided by PAHO Headquarters, through the Information and Technology Service Unit (ITS). In March the Institute received 15 Dell Optiplex 745 desktop computers as part of the organization's replacement policy.

The office received an allocation of funds from ITS, for the procurement of spare parts and computer-related equipment. CFNI was able to utilize this external funding to acquire much needed supplies.

The software upgrades done throughout the year included a new version of the Antispam software – GFI Essentials 14 and Symantec Antivirus Software.

The AmpesOmis accounting system was upgraded significantly in 2008 with various changes to the processes. Ms Jacinth Vaughn, Administrative Assistant/Accounting, Dr. Ballayram, Food Economist and Mrs. Michelle Tappin-Lee, Administrator, attended a training workshop in Barbados, 7-11 October on Planning and Use of the AmpesOmis Accounting System.

During the period under review, CFNI staff participated in a number of on-line sessions for training and meetings via the Elluminate Live Conferencing software. PAHO Headquarters used this medium throughout the year for training in SharePoint and the new CFNI/PAHO Website. The new CFNI website which is now hosted under the PAHO.ORG domain was launched jointly with the Head office on 1st October. The CFNI website continued to facilitate requests and on-line queries from the Caribbean and the wider international community. The Institute's publications Cajanus and Nyam News as well as other CFNI information were published on the website.

Library

Use of the Collection

Throughout the year the Library was able to continue providing users with a referral service in food and nutrition as well as current awareness services (bulletins, indexes), photocopy and internet printing facilities. The CFNI Trinidad Centre, which is supplied from the Jamaica Centre collection, also provided these services. Groups (high schools, university, medical and nursing students) as well as several individuals visited the library during the period under review, to conduct research including the use of the CFNI periodicals (Cajanus and Nyam News). Volume of user visits are indicated by the statistics included in this report.

Journals' binding has upgraded the library stock for the period with 48 volumes of bound issues.

Composition of User Community

This year the library records showed 818 reference visits were made to the library. User visits for 2008 (see Table 1)

Table 2 shows user visits for the major categories of users, over the 5-year period, 2004 – 2008, a total of 4,171 exposures.

The majority of the users were University of the West Indies, University of Technology, and the nursing schools including University of the West Indies School of Nursing, high schools' students and teachers' colleges. Other users included health practitioners, nutritionists, schools of catering and members of the public. Combined with the current awareness monthly bulletins of new material, the library's services have also been heavily utilized by national public health personnel, personal health enthusiasts and persons with nutrition-related chronic diseases. The CFNI library offered several school groups, tours of the library facilities as part of library's services. The groups researched for examination preparation at the CXC and CAPE levels. The following schools were among the visiting and tour class groups this year: Ardenne High School, Holmwood Technical High School, St. Andrew Technical High School, St. Hugh's High School,

Vere Technical High School, Knox Community College and the Queen's High School.

Direct requests from the CFNI community focused on the topics: food composition, obesity and weight management, diabetes and chronic non-communicable diseases, food security, meal planning, infant nutrition, nutrition-related diseases and health, food and culture, food composition, food groups, food safety, indigenous recipes, dietetics, eating disorders (esp. obesity, micro nutrient deficiencies), nutraceuticals, vegetarianism,

alternative medicine, macronutrients, medicinal plants. Further, from existing reference resources, subject bibliographies and reference guides (library pathfinders) have been supplied to user clientele.

CFNI staff utilized the reference research facilities and the new journals received by the library. Interns and assistant consultants made good use of the retrospective nutrition research resources maintained in the library collection.

Training Opportunities Offered

The librarian and the IT coordinator participated in various training sessions on the new web management, offered on the Elluminate facility from Knowledge Management and Communication (KMC) Washington, held for the website focal points at PAHO institutions and centres. These were held by KMC with participation of personnel including Marcelo D'Agostino, Ian Roberts, Cristiane Oliveira and Ms. Myrna Marti. The CFNI site was among the first launched in September, in PAHO Latin American offices and centres. The launch of the new CFNI website was marked by the publishing of a statement from the CFNI Director on the Homepage. In June, the librarian attended The Association of Caribbean University and Research Institutes' Libraries (ACURIL) International Conference on e-Librarianship, on the theme, E-Librarian: Ideas, Innovation and Inspiration, in Montego Bay, Jamaica.

Table 1: User Visits 2008

Institution/Entity:	# of Participants
University of the West Indies (UWI)	227
University of Technology (UTECH)	163
Northern Caribbean University (NCU)	4
Mico University College	14
Teachers Colleges	45
High School	167
Staff request	44
Health personnel: Health Ministry Nurses	9 50
Others and telephone/email requests (e.g. vocational schools, other government departments, individuals, etc.)	95

Table 2: User Visits' Distribution of Major Groups for the 5-year Period (2004 – 2008)

Year	University of the West Indies	University of Technology	High Schools	Nurses	Teachers' Colleges	Others
2004	227	151	150	27	67	62
2005	229	214	98	39	42	79
2006	185	200	161	42	46	174
2007	207	100	192	39	96	500
2008	226	163	167	50	45	95
Total 5-yr.	1,074	828	768	295	296	910

Information Outreach

Public information was enhanced by displays mounted this year as well as access to the 40-year cumulated index to CFNI's flagship publication, *Cajanus*. Exhibitions and displays for the year also increased public awareness on the importance of nutrition to lifestyle practices; in various cases, in support of health ministries' activities.

The Library participated in the displays and other community events with provision of educational resources and materials. In March, one very successful out-of-town display was presented at the careers day of the Northern Caribbean University (NCU) campus in Manchester, Jamaica. Another successful display event, closer home, was the UWI Health Centre Wellness Day presented as part of the UWI 60th anniversary celebrations in 2008.

The library provided presentations to visiting health groups and the public in an endeavour to strengthen and enhance the function of information provision to the user community. The redesign of the Derrick B. Jelliffe Library poster was completed to improve text clarity. The poster and library flyer has been highly utilized in CFNI displays throughout the year.

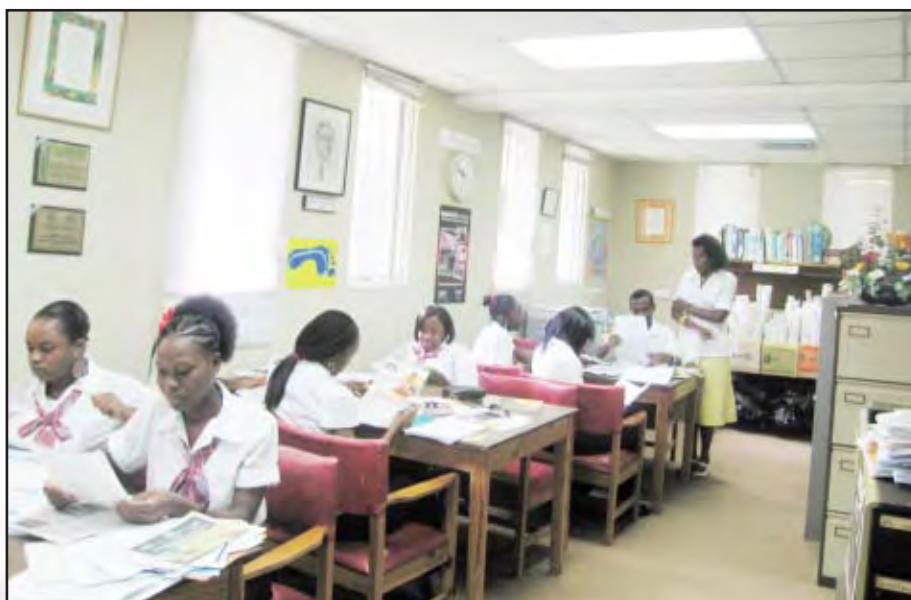
CFNI Website

The CFNI website was migrated along with all other PAHO websites with the application of Web 2.0 in 2008. The initiative is described as follows:

- PAHO Web 2.0 implies working in the Web and not working off-line to then upload files to the web.
- PAHO Web 2.0 is a strategic vision that integrates the models of the Virtual Health Library, the Virtual Campus and other sources of information of the Organization and other regions of WHO.
- PAHO Web 2.0 is a network of content repositories.
- PAHO Web 2.0 is a tool that evolves cooperatively.
- PAHO Web 2.0 considers a single applicable taxonomy to the whole information model of the Organization.
- All the staff members are "potential" content creators.
- Every content is "reusable."

The content management adopts open source technologies as platform and its philosophy of work.

CAPE students researching projects in CFNI Library, Jamaica



Based on a directive from Headquarters, all countries and centres participated in the formulation of the “New Web Strategy of The PAHO”. The “Weekly Implementation Report” kept staff updated regarding progress in the development and migration to the new system. Each implementation report also gave a listing of the participating countries and centres; from which a click on the country or centre name would navigate to the particular site. This bulletin included the stages at which country offices and centres were moving toward full implementation of the system.

Most sites were launched by September of 2008. Knowledge Management and Communication (KMC) team met virtually (Elluminate sessions) with the site managers as required, in order to assist with the development process. The site managers were also encouraged to seek assistance for queries from the KMC staff, and go to the websites’ discussion page on the PAHO website, to query in the various categories of management, library, good suggestions, etc. Mrs. Cristina Mitchell, Mr. Juan Carlos Díaz, Mr. Marcelo D’Agostino, Ms. Myrna Marti worked with the CFNI content managers, Miss K. Russell and Mrs. Enett Noble.

During the period of training and content upload to the new system the two formats for the websites, previous and new were run in parallel. Currently both have been merged to form the active site. A web team

was formulated in June and the names submitted to Washington. The team consists of Mrs. B Lawrence, Miss K. Russell, Miss A. Morris and Mrs. E. Noble. The CFNI new website was launched. The following documents were completed to support the corporate implementation of the project PAHO Web 2.0 (in English and Spanish):

- Guide for the implementation of the websites in the country offices and centers “*Content Management Quick Guide*”.
- Operational Guide of the Content Management System “Joomla!” designed for the needs for PAHO; “*Quick Guide Start of the Process*”.

The CFNI website carried issues of Cajanus and Nyam News to 2007; PowerPoint presentations and new activities including the schools’ competitions. Website content upload included regular updates of Cajanus and Nyam News as published and other public information. Website URL: <http://www.paho.org/cfni>.

New Title Acquisitions

A total of two hundred (200) new items including journals, books and pamphlets updated CFNI’s collection this year. The Library prepared and circulated bulletins on the new publications received.

Material Production Unit

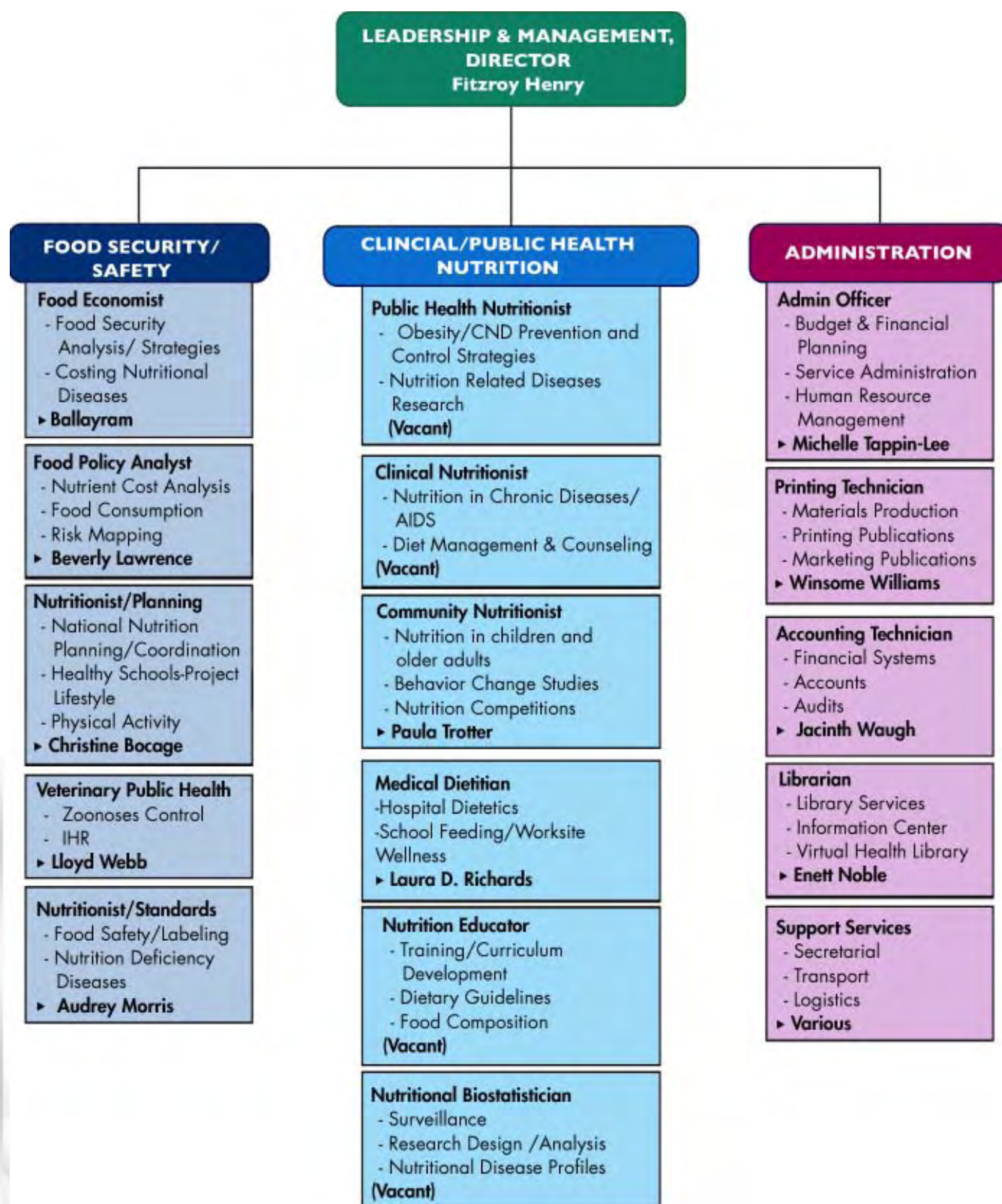
CFNI TECHNICAL PUBLICATIONS	
Name of Publication	No. of Copies
Cajanus, Vol. 39, No. 1, 2006	3,200
Cajanus, Vol. 39, Nos. 2-3, 2006	1,200 each
Cajanus Index, Vol. 39, 2006	1,200
Nyam News July – December 2005	2,680
Nyam News – January 2006 – September 2007	1,381 each
Reducing Poverty and Food Insecurity in the Caribbean	250
Poverty Alleviation and Food Security Strategies in the Caribbean: A Policy Dialogue	250
Healthy Eating and Active Living: 40 Small Changes to Make a Difference (Reprint)	1,400
Flyer: Caribbean School's Food & Nutrition Quiz Competition 2007: Call for Entries	1,000
Flyer: Caribbean Nutrition Promotion Awards Competition 2007: Call for Sponsors	2,000
Recommended Dietary Allowances for the Caribbean	117
Posters: The Caribbean Food Group :What they mean and how to use them	1,600
CFNI Annual Reports – 2006	450
CFNI Annual Report – 2007	450
Booklet: Sponsors of CFNI's 2007 Regional Nutrition Competitions	200
Flyer: How Much Trans Fat Are you Consuming?	150
Brochure: Caribbean Food & Nutrition Institute	4,500
Booklet: Sponsors of CFNI's 2008 Regional Nutrition Competitions	200
Antigua and Barbuda Child Health Clinic Record (Boys and Girls)	100 each
Booklet: Preventing Diabetes and Other Chronic Diseases through a Schools-Based Behavioural Intervention in Four Caribbean Countries	500
Poster: Schools-Based Behavioural Intervention in Four Countries (WDF-Funded Project)	60
My Food and Activity Journal (Instructions for Journal Entry)	886 pads
Country Coordinator Observation Form	850
Teacher Self-Evaluation Form	80
My Activity Contract	850
Key Nutrients in Foods	850
Foods: What's Inside	850

CFNI TECHNICAL PUBLICATIONS	
Name of Publication	No. of Copies
Worksheet 1: Foods Vary	1,150
Worksheet 2: The Foods Around Me	850
Worksheet 3: Foods and Nutrients	850
Worksheet 4: What's Inside the Foods Around Us?	950
Worksheet 5: Personal Reflection Foods and Nutrients	900
Worksheet 6: Grouping Caribbean Foods	900
Worksheet 7: Eating From the Six Caribbean Food Groups	900
Worksheet 8: Grouping the Foods Around Me	900
Worksheet 9: Personal Reflection Eating from all the Food Groups	900
Worksheet 10: To Which Food Groups Do the Foods That I Eat Belong?	900
Worksheet 11: Assessing the Foods Around Me	900
Worksheet 12: Personal Reflection: Getting it Right	900
Worksheet 23: My Activity Recall	900
Worksheet 24: Personal Reflection: My Activity	900
Worksheet 25: Planning My Activity	900
Worksheet 26: Assessing My Physical Activity Plan	900
Worksheet 27: Personal Reflection: How Do I Feel About Me	900
Worksheet 28: My Health Habits	900
What Goes in? What Comes Out? – Balance it	870

NON-CFNI PUBLICATIONS	
Name of Publication	No. of Copies
Printed for The UWI School of Nursing, Mona:	
• The Caribbean Journal of Nursing and Midwifery	300
• Professional Papers by Dr. Mary Jane Seivwright	300
• BScN (generic) Programme: Record of Clinical Skills	200
• Students' Handbook: Academic Year 2008-2009	250
Management of Sexually Transmitted Infections: A Clinician's Vade Mecus Reprinted for CHART/Ministry of Health Jamaica	500
Printed for Inter-American Institute for Cooperation on Agriculture Office in Jamaica:	
• 2007 Annual Report - IICA's Contribution to Agriculture and the Development of the Rural Communities in Jamaica	200
• Calling Cards – Mr. Ainsworth Riley	200
• Inside IICA Newsletters – July and October 2008	100 each
• IICA Day 2008 Programme (November 7, 2008)	100
• IICA Brochure	100
University Hospital League of Graduate Nurses 50th Anniversary Commemorative Magazine	250

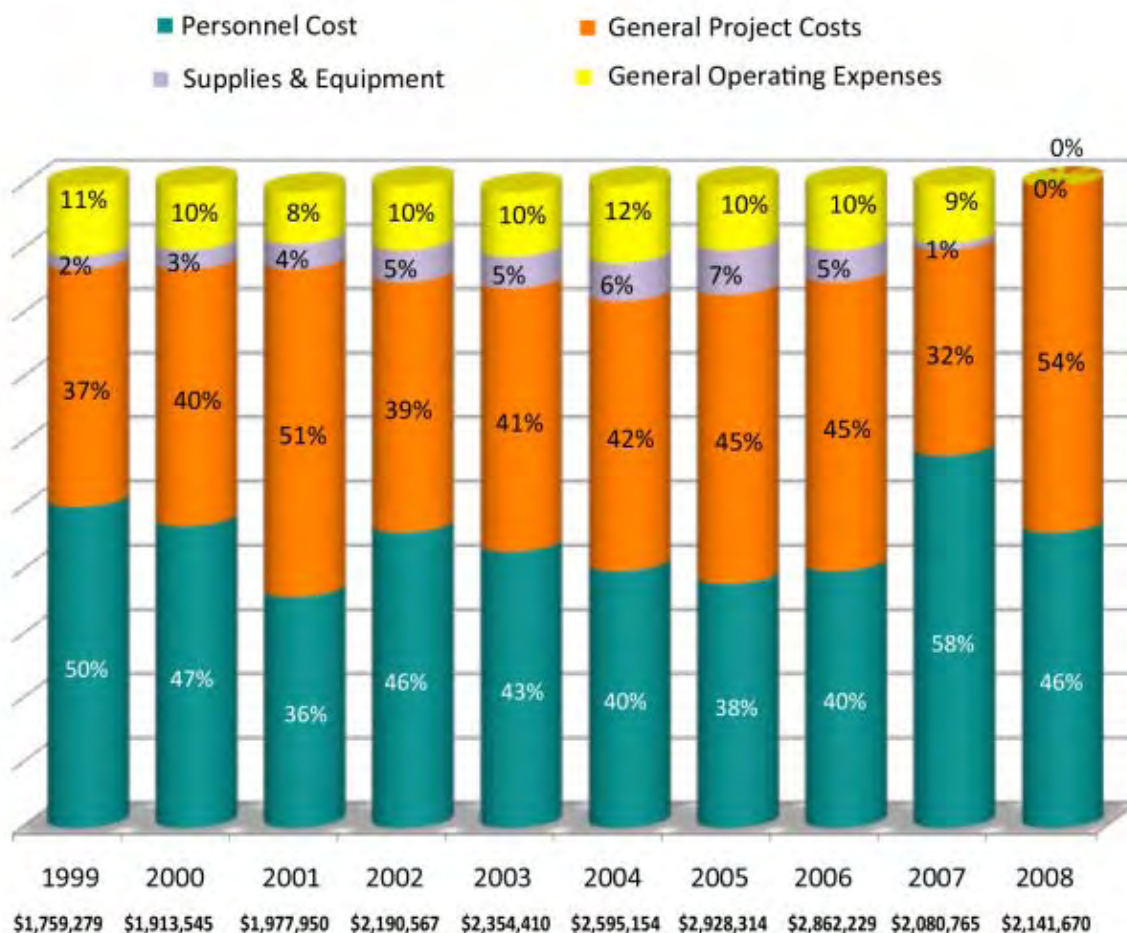
PRE-PRESS DESIGNS	
Flyers	Caribbean Schools Nutrition Quiz Competition 2008: Call for entries Caribbean Nutrition Promotion Awards Competition 2008: Call for entries
Covers	Cajanus Vol. 39, Nos. 4, 2006 CFNI Annual Report 2006 and 2007
Newsletter	NFNCCJ Newsletter 2007
Leaflet	WDF Project Overview
WDF	Food Labels
WDF	Picture Cards
WDF Posters	Read Your Labels Schools-Based Behaviour Interventions in Four Countries Things We Do Every Day Game Physical Education Physical Activity Sports Exercise
Posters	Types of Fat Trans fat and Your Health Our Bodies Need Some Fat What is Trans fat?

Annex I



Annex II

Types of Expenditure as a Percentage of Total Operating Budget 1999-2008



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