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FINAL REPORT
OF
THE INSTITUTE OF NUTRITION
OF CENTRAL AMERICA AND PANAMA
(INCAP)

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CONSULTANTS' ASSESSMENT

Since its creation in 1949, INCAP has been the only institution in Central America which has continuously supported regional activities in the fields of food and nutrition.

Although INCAP was primarily identified in the past with the health aspects of nutrition, the capabilities of the institute have increased to include such areas as food production and processing, nutrition education and national planning.

The institute's services center in the areas of training and development of human resources, technical cooperation and research covering all aspects of food, nutrition and related fields.

INCAP's training activities include a series of academic degree programs, post graduate tutorial studies and short term courses offered at the institute's headquarters, as well as in other countries in Central America.

Through its technical cooperation activities, it provides technical assistance to the member countries, as well as to others outside the region, in fields of food and nutrition planning and surveillance, nutrition in public health, food and nutrition education, improvement of basic grains, development of food resources and food technology applications.

INCAP's basic and applied research operations are carried out in basic foods, sources of nutrients, food technology and animal nutrition. It also carries out research in the improvement of the biological utilization and nutrient quality of foods, the evaluation and improvement of the nutritional status of certain population groups, impact evaluation of projects and programs and designs and implements socio economic, household consumption and anthropometric surveys.

The institute's linkages with ministries of health of the member countries are strong, as are those that it maintains with PAHO and other external donor organizations. Linkages with national organizations in sectors other than health tend to be weaker and more informal affecting INCAP's ability to fully utilize its extensive resources and capabilities in other areas of food and nutrition.

In the future INCAP will continue to play a similar role to the one it has played in the past. However, increasing emphasis will be assigned to technical cooperation.

The technical capacities of the institute's staff are appropriate for many of AID's program policies and strategies such as nutrition, health assistance, food and agriculture, transfer of technology and institutional development. Therefore, in the future AID should continue to consider INCAP as a capable project implementator.

The institution, the only one of its kind in Central America, as an apolitical entity, is highly regarded by the international scientific community. The services it provides, in the view of the national authorities and recipients of its services we spoke with, are of high quality.

INCAP maintains a special relationship with PAHO, with PAHO providing the institute with important administrative and financial support. Although the institute has set as a long-range goal increased independence from PAHO, the cooperative relationship between the two organizations is, in all probability, likely to continue for the foreseeable future. However, this inter-organizational connection has implications for the institutional identity of INCAP, as perceived by other national organizations, which could be potential users of INCAP'S services. INCAP will need to increasing promote its capabilities in all of its fields of expertise, especially agriculture, and establish a separate INCAP identity apart from PAHO.

In our opinion, INCAP is a useful organization that offers unique services that are beneficial to the solution of nutritional problems and the improvement of conditions in the Central American region. The changes introduced in INCAP's organization have been in place for a relatively short period of time, too brief to assess their final impact on the organization. However, in our opinion, the new strategies, plans and systems, currently in place or soon to be implemented demonstrate INCAP's capacity and desire to continue as a highly useful regional resource.

INTRODUCTION

This report contains the results of an institutional assessment made of INCAP over a two week period in early December 1983. The assessment was carried out by a combined Coopers & Lybrand - AID team. Our investigation centered primarily on assessing the capabilities of the institution itself, and the perceptions of the users of INCAP such as representatives of the national governments in the region and members of private voluntary organizations.

Our assessment was intended to provide information in the following areas: organizational; technical and financial. During this data gathering process we were also made aware of a number of important issues that influence INCAP's organizational ability and its capacity to provide solutions to food and nutrition problems in Central America and Panama. Combining factual information with these issues has allowed us to form certain conclusions about INCAP and food and nutrition issues in the region in general, and to make the recommendations that conclude this report.

We sincerely appreciate the cooperation and support provided by the management of INCAP, the ROCAP mission and all of the people who participated in our interviews throughout Central America.

OBJECTIVES AND METHODOLOGY

The overall objective of this institutional assessment of INCAP was to provide information concerning the role the institution can best play in the solution and improvement of nutrition problems and conditions in Central America and Panama.

To do this the assessment team carried out a series of interviews and did background research with representatives of INCAP, AID (ROCAP and bilateral missions) personnel and health, nutrition, agriculture, education and planning decision-makers and implementors in Honduras, Guatemala, and Panama. Time constraints limited our opportunity to visit more countries in the region. Our questions were designed to provide information in the following areas:

- (1) What role has INCAP played in the solution and improvement of food and nutrition problems and conditions in Central America and Panama?
- (2) What continued role is most appropriate for INCAP given its existing and potential capacities?
- (3) How might AID most effectively use INCAP in carrying out the agency's nutrition and food and agriculture policies and strategies for the region?

I. FINDINGS

A. Organizational

1. Mandate

The Institute of Nutrition of Central America and Panama (INCAP) was created in 1949 through a cooperative agreement between the governments of Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama and the Pan American Health Organization.

Originally, INCAP was intended to function as a technical, regional organization, carrying out activities related to research and advisory services in the field of food and nutrition. Specifically, INCAP was to identify and study nutrition problems in Central America, carry out research to solve existing problems and assist the Central American governments in applying effective solutions. In addition, INCAP was to have a primary role in training in all fields of nutrition.

After 32 years under its original mandate, in 1981 the directing council of INCAP directed the institution to "...continue to function as a scientific agency for the provision of technical cooperation, whose general purpose is to contribute to the development of the science of nutrition, promote its practical application and strengthen the technical capacity of the countries of Central America and Panama to solve their own food and nutrition problems."*

Although both mandates are similar, the current one reflects a reordering of priorities for INCAP's program and project activities. As such, the current mandate directs the institute to concentrate its efforts first, on the training and development of human resources in the food and nutrition fields, second, in the provision of technical cooperation to the member countries'

* This quotation comes from official INCAP and PAHO documents.

government and non-government institutions dealing with food and nutrition issues and, finally, to carry out applied research activities.

2. Management

The direction and control of INCAP is the responsibility of the institute's directing council composed of the ministries of health of each member country and a representative of the Pan American Health Organization.

The institute is headed by a director and by an administrator who are PAHO employees. Advisory functions are performed by two committees for internal coordination and technical consultancy and by the Pan American Health Organization which also provides administrative support.

Recent management emphasis has been directed to the reorganization of INCAP, reform of personnel classification, definition and clarification of basic functions derived from INCAP's new objective and the revision of programs based on needs and available resources. Emphasis has also been placed on a redefinition of the use of core funds and to increased technical cooperation activities. In the future, adjustments in structure and promotional activities will continue, with increased emphasis on a greater diversification of donor sources.

Management systems and controls are provided, in large measure, by PAHO. Computerized accounting, budgetary control, procurement and personnel management systems are presently being installed.

New rules of procedure for the directing council and the technical consultative committee, as well as rules for financial management and personnel management, have been approved and put in effect, or will be put in effect by 1984.

3. Relationships to External Organizations

INCAP's country members include Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama. Each country provides INCAP with an annual quota contribution, and their ministers of health constitute the institute's directing council.

The Pan American Health Organization contributes a substantial portion of INCAP's core funds, maintains a representative in the directing council, provides administrative support, oversees the institute's activities and audits its financial activities.

INCAP maintains formal linkages with all the Central American countries' ministries of health through technical cooperation agreements. Less formal relationships are maintained with other ministries in charge of sectors or activities related to food and nutrition, and with a number of government, non-government and international institutions.

INCAP also maintains a relationship with external donors which provides the institute with financial resources which allow it to undertake diversified programs and projects. The most important external donors include the Agency for International Development, the European Economic Community and the United Nations University.

4. INCAP/PAHO Relationship

Since its inception, INCAP has maintained a special relationship with PAHO. INCAP is one of the Pan-American Health Organization's specialized centers. The extent and implications of this relationship have changed and will continue to change in the future.

Prior to INCAP's recent reorganization, PAHO provided the institute with all of its administrative support, contributed most of its core funds and included a sizeable proportion of INCAP's staff as PAHO employees with the same salary structure and benefits provided to WHO/UN employees.

In 1980 an attempt was made to increase INCAP's administrative and financial autonomy by turning it into an independent regional institution under the direction of the governments of the six member countries. This provided the basis for INCAP's reorganization, a redefining of INCAP's mandate and a change in priorities, the reclassification of INCAP's personnel and a change in its personnel and salary systems and, also, the drafting of a new basic agreement signed in 1980 subject to ratification by the member countries.

After two years of unsuccessful attempts to obtain this ratification it was decided by the directing council to withdraw the proposed agreement. While it was decided that the changes already undertaken by INCAP should continue, the council agreed to maintain the tenants of the original basic agreement. Consequently, the council petitioned PAHO to continue administering the institute and to retain responsibility for designating INCAP's director and administrator.

5. Internal Organizational Structure

Until 1982 INCAP carried out activities under a decentralized and functional organization which allowed its technical divisions to function as semi-autonomous, scientific-administrative units with the authority to plan, budget and execute programs and projects in accordance with their objectives.

Although intended to encourage the maximum use of divisional resources, the organization did not achieve this objective fully, nor did it allow top management to adequately maintain control of the divisions, balance the institution's priorities, and effectively use its resources to maximize its organizational capabilities.

INCAP's 1983 reorganization created three coordinating offices: 1) manpower training and development; 2) technical cooperation; and 3) research along with three divisions: 1) agricultural sciences; 2) nutrition and 3) health and food and nutrition planning, each of which were further subdivided along

functional lines. A fourth division - administration - provides support services to the entire institution. In addition, an independent planning and development unit was assigned to the office of the director.

This "matrix" organization is designed to allow the coordinating offices to draw, as required, upon resources from the divisions required to carry out the institution's programs.

During the same period INCAP changed its personnel system, separating it from PAHO's. The previous system had resulted in a disparity in salaries and benefits provided to INCAP employees and did not provide ample job security leading to labor problems within the organization.

With the adoption of the new system, offering uniform salaries and benefit packages, overall labor costs were reduced, becoming more in line with prevailing local labor market conditions, and individual job security was increased.

6. Resources and Facilities

At present there are 165 employees working under fixed period contracts, renewable annually. This core staff qualifies for all the social benefits provided by INCAP. This staff includes 41 professionals with extensive academic backgrounds, and 124 technical and administrative support staff. In addition INCAP maintains, under temporary contracts, 25 professionals assigned to specific projects.

INCAP's physical facilities consist of a number of buildings located in Guatemala City. These include the institution's offices, laboratories and training facilities. INCAP's laboratories are extensive, sophisticated and appropriately equipped to carry out physiological chemistry work, agriculture and food sciences, as well as clinical and microbiological research. INCAP also maintains a small experimental farm used for applied animal nutrition and nutrition related agronomic studies, and several field stations located in rural communities. INCAP

maintains a pilot plant for food technology equipped to carry out experimental processing of food. The institute has a library which is considered one of the most complete in Latin America in the field of food, nutrition and related disciplines. Extensive and modern printing facilities and photography, mechanic and carpentry shops are also available. Finally, INCAP has a computerized, data processing center with new equipment consisting of an HP 3000 computer, tape drive, graphic plotter, printer and other peripheral equipment. Also included are programs for data base management, statistical analysis and word processing.

7. Planning Activities

Planning is the responsibility of the director of the institution supported by a planning and development unit, an internal coordinating committee and a technical consultative committee. The internal coordinating committee advises the director in the coordination of INCAP's programs. It includes INCAP's director, the heads of the three coordinating offices and the chiefs of divisions and the planning unit. The technical consultative committee includes one representative from each of the member countries' ministries of health, a PAHO representative and a multidisciplinary team of four international experts.

Planning activities in INCAP are guided by established policies for manpower training and development, technical cooperation, research, administration and acceptance of grants and are set by the institution's directing council. Plans in INCAP follow the recommendations of the institute's technical consultative committee, and the program guidelines of the internal coordination committee. INCAP's plans are approved by the institution's directing council.

The length of time over which plans are formulated varies depending on the nature and requirements of the activities undertaken by INCAP. As such, formal training activities are planned for the long term, but short training course programs are planned

annually. Technical cooperation activities are also planned annually. In research, major direction and emphasis is provided by long term planning, however specific research activities usually involve short term planning.

At present, INCAP is attempting to adopt a rolling, medium term (five years) plan for general direction, and specifically for the three major program activities undertaken by the institute. This plan is subject to annual revision.

8. Organizational Comparative Advantage

Since its creation INCAP has carried out activities in all areas of food, nutrition and related fields, allowing the institution to accumulate comprehensive knowledge and expertise in solving nutrition problems in the region, as well as outside the region. In addition, INCAP is the only institution in Central America and Panama with wide capabilities for dealing effectively with food and nutrition related issues.

INCAP's comparative advantages are based upon the institution's capability to offer extensive formal training and short courses in a variety of specialized fields, not only to students from the member countries but also to those coming from other countries, especially from Latin America. The institute also derives a comparative advantage from its ability to provide technical cooperation to member countries, as well as to other countries outside the region, and to carry out basic and applied research activities in the fields of food and nutrition.

B. Technical Findings

1. Programs

INCAP's program activities center in three areas - training, technical cooperation and research - and are carried out by three technical divisions: food sciences; nutrition and health; food and nutrition planning.

Training. INCAP's training programs consist of a number of long term courses, lasting one year or more, in several food and nutrition related fields, and other courses of a shorter duration offered by INCAP in Guatemala as well as in other countries.

The undergraduate, nutrition training program consists of a curriculum in clinical and public health nutrition including courses and supervised field work. Originally this program was four to five years in duration, however, since 1981 arrangements have been made so that initial coursework in the basic sciences can be taken at the Universidad de San Carlos in Guatemala. From 1966 until 1980 161 students graduated from this program, with 92 percent of them coming from Central America and Panama.

The post-graduate program in nutrition and maternal child health awards a masters degree and is one year in duration. Courses are offered in nutrition, maternal child health, epidemiology and biostatistics. The program curriculum is equivalent to the one year Master in Public Health program with a focus on nutrition similar to that offered in the United States. From 1970 to 1983 144 students, mostly physicians, graduated from this program.

The post-graduate program in food science and technology lasts two years and offers courses in nutrition, biochemistry, food science, microbiology and instrumentation. There have been

42 graduates since 1972, with 50 percent of them coming from Central America and the other 50 percent from South America.

The advanced tutorial program of the United Nations offers individualized training to professionals undertaking research in specialized fields. These programs may last from one to two years and involve training in food science, biology and human nutrition, applied nutrition, biochemistry, food technology, nutrition planning, public health nutrition and data processing. Since 1976 45 professionals from Central America have participated in this program, 24 from other countries in the Western hemisphere, 10 from Asia and 4 from Africa.

During the 1980-1981 period two long-term graduate training programs were terminated by INCAP. These were the post graduate program in animal nutrition, from which 25 students had graduated since 1972, and the post-graduate program in biochemistry and human nutrition, from which 25 students graduated. Both programs were two years in duration. At present tutorials in both areas are still provided under the United Nations University Program.

Short-term tutorial training is offered in agricultural and food science, biomedical research and human nutrition, microbiology, physical chemistry, human development, statistics, nutrition education, food quality control, nutrition and dietetics, and public health nutrition. As shown in annexes 1 and 2, since 1950 the short-term tutorial training program undertaken at INCAP included 1,343 participants: 601 from Central America and Panama; 311 from other Latin American and Caribbean countries; 340 from Canada, the United States and Mexico; 37 from Europe; 43 from Asia and 11 from Africa.

In 1983 short-term, in-country training was provided to 1,782 participants and included courses in statistics, nutrition education, anthropometry, maternal child health, and other related fields.

A review of enrollment trends since the late 1970's indicates a decline in the demand for food and nutrition training. This decline may be due to: 1) a perception of decreased need on the part of the sponsoring governments for nutrition specialists when it is considered that INCAP has already trained a large professional cadre of nutritionists; 2) the appropriateness of INCAP training programs relative to present needs; 3) competing host country demands and priorities for trained personnel; 4) a lack of host country financial support; or 5) security problems in Guatemala.

In response to decreasing enrollment INCAP is undertaking a human resource inventory and needs assessment for nutrition personnel, is suspending and reevaluating its nutrition-MPH program in 1984, and is developing new, focused, short-term training programs for 1984 to be offered at INCAP facilities and in host countries. This new, short term program will include courses in nutrition in primary health care and food and nutrition education. These activities will allow INCAP to increase its enrollment levels.

Technical Cooperation. At the present time technical assistance to the Central American countries and Panama is provided by 41 professional staff members and, occasionally, by individuals contracted by the institute. Technical assistance is offered in the following areas: food and nutrition planning; food and nutrition surveillance; nutrition in public health; food and nutrition education; improvement of basic grains; development of food resources; and food technology applications. In the past, these services have been provided to ministries of health, agriculture and planning, non-governmental organizations (e.g., cooperatives), U.S. and local private voluntary organizations, universities, other donor agencies (UNICEF) and AID missions

among others. Recently, under the sponsorship of AID, INCAP staff members have provided technical assistance in the Dominican Republic, Ecuador and Peru.

Annex 3 shows that in FY 83 (October 1, 1982 - September 31, 1983) INCAP provided approximately 80 person months of technical assistance in Central America and Panama (5 percent in Costa Rica, 15 percent in El Salvador, 22 percent in Guatemala, 15 percent in Honduras, 18 percent in Nicaragua, 11 percent in Panama, 14 percent in regional activities). This is a reasonable distribution based on need (the countries with the most severe nutrition problems are Honduras, Guatemala, Nicaragua and El Salvador), absorptive capacity (Honduras has the least absorptive capacity) and demand (Nicaragua until recently had a full time INCAP liaison officer in country to stimulate demand).

Technical assistance activities are planned, on an annual basis, by the coordinator of technical cooperation programs in conjunction with organizations in each country. Officially, requests for technical cooperation must come through the ministries of health, although this is problematic for some organizations since these ministries assign precedence to their own requests. Other organizations maintain a more formal relationship with INCAP and submit their requests directly. Technical assistance requests are reviewed by INCAP's internal coordinating committee and, when approved, they are then planned and budgeted. Planning and coordination of technical cooperation activities have been improving substantially since the December 1982 evaluation of the ROCAP/INCAP project. For example, a coordinator has been named and is functioning, an internal coordinating committee has been formed and technical assistance tasks are more evenly distributed among the INCAP staff.

Research. In INCAP basic and applied research operations are undertaken by each of the three technical divisions.*

Research projects in the Division of Agricultural and Food Sciences are conducted under four subprograms: basic foods; sources of nutrients; food technology; and animal nutrition. The research is carried out in the central laboratories of the institute and on its experimental farm. Personnel participating in these research activities come from INCAP, the Institute of Agricultural Science and Technology (ICTA), the Ministry of Agriculture, Animal Protection and Foods of Guatemala, and the Ministry of Agriculture and Animal Protection of El Salvador.

The major objectives of this division are to increase the quality and availability of food, to stimulate agronomic and livestock production and agroindustry utilization and to evaluate the nutritional and chemical composition of food. To meet these objectives, research is being conducted for the improvement of basic grains and the development of traditional food sources for both human and animal nutrition. Also, simple methods are being developed to determine the nutritional and chemical composition of food and feed products for use in Latin America. In addition, the institute is developing: appropriate technologies for the preservation and utilization of basic food such as beans; corn and rice; appropriate technologies for the utilization of agricultural wastes such as coffee pulp for animal consumption; and carrying out feasibility studies for the establishment of food processing plants for the better utilization of local resources for human and animal nutrition.

The research program of the Division of Health and Nutrition focuses on: improving the biological utilization of foods; improving the nutrient quality of foods; evaluating and improving

*A list of research projects being carried out during 1983 and those which may be conducted in the near future is presented in Annex 4.

the nutritional status of certain population groups. Research activities of this division do not constitute a consolidated, focused program, nor are they closely linked to the objectives of certain institutional projects (e.g. breastfeeding promotion projects). In addition, most of the current research activities of this type have in the past been funded with core support funds, but have now been switched to extrabudgetary support funds. Due to a lack of interest in this type of research among the donor community, INCAP has suffered a significant decline in its health and nutrition research program. Individual researchers however have recently prepared proposals which are more consistent with the institute's other programs and potential donor interests.

The Division of Food and Nutrition Planning concentrates its activities on operations and evaluation research. Current research activities include the impact evaluation of projects (health and agricultural) and programs (supplementary feeding). In addition this division is responsible for designing and implementing socioeconomic, household consumption and anthropometric surveys (functional classification in malnutrition). This division has also been involved with the design, implementation and evaluation of large, primary health care, operations research projects (SINAPS, PRINAPS). According to current plans it is anticipated that at least one economist will be recruited in 1984 to enhance the division's capacity to evaluate the nutrition and consumption impacts of agricultural, industrial and other policies. It is anticipated that work in this area will be undertaken in collaboration with regional agricultural organizations and international organizations with expertise in this area (e.g. IFPRE).

The reorganization of the institute has fostered the development of an institute-wide project - the regional breastfeeding promotion project. This project brings to bear all of the resources of the institute to address a single, high priority problem. This approach has had a particularly favorable impact

on the institute and in the countries because it focuses attention on a particular problem, facilitates communication and collaboration within the institute, increases and improves the public image of INCAP in the member countries, enables technical cooperation and information exchange among the countries and mobilizes donor support.

Technical Services. Technical services provided by INCAP include the use of its information system, laboratories and libraries and the production of technical publications. The computer center at INCAP is used by the member countries to process data from nutrition studies and studies in other sectors. Training and technical services are provided by the computer center staff in statistics and data processing and analysis. In addition, a nutrition data bank for Central America is maintained at the computer center. INCAP also provides laboratory services in food and pharmaceutical quality control and produces or contributes to the publication of "INCAP Informa", "Madre y Ninos", "Archivos Latinoamericanos de Nutricion" and guides and manuals related to technical assistance programs. INCAP also maintains the most comprehensive library on nutrition in Central America.

2. Program Quality

INCAP is possibly the only institute in the world that, recognizing the linkages existing between agriculture-food-nutrition-health, is involved in activities that bridge these sectors. Because of its long involvement in nutrition training, research and technical cooperation activities, the institution is internationally known and held in high esteem by the member governments, national institutions and multilateral, bilateral and other donor organizations.

Training. Measures used to assess quality of training in health and nutrition training programs include the quality of curriculum, length of training, technical qualifications of faculty, make-up of student body, reputation, perception of

students and the follow-up employment of students. The undergraduate training program in nutrition and the post graduate nutrition/public health programs are equivalent to U.S. programs in terms of curriculum, length of training and technical qualifications of faculty. With some exceptions (i.e. Honduras), graduates tend to assume administrative or teaching positions in national health institutions such as ministries of health and universities. Both of these training programs have a high reputation in and outside the region and among students and their sponsors (and subsequently employers). The U.N. University program and the short term tutorials have an excellent reputation worldwide as evidenced by the international make up of the student body. There are no equivalent training programs at the national level in Central America.

With respect to training in agriculture and food science, a graduate program was begun in 1972 to award MS degrees in animal nutrition, food science and technology, and biochemistry and human nutrition. In 1977 the United Nations University (UNU) designated INCAP as a post-graduate center where qualified students can receive from 12 to 18 months of tutorial instruction in food and nutrition research topics. These programs are recognized as providing more than adequate training for M.S. degrees.

The objective of the food science and technology program is to prepare highly trained personnel whom, upon graduation, can contribute to the solution of nutritional problems through interventions in the improvement, storage and processing of staple foods and food crops of the area. The graduates of this program should also be able to carry out academic activities at the university level. In 1982 there were seven students participating in this program; four were in their second year and three were completing their research. Four students graduated during the year.

At present 50 students have graduated, earning the academic degree of M.S. in food science and technology. All of them have returned to their countries and are working in universities,

ministries of agriculture, private industry and other institutions.

During 1982 no new students were admitted into the graduate program of biochemistry and human nutrition. Three students enrolled for their second year in 1981 and completed the program requirements for a M.S. degree, two are studying for Ph.D's at U.S. universities and one returned to her country to teach at the university level.

Technical Assistance. Assessment of the quality of technical assistance was based on the measurement of the demand for technical services and the perceptions expressed by users of these services.

In the last year the demand for technical services has been increasing significantly and it is expected that this trend will continue. The users and beneficiaries of technical assistance perceive INCAP to be responsive, and capable of providing high quality services and technical advisers in a timely fashion. However, it was expressed that difficulties sometimes occur when non-health or non-governmental organizations must submit requests for technical assistance through the ministries of health and these requests are not promptly passed on to INCAP.

The current planning and reporting system established by INCAP for technical assistance projects does not facilitate evaluating the impact of these activities because specific outputs are not explicitly stated prior to technical assistance activities.

Research. The major indicators of the quality of research undertaken by INCAP used in this assessment were the degree of acceptance and implementation of research results by Central American institutions and the international scientific community.

Results from INCAP's research have contributed to increasing the availability of food, productive utilization of agricultural wastes and better systems for the prevention and treatment of severe malnutrition in children. For example, INCAP assistance

has resulted in a more efficient use of a feed mill in Honduras and a vegetable dehydration plant in Guatemala.

INCAP's health and nutrition research - particularly the development of incaparina and the fortification of salt and sugar - is considered by the Central American countries and international scientific community as INCAP's major achievement and seminal work in the field of nutrition. Operations and evaluation research, a relatively new endeavor for INCAP, is considered to be a high priority by the member countries and, as an indication of its relevance as well as quality, it has been widely sponsored by donor agencies. Despite the fact that much of the research presently being carried out is not directly relevant to ongoing country programs, the country representatives felt satisfied with INCAP's research accomplishments. INCAP's research has been published in all major technical journals in food, nutrition, and public health.

At present the research programs of the institute are designed to obtain a better understanding of the epidemiology and the implications of the more important nutritional deficiencies found in the countries, and to search for the means to correct them. From an initial emphasis on food analysis, the study of food habits, and the clinical nutritional status of the population, the program expanded into agricultural food sciences, food technology, food safety, and, more recently, into the field of rural development in an effort designed to provide a better understanding of the complex food and nutrition problems of the developing countries.

The research program has produced important results, which at present are being translated into practical actions that are expected to contribute to increasing the availability and nutritional quality of food.

INCAP is regarded by ICTA/Guatemala as doing relevant research in food science. An ICTA employee is presently assigned to INCAP to help in establishing a better relationship between

the two institutes. INCAP is also working directly with cooperatives in both Honduras and Guatemala and with small swine producers in El Salvador.

3. Program Relevance

Since its inception, INCAP has been the major, if not sole, institution in the region providing nutritional training at the graduate and undergraduate level. Virtually all nutrition units in the Central American ministries of health include professional staff which are INCAP graduates.

INCAP's research on fortification of sugar and salt has resulted in a dramatic decrease in Vitamin A deficiency and goiter in those countries where these programs have been established.

Nutrition baseline studies have defined magnitude, location and other factors for malnutrition in Central America. Technical assistance has served to highlight certain nutrition problems (e.g. reduction in breastfeeding), resolve certain nutrition problems (e.g. goiter, Vitamin A deficiency), improve nutrition in certain segments of the population (e.g. hospital patients, school children) and design and evaluate nutrition, health, agriculture and education programs and projects.

4. AID Policies

INCAP's mandate, objectives, activities and achievements are consistent with AID's nutrition, health, agriculture and institutional development policy papers. In addition, INCAP conforms to AID (and LAC) strategy position papers and program guidance in health, nutrition, agriculture, institutional development, technology transfer and food aid. Conceptually, INCAP's institutional priorities and activities reflect AID's nutrition policy that nutrition should be integrated primarily into the health and agriculture sectors. Nutrition activities to be included in primary health care systems (nutrition surveillance and nutrition education), as elaborated in AID's health policy, have been

developed and are being promoted in Central America by INCAP. INCAP is working with member governments to maximize the nutritional impact of supplementary feeding programs, most of which are dependent on food aid (U.S. and World Food Program among others). Additionally, INCAP's technical assistance and training programs are geared to strengthening national institutions, including universities.

INCAP's agriculture and food science program conforms closely to AID priorities in food and agriculture development because many of the institute's activities are centered on attempting to increase food availability through increased agricultural development and improved food consumption in rural and urban areas. The institute also conforms closely to the LAC bureau's strategy in its interest in crop diversification and the establishment of food processing plants for marketable crops for domestic consumption and export sales.

C. Financial

1. Analysis of Revenues

INCAP's revenues are derived from four major sources:

1) member quotas; 2) PAHO/WHO contributions; 3) project revenues; and 4) other revenues. In 1982 INCAP's revenues were distributed as follows*:

Member Quotas	\$ 386,000	11%
Other Revenues	145,000	4
PAHO/WHO Contribution	1,305,000	38
Projects (direct & overhead)	<u>1,591,000</u>	<u>47</u>
	\$3,427,000	100%

In 1982 project revenues, including the overhead component, reached approximately \$1.6 million, accounting for 47 percent of INCAP's total revenues. This amount represents a substantial decrease from 1979 when project revenues reached \$3.9 million, equivalent to 79 percent of the total revenues. It is expected that in 1983 this amount will increase to \$1.9 million or 57 percent of total revenues.**

During the 1979 - 1983 period, non-project or basic revenues have remained fairly stable in the \$1.3 to \$1.8 million range. The PAHO contribution, the largest component, has varied between \$960,000 and \$1,305,000.

Member government annual quotas total \$300,000. These contributions are determined by INCAP's directing council and

* These figures were derived from externally audited financial statements.

** Unless otherwise noted, data for 1983 is from a revised budget dated July 15, 1983 based on actual data for the first six months.

vary from \$31,200 for Honduras to \$93,900 for Guatemala as shown in Annex 5. At present, members owe a total of \$1 million in quotas either for current or past years as shown in Annex 6. As of October 1983 Guatemala and Panama were the only countries which were current in their payments. In 1983 both Honduras and Costa Rica had made payments in excess of their annual quota, decreasing the amount of their arrears. As of October 25, 1983 El Salvador and Nicaragua had made no payments during 1983.

Sources of other revenues include student tuitions, technical services, sales of publications, laboratory analysis and equipment sales.

The period 1979 to 1982 shows a decreasing trend in the number of active projects undertaken by INCAP and in the number of donor institutions providing funding. The number of active projects at INCAP decreased from 43 in 1979 to 23 in 1982. The number of donor institutions decreased from 21 to 17 during the same period.

During 1982 AID was the largest single donor with revenues for its five projects representing 26 percent of the institute's project revenues, or 12 percent of INCAP's total revenues.

	<u>Project Revenues (000)</u>	<u>% of Projects</u>	<u>% of Total Budget</u>
AID	\$ 412	26%	12%
EEC	342	22	10
UNU	245	15	7
Others	<u>592</u>	<u>37</u>	<u>17</u>
Total Projects	\$1,591	100%	47%

During the same year revenues from the other 16 donor institutions represented 34 percent of INCAP's total revenues. Individually, however, each represented approximately 3 percent, with the exception of the EEC and UNU which accounted for 10 and 7 percent of overall revenues, respectively.

2. Analysis of Costs

The institute's expenses are covered by funds from three major revenue providers which are INCAP, PAHO/WHO and project revenues.* During 1982 INCAP's expenses were funded as follows:

	<u>INCAP</u>	<u>PAHO/WHO</u>	<u>PROJECTS</u>	<u>TOTAL</u>
Personnel	\$ 249	\$ 982	\$ 552	53%
Operating Expenses	222	129	311	19
Materials & Supplies	9	133	141	8
Scholarships	12	27	166	6
Contract Services	7	-	194	6
Travel	1	34	153	6
Project Support	-	-	52	2
Audio-Visual	-	-	12	-
Buildings	-	-	10	-
	<u>\$ 500</u>	<u>\$1,305</u>	<u>\$1,591</u>	<u>100%</u>

INCAP's largest expenditure is for personnel, accounting for 53 percent of total expenditures. Funding with INCAP and PAHO/WHO revenues are for those positions considered permanent, primarily administrative staff and permanent technical staff including researchers and instructors. Personnel expenditures funded by project revenue are for those employees hired under the temporary contract services category and include research professionals, technicians and instructors.

Operating expenses include costs for transportation, the computer center, building and equipment maintenance, the library, and administrative services not allocated to basic activities or projects.

Scholarships may be provided from all three funding sources, but primarily from grants specifically designated for that purpose.

* INCAP revenues in this case include member quota contributions and other revenues.

3. Cash Flow Projections

A summary of cash flow projections prepared by INCAP management follows for the years 1984 through 1987. These amounts are in thousands of U.S. dollars which, according to INCAP, include an inflation factor.

	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
<u>Revenues</u>				
Quotas, Other	\$ 583	\$ 713	\$ 834	\$ 977
PAHO/WHO	999	1,239	1,450	1,697
Projects	<u>1,595</u>	<u>1,770</u>	<u>2,040</u>	<u>2,289</u>
Total	\$3,177	\$3,722	\$4,325	\$4,963
<u>Expenses</u>				
Personnel	\$1,557	\$1,953	\$2,285	\$2,655
Travel	171	242	283	330
Contract Services	76	108	135	169
Operating Expenses	16	20	24	28
Supplies, Equipment	74	104	121	142
Investment (Project)	250	-	-	-
Scholarships	238	238	238	238
Program Support	22	31	39	46
Common Services	<u>773</u>	<u>1,026</u>	<u>1,200</u>	<u>1,355</u>
	\$3,177	\$3,722	\$4,325	\$4,963

Member government quotas are projected to remain at the same level as 1983 with annual collections equal to at least \$300,000. Increases are expected to occur in the other sources of basic revenue, particularly technical services' revenue.

The projected PAHO/WHO contribution has already been allocated in the budgets of those organizations, therefore, that revenue is fairly certain to be received. Because the budgeting function for 1988 and beyond has not yet occurred, no financial commitment has been made by PAHO/WHO beyond 1987. However, INCAP management expects that in 1988 and 1989 the amounts contributed will be similar to those of prior years.

Project contracts show increases of from 10 to 14 percent per year from 1984 through 1988. Based on the most current information about continuing and new projects for 1984, the projection for 1984 is actually lower than the expected total for 1983.

Management considers the projection of project contracts to be very conservative. The potential exists for contracts totalling an amount substantially greater than shown, perhaps as high as \$7.5 million in 1988. The basis for this are the findings of a major planning study (now in process) on health and nutrition needs in the region through 1988, and the portion of the work which could be handled by INCAP. The institution's ability to undertake this higher level of activity would depend on increasing its capacity through: hiring additional technical personnel; purchasing additional laboratory equipment; expanding the physical plant; and developing greater efficiency in project management at both the main campus and outreach offices.

Personnel expenses are expected to increase as a proportion of total expenses, including growth in both the number of employees and their salaries. Contractual services expense is expected to double.

Travel expense, including the travel of INCAP personnel for training, will nearly double.* The scholarship expense, primarily for students who attend INCAP, however, is expected to remain level.

4. Working Capital Fund

A working capital fund was begun at INCAP in 1952, but it has been insufficient to provide for all of the institution's cash needs. Presently PAHO provides short-term capital as needed.

* Management has identified advanced training of INCAP's personnel as a top priority area.

In 1982 INCAP's board of directors mandated that the institution accumulate a working capital reserve fund of \$600,000 so that it could be self-sufficient in cash management. The fund was approximately \$200,000 at the end of 1982. Additions to this fund are expected, primarily from the collection of member government quotas in arrears, and from core revenues remaining after expenses are met at year end. Additionally, interest income is accruing on these funds.

5. Accounting Systems

Presently INCAP is installing a new computerized accounting system which appears to meet the institute's present needs. It is expected that this new system will improve the availability of internal financial data, particularly regarding year-to-date income and expenses which was difficult to obtain during this review. INCAP's external audit is prepared by the PAHO/WHO external auditor. The resulting document focuses on the PAHO financial relationship with INCAP, rather than on INCAP as a separate entity. Therefore, the overall INCAP position is not clearly reflected.

6. Overhead

INCAP's overhead fee supports common services and is based on the overall cost of administration to the institution. The standard overhead rate has been set by INCAP at 25 percent of total project cost. In addition, some project donors also pay an overhead fee to PAHO, whose standard rate is 33% of project costs. In 1983 a minimum charge of 13.5% was authorized. In exceptional cases, no PAHO overhead is charged. The rationale for this charge is that some projects utilize administrative services provided to INCAP by PAHO. PAHO, however, recently agreed to a blanket waiver of its overhead on all INCAP projects.

7. Financial Viability

The annual contribution from PAHO/WHO is important for INCAP's financial stability and for the support of basic activities. In 1981 and 1982 this source provided about 72 percent of non-project funds; in 1984 and 1985 this is expected to be 65 to 69 percent. Permanent personnel is the major expense supported by this contribution. In addition to its annual quotas, PAHO also provides a contribution to INCAP's capital investment fund (\$200,000 in 1983).

Theoretically, project contracts could be scaled back greatly without curtailing the basic institutional activities of INCAP, assuming that basic funding continues at current levels.

II. ISSUES

During the course of the team's investigation a number of issues were put forward by the people we interviewed or, based on information from a number of sources, became apparent. We present these issues in this section to enable the reader to better understand INCAP and the environment in which it operates.

1. The Role of PAHO and Its Influence on INCAP's Activities

The nature of the present INCAP-PAHO relationship creates a perception of substantial dependence of INCAP on PAHO. This dependence is most noticeable in the administrative and financial areas.

A. Administrative Dependence

At the present time PAHO provides administrative support to INCAP such as: accounting supervision and control; cash management operations; billing; purchases and contract negotiations; programming assistance for INCAP's computerized administrative systems and internal and external audit. However, PAHO has established as a long-range objective for INCAP an increasing measure of administrative independence.

B. Financial Dependence

Currently PAHO contributes 65 to 70 percent of INCAP's core funds. This provides PAHO with a potential to significantly influence INCAP's decisionmaking and the direction and emphasis given to the institute's activities.

2. Lack of Program Impact Evaluation

PAHO's interest in INCAP services is centered primarily on the number of programs and projects accomplished, but not necessarily on their contribution to the solution of nutrition problems.

3. Shift In Program Orientation

Changes in program emphasis and new INCAP activities have resulted in a shifting away from solely health and into broader nutrition objectives. This influences the institution's identity as it is perceived by national organizations and other potential clients. Many of these organizations are not now fully aware of INCAP's current program and project orientation, or the new organizational priorities being assigned to the use of institutional resources.

This is further aggravated because of PAHO's perception of INCAP as an organization dealing with nutrition only in the context of health and not in a broader context which relates nutrition to other sectors such as agriculture, education and national planning. This affects INCAP's ability to establish new linkages with national organizations in charge of sectors outside of health.

4. Donor Diversification

The financial status of INCAP and its ability to carry out its programs and projects depends, to a great extent, on the financial contributions of a small number of external sources.

External donors provide 57 percent of INCAP's total budget and are the source of 65 percent of the funds allocated to its three major program areas.

This dependence on a small number of donors and the uncertainty that accompanies their continuation and level of funding raises questions about INCAP's ability to carry out its medium and long range plans or the continuation at the same level of effort of some of the programs and projects currently undertaken. This is most noticeable in those cases where the AID and EEC contributions are large. If these donors decide to discontinue their financial support, the future of these programs would be uncertain. This is clearly the case with the institute's outreach programs where any significant decrease in AID (ROCAP)

funding would seriously affect this program unless they were picked up by other donors or paid for through core funding.

5. Promotion Activities

INCAP perceives promotion as one of the most important activities it can carry-out to secure a steady and diversified source of project funding. Therefore, the institute is pursuing promotional activities very actively. However, there is a perception that these promotion activities may be being directed in too many directions, and possibly not taking into account fully the institution's long-range plans or future capabilities. In addition, it appears some of INCAP's functional divisions are not yet fully attuned to changes in the institution's objectives and program priorities. This is based on an analysis of proposals developed by them which do not always conform to the new objectives and priorities.

6. Linkages

Existing linkages between INCAP and health related organizations are strong. Linkages between the institute and national organizations in sectors other than health are weak and informal. The relationship that exists between the governments and INCAP is centered in the ministries of health of each country. This poses a problem for the other national organization's ability to be aware of INCAP capabilities and resources that they could conceivably utilize. In this respect, at the country level, there is minimal coordination between the ministries of health and other ministries involved in food and nutrition related fields.

In addition, INCAP is handicapped in establishing better, more formal linkages with national organizations, because it does not maintain permanent representatives in the member countries.

Technical cooperation agreements are made by the ministries of health as members of INCAP's directing council. This body is viewed as rather narrow in its outlook because its members tend to view nutrition solely as a health issue. This precludes the

expansion of linkages to non-health organizations or disrupts existing ones. Because of this INCAP's capabilities, especially those in food and agriculture, may be underutilized.

7. National Commitment to Nutrition Plans

Even though food and nutrition policies and plans do exist, most of the Central American governments have not made the necessary financial and human resource commitments to effect their implementation.

This lack of commitment by the countries can be seen by the arrears in the payment of quota contributions to INCAP, the underutilization of their national human resources that graduated from the institute's training programs and the lack of local cost support for certain technical assistance, training and research activities undertaken by INCAP in these countries.

This lack of support by the member countries affects the financial stability of the institution, the efficient utilization of its resources, country follow-up on INCAP programs, the undertaking of field research activities and the ability of INCAP-assisted country programs to have a sustained impact on improved nutrition in Central America.

8. Competing Priorities Among External Donor Institutions

External donor's have clearly stated policies and strategies for health, food and nutrition which demonstrate their commitment to help in the solution of nutrition problems.

When these policies are considered in isolation they may evoke greater expectations for nutrition program funding. However, this view overlooks competing priorities by other sectors of interest to these donors for limited amounts of funding. Often these other sectors take precedence over nutrition.

This affects INCAP's ability to obtain more project funding because financial resources directed to nutrition projects are limited. Further, donor institutions may not be fully aware of the institute's capabilities in nutrition-related areas closely associated with their other sectorial priorities, a situation that may affect INCAP's opportunities for additional project funds.

ANNEX 5

MEMBER GOVERNMENT QUOTA CONTRIBUTIONS

Costa Rica	\$42,000
El Salvador	51,000
Guatemala	93,900
Honduras	31,200
Nicaragua	37,200
Panama	<u>44,700</u>
Total Annual Contributions	\$300,000

ANNEX 6

QUOTA CONTRIBUTIONS DUE TO INCAP FOR
1983 AND PREVIOUS YEARS*
(US dollars)

	<u>Quotas due for 1983</u>	<u>Total amount owed at the beginning of 1983</u>	<u>Payments made in 1983</u>	<u>Balance in arrears</u>
Costa Rica	42,000	335,494	(47,100)	288,393
El Salvador	51,000	102,000	-	102,000
Guatemala	93,900	93,900	(93,900)	0
Honduras	31,200	292,187	(53,200)	238,988
Nicaragua	37,200	385,087	-	385,087
Panama	<u>44,700</u>	<u>53,822</u>	<u>(53,822)</u>	<u>0</u>
Total	300,000	1,262,490	(248,022)	1,014,468

* As of October 25, 1983

Note: ROCAP has advised us that El Salvador also paid its \$51,000 annual quota before the end of 1983.

III. CONCLUSIONS AND RECOMMENDATIONS

An analysis of INCAP's capabilities shows that the institute has achieved a predominant position in food and nutrition training, technical assistance and food science and nutrition research in Central America and Panama.

INCAP's policies and strategies are in accordance with its mandate and priorities which seek the solution of nutrition problems in the region. As a specialized institution, INCAP provides unique and essential services which, for the most part, cannot be provided by national organizations.

Regardless of the financial constraints that the institution faces and the demands imposed on its resources and capabilities by changing government priorities, INCAP has been able to establish an impressive record of achievements which justify continuing support by the member governments as well as external donor organizations.

At present INCAP is in a period of transition resulting from a reorganization, a reordering of its priorities and changing directions and emphasis in its technical activities. During this process, there will be an opportunity to make the institute more efficient and more responsive to program needs. Because the changes introduced in INCAP have been relatively recent it is not yet possible to assess their impact. However, a review of the new strategies, plans and systems currently in operation or about to be adopted allows us to conclude that INCAP will continue to provide unique and high quality services in the food and nutrition fields.

INCAP's reliance on PAHO's administrative and financial support places the institute in a dependent position. Because of its long-range objective to achieve administrative independence, INCAP will need to systematically build its own administrative capabilities. Although, there is no indication that PAHO will curtail its current level of support in the near future, the

assumption is that support will not continue indefinitely. Therefore, it is recommended that the institute take appropriate measures to begin to develop its internal administrative capabilities. Also, INCAP will need to increase core funds derived from sources other than the member countries and PAHO (e.g. foundations, external donors, private enterprise.).

The composition of INCAP's directing council limits its ability to establish formal linkages with national institutions outside of the health area. This limits the institution's possibilities for fully using its resources and impedes many organizations from requesting technical assistance services from INCAP, therefore, denying the institution a potential source of additional funding. It is recommended that the directing council be broadened to include representatives from other sectors such as agriculture, education and national planning. In addition, INCAP should direct more of its promotional efforts to all national organizations, and especially to those in the agricultural sector, providing them with information about the institution's programs and capabilities and indicating how they might best be used by them. INCAP should also extend its technician exchange program to include other agricultural sector institutions like CATIE, ICTA, CENTA and host and participate in international, regional and national seminars. In addition, INCAP's technical consultative committee should represent agricultural and planning specialist from the member countries.

National organizations in sectors other than health and other potential clients do not have a clear understanding of INCAP's identity or its capabilities in a wide array of food and nutrition fields, because the institute's activities have been perceived as more related to the health aspect of nutrition. A lack of knowledge concerning the institution's shift to broader nutritional objectives, or about the changes introduced in INCAP's program and project orientation, has contributed to this

perception. Contributing further is the nature of the relationship that exists between PAHO and INCAP which portrays the institute as a research center for PAHO. Although PAHO has stated that it is not opposed to INCAP's broadened involvement in other nutrition related sectors and, on the contrary, it will encourage the institute to do so, this is not yet an official policy of PAHO. It is recommended that INCAP change the perceptions that other institutions have by disseminating information about its experience and capabilities through increased public relation activities in the member country as well as in other countries outside the region.

The ability of INCAP to carry out its program are dependent, to a large degree, on a very small number of external donors (AID, EEC and UNU). The extent of this dependence on these sources makes the continuation of some programs uncertain if funding is curtailed or discontinued. In this respect it is recommended that INCAP diversify the sources of funds allocated to individual programs and projects, as well as increase the number of donors which contribute funds to the institute. For this to be possible, INCAP should direct its promotional activities towards international, bilateral and multilateral, development assistance organizations, universities and private foundations which are interested in nutrition and related fields.

The management and technical staff, particularly in agriculture and rural development of AID missions are often unaware of INCAP's capabilities and activities in Central America. Since these missions could be potential users of the institute's services, it is recommended that specific promotional activities be directed to them. The provision of information should not only include INCAP's technical capabilities, but also a listing of on-going activities by country, the institute's achievements and the various contracting, grant options and procedures used by donor agencies. For this to be effective, INCAP should organize periodic meetings at each mission and include in the audience the

missions' management as well as the technical staff. This same approach should also be used with other potential donor institutions.

Technical cooperation activities constitute one of the most promising areas in which INCAP could concentrate its resources because it fills a need in member as well other countries, allows the institution to make the best use of its experience, knowledge and capabilities, promotes knowledge about the institute that other organizations have and may constitute an important source of revenues. However, as demand for technical assistance now surpasses INCAP's ability to respond to all requests, it is recommended that INCAP place additional emphasis on advising countries concerning the technical cooperation priorities and targets of opportunity for each country in order to maximize impact and minimize dissipation of benefits. Additionally, INCAP should establish clear results intended for technical cooperation activities so that the impact of these activities could be measured.

The new organization of INCAP is adequate for developing institution-wide programs and projects which will allow the bringing together of all of the institute's resources to address specific food and nutrition problems. An example of this is the regional breastfeeding promotion project currently underway. Therefore, it is recommended that INCAP develop more of these institution-wide projects in areas such as primary health care (oral rehydration), human and animal food processing, improvement of basic grains, food storage, improved swine production and animal nutrition. This will have a positive impact on INCAP and in the Central American countries because it will allow the institute to focus attention and increase awareness on specific nutrition problems and will foster the exchange of information and services among countries.

In addition, INCAP should expand its activities in conjunction with national and international agriculture institutions with proven farming systems expertise, in intermediate animal and

food processing for cooperatives and other community and private enterprises, capitalizing on the experience acquired through the self financing health and nutrition projects currently being carried out (Agrosalud and Cuatro Pinos).

INCAP's research priorities, particularly in health and nutrition, are neither consistent with overall institutional objectives and priorities or well integrated into on-going programs of the institute, nor are they very consistent with donor institutions' requirements and needs. Therefore, it is recommended, now that both the training and technical cooperation programs are well established within the new structure, that INCAP focus its attention on establishing research priorities within the framework of institute-wide projects as recommended elsewhere.

BRIEFING
INSTITUTIONAL ASSESSMENT
THE INSTITUTE OF NUTRITION OF CENTRAL AMERICA
INCAP

COOPERS & LYBRAND
FEBRUARY 9, 1984

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OBJECTIVES OF ASSESSMENT

1. TO DETERMINE WHAT ROLE INCAP HAS PLAYED IN THE SOLUTION AND IMPROVEMENT OF FOOD AND NUTRITION PROBLEMS IN CENTRAL AMERICA AND PANAMA.
2. TO ADDRESS WHAT CONTINUED ROLE IS MOST APPROPRIATE FOR INCAP GIVEN ITS EXISTING AND POTENTIAL CAPABILITIES
3. TO SUGGEST HOW AID MIGHT MOST EFFECTIVE USE INCAP IN CARRYING OUT THE AGENCY'S NUTRITION, FOOD AND AGRICULTURE DEVELOPMENT STRATEGIES FOR THE REGION.

CONSULTANTS' ASSESSMENT

- o ONLY REGIONAL INSTITUTION IN CENTRAL AMERICA SUPPORTING THE FIELDS OF FOOD AND NUTRITION
- o EXTENDING INTO INCREASED ACTIVITIES: FOOD PRODUCTION AND PROCESSING; NUTRITION EDUCATION; NATIONAL PLANNING
- o STRONG LINKAGES WITH MINISTRIES OF HEALTH IN CENTRAL AMERICA; LESS STRONG WITH GOVERNMENT ENTITIES CONCERNED WITH SECTORS OTHER THAN HEALTH SPECIFICALLY WITH HEALTH AND NUTRITION
- o SERVICES PERCEIVED BY USERS AS OF A HIGH QUALITY
- o RECENTLY REORGANIZED TO INCREASE AUTONOMY AND ADMINISTRATIVE CAPABILITIES
- o CONTINUING CONNECTION TO PAN AMERICAN HEALTH ORGANIZATION (PAHO): ADMINISTRATIVE AND FINANCIAL SUPPORT; DIRECTORS' APPOINTMENTS; PLANNING
- o NEED TO MORE AGGRESSIVELY PROMOTE INSTITUTIONAL ACTIVITIES IN ADDITION TO HEALTH; I.E., FOOD AND AGRICULTURE

I. FINDINGS

A. ORGANIZATION

- o FOUNDED IN 1949 THROUGH A COOPERATIVE AGREEMENT BETWEEN GUATEMALA, HONDURAS, EL SALVADOR, NICARAGUA, COSTA RICA, PANAMA AND PAHO
- o TRAINS AND DEVELOPS HUMAN RESOURCES IN THE FIELDS OF FOOD AND NUTRITION
- o PROVIDES TECHNICAL COOPERATION TO MEMBER COUNTRIES
- o CARRIES OUT APPLIED RESEARCH
- o DIRECTING COUNCIL: MEMBER COUNTRY MINISTRIES OF HEALTH AND PAHO
- o MANAGEMENT AND ADMINISTRATIVE SYSTEMS PROVIDED BY PAHO
- o INCAP ONE OF PAHO'S SPECIALIZED CENTERS
- o ORGANIZED AROUND THREE COORDINATING OFFICES: MANPOWER TRAINING AND DEVELOPMENT; TECHNICAL COOPERATION; RESEARCH AND THREE DIVISIONS: AGRICULTURAL SCIENCES; NUTRITION AND HEALTH; FOOD AND NUTRITION PLANNING
- o STAFF OF 165: 41 PROFESSIONALS, 124 SUPPORT
- o HEADQUARTERS AND FACILITIES IN GUATEMALA CITY

- o ONE EXPERIMENTAL FARM FOR APPLIED ANIMAL NUTRITION AND AGRONOMIC STUDIES AND SEVERAL FIELD STATIONS
- o LONG TERM PLANNING FOR RESEARCH, TECHNICAL COOPERATION AND TRAINING CARRIED OUT ANNUALLY

B. TECHNICAL

1. PROGRAMS

o TRAINING

- UNDERGRADUATE NUTRITION TRAINING IN CLINICAL AND PUBLIC HEALTH NUTRITION
- POSTGRADUATE PROGRAM IN NUTRITION AND MATERNAL CHILD HEALTH
- POSTGRADUATE PROGRAM IN FOOD SCIENCE AND TECHNOLOGY
- ADVANCED TUTORIAL PROGRAM: FOOD SCIENCE; BIOLOGY AND HUMAN NUTRITION; APPLIED NUTRITION; BIOCHEMISTRY; FOOD TECHNOLOGY, ETC
- SHORT-TERM IN-COUNTRY TRAINING: STATISTICS; NUTRITION EDUCATION; ANTHROPOMETRY; MATERNAL CHILD HEALTH, ETC.

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o TECHNICAL COOPERATION

- OFFERED TO MEMBER COUNTRIES: TC STAFF OF 41 PROFESSIONALS
- COVERS: FOOD AND NUTRITION PLANNING AND SURVEILLANCE; NUTRITION IN PUBLIC HEALTH; EDUCATION; IMPROVEMENT OF BASIC GRAINS; FOOD RESOURCES; FOOD TECHNOLOGY

o RESEARCH

- CARRIED OUT BY THREE TECHNICAL DIVISIONS

o TECHNICAL SERVICES

- INFORMATION SYSTEMS, LABORATORIES, LIBRARIES AND TECHNICAL PUBLICATIONS.

INCAP PROGRAMS LINK AGRICULTURE-FOOD-NUTRITION-HEALTH PROBLEMS TOGETHER

INTERNATIONALLY KNOWN AND HELD IN HIGH ESTEEM BY MEMBER COUNTRIES, NATIONAL INSTITUTIONS AND DONOR AGENCIES

UNDERGRADUATE PROGRAM QUALITY COMPARABLE TO U.S.

INCREASING DEMAND FOR TECHNICAL ASSISTANCE

HIGH DEGREE OF RESEARCH ACCEPTANCE AND IMPLEMENTATION; PUBLISHED IN ALL MAJOR JOURNALS IN FOOD, NUTRITION AND PUBLIC HEALTH

INCREASINGLY INVOLVED IN FOOD ANALYSIS, NUTRITION STATUS, FOOD SCIENCES, TECHNOLOGY AND SAFETY AND RURAL FOOD AND NUTRITION NEEDS

RESULTS BEING TRANSLATED INTO PRACTICAL ACTIONS

INCAP TRAINED STAFF WORKING IN ALL MINISTERIAL NUTRITION UNITS

CONFORMS WITH AID'S POLICY FOR INTEGRATING NUTRITION WITH HEALTH AND AGRICULTURE AND EMPHASIS ON MAKING FOOD AVAILABLE THROUGH AGRICULTURAL DEVELOPMENT AND IMPROVED FOOD CONSUMPTION

ALSO CROP DIVERSIFICATION, FOOD PROCESSING FOR MARKETABLE CROPS

C. FINANCIAL

- o TOTAL REVENUES (1982) EQUALLED \$3.4 MILLION; 47% PROVIDED THROUGH PROJECTS (26% BY AID)
- o MEMBER COUNTRIES CONTRIBUTE AN ANNUAL QUOTA RANGING FROM \$31,000 FOR HONDURAS TO \$94,000 FOR GUATEMALA
- o PAHO PROVIDES APPROXIMATELY 38% OF OVERALL FUNDS
- o PROJECT REVENUE IS EXPECTED TO INCREASE FROM 10 TO 14% ANNUALLY BETWEEN 1984 AND 1988

II. ISSUES

1. THE ROLE OF PAHO AND ITS INFLUENCE ON INCAP ACTIVITIES
2. LACK OF PROGRAM IMPACT EVALUATION
3. SHIFT IN PROGRAM ORIENTATION
4. DONOR DIVERSIFICATION
5. PROMOTION ACTIVITIES
6. LINKAGES
7. NATIONAL COMMITMENT TO NUTRITION PLANS
8. COMPETING PRIORITIES AMONG DONOR INSTITUTIONS

III. RECOMMENDATIONS

1. INCAP DEVELOP ITS OWN ADMINISTRATIVE CAPABILITIES.
2. INCREASE REVENUES DERIVED FROM FOUNDATIONS, DONORS AND PRIVATE ENTERPRISE.
3. CHARGE ONLY ONE OVERHEAD EXPENSE FOR INSTITUTION SERVICES.
4. BROADEN THE DIRECTING COUNCIL TO INCLUDE REPRESENTATIVES FROM AGRICULTURE, EDUCATION AND NATIONAL PLANNING.
5. INCREASE INCAP TECHNICAL EXCHANGE PROGRAMS WITH OTHER AGRICULTURAL ORGANIZATIONS.
6. CHANGE, THROUGH EDUCATIONAL ACTIVITIES, INCAP'S LIMITED IMAGE AS PRIMARILY HEALTH/NUTRITION ORIENTED ONLY.
7. DIVERSIFY SOURCES OF FUNDING.
8. SPECIFICALLY PROMOTE INCAP SERVICES TO BILATERAL MISSIONS.
9. INCREASE COUNSELING TO GOVERNMENTS CONCERNING TECHNICAL COOPERATION PRIORITIES.

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10. PLACE MORE EMPHASIS ON INTEGRATED INCAP-WIDE PROJECTS IN SUCH AREAS AS PRIMARY HEALTH CARE, HUMAN AND ANIMAL FOOD PROCESSING, IMPROVEMENTS OF BASIC GRAINS, ETC.
11. RE-ESTABLISH RESEARCH PRIORITIES TO BETTER REFLECT EXPANDED AREAS OF CONCERN TO THE INSTITUTION.