executive committee of the directing council

PAN AMERICAN HEALTH ORGANIZATION

working party of the regional committee

WORLD HEALTH ORGANIZATION

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OBJECTIVES, FUNCTIONS, AND FINANCING OF THE INSTITUTE OF NUTRITION OF CENTRAL AMERICA AND PANAMA

I. INTRODUCTION

In 1946 the Governments of the six countries of the Central American Isthmus decided to establish an institute that would undertake the study of the nutrition problems of the area and cooperate with Governments in the programs required for their solution. The officials of this institute, which initiated its activities in 1949 under the name of the Institute of Nutrition of Central America and Panama (INCAP), recognized from the outset that to discharge effectively their responsibilities it would be necessary, in face of the magnitude and complexity of nutritional problems, to organize a broadly-based program, multidisciplinary in character, that would first call for the training of experts in various fields related to food and nutrition. It was also considered that, in view of the ecological characteristics of the area and the social, economic, and cultural characteristics of its population, which have a direct bearing on its nutritional situation, it would be necessary to base any course of action on a well-founded program of research that would make use of the general basic data available to analyze the local characteristics of problems and the factors determining these, and seek to find practical solutions that lay within the means available to countries and were consistent with their special characteristics. That it was possible to go forward with this general plan of action was due to the support that the Institute received not only from its member countries, but from international organizations that were interested in its activities, more especially the Pan American Sanitary Bureau, which was asked to administer INCAP by the latter's member countries, as well as from government agencies and private foundations outside the area, especially in the United States of America. It was in this way that INCAP reached a level of development and efficiency that justifies its present status as one of the best and most effective institutions in its field throughout the world.

In parallel with the development of INCAP and in part due to its influence, there has been a growing concern on the part of all the countries of the Continent with the nutrition problems of their peoples and with the urgent need to deal with these: this has been reflected in the high priority attached by the Pan American Health Organization, within its framework of responsibilities, to nutrition programs. To enable it to meet this need, PAHO has drawn in part on the resources available to INCAP for programs outside the Central American area, and, in addition, the Institute has also assisted with nutrition programs being undertaken in regions of the world outside the American Continent.

In the face of this situation, PASB noted with interest the resolution of INCAP's Council in which the latter, considering that INCAP had now reached a stage of development and effectiveness in which it could more efficiently serve not only the needs of the countries of the Central American area but also those of the entire Continent, if its stability and future development could be assured by its conversion into an Institution that would augment the resources being deployed by PASB in its nutrition programs throughout the Region, requested the Director of PASB to study the desirability of such a course of action and determine how far it was of interest to other Member Countries of the Organization.

In response to this request, the Director of the Pan American Sanitary Bureau brought the case before the Directing Council of PAHO at its XVIII Annual Meeting, held in Buenos Aires, Argentina, in 1968 (Item 22 of the Agenda, Document CD18/20, "Objectives, Functioning and Financing of INCAP").

On that occasion, the Minister of Public Health of Costa Rica, Dr. Alvaro Aguilar Peralta, President of the Central American Public Health Council, in the absence of the Minister of Public Health and Social Welfare of Honduras, emphasized in the presence of his colleagues from the other countries of the Continent, the desire of the Central American countries and Panama, that the remaining countries of the hemisphere should participate more directly than had so far been the case in the services that INCAP was able to offer. He also expressed the hope that such a course would serve to guarantee the financial stability and future development of the Institute. In responding to the needs of the member countries of PAHO, it was clear that INCAP had provided convincing evidence of its worth and, over practically twenty years of endeavor, had accumulated invaluable resources, more especially in the form of professional workers, highly qualified for the performance of their duties.

The Directing Council of the Organization, after considering this Item, approved Resolution XXIII, which reads as follows:

"THE DIRECTING COUNCIL,

Bearing in mind Resolution VIII, paragraph 6, approved by the Central American Public Health Council at its II Meeting, in which the Council requested the Director of the Pan American

Sanitary Bureau to explore the possibility and advisability that INCAP expand its direct responsibilities with regard to all the countries of the Continent;

Conscious of the work, which is highly appreciated, that INCAP has carried out and continues to carry out for the benefit of the nutrition programs of all the countries of the Hemisphere;

Considering that the magnitude and importance of the nutrition problems that affect great sectors of population in all the countries of the Continent, and further assured that because of its technical capacity, INCAP can collaborate efficiently with the efforts of Governments in the solution of such problems; and

Expressing thanks for this gesture of the countries of the Central American Isthmus towards the countries of the Americas as a whole,

RESOLVES:

1. To request the Director of the Pan American Sanitary Bureau to study the ways in which INCAP can expand its direct responsibilities in collaboration with all the countries of the Continent and, when appropriate, with other regions of the world, thus assuring the stability and development on a firmer financial basis than at present, and that he submit this study for consideration of the Executive Committee of the Organization at its next Meeting.

2. To request that the Executive Committee analyze this study and present its recommendations for consideration at the XIX Meeting of the Directing Council, XXI Meeting of the Regional Committee of the World Health Organization for the Americas."

In view of the foregoing, the present document has been prepared for use by the Executive Committee at its forthcoming meeting, as a basis for its discussion of this matter.

II. PROPOSED PROGRAM OF WORK

It is proposed that INCAP, in assuming the form of a PASB program, serving all the countries of the Continent, should reorganize its activities to meet the needs of the region and of each country. The intention is not, of course, that it should in any way replace the various departments, institutions and other national agencies already working in the nutrition field, but that it should augment PASB's technical resources and working association with existing agencies.

The primary aim of all the Institute's activities, would be to assist Governments of Member Countries of PAHO, in the study of the nutrition problems of their peoples, and in seeking better means of dealing with these. These activities would fall into three broad categories: research, education, and advisory services. The specific activities to be included in

each of these three programs and the priorities to be assigned to them, will need to be carefully determined and continuously reviewed by PASB and INCAP officials in close consultation with the responsible officials and agencies of each country. It is not possible, therefore, to put forward a program of specific activities but the general fields of activity to be covered by each of the three programs that INCAP proposes to adopt are indicated below:

A. RESEARCH

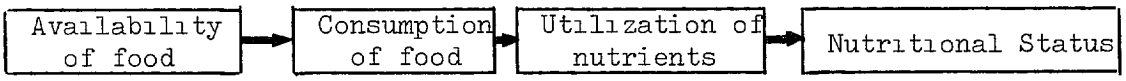
INCAP's history, confirming the experience of the more highly developed countries, shows that if the programs of direct service of an institution of this kind are to be an effective instrument of consultation and education, they must be based on a solid foundation of research. The urgency of the problems to be solved and the limited resources available further require that such a research program should be designed to provide the information needed for measures that can be immediately put into effect. INCAP's research programs would therefore have the following general objectives:

1. To identify through fundamental studies the basic factors and relationships determining the nutritional status of individuals and population groups in the Hemisphere.

2. To contribute to a better understanding of the nutritional problems of the countries of the Region, determining their nature, magnitude and consequences, and the corresponding epidemiological factors.

3. To seek solutions to these problems, and the best means of putting them into practice.

Three levels or types of research that are complementary to one another are therefore required: fundamental studies to determine cause and effect relationships and mechanisms of action; ecological, epidemiological and clinical studies to indicate the scope and nature of problems; and practical or methodological studies to provide solutions to these problems. In addition and in view of the special nature of the nutrition problem, these three levels of research should follow each of the stages indicated below, which outline the natural course of malnutrition.



The availability of food of adequate quality and on a scale sufficient to satisfy the needs of the population depends on factors related to the production preservation, processing, transportation, and marketing of agricultural products for human consumption: in this field, INCAP would cooperate with the agencies directly concerned (agricultural, economic and industrial) in all matters directly connected with satisfying the nutritional requirements of the population.

The consumption of the available food resources is determined by economic factors (food costs in relation to the purchasing power of the consumers) and cultural patterns (food habits and practices). In this field studies of a social and economic nature are required, for which it will be necessary to obtain assistance from institutions concerned with human nutrition.

The utilization of the nutrients contained in ingested foods depends on the characteristics of the host (nutritional requirements, physiological or pathological characteristics of individuals that affect digestion, absorption, retention, and loss of nutrients); on the characteristics of the agent (natural or induced characteristics of foods that affect their use); and on environmental biological and socio-cultural factors (environmental temperature, effect of infectious processes and other stresses on nutrition). The nature of all these characteristics and factors and of their operating mechanisms must be determined.

Lastly, efforts are needed in the area of the nutritional status of individuals and of population groups to improve diagnostic methods, evaluate results, and introduce effective means of control.

Following the same line of thought, it is proposed that INCAP should collaborate with Governments in a general research program, based on the areas and types of studies already discussed and outlined in the table below, which provides, by way of illustration, some examples of the types of studies proposed, while making no claim to be an exhaustive analysis.

	FUNDAMENTAL STUDIES (Objective 1)	STUDIES DIAGNOSING THE SITUATION (Objective 2)	STUDIES IN SEARCH OF SOLUTIONS (Objective 3)
Availability of Food	1) Environmental and hereditary influences on the nutritional value of foods. 2) New sources of nutrients. 3) Effects of processing on the nutritional value of foods.	1) Composition and nutritional value of conventional foods. 2) Balance sheets and projected requirements. 3) Nutritional value of processed foods.	1) Various ways of improving the nutritional value of food. 2) Development and marketing of new foods.
Food Consumption	1) Relation of food costs to family income and distribution of the latter. 2) Factors affecting food costs. 3) Cultural bases of food habits. 4) Survey methods.	1) Survey of food habits and practices. 2) Food consumption in relation to the socio-economic status of families.	1) Ways of reducing food costs. 2) Design and evaluation of educational materials.
Utilization of Nutrients	1) Nutritional requirements under various conditions. 2) Interrelationships of nutrients. 3) Characteristics of foods (natural or induced) that affect their use. 4) Relationship between nutrition and infection.	1) Existence of absorption defects or defects leading to severe loss of nutrients. 2) Biological value of conventional foods. 3) Sanitary condition of foods.	1) Changes required to correct environmental factors affecting nutrition. 2) Changes required in foods or diets to improve the utilization of nutrients.
Nutritional Status	1) Methods of identifying problems (indicators). 2) Methods of quantifying deficiencies. 3) Effect of nutrition on growth, development and ability to work. 4) Nutritional adaptation.	1) Nutritional diagnostic surveys: anthropometric, clinical, biochemical. 2) Analysis of vital and morbidity statistics.	1) Methods of implementing solutions (operational research). 2) Methods of evaluating operational programs.

The following are more concrete examples of the types of research projects that INCAP could carry out in association with PAHO and its Member Countries, within the framework of such a general plan:

1. Variations in the protein, lysine, tryptophan, methionine, and cystine content in varieties of bean with a view to selecting those of the highest nutritional value.

2. Chemical-nutritional studies of seeds of potential use in agriculture that are currently not grown on an adequate scale, (quinoa, Brazil nut, oil seeds).

3. Utilization for nutritional purposes (for livestock) of residual agricultural or industrial products (sugar cane molasses, coffee pulp, residues with a high cellulose content, etc.).

4. Development of vegetable mixtures adapted to the special conditions obtaining in various countries or regions.

5. Improvement of cereals and cereal by-products by the addition of protein and/or amino acid concentrates, using methods consistent with local needs.

6. Effects of minor elements on livestock and crop production and methods of correcting the deficiencies that arise.

7. Systematic use of urea as a source of nitrogen to replace proteins in livestock feeding.

8. Effects of various pathogenic agents and of "indigenous" intestinal microflora on general health and child nutrition as a basis for the formulation and evaluation of programs of environmental sanitation.

9. Development, evaluation, and standardization of methods for the definition and quantification of protein and calorie deficiencies in children and adults and establishment of standards of normality (anthropometric and body structure, biochemical, hematological and physiological).

10. Physiological deformities and functional adaptation in subclinical cases of chronic protein and calorie deficiency.

11. Factors affecting calorie and protein requirements under normal living conditions in Latin American population groups.

12. Development, evaluation, and standardization of practical methods for the diagnosis of the nutritional status of population groups.

13. Pilot studies to evaluate the efficiency of various methods of nutritional education.

14. Studies of the means of achieving more effective control and treatment of the various stages of protein and calorie deficiency, of the nutritional anemias, vitamin-A deficiency, endemic goiter, and other significant nutritional deficiencies in the Hemisphere.

As indicated above, the major projects and the priorities to be assigned to them will be formulated on the basis of consultations with Governments and in the light of the resources available to INCAP, with a view to making the best possible use of these resources to meet the most pressing needs of the countries of the Hemisphere.

Three possible forms of cooperation by INCAP in these programs are envisaged:

1. Studies to be undertaken by INCAP with its own physical resources and permanent staff. These include:

a) Those of direct interest to the countries of the Central American area (which could also be undertaken in association with officials and agencies from those countries).

b) Those of general interest to the Continent or to specific countries or areas of Latin America, provided it is considered that the resources at INCAP's disposal are equal to such demands. In such cases the PASB and INCAP officials concerned would jointly decide on and plan such studies in the light of requests from countries or on the basis of their knowledge of the problems and requirements of the Region.

2. Projects that will be carried out in other centers or institutions in the Region, to which it is considered that INCAP could give its support by, for example:

a) Providing technical assistance on the formulation, methodology and evaluation of scientific nutrition studies.

b) Providing training within its own facilities for the personnel who are to work on these studies.

c) Furnishing specialized laboratory or statistical services.

3. Projects that by their nature must be undertaken in a number of countries (for example, multi-national epidemiological studies) and for whose organization and coordination INCAP could assume responsibility.

B. EDUCATION

The manpower shortage is undoubtedly one of the principal limiting factors in applied nutrition programs. It is therefore considered that one of the most effective ways in which INCAP can cooperate with all the countries of the Hemisphere is through its educational programs.

It is proposed that, in the educational field, INCAP should participate in the following programs:

1. Programs Leading to a University Degree

These include a four-year course for the training of nutritionists at the university graduate level (equivalent to a B.Sc. in the United States educational system): the course would train graduates to work as institutional dietitians, as nutritionists in health, educational, agricultural extension and home economics programs or provide an opportunity for them to continue their studies in disciplines related to nutrition and food sciences.

This course could take each year 10 students from countries in Central America and 10 from other Latin American countries, who would preferably come from those countries that do not yet have schools of nutrition providing this kind of vocational training.

It could also accept graduates from other schools of nutrition with more limited programs of study who are desirous of completing their academic training in INCAP and who would be given credit for the subject and practical work they had already successfully completed. Six places a year could be offered to such students, which would bring the number of students at INCAP's School of Nutrition coming from countries outside Central America up to 16 a year.

2. Post-graduate Programs

These would take the form of courses of one or two years duration (depending on the previous education of the participants) and leading to a Master's degree in nutrition. They would be initiated with a program for physicians, graduate nutritionists and others with professional qualifications in biology at the graduate (B.Sc.) level or its equivalent. The program would include courses to enable students to complete the number of credits they needed, seminars, and the publication of an original work, in any of the epidemiological, clinical or operational fields of fundamental research in which INCAP is engaged, and under the proper supervision and guidance of the Institute's professional staff.

Initially, ten places on these courses could be offered to professionals from any country on the Continent.

Consideration is also being given to the possibility, in the light of the demand and the resources available, of organizing similar courses for a Master's degree in nutrition for professionals in the fields of agronomy, veterinary surgery, animal genetics, chemical and industrial engineering and other such disciplines.

All these professional workers, having obtained a Master's degree in nutrition, would be able to return to their own countries in a position to direct practical programs or assume academic responsibilities, teaching nutrition in specific vocational training programs. They would form the leaders so badly needed in many of the countries of the Region to train local staff and to translate the data available into operational programs.

3. Tutorial Programs

These would be provided for those requiring an intensive training in any of the Institute's fields of work. The programs would be related to the prior training and special needs of the student, who would be assigned to work for various periods of time under the direct supervision of particular members of the Institute's professional staff for up to a total of between three months to one year. In the course of the program the student would also participate in seminars, attend lectures and review-sessions on the literature of the field, participate in INCAP's other scientific activities, and, if necessary, he would take some of the courses offered regularly under other teaching programs. Initially, INCAP would be in a position to take each year up to twelve students of this type, who could come from any country in the Region.

4. Supplementary Programs of Short Duration

The aim of these short courses, of from a few weeks to a few months in length, would be to provide the knowledge and basic experience of the field of nutrition needed by professional and other workers for the performance of their duties.

An example of one of these programs is the ten-week course on nutrition in public health for physicians that INCAP has been conducting and would continue to conduct for public health physicians from all of the countries of the Continent. For this course, twenty Spanish-speaking and twelve English-speaking students could be taken each year.

The possibility of organizing similar courses for other kinds of professional and other workers is being considered, such as, for example, for health planners, administrators of hospitals and other health services, supervisors of agricultural extension or home economics programs, secondary schoolteachers, etcetera.

5. Seminars

It is believed that, in addition to the formal courses indicated above, INCAP could also collaborate effectively with all the countries of the Hemisphere in organizing seminars or meetings on specific topics related to nutrition that were of interest to them. These could be organized at the Institute's Headquarters or in other institutions in association with INCAP. The topics and participants could be very varied in character, but should always serve the common purpose of promoting, assisting in, or improving applied nutrition programs. The following topics can therefore be suggested as suitable for discussion at meetings of this kind: nutrition measures in national health plans; national nutrition and food policies; teaching of nutrition in various vocational schools; methods of nutritional education; development and utilization of new foods; enrichment of food; treatment of severe malnutrition, etcetera. Depending on the topics, the participants would be: officials from the health services; university professors or teachers from other educational institutions; agronomists; industrialists and others connected with food production, processing, marketing, etcetera.

C. Advisory Services

Under the plan proposed for the widening of INCAP's responsibilities, the entire professional staff and technical facilities at INCAP's disposal would provide PAHO with additional resources for its programs of advisory services in the nutrition and related fields in all its Member Countries.

The wide range of disciplines represented on INCAP's professional staff would facilitate the formation of teams of professional workers with complementary skills to deal with specific problems.

Such advisory services could be provided either through the PAHO officials concerned handling problems put to INCAP in this connection, or by INCAP professional staff providing countries with direct services, after prior consultation with Zone Chiefs.

The following are amongst the areas in which INCAP's capacity to provide advisory services can be developed:

1. Formulation of national nutrition and food policy. Cooperating with government agencies responsible for the collection and analysis of the basic data required for this purpose; preparing projections of requirements and resources; defining the sectoral courses of action that should form part of such policy; planning such measures, including methods of evaluating them; other related fields.

2. Organization and definition of functions of nutrition departments and institutes.

INCAP's experience could be valuable to countries that are desirous of organizing or re-organizing their national nutritional services or institutes of nutrition.

INCAP could assist, in such cases, working jointly with the officials responsible for planning the structure and defining the functions of such bodies in the light of local conditions and requirements, and it could also help with the training of the staff needed.

3. Evaluation of the nutritional status of population groups. INCAP could provide valuable technical assistance in connection with all aspects of the planning and conduct of nutrition surveys and other special diagnostic studies of the nutritional status of population groups, including sampling, design and standardization of methodology, and analysis and interpretation of data.

4. Planning and conduct of special applied nutrition programs. Supplementing, whenever necessary, the resources of PASB and of the national agencies concerned, INCAP would be in a position to assist with the planning, conduct and evaluation of such special programs as diet supplements, nutrition education, enrichment of foods, development of new foods of nutritional interest, etc., as well as programs designed to deal with emergency situations.

5. Educational Programs

In addition to the educational programs to be undertaken in the Institute itself, and described in the preceding section, INCAP could assist Member Countries of PAHO by providing advisory services on nutrition education programs undertaken at national levels. Such assistance would include advice on the formulation or review of curricula, training of teaching staffs, the selection and/or preparation of instructional materials, etc. Under this heading would be included not only programs of specialized education in nutrition and schools of nutrition, but also programs of education in nutrition conducted in other schools of vocational education, such as schools of medicine, public health, nursing and social service, teacher-training colleges, and colleges for the training of specialized teachers, etcetera.

6. Research Programs

Finally, and as indicated in the corresponding section, INCAP could assist, to the extent that its services were required, agencies or persons interested in conducting programs of research into nutrition or related disciplines in the countries themselves. Such aid might take the form of guidance on the form of experiments, the methodology to be adopted and the analysis of data, or the furnishing of direct services in specialized laboratory techniques or in mechanized data analysis.

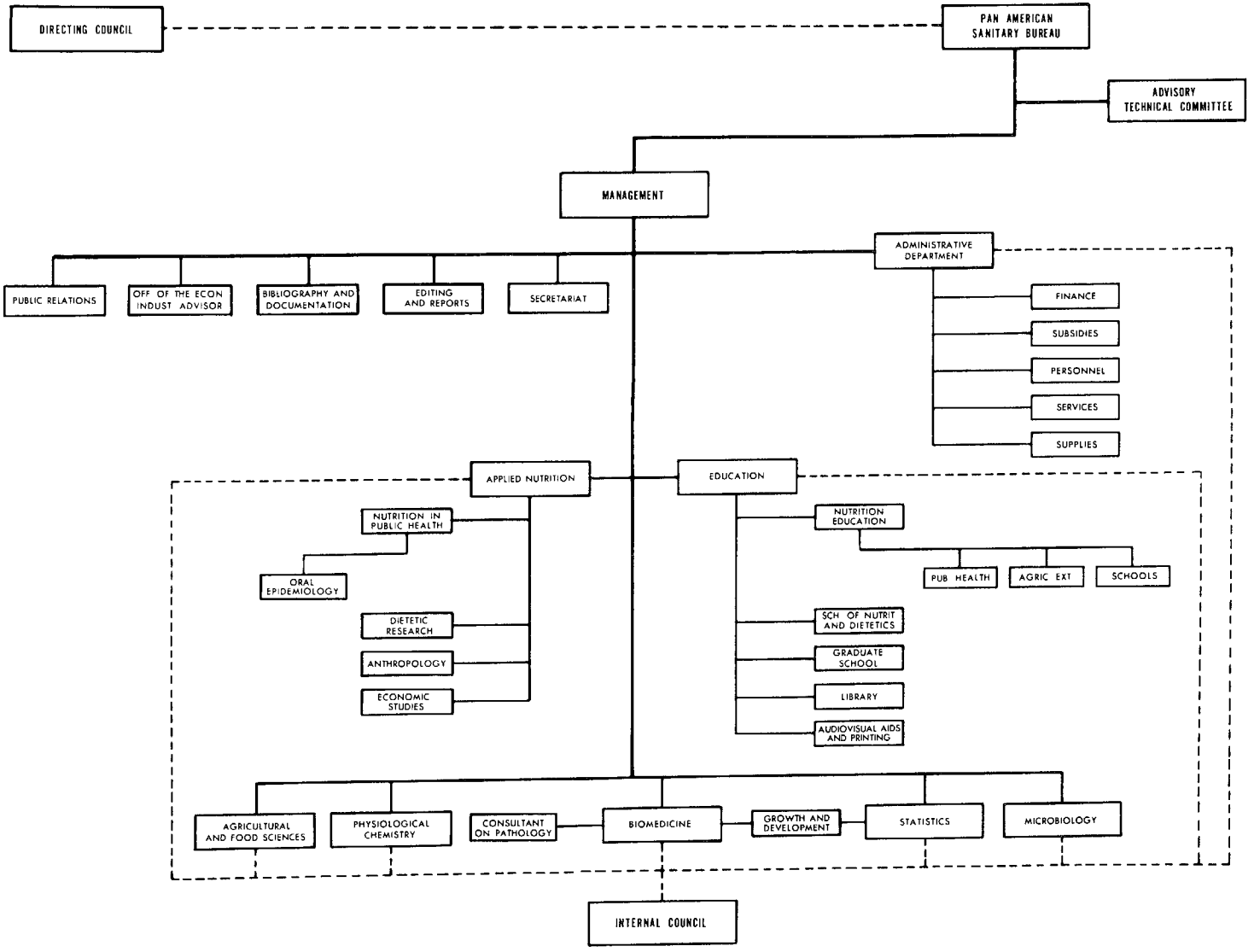
As indicated in the beginning of this chapter, the program that has been outlined here in general terms should, for the purposes of more specific programming and the establishment of priorities, be related to the requirements of countries and the funds available to INCAP. With this in mind, it is proposed that officials of PASB and INCAP, with the assistance, if necessary, of consultants appointed specially for this purpose, undertake a study of these factors as a basis for programming, and that this should be supplemented by meetings of the national experts concerned to discuss the ways in which INCAP can most successfully carry out the proposed program and satisfy the most urgent needs of the countries of the Hemisphere.

III. ORGANIZATION AND PHYSICAL FACILITIES

A. Organization

To carry out the program of work outlined in the preceding chapter, INCAP would maintain its existing form of organization, as shown in the following organizational chart:

ORGANIZATIONAL STRUCTURE OF THE INSTITUTE OF NUTRITION OF CENTRAL AMERICA AND PANAMA (INCAP)



This technical and administrative structure would, of course, be reinforced with the minimum additional personnel required to enable the Institute to effectively perform its new function of serving the entire Continent. It is also proposed that, as soon as the necessary personnel and financial resources can be obtained, to form a new division of social and economic studies. This is regarded as an essential means of augmenting INCAP's capacity to undertake integrated studies of the nutritional problems of our peoples and of the factors lying behind them, and would serve to facilitate the search for and formulation of practical solutions based on a multidisciplinary approach consistent with the nature of these problems. This new division would be staffed initially by two professionals, an economist and a social anthropologist, supported by the necessary auxiliary personnel.

B. Physical Facilities

For the conduct of its various programs, INCAP at present possesses the following physical facilities:

1. Buildings*

The main building is of two stories, covering an area of 2,170 square meters, and was handed over to the Institute by the Government of Guatemala in 1954. The ground floor is used for the offices of the managerial staff, and for personnel whose work is connected with technical administration, field activities and other services. The second story is used exclusively for the laboratories of the various divisions, and as a library, including a reading-room and an office for the library staff. The basement is used for storage.

INCAP also possesses a few small annexes that it has built with its own funds and the Growth and Development Unit is located in two of these with the carpentry and mechanical workshops, cafeteria, etc. occupying two others (with a total area of 615 square meters). Another annex of two stories near the main building, with a total area of 606 square meters, is used for a number of purposes. One wing of the ground floor of this building contains the graphic arts, photographic, and printing services, and the other section contains animals used for experimental purposes. The second floor is used for administrative offices.

In September 1967 the Government of Guatemala made a second building available to INCAP, designed especially for the Clinic and Metabolic Studies Unit, and possessing facilities for the hospitalization of 16 children and 12 adults. This building also contains the occupational Physiology Laboratory.

In 1968, the Government of Guatemala officially inaugurated a further building, covering an area of 5,400 square meters. Total construction costs, which were covered by the Government of Guatemala, amounted to more

*See plans of INCAP's physical installations in Annexes I and II.

than half a million dollars. The new building provided additional working facilities for a number of departments of the Institute, particularly those dealing with educational programs and statistical services, and for new research laboratories. Funds are available to meet the cost of providing the furniture and installing the common services needed for its operation, as all INCAP Member Governments contributed a special quota for a limited period for this purpose.

The Statistics Division, with its Computer Center, is already housed in part of the basement, and the first floor is occupied entirely by the Educational Division, and is amply supplied with lecture rooms, offices, educational laboratories, meeting halls, and study rooms. In addition, the Guatemalan Government is currently constructing a service building that it hopes to complete shortly for the installation of an emergency electric power plant, underground water tank, pumping and water purification equipment, electric power station and boilers. Plans have already been approved for the construction, on which a start will be made this year, of a further building especially designed for the library and documentation service.

2. Experimental Farm

Of inestimable value for the conduct of experimental projects for the improvement and biological evaluation of basic foods and for the utilization of poultry, hogs, sheep and cattle in nutritional and other experiments, is the farm with an area of 180 hectares that the Government of Guatemala - through its Ministry of Agriculture - has placed at INCAP's disposal. The farm's physical installations and equipment have therefore been put into the best possible condition: its operation will be the responsibility of the Division of Agricultural Sciences and Foods.

3. Rural Training Center

Situated in the Department of Chimaltenango in Guatemala, this covers an area of 1 hectare and 21 square decameters, and is near the Health Center in this locality. This building will provide residential facilities for students and possesses a cafeteria service and other facilities needed for the conduct of its activities.

The role of the Center will be very important, as in February of the present year the San Carlos University of Guatemala, the Ministry of Public Health and Social Welfare, and INCAP initiated in the Chimaltenango area an integrated health program with teaching and research facilities for students participating in INCAP's academic programs, for medical students in their year of internship to complete part of their practical work, and for students from other institutions in which health personnel are trained.

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4. Field Laboratory

This operates in Santa Maria Cauqué, a municipality in the Department of Sacatepéquez. This is a properly equipped laboratory to be used for the longitudinal ecological studies on the relationship between nutrition and infectious diseases, for which the Division of Microbiology is responsible. It is housed in the Health Subcenter in this locality which, with the authority of the Director General of Public Health, operates under the auspices of INCAP.

5. Field Units

For the conduct of its various activities, the Growth and Development Unit has eight centers located in various departments in the Republic of Guatemala. In addition to these, the Institute has two other field units used for the conduct of field nutrition studies of general interest.

6. Equipment

In addition to the physical facilities already described, INCAP possesses a range of basic equipment for the conduct of the special activities of each Division. Much of this has been purchased with subsidy funds, and is therefore the Institute's property. By way of illustration, the following is a detailed list of the various types of equipment at INCAP's disposal.

	Original Price (US$)
Mobile Freezer Unit	3,772.52
Technicon Automatic Analyzer	10,300.00
Toledo Scales, Model No. 2191	2,084.00
Revco Freezer, Model No. 659	2,182.00
Six-Channel Physiograph	6,855.00
International Centrifuge	3,443.00
Gilford Automatic Spectrophotometer	7,708.00
Spinco L2-65 "Ultracentrifuge"	13,012.00
Well-type Scintillation Counter	3,449.00
Automatic Analyzer (Amino Acids)	11,392.00
Refrigerated Centrifuge	2,975.00
Electric Autoclave	2,024.00
Beckman Model D-4 Spectrophotometer	2,625.00
Barnsted Water Distiller, Model EMH-10	2,807.00
Fraction Collector	1,721.00
Coulter Counter, Model B	4,850.00
"Microzone" Electophoresis system	2,982.00
Automatic Scintillation Counter for liquids	8,910.00
Gas Chromatograph, Tracor, Model Microtek MT-220 and accessories	20,000.00

The original cost of all the equipment listed, either owned or in the custody of INCAP, exceeds US$500,000. This figure includes a fleet of 22 vehicles of various kinds, and office equipment valued at US$116,000.

7. Computer Center

Under an agreement signed with IBM of Guatemala, the Computer Center of the Division of Statistics of the Institute leases modern mechanical and electronic computer equipment (Computer No. 1620) together with the associated equipment and accessories necessary for its efficient use.

IV. ADMINISTRATION

Under the proposed plan of action, INCAP would continue to be administered by the Pan American Sanitary Bureau. The Director of the Institute would make an annual technical and administrative report to the Director of PASB, and would also prepare any further documentation that might be necessary. Similarly, INCAP's draft operational program and general budget would be submitted annually for consideration and approval by the Governing Bodies of PASB.

PASB would continue to provide advisory services on nutrition for the six countries of the Central American Isthmus through INCAP, which would also function, as before, as the agency in the area responsible for training and research in the field of nutrition.

The Central American Public Health Council would become the Governing Body for INCAP, within the limits of its area responsibilities.

The Technical Advisory Committee which has been operating as an advisory agency of the Director of the Pan American Sanitary Bureau in connection with INCAP's activities, would cease to exist as such and its responsibilities would be assumed by PASB's advisory agencies.

Accordingly, the Advisory Technical Committee appointed by PASB to advise the Director on all activities in the field of nutrition undertaken in the Hemisphere with PASB's support, would be responsible for reviewing INCAP's work in the context of PASB's global nutrition program. It would therefore make such recommendations as it thought desirable with respect to these activities.

V. BUDGET AND FINANCING

A. Budget

In order to carry out the program outlined above, it is estimated that a budget of $1,391,320 will be required, which is $270,000 more than presently foreseeable resources. This budget will provide the minimum cadre of experts and services needed to make INCAP more effective as a Pan American institution as well as serving Central America.

TABLE I - Budget

Program		Budget
I.	Advisory Services	$122,503
II.	Training	228,837
III.	Research	697,415
IV.	Statistics	67,084
V.	Social Studies	81,326
VI.	Executive Direction and Program Services	184,805
VII.	Organizational Meetings	9,350
	TOTAL	$1,391,320

The proposed budget includes $122,503 for advisory services to Governments; this amount covers only the unit which serves as the focal point for coordinating advisory services. In reality, the entire professional staff of INCAP will be available for training, and for advice and assistance to Governments, to the extent that such assistance is mutually agreed upon.

The amount of $697,415, or approximately 50 per cent of the budget proposed, is planned for research activities. To date, much of INCAP's research program has been financed by grants, and it is assumed that these will continue to be available. However, the uncertainty of grant funding, both as to amount and timing, makes it extremely difficult to develop and maintain the basic staff which INCAP requires for training and advisory services as well as for research. Reliance on financing by grants could mean termination of highly trained technical staff between projects financed by grants, unless the Organization has other sources of financing to draw on.

B. Financing of Expanding Program

There are presently three principal sources of financing for INCAP: contributions from the INCAP Member Governments; grants; and the PAHO Regular Budget.

TABLE II - Financing

Sources of Funds	1st year	2nd year	3rd year
INCAP Member Governments	$394,545*	$394,545*	$394,545*
Grants to INCAP	244,543**	245,160**	246,000**
PAHO Regular	464,496	473,963	480,775
Sub-total	1,103,584	1,113,668	1,121,320
Proposed Increase to PAHO Regular	90,000	180,000	270,000
TOTAL	$1,193,584	$1,293,668	$1,391,320

*Includes $19,545 miscellaneous income.

**Excludes $365,000 study being conducted by the Growth and Development Unit of INCAP under a contract between NIH and PAHO.

1. Member Government Contributions

It is assumed that there will be no change in the portion of the INCAP budget attributable to the six Central American countries for whose benefit INCAP was initially established. INCAP will continue to provide services to these countries, and it is assumed that their participation in the cost of financing will continue at its present level. Each Member is currently assessed $62,500 annually, and miscellaneous income of $19,545 is anticipated annually.

2. Grants

It is assumed that INCAP will continue to receive grants of approximately $245,000 annually for research and training. (This amount excludes $365,000 for the Growth and Development Study, which is being financed under a contract between the National Institutes of Health and PAHO). INCAP will continue to attempt to secure financing from grants and other non-budgetary sources.

3. PAHO Regular Budget

The amounts of $464,496 for 1970, $473,963 for 1971, and $480,775 for 1972 have already been projected as PAHO's share of the cost of INCAP. If INCAP's role on the regional level is expanded, and if the basic cadre which the Institution requires to perform effectively is

to be provided, the Executive Committee may wish to recommend to the Directing Council the desirability of increasing the contribution from the PAHO regular budget gradually, over a three-year period to meet the amount of $270,000 not covered by presently available resources.

The following table indicates the detail of the proposed increase:

TABLE III - Detail of Proposed Increase

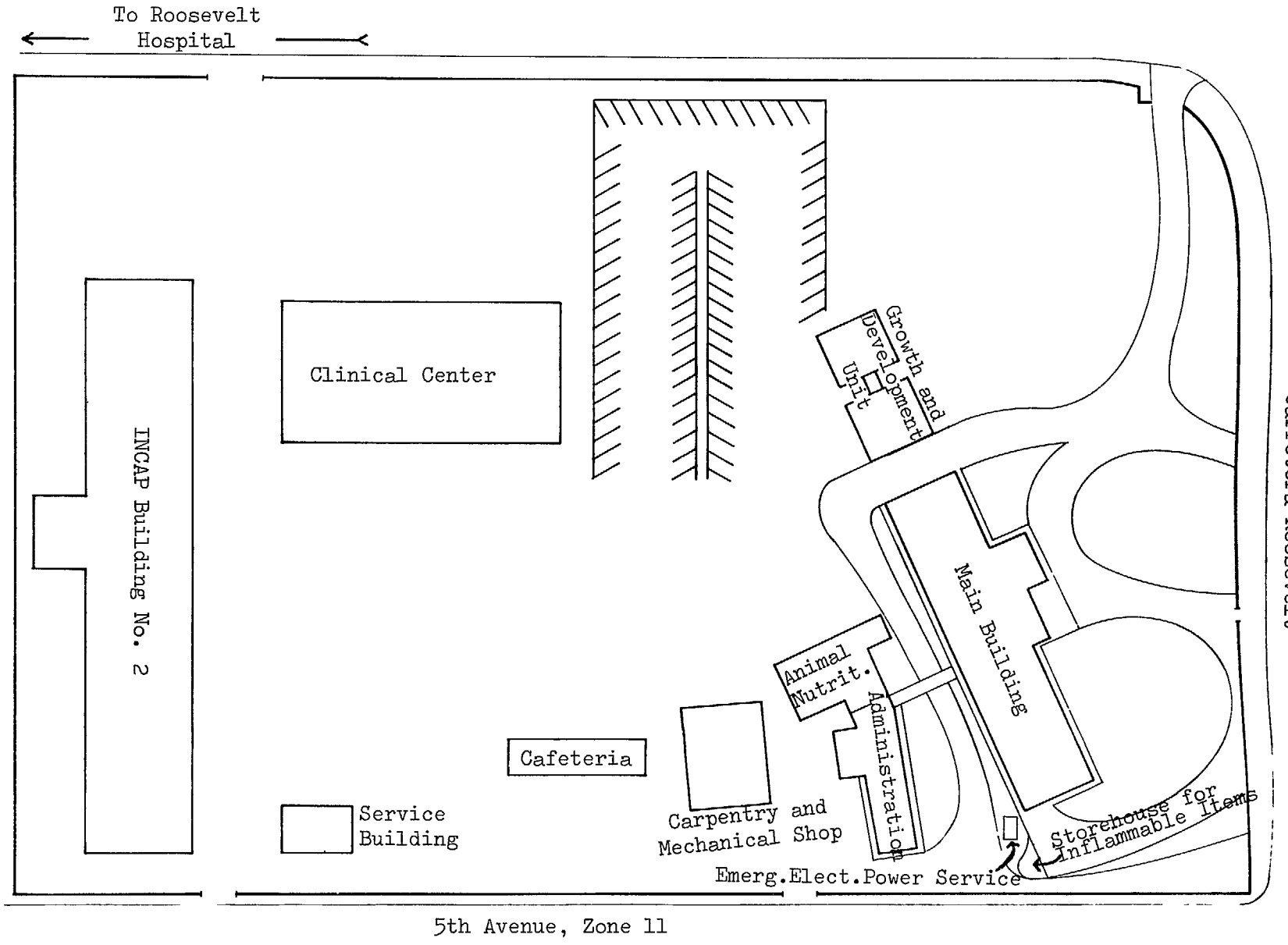
Personnel Costs	$56,900	$120,700	$183,300
Duty Travel	3,000	6,000	7,500
Supplies and Equipment	3,000	4,000	5,000
Training Seminars and Courses	20,000	31,000	42,000
Common Services	7,100	18,300	32,200
TOTAL	90,000	180,000	270,000

C. Stabilization of Financing for Research

The plan of activities contemplates research activities to be financed from grants to continue at a level of $245,000 each year. The lack of stable financing for a staff to carry out these activities creates a problem in recruitment and retention of staff, planning for future projects, etc. In order to minimize the detrimental effect of the insecurity of the financing of these activities, it is suggested that the PAHO Working Capital Fund might be used to backstop these operations. Approval to provide up to $200,000 from the PAHO Working Capital Fund would provide such a backstop.

In more concrete terms, it is suggested that the Executive Committee recommend to the Directing Council that it authorize an advance of up to $200,000 from the PAHO Working Capital Fund to maintain the level of operations at INCAP currently being financed by grants at INCAP, in the event that these grants are not renewed or new ones found. This amount should be adequate to cover an interim period while new sources of funds are sought or allow for a readjustment of research activities, to come within available resources.

PLAN OF INCAP'S PHYSICAL INSTALLATIONS



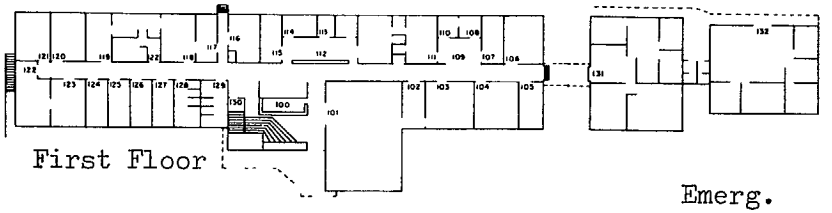
Scale: 1:500

INCAP Audiovisual Aids
Guatemala, March 1969

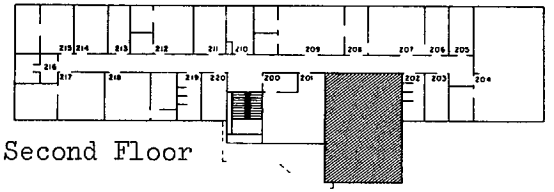
CE61/12 (Eng.)
ANNEX I

PLAN OF INCAP'S INSTALLATIONS

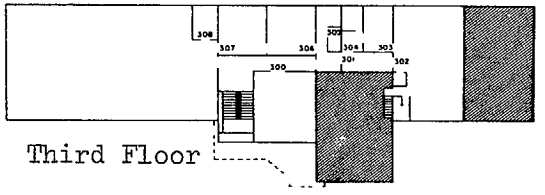
Main Building



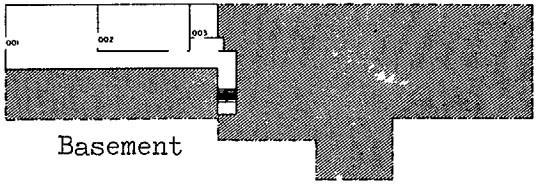
First Floor



Second Floor

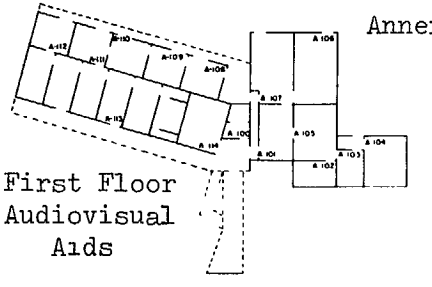


Third Floor

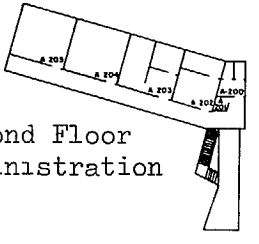


Basement

Annexes



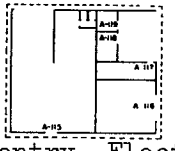
First Floor
Audiovisual
Aids



Second Floor
Administration

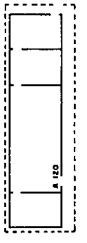
Emerg. Electric Power Service

Storehouse for Inflammable Items



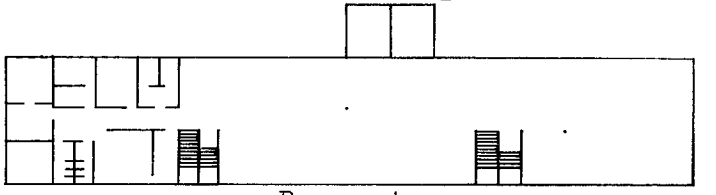
Carpentry, Electrical and Mechanical Shop

Cafeteria

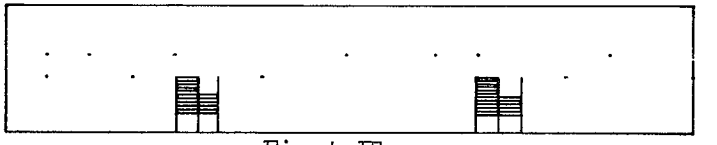


Buildings Services

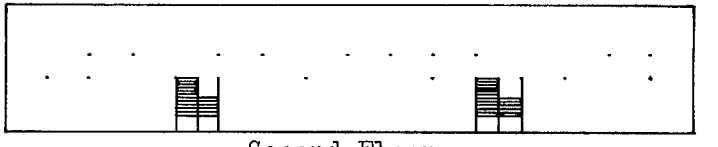
INCAP Building No. 2



Basement

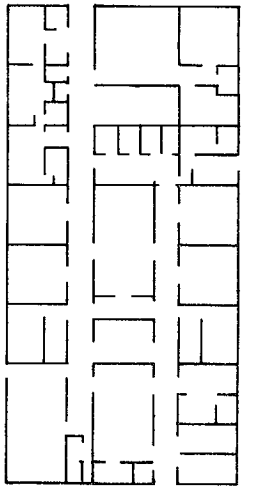


First Floor



Second Floor

Clinical Center



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ANNEX II

INCAP Audiovisual Aids
Guatemala, March 1969