CARIBBEAN COOPERATION IN HEALTH

PAHO/WHO **CARICOM**

WEST INDIES AND CENTRAL AMERICA

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NATIONAL GEOGRAPHIC MAGAZINE

ATLANTIC OCEAN

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STRAITS OF FLORIDA

CAMPECHE BANK

YUCATAN CHANNEL

YUCATAN PENINSULA

CARIBBEAN SEA

JAMAICA

COLOMBIAN BASIN

VENEZUELAN BASIN

GRENADA

TRINIDAD AND TOBAGO

GUATEMALA

HONDURAS

NICARAGUA

COLOMBIA

VENEZUELA

PACIFIC OCEAN

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INTRODUCTION

The "Caribbean Cooperation in Health" initiative represents a new approach to improving health conditions in the Caribbean. By mobilizing all available national, subregional and external resources, the initiative will help Caribbean countries address the most important health problems of their neediest groups.

The initiative has gained the approval of the Governments of Anguilla, Antigua and Barbuda, Bahamas, Barbados, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Jamaica, Montserrat, St. Christopher and Nevis, Saint Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, the Turks and Caicos Islands, and the mainland countries of Belize and Guyana.

The social sectors of Caribbean countries, particularly health, are under severe strain as a result of the global economic crisis. Because of their small size and fragile economies, these nations are especially vulnerable and there is concern that recent cuts in health budgets will have negative effects on the health of their people.

Thus, this initiative is critical as a timely way to focus national and international attention on the major health problems of the Caribbean and mobilize resources to solve these problems in a collaborative manner.

After intense national and regional discussion, the countries, in cooperation with the Pan American Health Organization (PAHO) and the Caribbean Community (CARICOM), agreed to develop a series of projects in the following six areas considered critical to improving health in the Caribbean:

1. Environmental protection including vector control
2. Human resources development
3. Chronic non-communicable diseases and accidents
4. Strengthening health systems
5. Food and nutrition
6. Maternal and child health and population activities

OBJECTIVES

The emphasis of the Caribbean Cooperation in Health initiative is to assist the governments of the Caribbean in improving the health of their people. Its objectives are:

- To identify priority areas and entry points for more productive use of resources in the Caribbean countries.
- To develop specific projects as vehicles for improving the health delivery system, and simultaneously solve critical problems in the health sector.
- To mobilize national and external resources to address the most important problems of the neediest groups and sectors.
- To improve technical cooperation in health in the Caribbean as a whole by stimulating collaboration among countries, agencies and institutions.

The Governments of the English-speaking Caribbean region have asked PAHO and CARICOM to coordinate development of this initiative.

THE CARIBBEAN: AN OVERVIEW

The Caribbean's ideal year-round climate, the natural beauty of the area, and its proximity to North America attract large numbers of tourists. Luxury hotels everywhere offer superb accommodations, excellent food and personal service. This is the Caribbean of the postcards, the perfect spot for a vacation.

But it is also a region of stark contrasts. Unemployment and poverty persist in many areas. In parts of the Caribbean away from resort areas, water supplies are unsafe or insufficient, and contamination of the environment is an important problem.

The Caribbean is also prone to natural disasters. Hurricanes have repeatedly ravaged the islands and Belize. Also, the islands sit on a volcanic fault, facing dangers from earthquakes and volcanic eruptions.

The 18 countries of the English speaking Caribbean have a population of about 6 million people. They share a similar history and similar problems, especially in health.

Table I: Area, Population and Density of Caribbean Countries

Country	Area (km2)	Population (000)	Population density
Anguilla	91	6.7	73.6
Antigua and Barbuda	440	78.1	117.5
Bahamas	13,942	223.6	16.0
Barbados	431	251.2	582.8
British Virgin Islands	150	12.6	84.0
Cayman Islands	260	18.9	72.7
Dominica	750	81.3	108.4
Grenada	345	108.8	315.4
Guyana	214,970	813.6	3.8
Jamaica	11,424	2,287.7	200.3
Montserrat	102	11.7	114.7
St. Christopher and Nevis	269	44.6	165.8
Saint Lucia	616	126.6	205.5
St. Vincent and the Grenadines	388	113.9	293.6
Trinidad and Tobago	5,128	1,149.3	224.1
Turks and Caicos Islands	417	7.9	18.9

SOURCE: Caribbean Development Bank 1984 Annual Report

The populations of the Caribbean countries are relatively young, with those under 15 comprising at least 40 percent of the total population in most countries. Women of child-bearing age (15-44) represent almost 20 percent of the population, and the rate of teenage pregnancies is very high. At the same time the proportion of the elderly is increasing.

These facts have important implications for Caribbean health services. Not only must they deal with the costly burdens of treating chronic diseases typical of adult populations, but also handle health problems related to the high teenage fertility rates, such as perinatal morbidity and mortality, and maternal morbidity.

ECONOMIC ASPECTS

The economic crisis has had a strong negative effect on the delivery of health care in the Caribbean. Health services have suffered from budget cutbacks, and persistent unemployment has been relieved only by migration out of the region, causing the loss of many needed skilled workers and professionals in the health and other sectors.

Most countries import finished goods as well as many basic essentials including food. Subsistence agriculture is minimal and import bills for food are high, rising to more than $1 billion for the Caribbean in 1983.

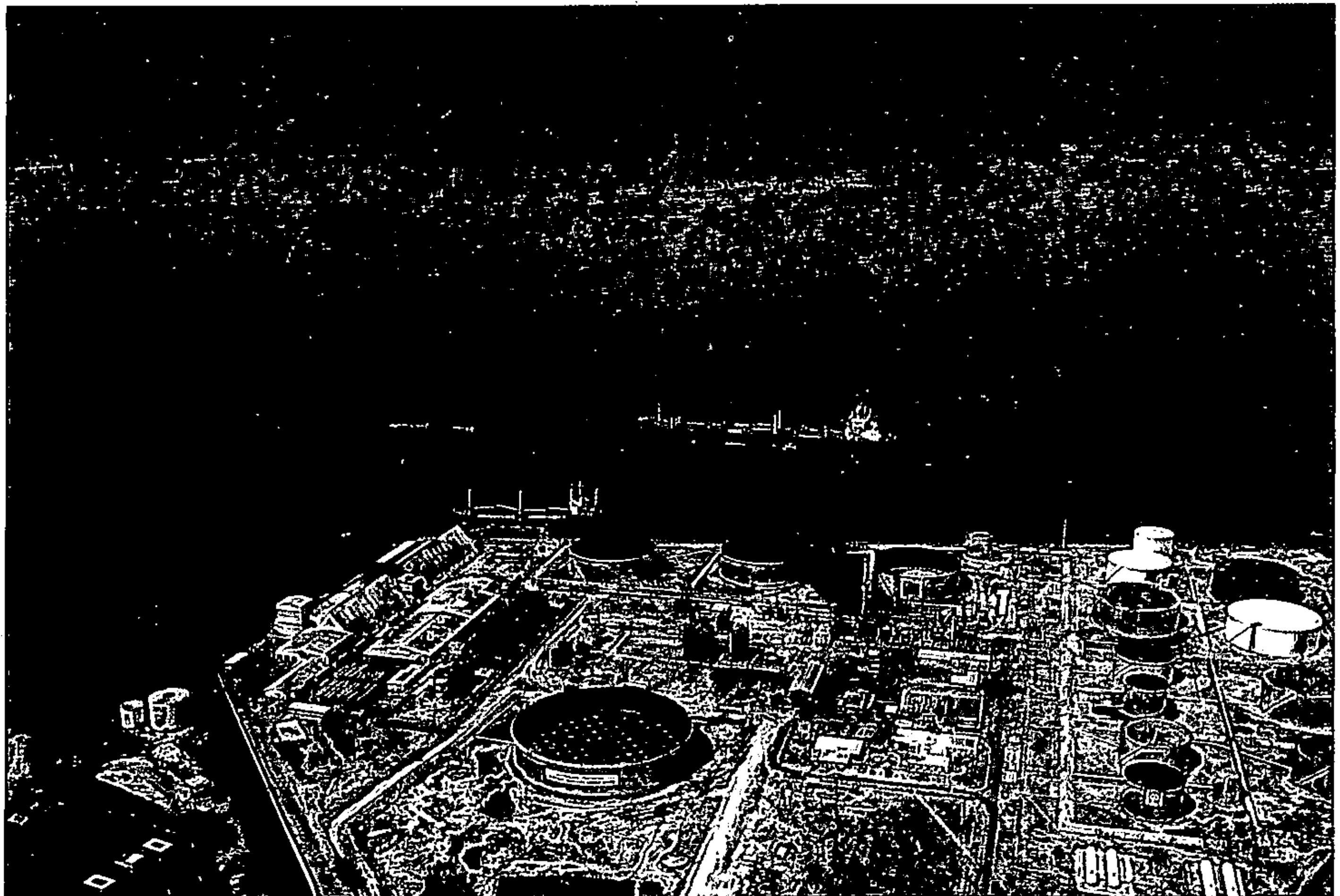
Public sector employment policies have been influenced by a desire to reduce unemployment. Public sector expenditures on salaries and wages account for 45 to 55 percent of national budgets in the smaller islands, about 40 percent in Trinidad and Tobago, and 25 percent in Guyana.

Although incomes per capita in the Caribbean may appear to be high compared with other developing countries, these figures do not tell the whole story.

People who have not completed their basic education and recent migrants to urban areas have great difficulty finding work and are unable to pay for private health care, placing greater burdens on public health services already suffering from overloads and budget cuts. These conditions can lead to development of chronic discontent, violence and even political extremism, putting at risk national cohesion and the democratic process itself.

In the typical Caribbean country, the economy depends on one or two staple activities such as tourism or agriculture for the bulk of its income, employment, government revenue, and export earnings.

With the exception of Guyana and Jamaica with bauxite, and Trinidad and Tobago with oil, the Caribbean is dominated by plantation type economies, producing agricultural products for export with employed labor. Historically, the main crop has been sugar, but lately, particularly in the Eastern Caribbean, other plantation crops such as cocoa, citrus, nutmegs, sea-island cotton, and bananas, have begun replacing it.



Despite increasing diversification of the economy into tourism, bauxite-alumina mining, light manufacturing, service industries, and petrochemicals, the effects of the plantation economy are still being felt.

Although there has been progress in industrial development, the manufacturing sector has not yet developed strong linkages with the rest of the economy. In addition, local entrepreneurship is not broadly based and the export capacity of the manufacturing sector is still rudimentary. The agricultural sector needs improved skills and appropriate technology if it is to meet local food demand.

Imports of goods and services exceed exports in most Caribbean countries and all countries had negative balances on current accounts in 1983. The negative balances were as high as US$984 million in Trinidad and Tobago, and US$289 million in the case of Jamaica. Since 1983, the foreign exchange reserves position in most countries has continued to worsen.

Table II:
Gross Domestic Product per Capita in Caribbean Countries

Country	GDP IN U.S. Dollars, 1983
Antigua and Barbuda	1,493
Bahamas	7,447
Barbados	4,200
Belize	1,131
Dominica	966
Grenada	1,065
Guyana	596
Jamaica	1,527
Montserrat	2,513
St. Christopher-Nevis	980
Saint Lucia	1,096
St. Vincent and the Grenadines	794
Trinidad and Tobago	7,558
Turks and Caicos Islands	3,557

SOURCE: Caribbean Development Bank 1984 Annual Report

HEALTH CONDITIONS IN THE CARIBBEAN

As a result of 50 years of vigorous public health programs, the Caribbean has seen considerable improvement in the health status of its peoples. However, there is now a real threat of significant deterioration in the health of the people.

Social expenditures have not been maintained at previous levels, much less increased to meet the needs of an expanding population. Current financial problems make it essential to find new ways to maintain and improve health conditions for the people of the Caribbean.

The public sector health systems are plagued by inadequate budgets, shortages of staff, management deficiencies, shortages of critical supplies and essential drugs, and the absence of modern information systems to help in management, planning, and evaluation. Budget cuts have caused physical plant deterioration due to lack of maintenance, shortages of supplies, and reductions in staff.

The public general hospitals in the countries, affected by shortages of funds and qualified personnel, need major refurbishing, reconstruction, or both as a result of neglected maintenance.

The infrastructure for the delivery of health care is underdeveloped and this is aggravated by the constant migration of trained health professionals out of the Caribbean. Many well trained lower and middle level workers have also been lost to the health sector by transfer to other sectors of the public service and to the private sector.

Table III: Selected Indicators of Health Status

Country	Life Exp. at birth	Gross Mort. Rate	Infant Mort. Rate per 1,000	1-4 yrs. Mort. Rate per 1,000	Maternal Mort. Rate per 1,000
Anguilla	70.0	7.1	na	na	na
Antigua and Barbuda	70.0	na	11.5	0.1	0.2
Bahamas	69.3	5.5	24.7	1.0	0.8
Barbados	70.0	6.8	17.6	0.6	na
Bermuda	73.0	7.0	8.7	1.3	na
British Virgin Islands	na	5.4	21.6	1.0	na
Cayman Islands	na	na	24.3	1.7	na
Dominica	71.0	5.1	13.9	0.4	na
Grenada	65.5	7.3	21.2	—	1.4
Guyana	70.5	7.0	47.9	3.4	na
Jamaica	70.1	5.9	26.5	3.0	0.6
Montserrat	na	10.4	26.4	—	na
St. Christopher-Nevis	65.0	10.6	41.2	1.1	2.3
Saint Lucia	67.0	7.8	18.0	1.1	0.3
St. Vincent and the Grenadines	68.5	6.1	33.0	3.0	1.3
Trinidad and Tobago	68.9	7.0	19.7	1.3	0.9
Turks and Caicos Islands	na	3.9	24.4	3.8	na

SOURCE: 1. Chief Medical Officer's Reports.
2. Country Narratives (AMPES Document) PAHO 1985.

These shortages make it difficult to deal with the major problem areas that affect the health of the people in the Caribbean.

Of the six areas identified as health priorities by Caribbean health ministers, the one posing the greatest threat to people's health is insufficient and unsafe water supply and unsanitary disposal of human wastes.

These environmental conditions give rise to communicable diseases and infestations which are the direct cause of sickness and death of many children and adults. For example, typhoid fever, transmitted by contaminated food or water, is endemic in many Caribbean countries.

Another constant danger to health in the region is caused by the *Aedes aegypti* and *Anopheles* mosquitoes, which can adapt to enviornmental changes and continue to carry communicable diseases. Dengue, which is spread by *Aedes aegypti*, is endemic and when it occurs in epidemic form may produce dengue shock syndrome and dengue hemorrhagic fever. Malaria, transmitted by the *Anopheles* mosquito, is a problem in Belize and Guyana, where the number of cases is increasing at an alarming rate.

The major maternal and child health related problem in the Caribbean is perinatal deaths. Infant deaths are closely related to low birth weight, anemia during pregnancy, toxemia, too many pregnancies with short intervals between them, and abortions. In addition, cervical cancer rates in the Caribbean are among the highest in the world.

Nutritional deficiencies, inadequate diets and related chronic diseases such as diabetes, hypertension, cardiovascular diseases, anemia, cancer and obesity in women are also problems that must be overcome.

Parasitic diseases are still a problem in the Caribbean. In some communities the prevalence of helminthic infection may be about 90 percent.

Schistosomiasis, or snail fever, occurs in St. Lucia, though it has been considerably reduced following implementation of successful control programs.

The incidence of acquired immuno-deficiency syndrome (AIDS) is on the rise, and traffic accidents have become a leading cause of death in the Caribbean.

All of these problems must be dealt with by an ever-shrinking corp of health personnel. Throughout the region, there is an uneven distribution of doctors and the vast majority of physicians are in the capital cities, leaving the rural areas poorly staffed. All countries also lack sufficient dental manpower.

Table IV: Health Resources Indicators

Country	Physicians per 10,000 inhabitants	Dentists per 10,000 inhabitants	Veterinarians per 10,000 inhabitants	Nurses per 10,000 inhabitants	No. of Hospital Beds per 1,000 inhabitants
Anguilla	5.0	1.0	—	17.0	3.6
Antigua and Barbuda	4.5	0.6	0.3	16.0	6.9
Bahamas	9.8	—	0.5	42.9	4.3
Barbados	8.8	1.2	0.4	30.0	8.0
Bermuda	13.7	4.3	0.9	77.6	6.3
British Virgin Islands	8.0	1.7	0.8	31.7	4.7
Cayman Islands	11.1	2.4	—	34.1	2.7
Dominica	3.6	0.5	0.3	16.0	3.0
Grenada	3.8	0.7	0.1	33.7	3.2
Guyana	1.2	0.2	—	6.5	4.5
Jamaica	3.5	0.4	—	10.4	2.6
Montserrat	3.4	0.9	0.9	34.1	13.4
St. Christopher-Nevis	5.8	1.1	0.5	56.7	5.6
Saint Lucia	4.0	0.4	0.2	22.7	4.4
St. Vincent and the Grenadines	2.9	0.6	2.0	10.4	2.4
Trinidad and Tobago	10.5	0.9	0.3	28.3	4.1
Turks and Caicos Islands	9.4	2.7	1.0	20.0	4.6

SOURCE: 1. Health Manpower Statistics for the LDC's CARICOM 1983.
2. Country Narratives (AMPES Document) PAHO 1985.

HISTORY AND DEVELOPMENT OF THE INITIATIVE

Over the years many collaborative and cooperative efforts in health have been undertaken in the Caribbean. In 1978, the Caribbean Ministers of Health adopted the first Declaration on Health for the Caribbean Community. It identified the principal health issues and priorities as well as the basic goals to be achieved.

The concept of a special initiative to improve health and promote collaboration throughout the English-speaking Caribbean was originally proposed by the Director of the Pan American Health Organization to the Conference of Ministers Responsible for Health in the Caribbean at its meeting in Roseau, Dominica in July 1984.

The Ministers entrusted the further development of the strategies and plans for the initiative, to be called Caribbean Cooperation in Health, to PAHO, and CARICOM, and it was agreed that two approaches would be used simultaneously:

a) Promotion of Caribbean Cooperation in Health in national and international political fora and with potential donor agencies.

b) Development of specific national and multicountry projects in the priority areas.

Since then, the Caribbean Cooperation in Health initiative has been endorsed by:

- Conference of Ministers Responsible for Health in the Caribbean, Georgetown, Guyana, June 1986.
- Conference of Caribbean Heads of Government, Georgetown, Guyana, July 1986.
- Executive Committee of the Pan American Health Organization, Washington, D.C., July 1986

Projects have been developed in the six priority areas at three levels: The whole Commonwealth Caribbean including the English speaking mainland countries of Belize and Guyana; the islands of the Eastern Caribbean, and the national projects in each of the countries.

The responsibility for the coordination of these projects rests with PAHO through its Caribbean Program Coordination office in Barbados and its PAHO/WHO Representatives in the countries, CARICOM, and national program coordinators designated for this purpose.

Training in project preparation and management is being carried out as a specific component of this initiative.

The focus of Caribbean Cooperation in Health is *cooperation.* There are already many subregional Caribbean institutions which serve as examples of this type of collaboration in other fields.

The Caribbean Community (CARICOM) is the political expression of regionalism. The Caribbean Development Bank is the premier local financial institution, and the University of the West Indies has a subregional educational mandate. The Organization of Eastern Caribbean States (OECS) promotes cooperation among those countries.

PAHO's Caribbean Epidemiology Center (CAREC) in Trinidad, and its Caribbean Food and Nutrition Institute (CFNI) in Jamaica play significant roles in regional public health efforts. Other institutions such as the Caribbean Enviornmental Health Institute (CEHI) in Saint Lucia will also collaborate in the development and implementation of this initiative.

PRIORITY AREAS

"Caribbean Cooperation in Health" is organized around six priority areas which serve as the strategic entry points through which the Caribbean countries together will improve the health status of their people by strengthening the region's entire health delivery system. The following describes the situation for each of the areas, the objectives, and focus of the projects being developed.

ENVIRONMENTAL PROTECTION AND VECTOR CONTROL

ENVIRONMENTAL PROTECTION

The Situation

The natural environment constitutes an important resource for the Caribbean countries, whose economies are becoming increasingly dependent upon tourism. Although environmental hazards have been partially controlled, much remains to be done, as the Caribbean Declaration on Health explains:

> "Among the greatest causes of sickness and death are poor environmental conditions and the resulting communicable diseases, namely, gastro-enteritis, dysentery, and typhoid. The high rate of intestinal parasitic infestation among children is significant. The chief dangers in the environment arise from insufficient and unsafe water supplies. Insanitary excreta disposal and poor food hygiene come next in importance."

In some countries, only one-quarter of the houses have a pipe-borne water supply and only one-sixth of the houses have indoor toilets. Some countries have sizable populations with no facilities at all. In two of the countries less than one-fifth of the houses have their solid waste collected by a responsible agency.

In some countries water supplies are intermittent, disinfection is not always dependable, and there is inadequate quality control, extensive water loss due to leakage, and frequent breakdowns of mechanical equipment.

Illegal dumping of refuse, badly sited refuse dumps and inappropriate waste disposal methods pollute the coast and sea in some areas, causing adverse effects on the marine environment and fringing coral reefs, and endangering the tourism and fishing industries.

Many of the countries find it difficult to attain and maintain high standards of refuse storage, collection and disposal, due to lack of trained manpower and financial resources, as well as inadequate institutions and management. In addition, there is a shortage of equipment and lack of legislation.

There is also a need for a well planned long-term health education program in each country which would emphasize the importance to health of proper refuse storage, collection, and disposal.

Objectives:

a) Provide potable water to all persons;
b) Reduce the incidence of water and sewage borne disease;
c) Safeguard the environment against pollution and degradation;
d) Develop national capabilities to improve environmental conditions, especially in solid waste disposal.

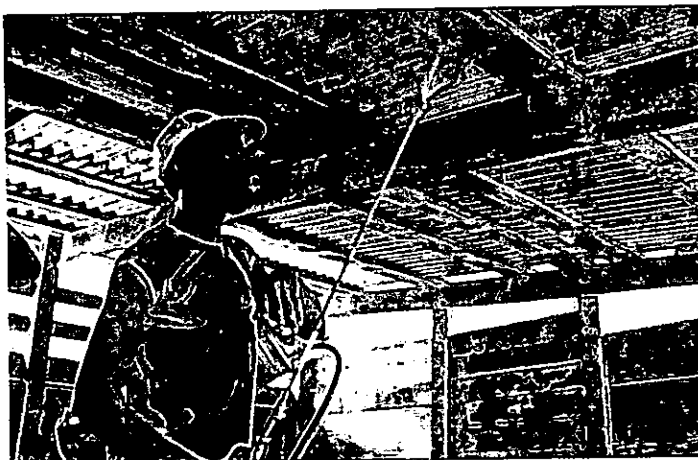
Project Focus:

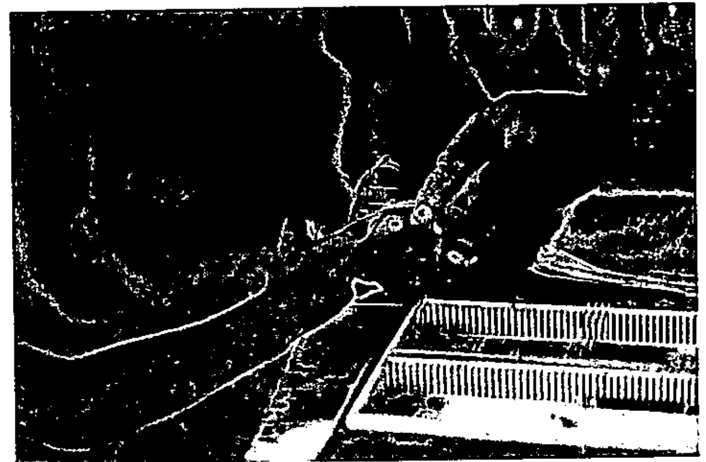
1) Water supplies:
   - Promote institutional support and system rehabilitation including leakage control, disinfection, and water quality control;
   - Involve women in provision of water supplies.
2) Sewage and excreta disposal:
   - Develop appropriate technologies for septic tank effluent and gray water disposal;
   - Provide outfall design and construction;
   - Design wastewater management systems.
3) Solid waste management:
   - Develop model programs to include institutional support, equipment maintenance, and training;
   - Carry out community health education and ensure participation of women.

VECTOR CONTROL

The Situation

The Caribbean is under the constant threat of dengue fever and a more remote threat of yellow fever, while malaria is a severe and increasing problem in Belize and Guyana. *Aedes aegypti*, the mosquito vector of dengue and yellow fever is found breeding on at least 90 islands or more than 95% of the inhabitable islands of the Greater and Lesser Antilles. The countries of the Caribbean have a very limited capacity to deal with an emergency such as a dengue epidemic. The *Anopheles* mosquito is a vector of malaria in rural regions of Belize and Guyana. Mosquitoes are also developing resistance to insecticides such as temephos and malathion in various countries. Complicating the situation, there is even a shortage of entomologists or vector control specialists in national programs.





Objective:

To eradicate the *Aedes aegypti* mosquito from the Caribbean countries, and to reduce the incidence of malaria through vector control of the *Anopheles* mosquito where that disease is a problem.

Project Focus:

1. Promote development of an emergency dengue control program.
2. Develop a comprehensive plan to strengthen national programs for eradication of *Aedes aegypti*.
3. Eradicate malaria where appropriate, and in those areas where eradication is not feasible, reduce its endemicity.

HUMAN RESOURCE DEVELOPMENT

The Situation

The current economic crisis is the major factor affecting the training and retention of health professionals in the Caribbean. Reductions in public sector expenditures have resulted in the closing of some health facilities, reductions in staff in others, and migration of trained staff out of all the Caribbean countries. In addition, there has been little manpower planning.

The efficiency of the health services is seriously impaired by a lack of management expertise. There are still substantial numbers of top and middle level managers in the health systems who have received very little, if any training in management. Although several training programs in different areas of health administration do exist, there are no logical relationships or accreditation arrangements among the programs offered at different institutions, or even between those at a single institution. Also, in-service training activities do not qualify for credit at any of the subregional training institutions.

Finally, there is no organized system of continuing education for any health professional categories and there is a major lack of appropriate educational technology in several fields.

Objectives:

a) Develop a coordinated network of resource persons, as well as national and subregional service and educational institutions to provide various levels of training relevant to the needs of the health systems, based on the primary health care approach.
b) Strengthen the existing infrastructure at the University of the West Indies, the University of Guyana and other educational and training institutions.
c) Promote educational research, and design simplified methodologies for manpower planning.
d) Promote coordination among health services, the educational and training institutions which prepare health personnel, and the communities that are served.
e) Establish continuing education in different disciplines.

Project Focus:

1) Strengthen the national and subregional institutions at all levels to carry out and provide technical support for health manpower research and training.
2) Facilitate production and distribution of indigenous educational technology.
3) Develop a variety of in-service training and continuing education activities in each country within an organized system of university education.
4) Identify human resources for use as trainers.

CHRONIC NON-COMMUNICABLE DISEASES AND ACCIDENTS

The Situation:

In the past 35 years, there has been a progressive increase in the incidence of chronic non-communicable diseases in the Caribbean countries, with the result that hypertension, cancer, and diabetes mellitus have become the leading causes of mortality in these countries over the past two decades.

Hypertension is responsible for much of the illness due to heart disease, strokes, and kidney disease.

Cancer is the second leading cause of death in the entire region. Cancer of the cervix is the second commonest of the cancers, and its incidence in certain countries of the Caribbean ranks among the highest in the world. Breast cancer is among the leading malignancies in the female population, and there is evidence that the rate is rising. Cancer of the lung is the malignancy with the most rapidly rising rate in both sexes.

Cerebro-vascular disease accounts for a large portion of the mortality in the Caribbean and was listed as the third leading cause of death in the period 1969-1980. Coronary artery disease has been accounting for an increasingly larger percentage of deaths from diseases of the heart.

The incidence of diabetes mellitus has been rising over the past thirty years and is now believed to affect approximately 8 to 10 percent of the adult population, accounting for 15 to 20 percent of the hospital bed occupancy.

Accidents are among the leading causes of death in the 20-30 year age group, and account for approximately 7 percent of all male deaths in the region.

Objectives:

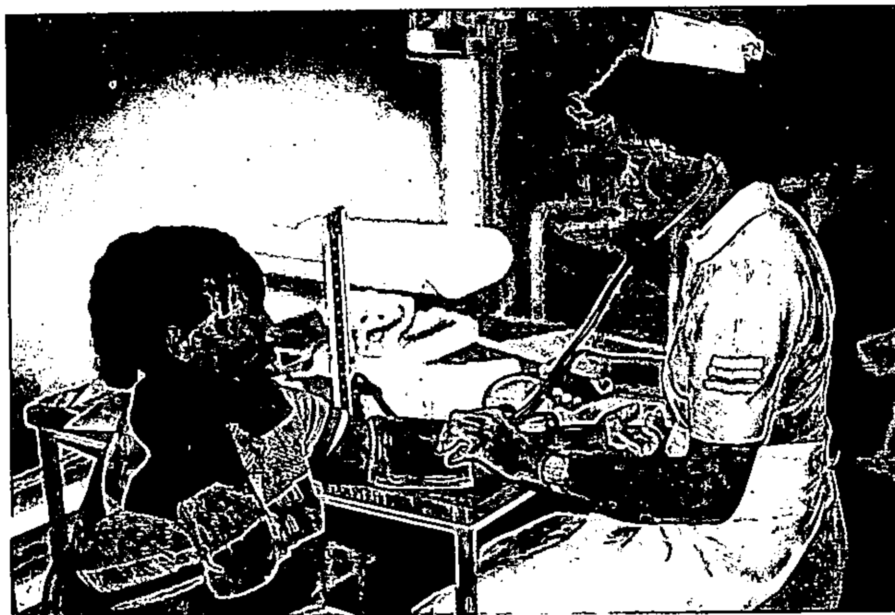
a) Reduce or minimize morbidity produced by chronic non-communicable diseases and accident-related disorders.

b) Attain a better understanding and clearer definition of the situation in the Caribbean countries in regard to chronic non-communicable diseases.

c) Develop integrated, community-based, control programs together with the organization of diagnostic, therapeutic and rehabilitation services for these disorders.

Project Focus:

1. Formulate national and regional plans, programs and policies on prevention and control of hypertension, coronary heart disease, diabetes, and cancers of the cervix, breast and lungs.
2. Provide basic essential drugs for this class of disorders.
3. Promote changes in lifestyles by disseminating information to all levels, including the community itself.
4. Train health workers in program management, data collection and analysis, and research.
5. Develop effective emergency services and help to provide training in accident related fields.
6. Undertake research on the causes of traffic accidents, and ways to reduce their impact.



STRENGTHENING HEALTH SYSTEMS

The Situation:

Four basic components are crucial to strengthen the Caribbean's health services: Organizational development; physical infrastructure and maintenance; critical supplies; and research.

The increasing costs of health care, and the worsening economic situation accentuate the need to look for innovative ways to make the best use of health system resources.

Currently, the organization of the network of health services is inadequate and their ability to solve health problems at the peripheral level is low. In addition, the capacity of hospitals to provide ambulatory medical care efficiently and effectively is limited due to the increasing demand for services as well as deficiencies in their physical structure and in the organization of services.

Also, the emphasis on strengthening the delivery of health services through peripheral units in rural and urban areas has not been accompanied by the development of the more complex health care facilities such as hospitals. Equipment for health facilities is not provided on a systematic basis and the need for maintenance of the existing equipment and buildings have become critical. Preventive maintenance programs including training, provision of spare parts and tools, and workshop facilities are sorely needed.

There are inadequate and insufficient supplies of essential drugs and medical supplies, particularly in peripheral health units.

Finally, research is needed to find the best ways to strengthen the organization and delivery of health services.

Objectives:

a) Increase the operating capacities of the health sector to improve accessibility, effectiveness, and efficiency of the health services.

b) Develop effective ways to ensure that communities participate in the provision of these services.

c) Strengthen the management of the health sector through institutional development, systems development, training, and acquisition of needed equipment.

d) Provide training in project development and management.

Project Focus:

1. Develop studies on policies, plans, and financing of the health sector.
2. Organize national and subregional approaches to maintenance of health sector infrastructure and equipment.
3. Support implementation of national and subregional policies to ensure quality drugs and medical supplies at reasonable prices.
4. Conduct research on the administration and delivery capacity of health services to improve the delivery of health care.
5. Develop adequate information systems for planning and managing community health services.

FOOD AND NUTRITION

The Situation:

The population groups which are most vulnerable to nutritional deprivation predominate in the Caribbean. Forty percent of the population is under 15 years of age. Children and women of reproductive age make up 60 percent of the total population, and a significant percentage of newborns are in the low birth weight category.

In several countries chronic undernutrition and malnutrition still exist, and iron deficiency occurs frequently in women and children. The adult population has a high prevalence of nutritionally related chronic diseases such as obesity, diabetes, hypertension and coronary artery disease.

Food habits in the Caribbean are varied because of the diverse ethnicity, types of food production, trade characteristics and different national policies on food subsidies. All countries have some type of food subsidy (general or directed) and food distribution systems, but the efficiency and effectiveness of such programs has never been properly evaluated.

There are few well trained personnel in food and nutrition, making it difficult to carry out the policies and programs which have been agreed upon. All countries in the Caribbean have activities of varying effectiveness aimed at early detection and management of nutritional diseases. Surveillance for specific nutrient deficits such as iron deficit, highly prevalent in the region, is still primitive, though new technology to survey and control them is available.

Some countries have food fortification programs, but they depend on the fortification of imported staples and thus are poorly controlled and their effectiveness is unclear. More emphasis is needed on modern concepts of preventive nutrition to control chronic diseases in the adult, and to guide general food policies leading to healthy diets beginning in early childhood. Another important need is for food safety programs including consumer education and food hygiene.

Objectives:

Put into operation the existing Caribbean Food and Nutrition Strategy to attain economic self sufficiency, self reliance and improved health status for the people of the region, as well as reduce malnutrition and the dependence on imported foods.

Carry out the specific aims of the strategy, which include:

a) To improve the quantity and quality of food taken by young children, expectant and nursing mothers, and the poor;

b) To eliminate undernutrition;

c) To reduce anemia levels and control obesity and other nutrition-related diseases;

d) To supply the nutritional requirements of the population primarily from local sources;

e) To promote greater awareness of nutrition problems, their causes and likely solutions, and foster the involvement and commitment of the population in the formulation and implementation of food and nutrition programs and projects.

Project Focus:

1. Develop food and nutrition surveillance systems to generate data on food production and distribution, nutrient costs, price elasticity, food trend patterns, nutritional status, and food safety and consumption at the household and other levels.
2. Establish programs at the country level in preventive nutrition, especially as related to chronic diseases.
3. Establish programs to study and eliminate specific deficiency diseases, especially iron-deficiency anemia.
4. Review the availability and use of trained manpower, and train personnel to fill the gaps identified.
5. Establish or strengthen programs in communication and education in food and nutrition.

MATERNAL AND CHILD HEALTH AND POPULATION ACTIVITIES

The Situation:

Demographic data from the Caribbean show the need for action in maternal and child health and population. Currently, 40 percent of the population is under 15 years of age, female teenagers represent one-quarter of all potential mothers in the region, and teenage fertility rates are high. Infant mortality and maternal mortality rates still fall short of standards accepted as minimum in developed countries.

The key problems in maternal and child health in the Caribbean include: High teenage fertility rates, and their related problems, including low birth weight infants, pre-term infants, perinatal morbidity and mortality, and maternal morbidity; inadequate family life education outreach programs; insufficient youth counseling services; inadequate contraceptive services, especially for young people; continued high morbidity and mortality from diarrheal diseases and respiratory infections in children; and lack of adequate services for handicapped children.

To address some of these problems, the Caribbean over the last ten years has developed a Maternal and Child Health strategy, which forms the basis for action in the field of maternal and child health throughout the countries of the sub-region.

Objectives:

a) Reduce the number of births, especially to younger teenage mothers;

b) Improve the state of perinatal health by reducing the incidence of prematurity and the incidence of low birth weight infants, thereby reducing neonatal morbidity and mortality;

c) Reduce the incidence of maternal morbidity;

d) Maintain immunization coverage at 90 percent or higher for the target groups;

e) Reduce the incidence and severity of diarrheal diseases;

f) Reduce the morbidity and mortality from acute respiratory infections;

g) Reduce the incidence of handicaps in children and improve the health and well-being of mentally and physically handicapped children.

A strategy to achieve these objectives is outlined in the recently revised *Maternal and Child Health Strategy for the Caribbean Community,* which sets out the various targets, inputs and activities needed to attain improvements in maternal and child health.

Project Focus:

1. Provide outreach family planning and family life education services.
2. Improve perinatal care, particularly through subregional collaborative activities.
3. Continue promotion of immunization against poliomyelitis, measles, whooping cough, diphtheria, tetanus, and tuberculosis.
4. Introduce programs to provide and put into effect norms for treatment of diarrheal diseases and acute respiratory infections.
5. Provide services for the handicapped, and prevent handicaps through training programs, supplies and equipment, and development of research.

Table V: Mortality in Children Under 1 in Caribbean Countries
Rates per 1,000 live births

COUNTRY	1960	1975	MOST RECENT YEAR
Antigua and Barbuda	68.7	38.2	11.5 (1984)
Bahamas	51.8	34.7	24.7 (1982)
Barbados	60.3	29.0	17.6 (1982)
Bermuda	31.5	14.3	8.7 (1983)
British Virgin Islands	75.3	17.8	21.6 (1984)
Cayman Islands	11.4	—	24.3 (1979)
Dominica	107.3	27.5	13.9 (1983)
Grenada	79.9	23.5	21.1 (1983)
Guyana	61.4	—	47.9 (1980)
Jamaica	51.5	23.2	26.5 (1980)
Saint Christopher-Nevis	98.1	42.8	41.2 (1983)
Montserrat	114.2	—	26.4 (1984)
Saint Lucia	107.1	35.6	18.0 (1984)
Saint Vincent and The Grenadines	132.0	—	33.0 (1983)
Trinidad and Tobago	45.4	32.8	19.7 (1980)
Turks and Caicos Islands	79.4	—	24.4 (1982)

SOURCE: 1. PAHO Scientific Publication—Health Conditions in the Americas 1977-1980
2. National MCH Coordinators

PROJECTED COSTS

To improve health in the Caribbean, funds from international organizations, multilateral and bilateral agencies, and private groups are needed to supplement the resources the countries themselves will provide for the initiative. Based on initial estimates, preliminary figures for the projected costs of the initiative are shown in the following table:

Priority Area	Subregional and Eastern Caribbean				National			
		Cost in U.S. $				Cost in U.S. $		
	No. of projects	Local	External	Total	No. of projects	Local	External	Total
Environmental Protection including vector control	6	24,600,000	8,491,500	33,091,500	24	8,311,705	19,101,828	27,413,533
Human Resource Development	9	2,844,000	8,535,000	11,379,000	7	5,271,556	5,684,622	10,956,178
Chronic Diseases	2	500,000	1,429,000	1,929,000	6	1,837,756	1,421,696	3,259,452
Strengthening Health Systems	5	771,100	12,113,090	12,884,190	16	2,216,815	4,618,814	6,835,629
Food and Nutrition	5	3,132,000	4,881,000	8,013,000	2	1,500,000	1,813,500	3,313,500
Maternal and Child Health and population activities	4	610,000	5,444,000	6,054,000	3	3,562,500	1,868,000	5,430,500
Total	31	32,457,100	40,893,590	73,350,690	58	22,700,332	34,508,460	57,208,792 130,559,482

ADDITIONAL INFORMATION

For information about the Caribbean Cooperation in Health initiative, and ways in which you can help, please contact:

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This publication was prepared by the Office of Information and Public Affairs of the Pan American Health Organization, in cooperation with the Caribbean Community, CARICOM.

A video presentation about the Caribbean initiative is also available by writing to: Office of Information and Public Affairs, Pan American Health Organization, 525 23rd St. N.W., Washington, D.C. 20037, or telephoning (202) 861-3458.

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