



# XVI Pan American Sanitary Conference

## XIV Regional Committee Meeting



Minneapolis, Minnesota, U.S.A.  
August-September 1962

Draft Agenda Item 2.6

CSP16/6 (Eng.)  
18 June 1962  
ORIGINAL: SPANISH

### REPORT ON NUTRITION PROGRAM IN THE AMERICAS

#### 1. Introduction

In recent years, considerable emphasis has been placed on nutrition programs in America for the following reasons, among others: a) the awareness of the public authorities of the seriousness and consequences of nutrition problems in the Hemisphere; b) the progressive decline of certain communicable diseases, which has resulted in the emergence of other problems formerly not accorded high priority in public health programs; c) better scientific knowledge of the problems and the means to solve them and, finally: d) the possibility of more extensive resources, both national and international, for a solution of those problems.

The XIII Meeting of the PAHO Directing Council, held in Washington in October, 1961, discussed at length all aspects of the nutrition problem in the Americas and approved Resolution XI, which enumerated the most urgent problems and recommended the measures to be adopted by Governments as well as the Pan American Health Organization in order to solve those problems.

This document has been prepared in response to the final paragraph of the above-mentioned Resolution, which reads as follows:

"To request the Director to present annually to the meetings of the Council a report on the nutrition activities carried out in accordance with this program, and on the progress made in overcoming the problems in this field."

The document presented by the Bureau last year gave a detailed account of the nature of the nutrition problem in Latin America; accordingly the document at hand is intended merely to supplement the information on the programs that have been carried out, special emphasis being given to those completed during the past year.

## 2. The problem

The above-mentioned Resolution of the XIII Meeting of the Directing Council stated that the seriousness of the nutrition problem in the Americas "was shown by a diversity of evidence, among which was the fact that the per capita food production in Latin America was higher before World War II than in 1959-1960."

Unfortunately the situation has deteriorated rather than improved during the past year. The population growth has continued to exceed the increase in food production. The per capita food production index was 3 per cent lower in 1960/61 than in 1959/60, in other words 5 per cent lower than before World War II.

The indices appear below:<sup>1/</sup>

<u>"Per capita" Food Production</u>	<u>Index</u>
Average before World War II	104
1948/1949 to 1952/1953	97
1953/1954 to 1957/1958	101
1958/1959	105
1959/1960	102
1960/1961	99

The slight gain made in 1958/1959 was lost in 1960/1961. The per capita production decline has been attributed to climatic factors, but that only shows that greater efforts are needed.

Resolution XI, adopted at the last PAHO Directing Council Meeting, stated that the "problem of nutrition in the Americas severely affects the state of health of the people, resulting in high mortality and morbidity, especially among children, as well as inadequate physical development and output of work, all of which have deep repercussions on the social and economic development of the countries."

It is obvious that the magnitude of the nutrition problem in the Americas can now be appraised much more accurately than formerly. The mortality of children in the age-group 1 to 4 continues to be 20 to 30 times higher in some countries than in those that are more advanced technologically, and the association between mortality and the nutritional status of the areas is becoming increasingly clear.

---

<sup>1/</sup> The State of Food and Agriculture - FAO - Rome, 1961 - C 61/6.

Calorie-protein deficiency in children continues to be the most serious problem in the Americas. A large number of children are being hospitalized for ailments ranging from the extreme form of marasmus to the classic manifestation of kwashiorkor (infantile pluricarenal syndrome). The problem is serious not only because of the high mortality rate, but because those conditions have repercussions on the future physical and mental development of the people. Other specific serious problems in the Americas are the anemias and endemic goiter, which was dealt with at length in Document CD13/14 presented by the Bureau at the XIII Meeting of the Directing Council in 1961.

In certain areas, Vitamin A deficiency constitutes an important cause of eye lesions and even blindness.

Aside from those specific manifestations, the people in Latin America generally show signs of chronic malnutrition, characterized by insufficient development of height and weight in relation to their ethnic potential, an attitude of indifference, fatigue, and as a result low productivity.

For the above reasons, the nutrition problem ought to be regarded -as stated in Resolution XI of the 1961 Meeting of the Directing Council- as one of the top priority problems in national health planning.

### 3. PASB Personnel

In 1960 the Bureau had one nutrition adviser. In 1962 there are five advisers stationed in Colombia, Guatemala, Haiti, Trinidad, and Washington, to give advisory services to the Governments of all countries in the Region, another adviser has been included in the 1963 budget.

It is to be hoped that this increase in personnel will benefit the nutrition activities being promoted by Governments in their respective countries.

The Bureau believes that such a marked increase in personnel for nutrition activities is in keeping with the recommendation made in 1961 by the Directing Council in Resolution XI, as follows:

"To give its full support to the recently-initiated intensification of activities in this field, and to recommend that, in view of the severity of the problem, the Director include in future proposed budgets the necessary allocations to ensure the progressive development of these activities."

#### 4. Nutrition in National Health Plans

One of the objectives of the Ten-Year Public Health Plan of the Alliance for Progress (Resolution A.2) approved at the Meeting of Punta del Este, is "to give substantial improvement to the diet and nutrition of the most vulnerable population groups, increasing the intake of animal or vegetable proteins." Another, undoubtedly one of the most impressive aims, is "to reduce the mortality of children under five years of age by one-half."

Obviously, those objectives are mutually interrelated. It will be difficult to reduce the mortality rate of children under five years of age by one-half if there is not an improvement in their nutrition, especially an increase in their intake of high quality proteins within a satisfactory overall consumption of calories. To attain those objectives nutrition programs must be soundly planned.

With that end in view, PASB invited a group of experts to attend a meeting in January, 1962 and to prepare a report suggesting immediate and long-range measures to be applied in nutrition within the framework of national health plans in Latin America.

The meeting lasted for four days, during which the group discussed problems in Latin America, available resources, the order of priority of programs, the urgently needed measures, the training of personnel, the establishment or consolidation of nutrition services, the strengthening of maternal and child care health programs, and the studies required in order to obtain a better knowledge of problems and their solutions.

The report of the Advisory Group on Nutrition will be distributed in due course to enable the Governments to utilize it, if they so desire, in preparing or revising their nutrition plans.

#### 5. Expanded Nutrition Programs

The programs that began modestly in 1958 have increased appreciably. The aim of those programs, which Governments are carrying out with the cooperation of WHO/PAHO, FAO and UNICEF, and, on occasions, UNESCO, is to raise the levels of nutrition of the rural family by means of an intense campaign of education and by the promotion of food production at the school, family, and community level, with the participation of the Ministries of Health, Education, and Agriculture in a coordinated plan.

The programs began in Chile and Guatemala in 1958; they were extended to Paraguay in 1959; and to Brazil, Costa Rica and Ecuador in 1960; and to Bolivia, Colombia, El Salvador, Nicaragua and Peru in 1961; and finally, in 1962, three countries -Brazil, Colombia and Paraguay- extended the program to other areas and six new projects were begun in British Guiana, Honduras, Panama, and in the islands of St. Kitts, Lucia and Trinidad.

That means that a total of 19 projects are in progress in 16 countries or territories.

Expanded Nutrition Programs

Number of Projects

Year	Begun	Expanded	Continued	Total
1958	2	-	-	2
1959	1	-	2	3
1960	3	-	3	6
1961	5	-	6	11
1962	5	3	11	19

The interest of Governments in these programs is also revealed by the fact that five new projects are currently being studied. It is within the realm of possibility that in a year or two, almost all the Latin American countries and many of the Caribbean islands of the West Indies, may have such programs. The contribution of Governments to those programs has been difficult to evaluate in monetary terms. Specialized international agencies, FAO and WHO/PAHO, have contributed experts in the fields of nutrition and agricultural extension. To date, UNICEF in the Americas has assigned a total of \$1,752,000 in equipment, supplies, and stipends for courses.

There has never before been such a large-scale effort to improve the nutritional status of the people, but the achievements are slight in relation to the enormity of the problem in the Hemisphere. But it is to be hoped that these programs, in conjunction with the social and economic development plans, may be able to help in improving the well-being of the people.

It would be an ambitious plan for the future, although not an impossibility, to arrange for all schools where physical and social conditions are favorable to undertake a food production program, giving special attention to protective foods, which are those most conspicuously lacking in the diet of rural families. In some areas, it will possibly be better to organize model farms and gardens to instruct the whole community, along with a program of supervised credits for rural families, as some countries have done.

The participation of health centers, as well as of agricultural extension units, is essential for the development of the program, and the respective Ministries have understood that fact. The education of mothers, the nutritional rehabilitation of undernourished children, the campaigns against infectious and parasitic diseases, the practical demonstrations of food preparation are among the activities that health centers are carrying on. The promotion of food production at the family level and food preservation are some of the most significant activities being developed by agricultural extension units. And so, beginning with areas of 50 to 100 thousand inhabitants -or even more, if supervision is possible- these programs can be extended in all the countries of the Continent in a coordinated action of the Ministries of Health, Education, and Agriculture.

#### 6. Development of New Sources of Proteins

Most Governments have expressed interest in new high-protein products not currently being used for human consumption. In view of the limited availability of protein from traditional animal sources, such as milk, meat, fish and eggs, it is obviously necessary to promote intensified production of those foods and also to utilize other potential sources of protein.

The Pan American Sanitary Bureau, along with FAO and UNICEF, has been promoting this policy in areas where the lack of proteins is most pronounced.

The product made at INCAP, known by the generic name INCAPARINA, is currently being produced in two countries; from 1960 to 1961, production was increased by 38 per cent. In May 1962, a plant for the production of INCAPARINA was opened in Nicaragua.

To date, six countries have been authorized by INCAP to produce that vegetable mixture. The selling price is approximately four times lower than that of milk, which the product resembles in protein content and quality.

Other products, based on soy beans and peanuts, are being developed in Latin America. Fish flour is an important source of protein; in Chile it is being used for human consumption, and possibly its use may soon be extended to Peru also.

The Bureau believes that this program to promote new sources of low-cost protein is valuable as an auxiliary tool in the improvement of human nutrition, provided that it is incorporated into the general policy of dietary improvement. Although in certain areas of the Americas, it may at present be the key program to alleviate calorie-protein malnutrition in children, the denomination "auxiliary tool" is simply meant to indicate its limitations.

## 7. Training

### 7.1 Fellowships

The Directing Council, at its last meeting, "urged the Director to give special attention to the training of the necessary personnel so that the different countries may be in a position to properly carry out their nutrition programs."

The Bureau has made great efforts in that direction during the past year.

Thirty-one fellowships were granted for nutrition studies in 1961, that is, almost eight times more than the average of seven preceding years.

1954	-	2
1955	-	3
1956	-	2
1957	-	4
1958	-	5
1959	-	7
1960	-	5
1961	-	31

Aside from the fellowships granted with the Organization's own funds, other agencies and foundations were induced to increase funds for that purpose.

### 7.2 Training Centers

#### 7.2.1 Institute of Nutrition of Central America and Panama

One of the training centers most frequently utilized by the Bureau is INCAP. The three types of training offered at the Institute are perfectly attuned to the needs of Latin America, and at the same time are utilized by recipients of fellowships from other parts of the world.

##### a) Course on Public Health Nutrition

The purpose of the course is to offer physicians who have graduated from schools of public health intensive theoretical and practical training in nutrition. The principal objective of the course is to give public health physicians a more thorough grounding in nutrition so that extensive knowledge of the subject and experience in it may enable them to perform their activities more effectively.

The course lasts for ten weeks, and begins each year in the middle of June. In response to the demand from other regions of the world, the course is given in English every two years.

### b) Training of Non-Medical Nutritionists

An increase in the number of non-medical nutritionists in Latin America is urgently needed. Their activities in the fields of surveys, organization of programs, training, supervision and evaluation is essential to the improvement of the status of human nutrition.

The PAHO Advisory Group on Nutrition which met in January, 1962, agreed that the average need was for one non-medical nutritionist for each 300,000 inhabitants. Several countries have already established that figure as a goal for the coming years. To achieve that average in Latin America, it will be necessary to intensify training activities considerably, but the basis of such a policy will be to expand the teaching functions of the Schools of Dietitians already in operation -there are eight in Latin America- so that in addition to training staff who will be qualified to work in hospitals and other institutions, they will also be able to work in the public health field.

INCAP has organized a nine-month course which will probably be increased to twelve months to qualify public health nutritionists. A degree in dietetics, biochemistry, or pharmacy is the requisite for the course.

The collaboration of UNICEF in this training program has permitted INCAP to broaden the scope of its activity in this type of training.

### c) Medical Nutritionists

The scarcity of physicians who are specialists in public health nutrition is one of the most serious deterrents to the promotion of nutrition programs in Latin America.

INCAP has established a special course on that subject; its duration depends on the previous training of the candidates, but in no case is it less than one year.

The PAHO Advisory Group on Nutrition came to the conclusion that it would be necessary to train four hundred medical nutritionists in Latin America in the next ten years. Not only the courses offered by INCAP but also other instructional centers in the Hemisphere must be utilized in order to accomplish that objective. The Bureau is giving special attention to the problem.

Finally, INCAP is training professionals in the field of basic nutritional research.



### 7.2.2 Nutritional Training for Nurses

The Bureau and INCAP, with assistance from UNICEF, are preparing to organize a Seminar to be held in 1962. Supervisory personnel in hospital and public health nursing will attend the Seminar, as well as personnel in charge of the teaching of nutrition in Nursing Schools. The purpose of the Seminar is to discuss the type of training that nurses are receiving and ought to receive in the field of nutrition and dietetics. Preliminary work will be done for the preparation of a book on nutrition for nurses, which will be published by the Kellogg Foundation and possibly distributed in 1963.

### 7.2.3 Training in Nutrition for Social Service Personnel

At the end of 1962, with the aid of UNICEF and the collaboration of FAO, the United Nations Office of Social Affairs, the Pan American Union and PAHO, a three-month course will be given at the Inter-American Children's Institute (Montevideo) for executive personnel in charge of the teaching of nutrition in Schools of Social Service in Latin America.

The staff is performing a very important function in community programs and an appropriate social and economic approach to nutritional problems will permit it to exercise a beneficial influence on the improvement of nutrition. The Bureau will supply two consultants for its public health nutrition classes.

### 7.2.4 Course on Planning of Education in Nutrition Programs

The Bureau has prepared a plan for the organization of a course on the planning of education in nutrition programs which is now under consideration by FAO and UNICEF. The purpose of the course, which may be organized periodically, is to provide the personnel in charge of education in nutrition programs with training in the methodological aspects of planning, so that in organizing such educational programs all pertinent factors are taken into account. Attending the course will be nutritionists, health educators, public health nurses, domestic economy staff, agricultural extension personnel and others responsible for the organization, supervision, and evaluation of education in nutrition programs. The course will last for three months.

### 7.2.5 Other Training Projects

Other projects are being studied in Latin America, such as the training in nutrition of agricultural extension personnel, presently being considered by FAO and UNICEF; the organization of Nutrition Departments in medical schools, viewed by the Bureau as an urgent necessity; the strengthening of nutrition programs in the Schools of Public Health; and others now in the planning stage.

The Bureau is very interested in the recommendation made by the Directing Council in 1961, and is sparing no effort to intensify and extend its activity in the training of nutrition personnel, an essential part of programs to improve nutrition which Governments wish to introduce in their countries.

#### 8. Research Program in Nutrition

At the beginning of the document, it was stated that one factor that has brought about an increase in the development of nutrition programs in Latin America has been, among other considerations, the existence of a large storehouse of knowledge that needs only to be applied in the field.

However, much still remains to be learned on the subject.

The Bureau has been engaged in research activities in the field of nutrition for a long time, especially at INCAP, and, to a lesser degree, in collaboration with the Institutes of Nutrition of Ecuador and of Peru.

Moreover, WHO Headquarters has given some assistance to the Institute of Scientific Research of Venezuela to make a study on the anemias.

The recent creation in PASB of a Research Department which will carry out its activities principally by means of an agreement made with the National Institutes of Health of the United States will make it possible to expand nutritional research to a considerable degree.

The PAHO Advisory Group on Nutrition, which met in Washington in January, 1962, concluded that a proper orientation of nutrition programs required additional knowledge of the epidemiological aspects of malnutrition, especially of protein-calorie malnutrition in children, hypovitaminosis A, ariboflavinosis and endemic goiter. It also stated that the effects of malnutrition on physical and mental development had to be ascertained, and that the definition of mortality attributed to malnutrition needed to be improved.

The group also pointed out the necessity for making additional studies on high-protein foods, the relationship between nutrition and infectious diseases, the prevalence and causes of the anemias, and the special nutritional needs of nursing mothers.

In addition to these concrete problems, the Group agreed that it was necessary to improve the methodology for the evaluation of the nutritional status and for education in nutrition programs intended for different cultural, social and economic groups of all ages.

In April, the Bureau called together a group of consultants in Boston to discuss some specific projects of high priority in nutritional research, in order to present them at the meeting of the PASB Advisory Committee on Research, which met in Washington in June.

The following four projects were submitted to that Committee:

a) The effects of nutrition on physical and mental development in children

The project consists of a study of the mental and physical development of children belonging to different ethnic, social, and economic groups in various Latin American countries. Initially, the study would be carried out in four countries, where qualified experts are available to make such a study.

Since it is a known fact that many pre-school age children in Latin America suffer from manifestations of calorie and protein deficiency, it is important to ascertain the degree to which that deficiency influences their subsequent physical and mental development. Preliminary studies made in Mexico indicate that there is a relationship between underweight and mental backwardness in children, and that both probably result from malnutrition. A more thorough study must be made on different ethnic and social groups in various Latin American countries.

b) Etiology of the Anemias

One of the most serious specific nutritional problems in Latin America and the West Indies is anemia. There are many unknown factors about its etiology, and it is hoped that an appropriate epidemiological approach can clarify the situation.

That project, and the project of the WHO Central Office can be carried out in three or four countries of the Region.

c) Endemic Goiter

A special consultant appointed by the Pan American Sanitary Bureau prepared a specific project for the purpose of obtaining a better knowledge of the conditions and determining factors of endemic goiter. Although there is no doubt whatever that iodine deficiency plays an important part in the etiology of endemic goiter, there are probably other genetic and dietary factors that explain the differences encountered in the prevalence of goiter and cretinism in certain areas. Plans are being made to conduct studies in four or five countries in order to investigate the etiopathogenesis of the endemic.

Meanwhile, the Bureau is continuing to urge Governments to set up iodized salt programs.

d) Interrelationship between Nutrition and Infection

The high incidence of mortality from gastro-enteritis, measles, and other diseases accompanied by extreme states of malnutrition indicates the need for a thorough analysis of the situation.

The interrelationship between nutrition and infectious disease is dynamic, frequently characterized by synergism and less commonly by antagonism. In general, the successful control of malnutrition, especially in children, lessens the propensity toward infection; and the reverse is true since their relationship is mutually dependent. The studies begun at INCAP, to which the 1961 document referred at length, have encouraged the Bureau to expand the radius of activity to other research centers.

Those four projects, physical and mental development in children, the anemias, endemic goiter, and the interrelationships between nutrition and infection, will soon be promoted by the Bureau as the initial phase of its broad plan of research.

WHO Headquarters will continue to collaborate with the Bureau in its research on the anemias and Vitamin A deficiency, which is already in progress.

#### 9. Publications

In 1962, the Bureau distributed 4,000 copies of the "Table of Food Composition for Use in Latin America" prepared by INCAP and the Inter-Departmental Committee on Nutrition of the United States.

In May, 1962, distribution was begun of the Fourth Collection of Scientific Publications of the Institute of Nutrition of Central America and Panama (INCAP), which contains 36 research papers on nutrition, totaling 374 pages.

In Volume LII, No. 4, April, 1962, the Boletín of the Pan American Sanitary Bureau published the conclusions of the Seminars on Education in Nutrition that were held in Quitandinha (Brazil) and Guanajuato (Mexico) in 1960 and 1961 respectively.

#### 10. Fifth Latin American Conference on Nutrition Problems

The Government of Peru has generously offered its country as the site of the Fifth Latin American Conference on Nutrition Problems, which will be held in La Molina in March, 1963. The Conference will be sponsored by FAO and WHO/PAHO, with the collaboration of the Government of Peru. The four preceding Conferences took place in Montevideo (1948), Rio de Janeiro (1950), Caracas (1953) and Guatemala (1957).

One of the outstanding topics of the Fifth Conference will be "National Planning of a Food and Nutrition Policy". Experts in economics, agriculture, public health and, naturally, nutrition are expected to attend the Conference.

The Bureau wishes to stress the importance of this meeting. The success of the Conference will depend on the caliber and number of the participants sent by Governments. The document produced by the meeting can be very valuable as a guide or orientation for a food and nutrition policy within the general social and economic development plans prepared in the countries. As in previous Conferences, the Governments themselves will assume responsibility for the expenses of their delegates, while the host Government and the international organizations will assume the responsibility for the organization of the Conference and the publication of the report.

#### 11. Conclusion

The Americas are resolutely moving toward a better future. Although it is not immediately possible to evaluate the results of the efforts being made, it is undeniable that a new spirit of activity has become evident in recent years. The seriousness of the nutrition problem in Latin America demands that it be studied not only as a biological problem but an economic phenomenon as well. The people's diet could well be thought of in terms of economic capital, and for its administration a sum proportionate to the invested capital could be allotted.

Assuming that the daily cost for food for each person in Latin America is 25 cents, simple arithmetic leads to the conclusion that the annual investment in food is approximately twenty billion dollars. From the economic standpoint, the science of nutrition is nothing more than the knowledge of how to invest the capital produced by earth and sea, with man's help, in the best possible way to obtain the greatest possible return.