

**INTERNATIONAL CONFERENCE ON NUTRITION
ACTION PLANS
FOR
DOMINICA**

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PREFACE

In December 1992, the International Conference on Nutrition (ICN) was held under the auspices of the Food and Agricultural Organization (FAO) in Rome, Italy. One hundred and fifty nine (159) countries, including Dominica, were signatory to this declaration.

The declaration pledged to strive to eliminate or reduce substantially the following nutritional maladies by the end of the 1990's.

- * Famine and famine-related deaths.
- * Starvation and nutritional deficiency diseases in communities affected by natural and man-made disasters.
- * Iodine and vitamin A deficiencies .
- * Starvation and widespread chronic hunger.
- * Under-nutrition especially among children, women and the aged.
- * Other important micro nutrient deficiencies including iron.
- * Diet related communicable and non communicable (CNCDs) diseases.
- * Social and other impediments to optimal breast feeding.
- * Inadequate sanitation and poor hygiene, including unsafe drinking water.

Remedial strategies to combat these maladies have been incorporated into the following nine themes. Countries have been invited to select and develop action plans to be implemented before the turn of the century.

- * Incorporating nutrition objectives into development policies and programmes.
- * Improving household, food and security.
- * Improving food, quality and safety.
- * Controlling infectious diseases.
- * Promoting breast feeding.
- * Caring for the deprived and vulnerable.
- * Controlling micronutrient deficiencies.
- * Promoting appropriate diets and healthy lifestyles.
- * Assessing, analyzing and monitoring nutrition situations.

Prior to the ICN Conference, the Ministers of Health of various Caribbean countries met, September 1991, under the auspices of the Caribbean Cooperation Health (CCH), and formulated goals and targets to be achieved. Many of these directly relate to nutrition

and are reflected in some of the aforementioned themes, for example:

- (1) Development and implementation of comprehensive programmes to prevent and control CNCDS.
- (2) Prevention and control of malnutrition and its resultant diseases.

The CCH ministers identified the need for the following:

- (a) Food and nutrition policy and strategy.
- (b) Nutritional surveillance system.
- (c) Programmes to control anaemia, obesity, and PEM.
- (d) Nutrition education programmes.
- (e) Programmes to monitor food safety and security.
- (f) Programmes to educate and train.

The ICN hopes that the process of selecting and developing National Food and Nutrition Plans of Action would be beneficial. It would initiate the establishment of effective coordinating and catalytic units to support and facilitate implementation of these plans.

This document focuses on the development of such plan for Dominica for a three year period. It is hoped that improvements in nutrition planning and coordination alluded to by that august body, the ICN, will materialize during the implementation of these plans. Also, it is further hoped that these plans will ultimately achieve their "super goal" of improving the health and nutritional status of the people of Dominica.

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INTRODUCTION

Nutritional status is an outcome of a wide range of social and economic factors, and is a sensitive indicator of the overall level of development. Nutrition-related information is essential for selecting and implementing effective policies and programmes to improve nutritional well-being.

In Dominica, the Ministry of Health is responsible for matters related to health and is headed by a democratically elected Minister of Health. Nutrition falls under the purview of the Ministry of Health. The Nutrition Unit is headed by a nutritionist who is directly answerable to the Director of Primary Health Care Services. At the community/district level, nutrition services are currently being dispensed by nurses who are trained by the Nutrition Unit. Additional nutrition support is provided by the U.S. Peace Corp in the form of a nutritionist currently assisting the Nutrition Unit. Dominica also has a Food and Nutrition Council which is a statutory body within the Ministry of Health.

Dominica's quest to optimize the health and nutritional status of its citizenry was taken one step further when Dominica became one of the 159 signatories to the ICN Declaration, thereby pledging to address national nutritional issues, by the year 2000.

The next step is the identification of those themes, of the nine proposed by the ICN, that would positively impact the food and nutrition situation in Dominica, and formulate the necessary short term (3 year) action plans.

A situational analysis of the health/nutritional profile of Dominica was made by consulting the following:

- (1) The ICN Country paper.
- (2) Inter-sectoral group from various government ministries. (See Appendix A).
- (3) The CCH Goals.
- (4) The Caribbean preparatory document for the ICN.

This enabled a comprehensive look to be taken at each ICN theme, within the context of the food and nutritional needs and priorities of the people of Dominica. The following themes have been identified for which plans of action should be developed. It is believed that they will strengthen and optimally impact the current nutritional status of the Dominican people in the targeted three year period (1995-1997).

- * Promoting appropriate diets and healthy lifestyles.

- * Caring for the nutritionally deprived and the economically vulnerable.
- * Promoting breast feeding
- * Assessing monitoring and analyzing nutrition situations.
- * Improving food quality and safety.

Even though the other 4 themes have not been specifically selected, their target groups will be positively impacted by the projects emanating from the 5 selected themes. For example, controlling micronutrient deficiencies will not have a plan per se. However, of the micronutrient deficiencies of interest to the ICN (iodine, Vitamin A and iron), only iron deficiency anaemia in pregnant women is perceived to be a problem in Dominica. This will most likely be covered under the theme, caring for the nutritionally vulnerable and the socially deprived. Preliminary indicators are that in Dominica pregnant/lactating women, infants, children, elderly and indigent persons may fall in this category.

It is possible that subclinical levels of other micronutrients, not routinely checked for, are prevalent in Dominica. This possibility is slated to be investigated in a National Nutrition Survey currently being planned.

It was also agreed that the themes (a) Incorporating nutrition objectives into development policies and programmes and (b) Improving household food and security should be discussed at the policy level and have policy statements formulated.

The overall goal (super goal) of the projects slated to be undertaken in the ensuing plans is to improve the health and nutritional status of the citizenry of Dominica. The projected cost of these projects is approximately \$US 151,000.00. Each of the themes selected to contribute to this overall goal has its own goal, aims and objectives, and target specific population groups.

Dominica, the largest of the Windward Islands group, comprises a total land area of 290 square miles. The most recent census, conducted in 1991 estimates, the total population at 71,794 persons primarily of African ancestry, including about 3,000 Carib Indians. This represents a 2.75% reduction in population when compared to the 1981 census figures.

The population pyramid of Dominica is essentially triangular with a broad base, thereby reflecting a pattern of high birth rates, over a long period of time, and relatively fewer persons surviving to the older age groups. The demographic profile is expected to change somewhat in the twenty-first century when the children of the 1950s baby boom are expected to acquire elderly status (over 65 years of age). Currently, only 8.5% of Dominica's population is over 65 years old. This is markedly different from that of an industrialized nation like the USA where the elderly population comprises approximately twice that percentage.

The island is governed by a democratically elected government, based on the two party ministerial system, since its independence from Britain. During its colonial past it was governed at times by France as well as Britain. This accounts for the French African patois that is widely spoken among Dominican's, even though English is the official language.

The island is divided into seven health regions which contain fifty-three government operated health centers. Health care is delivered primarily by government health facilities. Dominicans enjoy universal access to health care and are required to pay only a minimal fee. Fee for service care is offered by private physicians for those who could afford to pay. There are no private hospitals.

Dominica has an open economy with few exports, primarily bananas.

NUTRITIONAL PROBLEMS

Under-nutrition

Childhood malnutrition, (PEM) the major public health concern, for the first half of this century, has shown significant improvement and is not regarded as a nutritional problem in Dominica.

Over-nutrition

Attention now needs to be focused on the other end of the malnutrition spectrum, over-nutrition. The CNCDS (hypertension, diabetes, cerebrovascular disease and ischaemic heart disease) continue to rank in the top five causes of death among adults. Obesity in children is also of concern.

Anaemia

Anaemia continues to be a major public health concern among pregnant women.

Much epidemiological research, with a strong nutrition component, has been conducted throughout the English Speaking Caribbean. The findings have allowed valid generalizations to be made about the national status of nutrition related medical conditions, for example, anaemia, and protein-energy malnutrition (PEM).

However, these data are not optimally utilized as there is no single organization charged with the responsibility of collecting and reporting national nutritional status indicators. There is a critical need for National Nutrition Surveillance and Monitoring systems in each territory.

The nutrition related disorders seen throughout the region have changed markedly since the turn of the century. This is as much the result of the advances in modern medicine as it is the result of developmental and economic progress. Earlier this century, undernutrition, exaggerated by infectious diseases (measles and gastroenteritis) was the primary nutrition related disorder in the region. Economic prosperity and easier access to modern medicine (vaccination, antibiotics and oral rehydration therapy (ORT)) have caused a marked reduction in the prevalence of undernutrition in Dominica.

However, unfortunately the chronic diseases (obesity, hypertension, diabetes, cardiovascular and cerebrovascular diseases) typical of overnutrition and prevalent in Western societies, have now emerged as major public health concerns in the region including Dominica.

The Caribbean is indeed in a transitory period. Close proximity, social, economic, and trade links to the United States have resulted in American culture impacting every aspect of Caribbean lifestyle, with diet and behavior being no exception.

This underscores the need for an effective surveillance and monitoring system to alert governments and health professionals of impending changes in patterns and disease trends. This would allow them to plan and make the timely changes in health care delivery. The ability of the programmes/projects emanating from these plans to achieve their super goal, improvement of the nutritional status of the citizenry of Dominica, will be greatly enhanced by the simultaneous implementation of a National Nutrition Surveillance System.

NATIONAL PLANS OF ACTION

A) Promoting Appropriate Diets and Healthy Lifestyles

Morbidity and mortality due to complications resulting from diet related CNCDS exert both financial and social burdens. These are felt most by the already taxed national health care delivery system, especially facilities that deliver secondary and tertiary care, which are the more costly modalities of care. These diseases could adversely affect the productive capacity, quality and duration of life for affected persons.

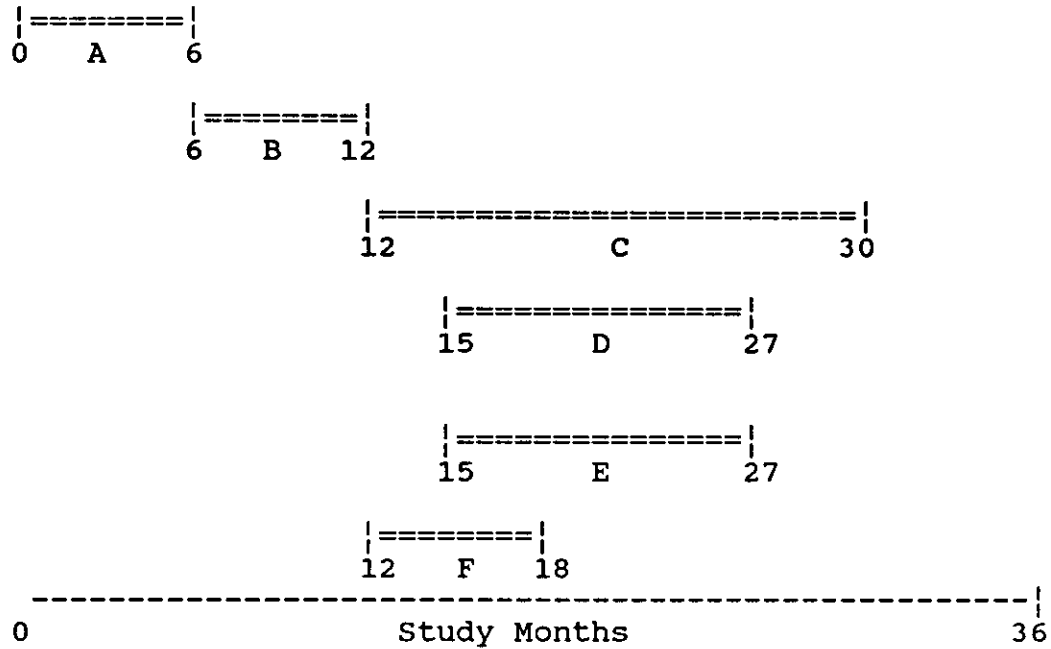
Studies have implicated various dietary parameters (high intakes of total and/or saturated fat, sugar, total energy and low intakes of fiber, iron, complex carbohydrates), in concert with various lifestyle parameters (smoking, inactivity and/alcoholism) as etiological agents/or risk factors for CNCDS.

A national plan to promote appropriate dietary and healthy lifestyle practices is needed. The Ministry of Health is currently conducting a healthy lifestyle project. A major component is encouraging and facilitating increased physical activity. Hiking, aerobics and badminton are some of the activities available to MOH personnel and their dependents.

The goal of this project is to reduce the prevalence of diet related chronic non-communicable diseases. This project will contribute significantly to this goal if the project's purpose is achieved. The purpose being the adoption of healthier diets and lifestyles.

This will be achieved by implementing a comprehensive programme of activities, the logic and strategies for which are outlined on pages 7 and 8. Appendix B contains additional information on cost components of Activities 3.3, 4.3 and 5.4. The projected time-line for these activities is as follows.

Promoting Appropriate Diets and Healthy lifestyles Time-line



Study Phase	Length (months)	Activities
A	6	Wellness Committee Formed
B	6	Personnel trained
C	18	Nutrition/Health education
D	12	Screening
E	12	Work-site programme
F	6	Review of Schools' Curriculum

HIERARCHY OF OBJECTIVES	OBJECTIVELY VARIABLE INDICATORS (OVI)	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS/RISKS
<p>GOAL</p> <p>Reduced prevalence of specific diet-related non-communicable diseases among adults.</p>	<p>1. 10% reduction in incidence of hypertension and/or obesity by 12/97.</p> <p>2. 10% reduction in hospital admissions resulting from complications due to hypertension and/or diabetes by 12/97.</p>	<p>1 Clinic records.</p> <p>2. Hospital records</p>	<p>1. National economic growth and development to support governments commitment of universal access to health care.</p> <p>2. Improved Socio-economic status.</p> <p>3. Healthy lifestyles and dietary practices adopted.</p>
<p>PURPOSE: Aim or Rationale</p> <p>Adoption of healthier diets and lifestyles.</p>	<p>EOPI (End of Project Impact - a benefit to be sustained).</p> <p>1. Participation of $\geq 10\%$ of adult population in nutrition screening exercises by 12/97.</p> <p>2. Projects established at 30% of work-sites (with \geq employees) to foster adoption of healthier lifestyles and behaviors by 12/97.</p> <p>3. Self reported changes to healthier dietary and lifestyle practices by 5% of adult clinic population by 12/97.</p>	<p>1. Project records.</p> <p>2. Project records.</p> <p>3. Project records.</p>	<p>PURPOSE TO GOAL</p> <p>1. Continued promotion of healthy diets and lifestyles.</p>
<p>OUTPUTS: Deliverables</p> <p>1. National status report.</p> <p>2. Trained personnel.</p> <p>3. Nutrition/health education /promotion program.</p> <p>4. Nutrition/health screening.</p> <p>5. Work-site program.</p> <p>6. Review of level and status of physical education in schools' curriculum.</p>	<p>1. Review of existing baseline/status data by 12/95.</p> <p>2. Personnel to implement healthy lifestyle programs trained by 6/96.</p> <p>3. Nutrition/health education /promotion program commenced by 6/96.</p> <p>4. Nutrition screening program. commenced by 6/96.</p> <p>5. Work-site healthy lifestyle program commenced by 6/96.</p> <p>6. Review disseminated by 6/96</p>	<p>1. Project records.</p> <p>2. Project records.</p> <p>3. Project records.</p> <p>4. Project records.</p> <p>5. Project records.</p> <p>6. Copy of review.</p>	<p>OUTPUTS TO PURPOSE</p> <p>1. Population receptive to information on healthy diets and lifestyles.</p>

HIERARCHY OF OBJECTIVE	OBJECTIVELY VARIABLE INDICATORS (OVI)	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS/RISKS
ACTIVITIES: (key activity clusters)			
1.1 Review available local/national data.	1.1 6 man-months \$ 500	1.1 Project records.	1. Availability of baseline data. 2. Availability of trainable personnel. 3. Availability of trained personnel. 4. Support of government, NGOs, medical and media personnel, private sector and the general public.
1.2 Prepare/disseminate review.	1.2 6 man-months \$ 500	1.2 Project records.	
1.3 Form inter-sectoral wellness committee.	1.3 2 man-months \$ 500	1.3. Project records.	
2.1 Develop training facilities and materials.	2.1 3 man-months \$ 500	2.1 Project records.	
2.2 Recruit/train personnel.	2.2 3 man-months \$ 500	2.2. Project records.	
3.1 Recruit/train personnel.		3.2. Project records.	
3.2 Develop linguistically and culturally appropriate media messages.	3.1 3 man-months \$ 500 3.2 6 man-months \$ 1,500	3.3. Project records.	
3.3 Conduct education campaign.	3.3 36 man-months \$ 29,190	3.4. Project records.	
4.1 Design screening program.	4.1 3 man-month \$ 500	4.1. Project records.	
4.2 Recruit/train personnel.	4.2 3 man-months \$ 500	4.2. Project records.	
4.3 Conduct screening exercises.	4.3 9 man-months \$ 9,250	4.3. Project records.	
5.1 Form work-site education committee.	5.1 2 man-months \$ 500	5.1. Project records.	
5.2 Recruit/train personnel.	5.2 3 man-months \$ 500	5.2. Project records.	
5.3 Develop linguistically and culturally literature.	5.3 3 man-months \$ 500	5.3. Project records.	
5.4 Conduct educational /screening exercises	5.4 9 man-months \$ 9,250	5.4. Project records.	
	TOTAL \$ 54,690		

B) Caring For The Nutritionally Deprived and The Socio-economically Deprived.

The increasing debt burden incurred by various Caribbean countries, including Dominica, has necessitated the implementation of various austerity measures to facilitate servicing these debts. These austerity measures (structural adjustment programs) could adversely affect the economic viability and the nutritional well being of many family units. This could in great part determine the nutritionally vulnerable and socio-economically deprived.

In Dominica, preliminary indications are that certain groups would be considered nutritionally vulnerable and/or socio-economically deprived. However, objective criteria need to be developed/decided upon to facilitate categorizing persons as such.

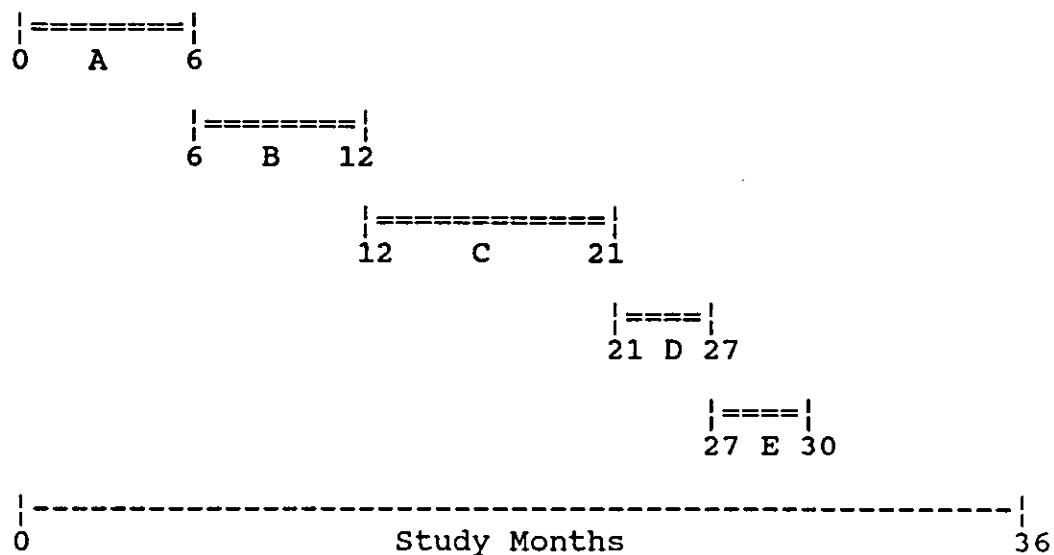
Currently outreach programs such as REACH (Reaching Elderly Abandoned Citizens House-bound) in collaboration with the Catholic Diocese, provides one meal per day for house-bound elderly and indigent persons. Additionally, the Social Center operates a feeding programme at its 21 daycare/pre-school facilities. Parents are required to pay a nominal fee based on the locale of the facility that their child attends.

Food Aid received from The European Community in collaboration with the Catholic Relief Services is utilized at various State run facilities e.g. The State Prison, Home For Delinquent Youths and The Center for Mentally Retarded Children.

The goal of this project is to develop and implement remedial strategies for nutritionally and socio-economically vulnerable Dominicans. This project will contribute significantly to this goal if the project's purpose is achieved. The purpose is to formulate definitions to identify nutritionally vulnerable and socio-economically deprived persons/groups in Dominica.

This will be achieved by implementing a comprehensive programme of activities, the logic and strategies for which are outlined in pages 9 and 10. Appendix C contains additional information on cost components of Activities 1.4 and 2.4. The projected time-line for these activities is as follows.

B) Caring For The Nutritionally Deprived and The Socio-economically Deprived.



<u>Study Phase</u>	<u>Length (months)</u>	<u>Activities</u>
A	6	Inter-sectoral Committee Formed
B	6	Personnel recruited/trained
C	12	Review conducted
D	3	Report disseminated
E	3	Definitions formulated

HIERARCHY OF OBJECTIVES	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	MEANS OF VERIFICATION (MOV)	IMPORTANT ASSUMPTIONS/RISKS
<p>GOAL (sector)</p> <p>To implement remedial strategies for the nutritionally vulnerable and socio-economically deprived.</p>	<p>1. Strategies formulated and implementation commenced by 12/97</p>	<p>1 Project records</p>	<p>GOAL TO SUPER GOAL</p> <p>1. National economic growth and development to support governments commitment to universal access to health care.</p> <p>2. Improved socio-economic status.</p> <p>3. Healthy lifestyles adopted.</p> <p>4. No outbreaks of disease.</p>
<p>PURPOSE: Aim or rationale</p> <p>Definition of nutritionally vulnerable and socio-economically deprived target groups formulated.</p>	<p>EOPI (End of Project Impact - a benefit to be sustained).</p> <p>1. Nutritionally vulnerable groups identified by 6/96.</p> <p>2. Socio-economically deprived groups identified by 6/96.</p>	<p>1.1 Project records.</p> <p>2.1 Project records.</p>	<p>Purpose to Goal</p> <p>1. Sustained economic growth and development.</p> <p>2. Funds available to implement remedial strategies.</p>
<p>OUTPUTS: Deliverables</p> <p>1. Nutritionally vulnerable persons defined.</p> <p>1. Socio-economically deprived persons defined.</p>	<p>TOR (Terms of Reference)</p> <p>1. Definition of nutritionally vulnerable person developed by 6/96.</p> <p>2. Definition of Socio-economically deprived person developed by 6/96.</p>	<p>1.1 Baseline study report.</p> <p>2.1 Project records.</p>	<p>Output to Purpose</p> <p>1. Optimal staff performance.</p> <p>2. Availability of personnel.</p>

HIERARCHY OF OBJECTIVES	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	MEANS OF VERIFICATION (MOV)	IMPORTANT ASSUMPTIONS/RISKS
<p>Activities: Key activity clusters)</p> <p>1.1 Form inter-sectoral review committee. 1.1 Design Baseline study. 1.2 Develop training facilities and materials. 1.3 Recruit and train personnel. 1.4 Conduct review, and disseminate report. 1.5 Formulate definition.</p> <p>2.1 Form inter-sectoral review committee. 2.1 Design Baseline study. 2.2 Develop training facilities and materials. 2.3 Recruit and train personnel. 2.4 Conduct review, and disseminate report. 2.5 Formulate definition.</p>	<p>Inputs (people, material, time, cost)</p> <p>1.1 3 man-months \$ 200 1.2 6 man-months \$ 500 1.3 6 man-months \$ 200 1.4 9 man-months \$ 6,040 1.5 2 man-months \$ 200</p> <p>2.1 See 1.1 2.2 See 1.2 2.3 See 1.3 2.4 See 1.4 2.5 See 1.5</p> <p>TOTAL BUDGET \$ 7,140.00</p>	<p>1.1 Project director's records. 1.2 Project director's records. 1.3 Project director's records. 1.4 Project director's records. 1.5 Project director's records. 2.1 Project director's records. 2.2 Project director's records. 2.3 Project director's records. 2.4 Project director's records. 2.5 Project director's records.</p>	<p>Activities to Outputs</p> <p>1. Availability of information on nutritional and SES indicators. 2. Support of public and private sectors.</p>

C) Promoting Breast Feeding

The importance of breast feeding to the achievement of optimal health and nutritional status in children is well documented. As a part of the campaign to encourage breast feeding, The International Code of Marketing Breast Milk Substitutes was adopted by the World Health Assembly in 1981. It encouraged Governments to implement national policies to regulate the marketing practices that promote bottle feeding.

Both WHO and UNICEF have issued statements "Protecting, promoting and supporting breast feeding." The Convention on the Rights of the Child was adopted by the United Nations General Assembly in 1989. It insists that all facets of society should have access to education and support regarding child health, nutrition and "the advantages of breast feeding."

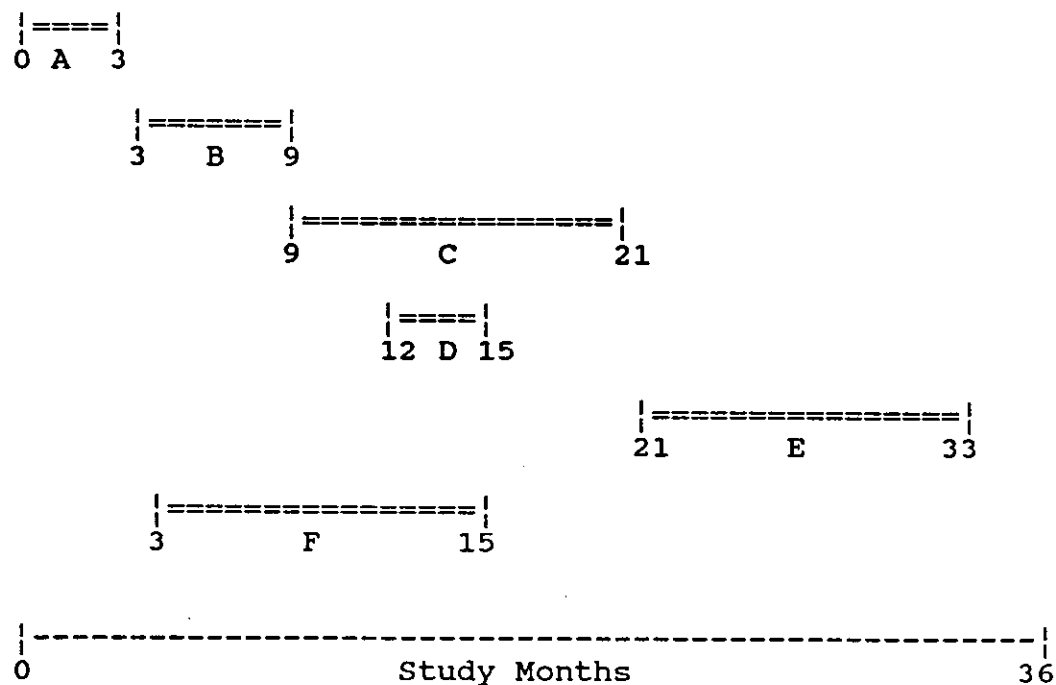
The trend with regards to breast feeding in Dominica is for mothers (50% in 1992) to initiate breast-feeding within 24 hours of giving birth. However, they only breast feed exclusively for a short period, much less than the three months recommended in Dominica.

In a 1983 study of 122 babies, 75% of them were being supplemented by three months of age. Common supplements were fruit juices, cereals and milk based formulae.

The goal of this project is to improve the anthropometric status of infants and children (0 - 5 years) in Dominica by reducing the prevalence of obesity. This project will contribute significantly to this goal if the project's purpose is achieved. The purpose being increasing the number of mothers who breast feed exclusively for 3 months.

This will be achieved by implementing a comprehensive programme of activities, the logic and strategies for which are outlined in pages 15 and 16. Appendix D contains additional information on cost components of Activities 1.5 and 2.4. The projected time-line for these activities is as follows.

Promoting Breast Feeding Time-line



Study Phase	Length (months)	Activities
A	3	Review Baseline data
B	6	Develop messages and train personnel
C	12	Nutrition/Health education
D	3	Train health personnel
E	12	Work-site nutrition education.
F	12	Baby Friendly initiative adoption campaign.

HIERARCHY OF OBJECTIVE	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS/RISKS
<p>GOAL (sector)</p> <p>Improved anthropometric status of infants and children.</p>	<p>1. 10% reduction in prevalence of gastroenteritis in children by 12/97.</p> <p>2. 10% reduction in number of children (0-5 years) classified as obese based on weight-for -age by 12/97.</p>	<p>1. Hospital/clinic records</p> <p>2. Hospital/clinic records.</p>	<p>Goal to Super Goal</p> <p>1. National economic growth and development to support governments commitment of universal access to health care.</p> <p>2. Improved Socio-economic status.</p>
<p>PURPOSE: Aim or Rationale)</p> <p>Increased number of mothers breast-feeding exclusively for 3 months post partum.</p>	<p>EOPI (End of Project Impact - a benefit to be sustained).</p> <p>1. 10% increase in the number of mothers initiating breast feeding by 12/97.</p> <p>2. 10% increase in the number of mothers breast feeding exclusively at four months post partum.</p> <p>3. 5% increase in the number of mothers breast feeding partially at 6 months post-partum by 12/97.</p>	<p>1. Clinic and hospital reports.</p> <p>2. Reports from health facilities and NNSS.</p> <p>3. Reports from health facilities and NNSS.</p>	<p>Purpose to Goal</p> <p>1. Sustained economic growth and development.</p> <p>2. Availability of jobs for women.</p> <p>3. Children fed appropriately.</p> <p>4. Timely introduction of appropriate weaning foods.</p>
<p>OUTPUTS: Deliverables</p> <p>1. Infant and young child feeding education program.</p>	<p>1.1 Monthly work-shops/lectures at clinics, post natal wards, out-patient facilities and private obstetricians and paediatricians offices by 12/95.</p> <p>1.2 Five culturally and linguistically appropriate media messages disseminated via electronic media by 12/95.</p> <p>1.3 One hundred flyers /pamphlets distributed monthly by 12/95.</p> <p>1.4 Health personnel trained in issues related to breast feeding by 12/95.</p> <p>1.5 Monthly presentations to church and civic organizations by 12/95.</p>	<p>1.1 Project records.</p> <p>1.2 Project records.</p> <p>1.3 Project records.</p> <p>1.4 Project records.</p> <p>1.5 Project records.</p>	<p>Output To Purpose</p> <p>1. Cooperation of the medical community.</p> <p>2. National commitment increase the incidence of breast feeding.</p>

HIERARCHY OF OBJECTIVE	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS/RISKS																																							
<p>OUTPUTS: Deliverables contd</p> <p>2. Work-site Infant and young child feeding education program.</p>	<p>2.1 Nutrition education program, began at work-sites that employ > 10 women of childbearing age on a permanent basis, by 6/96</p>	<p>2.1 Project records.</p>																																								
<p>Activities: Key activity clusters</p> <p>1.1 Review baseline data. 1.2 Form inter-sectoral education committee. 1.3 Recruit/train personnel. 1.4 Develop linguistically and culturally appropriate media messages. 1.5 Conduct nutrition education campaign. 1.6 Train health personnel</p> <p>2.1 Form work-site education committee. 2.2 Recruit/train personnel. 2.3 Develop linguistically and culturally literature. 2.4 Conduct nutrition education</p> <p>3.1 Conduct seminars for personnel from various obstetric and paediatric facilities.</p>	<table border="0"> <tr> <td>1.1</td> <td>2 man-months</td> <td>\$ 500</td> </tr> <tr> <td>1.2</td> <td>2 man-months</td> <td>\$ 200</td> </tr> <tr> <td>1.3</td> <td>2 man-months</td> <td>\$ 500</td> </tr> <tr> <td>1.4</td> <td>3 man-months</td> <td>\$ 1,000</td> </tr> <tr> <td>1.5</td> <td>18 man-months</td> <td>\$ 15,850</td> </tr> <tr> <td>1.6</td> <td>6 man-months</td> <td>\$ 500</td> </tr> <tr> <td colspan="3"> </td> </tr> <tr> <td>2.1</td> <td>2 man-months</td> <td>\$ 200</td> </tr> <tr> <td>2.2</td> <td>2 man-months</td> <td>\$ 200</td> </tr> <tr> <td>2.3</td> <td>2 man-months</td> <td>\$ 500</td> </tr> <tr> <td>2.4</td> <td>See 1.5</td> <td></td> </tr> <tr> <td>3.1</td> <td>6 man-months</td> <td>\$ 1,000</td> </tr> <tr> <td colspan="2">TOTAL</td> <td>\$ 20,450</td> </tr> </table>	1.1	2 man-months	\$ 500	1.2	2 man-months	\$ 200	1.3	2 man-months	\$ 500	1.4	3 man-months	\$ 1,000	1.5	18 man-months	\$ 15,850	1.6	6 man-months	\$ 500				2.1	2 man-months	\$ 200	2.2	2 man-months	\$ 200	2.3	2 man-months	\$ 500	2.4	See 1.5		3.1	6 man-months	\$ 1,000	TOTAL		\$ 20,450	<p>1.1 Project records. 1.2 Project records. 1.3 Project records. 1.4 Project records. 1.5 Project records. 1.6 Project records.</p> <p>2.1 Project records. 2.2 Project records. 2.3 Project records. 2.4 Project records</p> <p>2.4 Project records</p>	<p>Activities to Output</p> <p>1. Availability of trainable personnel. 2. Most mothers attend child welfare clinic. 3. Cooperation from mothers. 4. Support of, government, NGOs, medical community, media, private sector and general public. 3. Availability of baseline data on national breast feeding status.</p>
1.1	2 man-months	\$ 500																																								
1.2	2 man-months	\$ 200																																								
1.3	2 man-months	\$ 500																																								
1.4	3 man-months	\$ 1,000																																								
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2.4	See 1.5																																									
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TOTAL		\$ 20,450																																								

D) National Nutrition Surveillance and Monitoring System (NNSS)

Nutrition related indicators such as the number of undernourished children, prevalence of PEM, the distribution of adult body mass indices (BMI's), anaemia status, DMF (decayed, missing and filled) index for 12 year olds and DEF (decayed, extracted and filled) index for 6 year olds, and food availability coupled with traditional indicators of national development, such as GNP, would be good measures of human welfare and development in Dominica.

Nutrition related information is vital for a variety of purposes. It is needed to make effective policy decisions, and to develop and implement relevant programmes to improve nutritional well being. Such information should include the following:

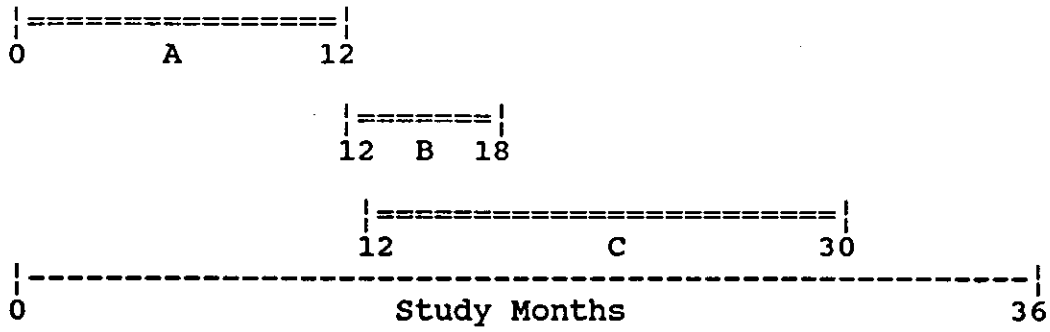
- * Identification of chronic nutritional problems and causes.
- * Prediction and detection of short term, acute nutrition problems.
- * targeting population groups for short-term relief efforts and long term policy and programme development.
- * Monitoring change and evaluating impact of short and long term intervention programmes.

To be useful, information must be provided to the appropriate decision makers in a timely manner and easily understood format. The Caribbean has long recognized the need for a regional NNSS. As indicated elsewhere, a functioning NNSS will be an important adjunct to the projects which make up Dominica's ICN Action Plans.

The goal of this project is to disseminate current data on specific health and nutrition indicators. This project hopes to contribute significantly to this goal if the project's purpose is achieved. The purpose being the provision of pertinent nutrition information to decision and policy makers.

This will be achieved by implementing a comprehensive programme of activities, the logic and strategies for which are outlined in page 19. Appendix E contains additional information on cost components of Activities 1.4 and 3.3. The projected time-line for these activities is as follows.

National Surveillance and Monitoring System (NNSS) Time-line



<u>Study Phase</u>	<u>Length (months)</u>	<u>Activities</u>
A	12	Needs assessment survey
B	6	Personnel trained
C	18	Functioning NNSS established

HIERARCHY OF OBJECTIVES	OBJECTIVELY VARIABLE INDICATORS (OVI)	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS/RISKS
GOAL: (sector) Current national data on specific food and nutrition indicators.	1. National Nutritional status reports disseminated quarterly by 1997. 1. Regional Nutritional status reports disseminated quarterly by 1997.	1. Date of publication. 2. Date of publication.	Goal to Super Goal 1. National economic growth and development to support governments commitment of universal access to health care. 2. Improved Socio-economic status. 3. Healthy lifestyles and dietary practices adopted.
PURPOSE: Aim or Rationale) Provision of pertinent information to formulate effective plans and policies to improve the population's nutritional status.	1. Forecasting/predicting and reporting national and local trends with regards selected food and nutrition indicators by 1/97	1. NNSS publications.	1. Commitment from contributing government and private agencies to submit reports on schedule.
OUTPUTS: Deliverables 1. Needs assessment survey. 2. NNSS personnel trained. 3. Functioning national monitoring /surveillance system established.	1. Report disseminated by 12/95. 2. Personnel trained by 6/96 3. 90% of all health/medical facilities submitting reports on schedule by 12/96.	1. Project records. 2. Project records. 3. Project records.	1. Contributing agencies collect data according to protocol.
ACTIVITIES: (key activity clusters) 1.1 Design survey. 1.2 Develop training facilities and materials. 1.3 Recruit and train personnel. 1.4 Conduct survey/disseminate report. 2.1 Develop training manuals, and manual of operations. 2.2 Recruit/train personnel. 3.1 Design surveillance system. 3.2 Train personnel from reporting agencies (eg medical facilities) in reporting procedure. 3.3 Operate NNSS (12 months)	1.1 6 man-months \$ 200 1.2 3 man-months \$ 500 1.3 3 man-month \$ 200 1.4 12 man-months \$ 9,730 2.1 6 man-months \$ 500 2.2 6 man-months \$ 500 3.1 6 man-months \$ 1000 3.2 3 man-months \$ 500 3.3 36 man-months \$ 27,950 TOTAL \$ 41,080	1.1 Project records. 1.2 Project records. 1.3 Project records. 1.4 Project records. 2.1 Project records. 2.2 Project records. 3.1 Project records. 3.2 Project records. 3.3 Project records.	1. Availability of trained professionals to manage/operate system. 2. Availability of trainable personnel. 3. Support of government, NGOs, medical community, media, food industry, private sector and general public.

E) Improving Food Quality and Safety

Governments, the food industry, consumers and international agencies each has important and inter-related roles to play so that the ICN theme "Improving food quality and safety" could be addressed.

Governments are saddled with the responsibility of ensuring a safe nutritious, affordable food supply be made available to the populace, so that a healthy diet can be chosen. To do this, the following are needed:

- * Comprehensive legislation.
- * Regulations and standards.
- * Effective compliance and monitoring programmes including inspection.
- * Consumer education on food quality and safety issues.

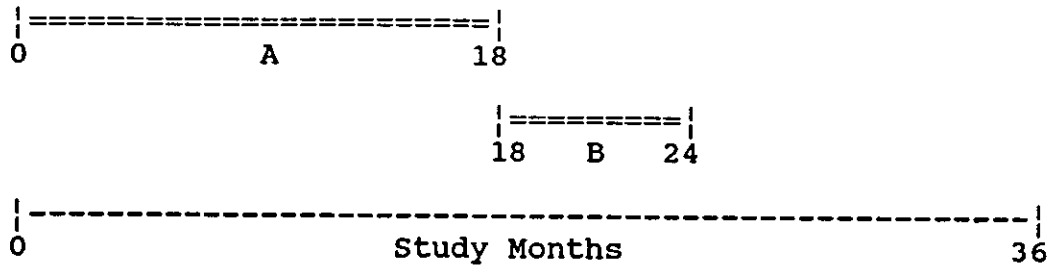
In Dominica, local food production is inadequate and a large proportion is imported. Approximately 44% of calories and 54% of protein are imported. Imported cereals contribute 29% of dietary energy. In 1987 food imports accounted for 16% of total imports.

The inter-sectoral group agreed that the Environmental Health inspectors perform admirably. However, concerns were expressed over the capability of the Food Chemist Lab to identify potentially hazardous substances (e.g. chemical/pesticide residues in water and on market produce). It was felt that the list of substances currently investigated at the lab needs to be revised to include harmful substances especially those known to be constituents of pesticides currently used in Dominica.

In keeping with this reality, the goal of this project is to ensure the availability of a safe food supply. The project will contribute significantly to this goal if the project's purpose is achieved. The purpose being the regulation of establishments that handle and/or sell food for human consumption.

This will be achieved by implementing a comprehensive programme of activities, the logic and strategies for which are outlined in pages 7 and 8. Appendix F contains additional information on cost components of Activity 1.4. The projected time-line for these activities is as follows.

Improving Food Quality and Safety Time-line



<u>Study Phase</u>	<u>Length (months)</u>	<u>Activities</u>
A	18	Needs assessment survey
B	6	Existing laws reviewed

HIERARCHY OF OBJECTIVES	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	MEANS OF VERIFICATION (MOV)	IMPORTANT ASSUMPTIONS/RISKS
<p>GOAL (sector)</p> <p>Safe food supplies.</p>	<ol style="list-style-type: none"> 1. 10% reduction in the incidence of food borne illnesses by 1997. 2. Capability of the Food Chemist's lab enhanced by 12/95. 3. Judicial prosecution of $\geq 80\%$ of cases within 3 months by 12/97. 4. Regulation of pesticide use by 12/97. 	<ol style="list-style-type: none"> 1.1 Health facility records. 2.1 Court documents. 	<p>GOAL TO SUPER GOAL</p> <ol style="list-style-type: none"> 1. National economic growth and development to support governments commitment to universal access to health care. 2. Improved socio-economic status. 3. Healthy lifestyles adopted. 4. No outbreaks of disease.
<p>PURPOSE: Aim or rationale</p> <p>Regulation of establishments that handle and/or sell food.</p>	<p>EOPI (End of Project Impact - a benefit to be sustained).</p> <ol style="list-style-type: none"> 1. 90% of roadside vendors have food handlers permits by 1/97. 2. Enforcement of existing food related laws by 6/96. 3. Enforcement of existing pesticide use laws by 6/96. 	<ol style="list-style-type: none"> 1.1 Project records. 2.1 Project records. 3.1 Project records. 	<p>Purpose to Goal</p> <ol style="list-style-type: none"> 1. Sustained economic growth and development. 2. Absence of natural disasters. 3. Hiring of adequate number of inspectors.
<p>OUTPUTS: Deliverables</p> <ol style="list-style-type: none"> 1. Needs assessment survey conducted. 2. Existing food related laws reviewed. 	<p>TOR (Terms of Reference)</p> <ol style="list-style-type: none"> 1. Baseline study completed by 12/96. 2.1 Review completed by 12/96 	<ol style="list-style-type: none"> 1.1 Baseline study report. 2.1 Project records. 	<p>Output to Purpose</p> <ol style="list-style-type: none"> 1. Inspections conducted according to protocol. 2. Optimal staff performance.

HIERARCHY OF OBJECTIVES	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	MEANS OF VERIFICATION (MOV)	IMPORTANT ASSUMPTIONS/RISKS
Outputs: Deliverables contd	TOR (Terms of Reference) contd		Output to Purpose contd
Activities: Key activity clusters) 1.1 Design Baseline study. 1.2 Develop training facilities and materials. 1.3 Recruit and train personnel. 1.4 Field test instruments, conduct survey, and disseminate report. 2.1 Review existing laws and regulations. 2.2 Draft new or modify existing laws and regulations.	Inputs (people, material, time, cost) 1.1 6 man-months \$ 500 1.2 3 man-months \$ 500 1.3 3 man-months \$ 1,000 1.4 33 man-months \$ 23,420 2.1 3 man-months \$ 1,000 2.2 3 man-months \$ 1,500 TOTAL BUDGET \$ 27,920.	1.1 Project director's records. 1.2 Project director's records. 1.3 Project director's records. 1.4 Project director's records. 2.1 Project director's records. 2.2 Project director's records.	Activities to Outputs 1. Availability of trained and trainable personnel. 2. Cooperation of government and food establishments. 3. Support of NGOs, medical community, media houses, private sector and general public. 4. Equipment available on schedule and within budget. 5. Laws enacted by legislature. 6. Judicial commitment to enforce laws.

RECOMMENDATIONS AND CONCLUSION

The programme of activities this document recommends is estimated to cost approximately \$US 151,000.00. Appendices B through E itemize the projected cost components of the various activities.

The capital outlay necessary to effectively implement these programmes in Dominica will most likely be substantially less than the amount stipulated in the budgets. Some of the personnel, resources and equipment budgeted for may be available from other programmes and can be appropriated to this programme without incurring a charge. Also, projects recommended in this programme have each budgeted independently for equipment and personnel. These could most likely be shared and/or loaned between projects, thereby reducing the projects implementation costs. An example of this is the programmes recommended for Promoting Appropriate Diets and Lifestyles and those recommended for Promoting Breast Feeding, both have community and work-site educational components. Each is budgeted for separately but it would be cost effective to combine them.

Local ministries and agencies responsible for implementing this programme are strongly urged to explore all avenues whereby projects could be dovetailed and further customized to prevent duplication of effort and expense. The cooperation and collaboration achieved by pooling and sharing resources would achieve a dual objective. It would substantially reduce the budgetary requirements to implement the projects and simultaneously foster intra- and inter-sectoral cooperation. Both of these are objectives the ICN would like to see achieved.

REFERENCES

1. The International Conference on Nutrition, Nutrition and Development - A Global Assessment , 1992. FAO/WHO.
2. The Caribbean Preparatory Meeting for the International Conference on Nutrition. Organized by FAO and WHO. 22-27 March, 1992. Kingston Jamaica.
3. Caribbean Cooperation in Health - Goals and Targets PAHO/WHO AND CARICOM.
4. International Conference on Nutrition, In Country Paper - Dominica.
5. International Code of marketing Breast Milk Substitutes. World Health Assembly: May 1991.
6. Protecting, Promoting and Supporting Breast feeding. WHO and UNICEF, 1989.
7. Convention on The Rights of The Child. United Nations World General Assembly, September 1990.

APPENDIX A

Persons Present at The Inter-sectoral Meeting to Discuss the ICN Plans For Dominica.

The following persons were in attendance at the inter-sectoral meetings regarding the ICN:

Mrs B Burmingham	Administrative Head of dental Department, Ministry of Health.
Dr C. Etienne	Director of Primary Health Care Services, Ministry of Health.
Mrs J. Henry	Health Educator, Ministry of Health.
Miss J Jacob	Principal Nursing Officer, Ministry of Health.
Mr W. Magloire	Chairperson, Food and Nutrition Council.
Mrs J. Prevot	Nutritionists, Ministry of Health.
Mrs P. Prevot	Family Nurse practitioner, Ministry of Health.

APPENDIX B

Project: Promoting Appropriate Diets and Healthy Lifestyles

Activity 3.3 related to Output 3 (Community Education)
Itemized cost to conduct Activity 3.4:

PERSONNEL AND EQUIPMENT	SALARY (US\$ per week)	TIME months	TOTAL COST
Project Coordinator /educator	200.00	18	\$ 14, 400
Secretary/data entry	100.00	18	\$ 7, 200
Transportation (5,000 miles at \$0.37 per mile)	0.37 per mile		\$ 2, 590
Equipment/materials (Audio-visual aids, computer, software, paper, telephone etc)			\$ 3, 000
Seminars/Workshops			\$ 2, 000
TOTAL		36 man-months	\$ 29, 190

Activity 4.3 related to Output 2 (Screening)
 Itemized cost to conduct Activity 4.3:

PERSONNEL AND EQUIPMENT	SALARY (US\$ per week)	TIME months	TOTAL COST
Project Coordinator/ Nurse	Same as 3.4	See 3.4	
Secretary	Same as 3.4	See 3.4	
Lab Tech	150.00	9	\$ 5, 400
Transportation (5000 miles at \$0.37 per mile)	0.37 per mile		\$ 1, 850
Equipment/mate rials (audio visual aids, haematological supplies, sphygmomanomet ers, cuffs, office and computer supplies)			\$ 2, 000
TOTAL		9 man-months	\$ 9, 250

Activity 5.4 related to Output 5 (Work-site Education)
 Itemized cost to conduct Activity 5.4:

PERSONNEL AND EQUIPMENT	SALARY (US\$ per week)	TIME months	TOTAL COST
Project Coordinator/ Nurse	See 3.4		
Secretary	See as 3.4	9	
Lab Tech	150.00		\$ 5, 400
Transportation (5,000 miles at \$0.37 per mile)	0.37 per mile		\$ 1, 850
Equipment/mate rials (audio visual aids, haematological supplies, sphygmomanomet ers, cuffs, office and computer supplies)			\$ 2, 000
TOTAL		9 man-months	\$ 9, 250

APPENDIX C

Project: Caring for the nutritionally vulnerable and socio-economically deprived.

Activities 1.4 and 2.4 related to Outputs 1 and 2.
Itemized cost to conduct Activities 1.4 and 2.4:

PERSONNEL AND EQUIPMENT	SALARY (US\$ per week)	TIME months	TOTAL COST
Project Coordinator	200.00	6	\$ 3, 600
Secretarial support	100.00	3	\$ 1, 200
Transportation (2,000 miles at \$0.37 per mile)	0.37 per mile		\$ 740
Equipment/materials (audio visual aids, office and computer supplies)			\$ 500
TOTAL		9 man-months	\$ 6, 040

APPENDIX D

Project: Promoting Breast Feeding

Activity 1.5 and 2.4 related to Outputs 1 and 2
 Itemized cost to conduct Activity 1.5 and 2.4:

PERSONNEL AND EQUIPMENT	SALARY (US\$ per week)	TIME months	TOTAL COST
Project Coordinator /educator	200.00	12	\$ 9, 600
Secretary/data entry	100.00	6	\$ 2, 400
Transportation (5,000 miles at \$0.37 per mile)	0.37 per mile		\$ 1, 850
Equipment/materials (Audio-visual aids, computer, software, paper, telephone etc)			\$ 2, 000
Seminars/Workshops			\$ 1, 000
TOTAL		18 man-months	\$ 15, 850

APPENDIX E

Project: National Nutrition Surveillance System

Activity 1.4 related to Output 1 (Needs assessment)

Itemized cost to conduct Activity 1.4:

PERSONNEL AND EQUIPMENT	SALARY (US\$ per week)	TIME months	TOTAL COST
Project Coordinator	200.00	6	\$ 4,800
Secretary	100.00	3	\$ 1,200
Computer/statistical support	200.00	1	\$ 800
Interviewers	100.00	2	\$ 800
Transportation (3,000 miles at \$0.37 per mile)	0.37 per mile		\$ 1,130
Equipment/materials			\$ 1,000
TOTAL		12 man-months	\$ 9,730

Activity 3.3 related to Output 3 (Surveillance)
 Itemized cost to conduct Activity 3.3:

PERSONNEL AND EQUIPMENT	SALARY (US\$ per week)	TIME months	TOTAL COST
Director/Statistician	200.00	12	\$ 9,600
Secretary/data entry	100.00	12	\$ 4,800
Data processors /Inspector	150.00	12	\$ 7,200
Transportation (5,000 miles at \$0.37 per mile)	0.37 per mile		\$ 1,850
Equipment/materials			\$ 3,000
Seminars/workshops			\$ 1,500
TOTAL		36 man-months	\$ 27,950

APPENDIX F

Project: Improved Food Quality and Safety.

Activity 1.4 related to Output 1 (Baseline data collection)
Itemized cost to conduct Activity 1.4:

PERSONNEL AND EQUIPMENT	SALARY (US\$ per week)	TIME months	TOTAL COST
Project Coordinator	200.00	12	\$ 9,600
Secretary/data entry	100.00	6	\$ 2,400
Computer/statistical support	250.00	3	\$ 2,400
Interviewers (2)	100.00 (x2)	6 x 2)	\$ 4,800
Transportation (6,000 miles at \$0.37 per mile)	0.37 per mile		\$ 2,200
Equipment/materials (computer, software, paper, telephone etc)			\$ 2,000
TOTAL		33 man-months	\$ 23,420