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PROGRAM POLICIES IN FOOD AND NUTRITION

Despite the efforts that have been made by the countries, there are still serious problems in the area of food and nutrition, particularly in low-income groups and those at high biological risk, which translates into a high prevalence of undernutrition and specific deficiencies. At the same time, there is malnutrition associated with certain chronic diseases in other social groups.

The most serious problem centers on low and unbalanced consumption of basic foods. It perpetuates chronic undernutrition, with a resulting breakdown in health, high morbidity and mortality, especially in mothers and children, and repercussions for the social and productive functioning of large sectors of the population. This situation has been exacerbated by the current economic and financial crisis, which has made it necessary to institute adjustment and economic stabilization policies with cutbacks in social expenditures.

The subject was discussed at length in the 101st Meeting of the Executive Committee, which emphasized the need to strengthen health sector leadership in multisectoral nutrition action and stressed the importance of food and nutrition surveillance for the formulation and evaluation of policies in this field, as well as the need to decentralize the processing of information in order to strengthen decision-making at the local level. Attention was called to the need to improve the methodology for evaluating the nutritional status of mothers and children and to the importance of nutrition education.

It was agreed that the distribution of food to vulnerable groups living in critical poverty is of the utmost importance from both the political and technical standpoint, and that the experience gained in national programs should be analyzed and made widely known. It was emphasized that food aid should be programmed in an integral manner, taking into account the food habits of the population, food quality, and logistic and administrative aspects.

The document presented to the Executive Committee was modified to bring out the fact that the cooperation being provided by PAHO in the area of food aid is aimed at the design and evaluation of these programs and at providing information that may be useful for the formulation of policies at the national level. The revised document is annexed hereto.

The Directing Council is asked to review the situation indicated earlier, to analyze the policy proposed by PAHO for contributing to improvement of the state of food and nutrition in the Americas, and to consider the resolution recommended by the Executive Committee in its Resolution CE101.R17:

THE 101st MEETING OF THE EXECUTIVE COMMITTEE,

Having seen Document CE101/10 on the Organization's food and nutrition policy, based on an analysis of the current situation and its trends in a biological, economic, and social context;

Recognizing that, despite national and international efforts, serious food and nutrition problems persist in the Region and affect, in particular, low-income groups and groups at high biological risk; and

Concurring in the proposals made on this subject of paramount importance to the Member Governments,

RESOLVES:

To recommend to the XXXIII Meeting of the Directing Council the adoption of a resolution along the following lines:

THE XXXIII MEETING OF THE DIRECTING COUNCIL,

Having seen Document CD33/23 on the Organization's food and nutrition policy;

Considering the persistence of serious food and nutrition problems in the Region, largely because of the marginal social and economic conditions of important population groups and the severe economic situation in the countries;

Aware that the problem is of a nature to require coordinated multisectoral action, in which the Ministries of Health carry out specific measures in the national health systems and provide leadership in the technical aspects of their interaction with the other sectors involved;

Concerned that the stabilization and structural adjustment measures being adopted by the countries may aggravate existing deficits in the availability and consumption of food in low-income groups and increase the prevalence of undernutrition;

Recognizing that, in addition to protein-energy malnutrition, there are specific deficiencies of iodine, iron, and vitamin A, as well as malnutrition from excesses and deficiencies of nutrients in the diets of many population groups; and

Taking into account the important role of the Organization in the food and nutrition area, both directly and in coordination with other technical cooperation agencies,

RESOLVES:

1. To urge the Member Governments:

   a) To strengthen their policies and strategies for improving the availability and consumption of food, particularly in low-income populations and groups at high biological risk;

   b) To step up food and nutrition work in national health systems and under the primary health care strategy, with broad social participation, through the effective mobilization of local and external resources, and taking account of the important part played by women in this work.

2. To request the Director, in working with Member Countries, to emphasize technical cooperation in the following aspects:

   a) The planning, execution, and evaluation of food and nutrition strategies directed at low-income populations and priority groups;

   b) Food and nutrition surveillance;

   c) Distribution of food to priority groups, especially mothers and children and other groups at the poverty level;

   d) Education and social communication in food and nutrition, including warning against the effects of malnutrition caused by insufficiencies and excesses;

   e) Control of specific nutritional deficiencies: iodine, iron, and vitamin A;

   f) Preventive nutrition in the management of chronic diseases associated with food and nutrition.

Annex

PROGRAM POLICIES IN FOOD AND NUTRITION

CONTENTS

CONTENTS (cont.)

I. INTRODUCTION

Adequate nutrition is essential for the health of the individual, for collective productivity, and for social well-being. Nevertheless, nutritional deficiencies continue to be highly prevalent in the Region, particularly energy-protein malnutrition and deficiencies of iron, vitamin A, and iodine.

Unquestionably there are some populations that are severely disadvantaged in terms of food supply and intake, health care, environmental sanitation, education, job opportunities, and social organization--in sum, who live in critical poverty. These conditions are aggravated by the demographic changes that are occurring in Latin America and the Caribbean, which place new demands on the food system.

Nutritional deficiencies aggravate health problems and contribute to increased rates of morbidity and mortality, especially in children under 5, causing functional disorders that have both immediate effects and long-term repercussions for mental, social, immunological, and reproductive capacity and for physical performance. At the same time, other population groups suffer from chronic diseases--cardiovascular diseases, non-insulin-dependent diabetes, obesity, and certain types of cancer--in whose etiology malnutrition, in the form of imbalanced nutrients and relative excess of energy, plays an important role.

Because nutrition and health cannot exist one independently of the other--both are essential for the development and well-being of the population--an adequate diet is essential for both individual and collective well-being. All the factors that affect the availability, acquisition, intrafamily distribution, consumption, and utilization of food should be taken into account in the plans and programs aimed at achieving and maintaining a good state of health and nutrition.

The control and prevention of malnutrition cannot be the exclusive responsibility of the health sector. It is necessary to implement policies and coordinated programs aimed at the identification, surveillance, and correction of the various factors that affect nutritional status and the consumption of food.

The multisectoral approach has been recognized for several decades by the countries of the Region. In 1976 the Directing Council recommended to the Governments that they intensify their efforts to formulate and execute national food and nutrition plans and policies through multidisciplinary and intersectoral action, strengthening nutrition services within their health systems.

The Organization has cooperated with the Governments in the fulfillment of their resolutions, but it is evident that improving the supply and intake of food at the family level has not been given sufficient emphasis and that this will have to be a priority for technical cooperation in the coming years.

PAHO's Food and Nutrition Program reflects the clear perception that the health sector is pivotal in the solution of food and nutrition problems that affect the countries of the Region if we are to achieve health for all in a climate of true social justice.

II. FOOD AND NUTRITION SITUATION IN THE REGION

A. NUTRITIONAL STATUS OF THE POPULATION

1. Energy-Protein Undernutrition

Critical poverty and the presence of disadvantaged populations in Latin America and the Caribbean constitute the substrate of energy-protein undernutrition, independently of age or sex, although the severe forms occur in small children. This group has greater dietary needs, yet they are often not met because of early weaning complicated by infections and frequent diarrhea and by improper diet both during and after these processes.

It is not uncommon for large numbers of children under 5 to have moderate or severe deficits in weight and height for their age, which are highly indicative of past or current energy-protein undernutrition. This chronic situation impacts negatively on a population's reproductive health and capacity for physical labor, affecting both health and well-being.

Energy-protein deficiency is the most serious nutritional problem in the Region, reaching a prevalence in some countries of 30% to 40% in children under 5 (Table 1). Many of these children have been at a disadvantage since they were born, as seen in the prevalence of low birthweight, which ranges from 6.8% to 17%. Moreover, undernutrition is associated in more than half the cases with high infant mortality.

Except for six countries, the figures on undernutrition correspond to surveys conducted in the mid-1970s, which makes it difficult to have a current picture of the situation. However, recent partial studies, done in conjunction with the effort to establish nutritional surveillance systems, would seem to support the earlier statements about the persistence of the problem and the need to act effectively to prevent and correct it. This includes the strengthening of surveillance so that it will provide reliable and timely information for decision-making at the level where national food and nutrition policies and programs are formulated.

2. Iron Deficiency and Nutritional Anemias

Iron deficiency has functional repercussions for mental, endocrine, reproductive, and immunological capacity as well as the capacity for physical labor. Its prevalence is particularly high among women of reproductive age, ranging between 15% and 48% in this population group. The increased demand for iron during pregnancy and lactation dramatically aggravates the incidence of anemia, which reaches levels as high as 75% in some countries. In

Table 1

PREVALENCE OF UNDERNUTRITION IN CHILDREN UNDER 5 ACCORDING TO THE GOMEZ CLASSIFICATION

Country	Year	% UNDERNUTRITION			
		Degree I	Degree II	Degree III	Total
Antigua	1975	35.5	6.8	0.8	43.1
Bahamas	1974	14.6	0.6	0.9	16.1
Barbados *	1978	36.1	3.1	0.3	39.5
Belize	1984	20.8	5.4	2.0	28.2
Bolivia	1966-69	29.0	10.2	0.7	39.9
Brazil	1980	37.2	12.0	2.3	51.5
Chile *	1984	7.5	0.8	0.1	8.4
Colombia *	1977-80	43.4	7.1	1.2	51.7
Costa Rica	1978	36.8	8.5	0.5	45.8
Dominica	1978	38.6	10.3	1.8	50.5
Dominican Rep. *	1969	49.0	23.0	4.0	75.0
Ecuador *	1965-69	28.9	9.6	1.2	39.7
El Salvador *	1978	50.2	11.0	0.8	62.0
Grenada *	1978	29.1	9.0	1.6	39.7
Guatemala	1977	43.0	27.2	2.3	72.6
Guyana	1984	33.0	10.2	1.3	44.5
Haiti *	1978	46.0	24.1	3.2	73.2
Honduras	1976	43.0	27.2	2.3	72.5
Jamaica	1984	21.5	3.0	0.4	24.9
Monserrat	1984	17.0	5.0	0.4	22.4
Nicaragua	1966	41.8	13.2	1.8	56.8
Panama *	1980	38.6	----11.4----		50.0
Paraguay *	1976	27.0	4.0	1.0	32.0
Peru *	1965-71	32.8	10.9	0.8	44.0
St. Kitts and Nevis	1980	34.2	7.8	0.4	32.4
Saint Vincent	1983	32.1	5.1	0.9	38.1
Saint Lucia	1980	19.7	3.1	0.3	23.1
Trinidad and Tobago	1978	36.8	11.1	1.4	49.3
Venezuela *	1974	35.3	12.2	1.4	48.9

*National representativity.

Source: PAHO Scientific Publication No. 500. Health Conditions in the Americas, 1981-1984. Vol. I, 1986.

addition, approximately 10% to 15% of the population have a folate deficiency as well.

Children between the ages of 6 months and 2 years are particularly at risk of iron-deficiency anemia, especially those who had low birthweight, were weaned early, or have had repeated infections. Other groups are also affected, particularly in areas that have a high prevalence of uncinariasis.

The situation has probably gotten worse in recent years as a result of greater poverty and hence reduced consumption of meat and citrus fruits, which heighten iron absorption. Recent studies in the English-speaking Caribbean show a prevalence ranging between 10.1% and 82.3% in pregnant women (1985).

3. *Iodine-Deficiency Disorders*

Iodine deficiency affects different metabolic processes, with negative repercussions for the health of the population, beginning with conception and continuing up through adult life. The most evident manifestations are endemic goiter and cretinism.

The basic cause of the deficiency is insufficient iodine intake in the diet. The control method of proven efficiency which is most widely used is the iodization of salt. In places where the prevalence of goiter and endemic cretinism is high and iodized salt is not accessible, the administration of iodized oil, either intramuscularly or orally, has been shown to be the best alternative.

Recent reports on iodine deficiency in the Region show a marked deterioration in the control of salt iodization. As a result, prevalence of goiter has increased alarmingly in some of the countries that had previously succeeded in reducing it to levels where it is no longer a health problem.

Endemic goiter continues to be a public health problem in Bolivia, Brazil, Ecuador, Guatemala, Nicaragua, Paraguay, Peru, and Venezuela, with prevalence ranging between 12% and 68%. Salt iodization programs in Argentina, Costa Rica, Panama, and Uruguay have demonstrated the effectiveness of this approach and have been associated with drops in prevalence to 5% (Province of Salta), 3.5%, 6%, and 2%, respectively.

4. Vitamin A Deficiency

Vitamin A deficiency alters cell metabolism, causes eye disorders, retards growth, and impairs the development of immune mechanisms, increasing the risk of death among preschool children. This deficiency occurs especially in populations whose diets are low in caloric density when carotene-rich foods are scarce.

The groups at greatest risk are moderately or severely undernourished children with concomitant infections, who may develop irreversible eye lesions leading to blindness and even death. Massive doses of vitamin A appear to

significantly reduce mortality in children under 2, including mortality due to measles.

From studies carried out by INCAP (1979), the prevalence of vitamin A deficiency in children under 5 was found to range from 18% to 43%. As a result, several countries have launched programs for the fortification of sugar with retinol palmitate, which has served to reduce considerably the magnitude of the problem. Unfortunately, however, this prophylactic measure was interrupted around 1980 for several reasons. Recent reports from Haiti, Colombia, and Mexico indicate that vitamin A deficiency affects around 25% of the general population.

5. Malnutrition and Chronic Diseases

At the other end of the nutritional spectrum, there has been a steady increase in the prevalence of pathological processes related to overnutrition. In the English-speaking Caribbean, for example, the prevalence of obesity in women ranged from 24% to 39% (1965-1971), and recent studies in Barbados have shown that the prevalence of obesity in men rose from 7% to 28% between 1969 and 1982.

The increase in the prevalence of overweight and obesity affects all groups of society, although the causes differ. Recent studies reveal that in Chile 10% of the women in the upper economic class, 22% of those of intermediate income, and 39.7% of those in the low-income class were overweight for their age, and in Costa Rica about 15% of girls and boys under age 6 were obese.

B. DETERMINANTS OF FOOD AND NUTRITION PROBLEMS

The principal causes of malnutrition are: malfunctioning of a country's economy and social structure, inefficient food supply systems, limited purchasing power or food production capacity on the part of poor families, and inadequate biological utilization of food.

Maintenance of an adequate level of nutrition in the population requires that there be enough food available to meet nutritional needs, that the food be distributed equitably among the different social groups, that it be consumed in appropriate quantity and quality, and that optimum utilization of nutrients be ensured.

Inadequate food intake at the individual level is conditioned by a relative increase in the body's nutritional requirements owing to changes in physiological state (for example, pregnancy and lactation), level of physical activity, acute infectious processes, etc., while at the community level the factors that dictate the intrafamily distribution of food are largely sociocultural and economic.

An analysis of the factors that cause energy-protein undernutrition at the individual and community level shows that they tend to occur in

combination and to act synergistically, the common denominator being poverty, which is often accompanied by infectious diseases and an unhealthful physical and social environment.

Economic policies, including those relating to agriculture, employment, wages, and prices, have a marked impact on the food and nutrition situation of the less protected groups of the population. In most countries of the Region the policies that have been adopted for economic growth have been based on the premise that the benefits of this growth will simultaneously reach the lowest strata of the population. The validity of this premise is questionable, however, since even in times of accelerated economic growth large human groups have been excluded from progress or have benefited very little from it.

At the same time, the policies that favor the small and medium farmer, encouraging technologies that do not generate unemployment and that guarantee a minimum wage capable of meeting basic needs, will have a positive effect on the food and nutrition situation. To the extent that social services, especially in health and education, provide coverage for these unprotected groups, and their quality and effectiveness is improved, they will be able to mitigate the negative effects of the economic crisis and the adjustment measures adopted by the countries.

1. Food Supply

The supply of food at the national level depends, among other factors, on the policies that govern food production, export, import, marketing, and pricing. It provides an indication of the country's average amount of food available per capita at the end of a given year. It should be supplemented by indicators of income distribution and statistics on population living in extreme poverty in order to see how the daily supply per capita, or apparent consumption, is distributed in the national population according to income level. Through this approach it is possible to determine the degree of undernourishment and undernutrition in a country.

Table 2 shows the per capita daily energy supply for 1975-77 and 1984-86. It can be seen, from a comparison of the two periods, that there were increases in 31 of the 40 countries of the Region and declines in only nine of them.

On the other hand, the food production index (FPI) shows increases for only 11 countries in a total of 29, with declines in the remaining 18. It is clear that most of the countries with a reduction in internal food production had to resort to imports in order to maintain an adequate food supply. If they did not import food or receive donations, then there was probably a lower apparent intake and a consequent deterioration in the nutritional status of the population.

In summary, comparison of the two periods shows that the average food supply in the Region was greater in 1984-86 than in 1975-77. Nevertheless, the analysis would be more accurate if it were based on a retrospective series

Table 2

DAILY ENERGY SUPPLY AND FOOD PRODUCTION INDEX (FPI)
IN THE AMERICAS

COUNTRY	CALORIES (daily per capita)			IPA per capita (1979-81)= 100		
	1975-77	1984-86	Difference	1976	1987	Difference
Antigua	2036	2089	+ 53	-	-	-
Netherlands Antilles	2724[a/]	2917	+193	-	-	-
Argentina	3358	3191	-167	100	96	- 4
Bahamas	2293	2695	+402	-	-	-
Barbados	3047	3185	+138	85	78	- 7
Bermuda	2737	2545	-192	-	-	-
Belize	2510	2585	+ 75	-	-	-
Bolivia	2049	2128	+ 79	110	92	-18
Brazil	2521	2644	+123	98	109	+11
Canada	3345	3425	+ 80	105	110	+ 5
Chile	2644	2573	- 71	92	106	+14
Colombia	2246	2550	+304	97	100	+ 3
Costa Rica	2487	2782	+295	108	92	-16
Cuba	2630	3107	+477	85	103	+18
Dominica	2093	2649	+556	-	-	-
Dominican Republic	2109	2464	+355	105	99	- 6
Ecuador	2111	2058	- 53	105	96	- 9
El Salvador	2071	2151	+ 80	102	86	-16
French Guayana	2481	2737	+256	-	-	-
Grenada	2099	2401	+302	-	-	-
Guadalupe	2584	2674	+ 90	119	125	+ 6
Guatemala	2023	2297	+274	104	88	-16
Guyana	2431	2456	+ 25	108	79	-28
Haiti	2041	1902	-139	106	96	-10
Honduras	2084	2078	- 6	94	96	+ 2
Jamaica	2662	2581	- 81	100	101	+ 1
Martinique	2623	2782	+159	138	136	- 2
Mexico	2668	3148	+480	91	100	+ 9
Nicaragua	2452	2473	+ 21	115	73	-42
Panama	2346	2439	+ 93	95	94	- 1
Paraguay	2808	2843	+ 35	92	109	+17
Peru	2284	2192	- 92	118	96	-22
St. Kitts and Neves	2166	2364	+198	-	-	-
Saint Lucia	2201	2499	+298	-	-	-
Saint Vincent	2281	2785	+504	-	-	-
Suriname	2284	2716	+432	86	102	+16
Trinidad and Tobago	2686	3058	+372	139	92	-47
United States	3539	3642	+ 3	96	93	- 3
Uruguay	2927	2676	-251	112	103	- 9
Venezuela	2436	2532	+ 96	100	90	-10

[a/] Average 1981-1982

Sources: Food and Agriculture Organization of the United Nations: Food Balance Sheets, Rome, 1980; Food Balance Sheets and FAO Indexes of Food and Agriculture Production. Rome. (outprints)

for each country to determine the corresponding trend, and if the same were done for the indicators of income distribution.

2. Food Intake

Real food intake is related principally to purchasing power, which in turn depends on income received. Thus, an insufficient income generally corresponds to a situation of undernourishment.

There is evidence that in the last two decades the distribution of wealth and income has become more regressive as a result of the economic crisis, the economic restructuring of the countries, and the intensive urbanization that the Region has been undergoing. This has caused food intake and the nutritional status of the poorest segment of the population to deteriorate even more.

According to data published in 1987 by the Economic Commission for Latin America and the Caribbean (ECLAC), the poorest 50% of the population in Latin America had access to only 13% of the income. During the 1970s, in 17 countries of the Region 10% of the urban families did not have sufficient purchasing power for even a minimum diet, and in the rural population this proportion was 34%. Moreover, 26% of the urban poor population and 62% of the rural population could not meet their basic needs, including food. This amounts to a high degree of dietary insecurity.

Information from the World Bank for 10 countries of the Region indicates that the poorest 40% received between 7% and 23% of total income whereas the proportion corresponding to the wealthiest 10% was between 23% and 51%.

3. Biological Utilization of Food

Efficient biological utilization of food is determined largely by the individual's state of health, which in turn is affected by access to water supply and sanitary waste disposal, as well as to health services.

The high prevalence of infectious diseases in childhood, especially diarrheas, acute respiratory infections, and diseases preventable by vaccination, makes for increased nutritional requirements and impedes the processes of biological utilization of nutrients.

In 1983 more than 50% of the rural population in the Region lacked water supply and sanitary waste disposal, as well as a smaller proportion of the marginal urban population. In addition, around 140 million people in the Region are without access to health care services as well.

III. FOOD AND NUTRITION STRATEGIES AND PROGRAMS

Food security has become a growing concern for the countries of the Region. With a view to supporting the countries' efforts to improve it, the Organization gives special attention to food aid programs, the production of basic foods, and nutrition education, in addition to technical cooperation for the regular work of the health services as part of the prevention and control of malnutrition within the primary health care strategy.

A. FOOD AID PROGRAMS

The food aid programs fall into two groups: (a) those for the general population, in which food is distributed through regular marketing channels, and (b) those directed toward low-income groups and groups at special nutritional risk.

The food aid programs that work through regular marketing channels in most cases are intended to provide financial support for economic rehabilitation programs. This is accomplished through sale of the food, which generates the necessary monetary liquidity for the development of programs and specific projects. One of the principal sources of this type of aid is the U.S. Government, through Public Law 480, Title I. Between 1984 and 1988, that country provided food valued at US$735.6 million, 85.1% of which corresponded to Title I. Of the total assistance over the period, 67.3% ($495.1 million) went to Central America. Food for this type of aid is also often obtained through loan agreements.

The cost of interventions directed toward the poor population is estimated at some US$2,000 to 3,000 million per year, financed for the most part by the Governments of the Region. In 1979 it was estimated that five countries of the Andean area alone contributed US$1,850 million annually for general food price subsidies, a figure that dropped to $1,365 million in 1981. In the present economic crisis the countries have tended to reduce their general subsidies while increasing programs directed toward the poor population in the form of food donations or controlled subsidies.

Currently, with the exception of a few countries that are making efforts to become self-reliant in food aid to their vulnerable groups, in most cases there has been an increase in the number of requests for external food aid addressed to nongovernmental, multilateral, or bilateral agencies such as the World Food Program, which in the period from its inception in 1963 up to 1987 has provided a total of US$1,007 million dollars to the countries in the Region (Table 3).

In collaboration with PAHO, the University of Chile's Institute of Nutrition and Food Technology (INTA) conducted a study of food aid programs in Latin America and the Caribbean during the period 1970-1984. A total of 126 programs for 26 countries were analyzed. Of these, 94% were food supplement programs, while only 6% were controlled subsidies directed toward the poor groups of the population.

In 93% of the cases the objective was to improve the nutritional status of the beneficiaries, but this goal was also combined with other objectives such as improving nutritional knowledge and eating habits, expanding health services coverage, organizing community services, and increasing food production. This frequent combination of several objectives would suggest that the programs have been trying to respond to complex situations, which are often beyond their ability to deal with them.

Most of the programs (66%) were directed toward mothers and children as a group, 25% were for schoolchildren, and 8% for the family unit. However, in terms of population benefited, 32% were mothers and children, 62% schoolchildren, and 6% families.

The foods supplied most often were protein mixtures, skim milk, whole milk, fats, wheat or wheat flour, and in most cases (75%) were imported.

Few of the programs covered in the study had actually been evaluated, and when this was done it was usually by outside groups, since generally the evaluation component is not planned or budgeted for at the outset.

From the study it may be concluded that the nutritional impact is greater in the supplementation programs than in the subsidy programs. The former provide, in addition, the possibility of integrating various types of sectoral programs (health, education, sanitation, and housing, among others).

It may also be concluded that both the supplementation and the subsidy programs benefit urban populations more than rural ones, possibly because of the differences that exist in the extension and adaptation of infrastructure, especially in the areas of health and education, because of the time factor involved in access to the goods offered, and because of the unequal purchasing power of the two populations.

The use food-for-work and other forms of food aid as part of social mobilization programs and in the creation of a productive infrastructure at the local level is a strategy of definite interest for turning palliative interventions into deep and lasting solutions.

PAHO's Food and Nutrition Program has worked closely with the World Food Program in the analysis of the countries' requests for food aid, especially in terms of the health and nutrition aspects, and it has participated in evaluation missions. In addition, PAHO has provided support for a number of program evaluations, such as the INTA study already mentioned, evaluations of school lunch programs in Argentina and Jamaica (the latter conducted by CFNI), and other studies done by INCAP in the Central American isthmus.

INCAP, with financing from USAID, is providing technical support for group feeding programs, through which it is contributing to managerial development as part of a scheme for food security.

It is clear that the focus of PAHO support to the countries in this field should be on developing their managerial capacity and helping them to set their food aid policies. Selection of the type of program, or combination thereof, should be based on specific knowledge of the problems being addressed, the prevailing sociopolitical conditions, the needs, the resources available, and, basically, the overall situation and the organizational capacity of the public agency that is to implement the programs.

B. PRODUCTION OF BASIC FOODS

In some of the countries the health sector has played a fundamental role in the promotion of strategic projects for improving the food and nutritional status of the population. The case of the dairy agroindustry and the development of mass consumption of fish, in one country in the Region, are examples of the role that the health sector can play in the production of basic foods at the national level.

One of the ways of coping with the crisis being experienced by the Region's urban and rural poor, in terms of food and nutrition, is to develop "subsistence economies"--in other words a series of activities aimed at producing food for family consumption, generating income, and improving the standard of living.

Socioeconomic surveys carried out by the agricultural sector indicate that, in general, the farmers with limited investment capacity are the ones who produce most of the basic foods in the developing countries. These same farmers also practice diversified production, in part for family consumption. These production systems, in which fowl and other animals play an important role in the family's economy and nutrition, offer excellent opportunities for food and nutrition programs that this sector should take advantage of.

Included under the heading of production systems are the multi-crop practices focused on products that generate income and food through more efficient adaptation to the ecology, the land, the environment, and the inputs that are available. The intention is to optimize the nutritive value of agricultural production by combining foods that can be appropriately produced on a given piece of land. The impact is even greater when systems of food transformation or processing are introduced, permitting diversification and preventing fluctuations in the availability of crops. These systems can be implemented at the level of the individual household or the community, and they are important for the fact that they improve the technological capacity of individuals.

Using the basic food basket as the point of departure, integrated systems of agricultural and livestock production have been designed which demonstrate the economic feasibility of producing what is required in order to meet the food needs of a family of five with enough surplus left over to generate at least some income. The introduction of crops such as soybeans makes for additional advantages: adequate and economic food and nutrition coupled with increased animal productivity in relatively small land areas.

Table 3

CUMULATIVE VALUE OF FOOD AID, WORLD FOOD PROGRAM (WFP): DEVELOPMENT PROJECTS AND EMERGENCY OPERATIONS IN LATIN AMERICA AND THE CARIBBEAN (1963-1987) (in US$ millions)

Country	Terminated	Under Way	Total
Antigua	1.4	0.8	2.2
Barbados	4.1	-	4.1
Belize	0.1	-	0.1
Bolivia	26.2	61.8	88.0
Brazil	46.5	87.3	133.8
Chile	7.1	-	7.1
Colombia	64.4	20.1	84.5
Costa Rica	4.1	5.5	9.6
Cuba	10.5	32.7	43.2
Dominica	0.06	-	0.06
Dominican Rep.	6.0	2.6	8.6
Ecuador	22.9	29.0	51.9
El Salvador	43.8	51.1	94.9
Grenada	-	1.6	1.6
Guatemala	14.1	42.2	56.3
Guyana	2.5	2.5	5.0
Haiti	24.2	18.1	42.5
Honduras	32.2	28.5	60.7
Jamaica	4.8	6.8	11.6
Mexico	84.3	23.2	107.5
Nicaragua	27.1	54.1	81.2
Panama	1.0	3.9	4.9
Paraguay	9.53	8.6	18.13
Peru	48.1	29.5	77.6
St. Kitts	1.3	0.5	1.8
Saint Lucia	1.8	2.1	3.9
Saint Vincent	-	1.5	1.5
Suriname	0.67	-	0.67
Trinidad and Tobago	0.6	-	0.6
Uruguay	1.2	-	1.2
Venezuela	2.8	-	2.8
TOTAL	493.56	514.0	1007.6

Source: World Food Programme, Progress Report, 1987.

C. FOOD AND NUTRITION EDUCATION

Food and nutrition education is a process aimed at developing the capacity of the individual, the family, and the community to make optimum use of all the community's resources for the improvement of food supply and nutritional status. This process is conceived within a holistic approach to health based on comprehensive knowledge of the person within the sociocultural environment and within the framework of primary health care.

All those who participate formally or informally in the teaching-learning process in aspects of food and nutrition are in fact nutrition educators. For years the countries of the Region concentrated on interpersonal methods of nutrition education. However, the limited impact of these conventional methods led, in the 1970s, to the use of mass media, especially in the English-speaking Caribbean, as the best means of consciousness-raising and informing the population about the need for behavioral changes that would bring about an improvement in their nutritional status.

In 1976 a technical meeting was held in Jamaica, organized by the CFNI, on nutrition and the mass media in food and nutrition programs. Since that date, considerable progress has been made in the area of Communication and Education in Food and Nutrition (CEAN). The strategies, as identified by a PAHO working group meeting held in 1984, include: (1) the formation of personnel; (2) the training of in-service personnel; (3) community education; (4) mass media communication; and (5) the preparation of training materials.

Both INCAP and CFNI have collaborated closely with the countries of the Region in the production of educational material and in the training of personnel. CFNI has been particularly active in community education and programs focused on special groups and specific problems. Recent evaluations, for example, of programs aimed at improving dietary habits during weaning and at guaranteeing food safety have shown significant positive results.

Since 1984 several countries of the Caribbean have benefited from the University of the West Indies long-distance education program (UWIDITE) for community workers in food and nutrition.

Greater efforts need to be made in the Region as a whole to ensure that planning and implementation of CEAN programs are adequate. This calls for collection and utilization of the information on those factors that bear on the community's knowledge, attitudes, and practices in food and nutrition. The participation of the community itself is indispensable in both the planning and the implementation of the programs.

IV. FOOD AND NUTRITION POLICY AND LINES OF ACTION

As indicated in the previous chapters, the Organization's policy in the field of food and nutrition will be directed in the coming years towards

improving food supply and consumption at the family level, particularly in the low-income groups of the population.

This does not involve a substantive change in the current orientation but rather a greater emphasis on the food component, including collaboration with agencies that promote the development of local food production systems which will permit family self-reliance in terms of nutrient intake, as well as a production surplus that will add to their income and increase the food supply in the community.

In addition, priority support will be given to the development of food and nutrition interventions that include programs for controlled subsidies, the distribution of food and other dietary assistance to vulnerable groups of the population, and programs for social communication and education geared to the improvement of knowledge, attitudes, and eating habits.

A. FOOD AND NUTRITION SURVEILLANCE

The activities in food and nutrition surveillance are a fundamental component of national primary health care strategies, since they contribute to the identification, follow-up, and care of those individuals and communities at greatest risk of undernutrition, especially the low-income rural and periurban populations in the developing countries.

Also, they serve to call attention to imminent situations that could have a negative effect on nutritional well-being; to improve planning for interventions and nutrition programs; to furnish information and evaluate operations under way; and to provide quantitative bases for controlling the nutritional consequences of economic development policies.

Since the mid-1970s, food and nutrition surveillance systems (FNSS) have been established in almost all the countries of the Region, but the information generated is not used often enough in political, technical, or administrative decision-making, due in part to the fact that the systems are conceived, planned, and operated by technical nutrition and health units, and there is not yet a demand within the sector itself for the information generated.

Often the staff at the higher levels of national planning do not even know about the existence of surveillance systems or do not see the need for them. Sometimes they do not recognize the need to measure and report on the problem of poverty and undernutrition when there are no resources available for dealing with it.

Recently there has been renewed interest in food and nutrition surveillance with a view to controlling the unfavorable effect of adjustment policies and economic stabilization on the poorer segments of society. The Organization is participating in a United Nations inter-agency program aimed at providing immediate information on health and nutrition conditions, advocating protection of the poor and vulnerable groups at national and

international levels, and promoting the development of surveillance systems through support for national and regional projects that strengthen their operations.

B. IMPROVEMENT OF FOOD AVAILABILITY AND CONSUMPTION

Since the causes of undernutrition are highly varied, it is necessary to develop activities that are multisectoral in scope, with lines of action geared to:

1. Increasing the real availability of food at the family level, taking into account the interrelationship of nutritional, socioeconomic, and institutional factors.

2. Improving food consumption through local supply and marketing systems and through food and nutrition education, including mass media campaigns.

3. Promoting the basic concepts of food and nutrition at decision-making levels so that the needed actions will be taken to ensure the execution of policies and plans in this area.

4. Preventing specific nutritional deficiencies, including the provision of technical support for food fortification programs in areas that have problems with iron deficiency anemia and disorders associated with iodine deficiency and hypovitaminosis A.

C. NUTRITION PROMOTION AND PROTECTION

The actions in this area should be integrated with other health activities, taking into account the primary care strategy, local health service programs, and operational decentralization, for the purpose of:

1. Stepping up the surveillance of child growth and development, the nutrition of expectant and nursing mothers, and the nourishment of children, including the promotion of breast-feeding and feeding during acute infectious episodes.

2. Strengthening health services for the diagnosis and management of energy-protein undernutrition, specific nutritional deficiencies, and undernutrition due to excessive or unbalanced food intake.

3. Improving institutional food and nutrition services, including institutional feeding programs for the healthy and for the sick who are in hospitals.

4. Promoting basic and operational research related to the priority problems in food and nutrition.

5. Supporting programs for the formation and training of personnel in food and nutrition so as to develop national scientific and technical capacity in this field.

V. MECHANISMS OF TECHNICAL COOPERATION IN FOOD AND NUTRITION

The Regional Food and Nutrition Program, including the specialized centers, INCAP and CFNI, use the technical cooperation mechanisms described below in support of its two basic components, food and nutrition.

These strategic approaches are generic for all PAHO technical cooperation. The description below highlights those aspects that are particularly important for the food and nutrition program as a whole. Some aspects of these approaches may be more appropriate or more fruitful when they are applied to the food component of the program, as opposed to the nutrition component, and vice versa.

A. RESOURCE MOBILIZATION

A number of the countries have specialized personnel and centers of technical excellence which are in a position to contribute effectively to the development of national capacity for dealing with food and nutrition problems.

PAHO works with the countries on the mobilization of these resources by providing motivation and by participating actively in collaborative projects and programs at the national and the intercountry level. The PAHO-promoted Regional Operational Network of Food and Nutrition Institutions (RORIAN) is an effective mechanism for achieving this purpose. Within this network, the work of the institutions that is basically related to the formulation and promotion of policies will be more applicable to the food component, but there will also be collaborative projects and programs that are concerned with investigating aspects of individual or group nutrition.

Special attention should be given to the coordination of actions with bilateral and international agencies, both government and private, so as to promote the mobilization of national and external resources in support of new programs or those already in operation, both in the area of dietary improvement and food consumption at the household level and in the promotion and protection of individual and community nutrition.

B. DISSEMINATION OF INFORMATION

The dissemination of scientific and technical information is a fundamental activity of INCAP and CFNI, carried out in collaboration with Headquarters, through publications on food and nutrition, periodic selected bibliographies, and reference material exchanges.

An up-to-date list should be kept of institutions and human resources in all the countries that are specialized in food and nutrition, as well as an inventory of programs and projects being carried out with the support of bilateral and/or international agencies, as documentation of experiences, and also, a calendar of educational programs and other important activities in the Region.

Food and nutrition surveillance and the provision of information on the situation and trends in the countries should be a regular activity of the Organization, carried out in collaboration with the Member Countries.

C. TRAINING

The national and subregional centers for food and nutrition training should be strengthened so that they will produce professionals and technicians who will meet national needs and who can collaborate in the process of technical cooperation between countries.

Support to the countries for training in food and nutrition is crucial to the implementation of actions, and for this purpose active cooperation is sought from academic institutions, international and bilateral agencies, and philanthropic foundations. RORIAN should play an essential role in this regard.

Knowledge of national needs for human resources in food and nutrition, together with the definition of professional and occupational profiles, is basic to the development of training programs.

D. DEVELOPMENT OF STANDARDS, PLANS, AND POLICIES

The formulation and implementation of food and nutrition policies and plans will be promoted, ensuring the participation of various sectors throughout the process, from conception of the programs up through their execution and evaluation.

This calls for the development of guidelines for obtaining the necessary information, processing it, and interpreting it; the conceptualization of the problem and the analysis of the political, economic, technical, and operational feasibility of solutions; the design of projects and the search for resources; the orientation of personnel in the preparation of operational standards; and the sharing of experiences in a convincing manner with those who make decisions at political, technical, and administrative levels.

E. RESEARCH PROMOTION

Research should focus on the most prevalent food and nutrition problems and be directed toward the search for solutions and the generation of new scientific and technological knowledge. It should encourage interdisciplinary collaboration and the development of national capacity.

Accordingly, the research to be promoted should be directed toward formulating strategies and interventions that ensure the availability and consumption of basic foods at the level of the household, as well as their optimum utilization, including programs for food and nutrition education and communication based on the peoples' sociocultural patterns of behavior.

The methodology will be brought up to date for the diagnosis of nutritional status and food intake as part of the food and nutrition surveillance systems that are operational, including the design and testing of appropriate indicators depending on the level of decision and the use to be made of the information.

Collaborative studies will be promoted to determine the impact of global and sectoral policies on nutrition, particularly in low-income groups and those living in critical poverty.

F. DIRECT ADVISORY SERVICES TO THE COUNTRIES

In response to the countries' requests for collaboration in the development of guidelines and standards on food and nutrition, and in close collaboration with other international or bilateral agencies (UNICEF, UNESCO, FAO, WFP, etc.), support will be given for the formulation and development of food and nutrition policies and programs, with emphasis on evaluative studies that will make it possible to improve their operations, such as programs for the distribution of food, the control of specific nutritional deficiencies, etc.

VI. CONCLUSIONS

1. It is clear that, despite the efforts by the Governments of the Region to raise economic and social levels, there are still serious problems that affect the well-being of the population and in particular the health and nutrition situation of low-income groups.

2. The analysis presented in the previous chapters reveals a high prevalence of undernutrition and specific deficiencies--iodine, iron, and vitamin A--as well as undernutrition associated with certain chronic diseases--cardiovascular diseases, diabetes, and some types of cancer. This is the result of insufficient food consumption and inadequate intake of specific nutrients in the first case, and of unbalanced intake of energy and nutrients in the second.

3. The main problem centers on low consumption of basic foods in the poor groups of the population. This perpetuates chronic undernutrition at the community level, with a resulting breakdown in health, translated in turn into high morbidity and infant mortality, together with repercussions for the social and productive functioning of large segments of the population.

4. The foregoing situation has been exacerbated by the current economic and financial crisis, which has obliged the Governments to institute adjustment and stabilization policies, with sharp cutbacks in social expenditures, including programs aimed at improving consumption at the family level through price subsidies for basic foods, food donations to vulnerable groups, especially mothers and children, use of international food aid as a stimulus for volunteer activity, etc.

5. In light of this situation, and in fulfillment of the mandates of its Governing Bodies, the Organization collaborates with the countries in the formulation, implementation, and evaluation of food and nutrition strategies and programs, promoting intersectoral approaches within the primary health care strategy. Considerable progress has been made in this undertaking, but it is clear that much still remains to be done if it is hoped to achieve health and effective food security for all the population.

6. In this context, the Organization proposes a renewed action policy in the area of food and nutrition, together with clear lines of work aimed, on the one hand, at improving food availability and intake at the family level and, on the other, at promoting and protecting the nutritional status of groups at biological risk, through preventive and corrective actions that support the concept of health-nutrition-health while strengthening the local health systems.

7. In order to implement the policies and lines of action enunciated above, the Organization proposes to strengthen the Regional Food and Nutrition Program, with emphasis on the food component in four specific areas:

a) Food and nutrition surveillance;

b) Food aid programs;

c) Production of basic foods; and

d) Food and nutrition education.

8. The nutrition component will continue to be developed as part of the strengthening of local health systems, integrated into the regular services that provide care to priority groups: mothers-and-children, schoolchildren, adolescents, adults, and the elderly.

9. As a basis for the planning of policies, programs, and projects in this field, renewed impetus will be given to food and nutrition surveillance, which will incorporate health, social, and economic indicators, the analysis and interpretation of which will be utilized effectively in the decision-making process at the political, technical, and administrative levels within the countries.

10. In fulfillment of its technical cooperation responsibilities, the Regional Food and Nutrition Program utilizes the mechanisms adopted by the Organization for the:

a) mobilization of national and international resources with the support of the Regional Operational Network of Food and Nutrition Institutions (RORIAN);

b) dissemination of scientific and technical information on food and nutrition;

c) training of professional, technical, and auxiliary personnel;

d) development of standards, plans, and policies;

e) promotion of research on the solution of prevalent problems; and

f) direct advisory services to the countries on the planning, implementation, and evaluation of food and nutrition strategies and interventions.

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