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**PROJECT ACTIVITY COMPLETION REPORT
(PACR)**

ORT, Growth, Monitoring and Education

(596-0115)

United States Agency for International Development

Guatemala City, Guatemala
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Table of Contents

	<u>Page</u>
1.0 Project Background	1
2.0 Project Description and Status	2
2.1 Project Goal	2
2.2 Project Purpose	2-3
2.3 Project Outputs	3-6
2.4 Description of Project Activities	6-14
2.5 Project Monitoring and Evaluation	14-16
3.0 Contribution Summary	16-17
4.0 Project Accomplishments	17-18
5.0 Progress Towards Attainment of Purpose-Level Objectives	18
6.0 Lessons Learned	19
7.0 Recommendations	19-20

1.0 PROJECT BACKGROUND

The 1980s in Central America was a time of significant economic, political and social crisis and consequently, stagnation or deterioration in health and nutrition status of Central Americans. Within this context Central American governments with the support of the international donor community sought options to counter the negative social and health effects of the crisis. Each country reviewed and restated their priorities in the health sector; the review became known as the Puente de Paz (Peace Bridge). The most pressing needs of the region were identified; these included a regional effort to combat diarrheal disease.

Infectious and contagious diseases have represented a major cause of infant morbidity and mortality in the region. The effect of diarrhea in the deterioration of nutritional status has been well documented: a vicious circle which increases the susceptibility of the child to acute infections, severe malnutrition and death. The effectiveness of ORT in preventing deaths due to acute diarrhea and dehydration has also been well documented. However, its effectiveness for chronic diarrhea was demonstrated nor would ORT help combat the nutritional depletion following diarrhea.

An important related issue identified during project design was the interaction between growth retardation, chronic malnutrition and chronic diarrhea; the project was to help develop much needed treatment and case management protocols. Improved and expanded implementation of certain maternal-child health actions was identified as another high priority. These included pre- and post-natal controls, oral rehydration therapy, growth monitoring, nutritional rehabilitation and the promotion of both breastfeeding and adequate infant and child feeding practices.

The ORT, Growth Monitoring and Education Project (596-0115) was designed to enable INCAP to work with public and private health sector organizations in its member countries to address these challenges. INCAP was identified as the most appropriate regional institute to support a regional child survival effort. The ORT Project was intended to build on AID's earlier support of INCAP to help INCAP develop and use its capability to provide regionally based technical support to primary health care.

The Project was designed to improve child survival and maternal and child health in the region by promoting the introduction and use of three relatively new technologies--oral rehydration therapy (ORT), growth monitoring and appropriate feeding practices during diarrhea and other illnesses.

2.0 PROJECT DESCRIPTION AND STATUS

2.1 PROJECT GOAL

The goal of the Project was to reduce infant and child mortality and severe malnutrition in Central America and Panama. This aim was approached through the use of simple, low-cost technologies, such as the prevention and treatment of diarrheal diseases, growth monitoring, the development and promotion of breastfeeding, and adequate maternal-child feeding practices.

The Objectively Verifiable Indicators identified as measures of goal achievement were: (1) Decrease infant mortality rates, and (2) Decrease in percentage of children under age five exhibiting severe growth retardation. National surveys, data from sentinel areas, census data and national health information system data were identified as means to verify changes in these indicators.

Two important assumptions were identified for goal achievement: (1) continued national level commitments to improve primary health care and (2) nutritious foods available at a reasonable cost to the entire population. Generally the governments, with important external support maintained and expanded primary health care delivery during the LOP. However, the second assumption proved problematic as later demonstrated for example in studies by INCAP and ORSTROM comparing minimum wages and basic food basic prices.

2.2 PROJECT PURPOSE

The purpose of the project was to increase the effective use of Oral Rehydration Therapy (ORT), Growth Monitoring and Appropriate Feeding Practices. The purpose was accomplished by relying on technologies that are generally well developed and are now being used, to a limited degree, in Central America and Panama (CA/P) and in other developing countries. The project responded to Commission on Central America (NBCCA) report's recommendations. Funds for the Project were included in the Administration's request for an FY 1984 supplemental appropriation which was approved by Congress.

The objectively verifiable indicators were the following:

1. Improved national capacity to plan, implement and evaluate programs aimed at control and treatment of diarrheal diseases, growth monitoring and related health/nutrition education.
2. Health care personnel are better trained in ORT, growth monitoring and proper feeding practices.

3. Technical information is disseminated in a timely manner and utilized by health care personnel in the region.
4. Practical knowledge regarding proper post diarrheal feeding practices; low birth weight risk indicators and appropriate interventions; information and guidelines for management of chronic diarrhea is available.
5. Testing for quality control of ORS is available to public sector distributors in the region.
6. Strengthened national health information systems existing in each country.
7. Acceptance of appropriate practices for home treatment of diarrheal diseases and associated protein-energy malnutrition by 50% of households in Central America and Panama.

The most important means of verification were project evaluations, surveys, information systems and technical trip reports. The major assumption related to the availability of resources for national level implementation, a factor clearly outside of the Project's domain. However throughout the '80s, resources were generally available (Nicaragua perhaps excepted), thanks largely to external donors.

2.3 PROJECT OUTPUTS

Outputs were grouped using a three-phase implementation methodology adopted from an earlier ROCAP-supported project with INCAP, the Regional Nutrition Technical Outreach Project (596-0104), which demonstrated its effectiveness for promoting national participation, planning and technology transfer.

Phase I: Promotion and Planning - The purpose of activities under this phase programmed for the first twelve months of the project was to improve national strategies and plans. Promotional visits identified key institutions and leaders, planning guidelines were developed, and specific studies were carried out to provide the analytical base for the planning process. These activities culminated in a regional seminar and national seminars at which implementation plans for the individual countries were reviewed and agreed upon. In addition to carrying out a series of studies at the national level effective technology transfer by augmenting its staff, developing educational materials, expanding an information clearing house, and starting research activities.

Outputs:

- a. 8 Protocols developed for formulating national strategies and carrying out national health systems assessments.

- b. 6 Country program assessments conducted, one in each member country
- c. 6 Sets of Baseline community and provider studies conducted, one in each member country.
- d. 6 Individual country strategies and implementation plans prepared or improved: these were done during year one and updated annually.
- e. 2 Regional planning seminars: the project originally contemplated three regional events but based on internal and external assessments, it was determined that the purpose of these events was achieved and that a third regional seminar was not needed.
- f. National planning seminars: the number of national level meetings and seminars greatly exceeded the original six projected, given the annual updating of strategies, etc.
- g. T.A. provided to C.A. countries for planning and promotion activities: the amount of TA provided was more than double than projected, especially given the increasing emphasis on in country teams by the end of the project.
- h. Research protocols developed: Three protocols were developed for major research projects (these each included subprojects with individual protocols) and four multicenter protocols were developed.
- i. Media library and technical information center established at INCAP.
- j. Regional human resources data bank established by INCAP and shared with member countries.

Phase II: Implementation - The activities under this phase were designed to resolve specific constraints at the national level and provide the technology needed to carry out the national programs. While the relative emphasis varies from country to country, activities were supposed to: (1) strengthen health service delivery systems and related information systems for evaluation and monitoring; (2) improve the technical knowledge and skills of the providers of health care through mass media programs; (3) expand the availability and improve the distribution of Oral Rehydration Salts (ORS); (4) provide scientific and technical information; and (5) increase research required to deal effectively with diarrheal disease and its nutritional consequences.

Outputs:

- a. 5 Technical reference guides and instructional materials developed:

- b. Periodic meetings of the national child survival coordinators: regular meetings were held, although not always quarterly as originally projected given difficulties in coordinating schedules and resistance by national governments to have key staff absent frequently. INCAP played key role in organizing and conducting meetings.
- c. Annual national meetings to review progress on national strategies and plans: held in each member country, except when and where project activities were suspended, e.g., in Panama and Nicaragua.
- d. Mid-project regional seminar
- e. 42 Regional workshops and expert's meetings on child survival topics: exceeded planned number by 33%
- f. Regional support to professional associations and other private sector groups to strengthen child survival involvement
- g. Five regional management and HIS courses
- h. Regional mass communications workshop (Social Marketing) held for both private and public sector participants
- i. Special regional training in child survival: targets were met and exceeded as INCAP successfully experimented with new forms of training such as distance education for doctors, nurses and nutritionists.
- j. Child survival content incorporated into university professional curricula.
- k. Six National Reference Training Centers established
- l. Eight Local-level Training Centers established
- m. 85 National and PVO workshops or courses in Child Survival, HIS and Management: as the project proceeded, it was determined that country level courses were more effective than regional ones so greater emphasis was given to this approach and the original targets easily met and exceeded.
- n. Five sets of National technical MCH programs norms for control of diarrheal disease growth monitoring, appropriate feeding practices and prenatal care reviewed and revised.
- o. Three major regional research activities carried out related to Persistent Diarrhea, Dietary Management of Children with Diarrhea and Risk of Peri- and Neonatal and Maternal Mortality.

- p. Country specific research carried out: operations research to identify and resolve specific problems were carried out in the four countries actively supported by the project during the second half of implementation.
- q. Technical information dissemination on child survival and Vitamin A by INCAP: Targets met and exceeded. INCAP disseminated both INCAP-produced information, including a newsletter and external information including Diarrhea Dialogue, Mothers and Children and the EPI Bulletin.
- r. T.A. provided to C.A. countries for strengthening delivery and information systems, education, training and mass communications, Vitamin A, and research activities: as indicated above, the TA provide substantially exceeded initial expectations, i.e., with over 400 persons months of TA provided.
- s. Promotion of national Vitamin A programs: supported by an Amendment adding Vitamin A earmark funds to the project, activities were supported in all eligible member countries (i.e., excluding for some time both Nicaragua and Panama).
- t. Evaluations or diagnostic research conducted on Vitamin A technology or interventions: with primary emphasis on Vitamin A fortification of sugar.

Phase III: Evaluation - National level programs were evaluated to see if the overall purpose of the regional project to increase the use of ORT, growth monitoring and appropriate feeding practices was achieved. The results were discussed at a regional seminar and a final report recommended future courses of action in dealing with the problems of diarrheal disease and malnutrition.

Outputs:

- a. Final seminar to identify accomplishments and continuing needs and to recommend future course of action: held in November, 1990 at INCAP in conjunction with a final meeting for Project 596-0116.
- b. National program process and impact evaluations: carried out by the regional Child Survival Advisory Group and looking at changes due to the combined child survival efforts in the region.
- c. Final project reports: by country and project component.

2.4 DESCRIPTION OF PROJECT ACTIVITIES

While some initial delays were encountered during project start-up, the project was well underway by the end of the first year. After an initial project evaluation in 1986, the project was amended for the first time in November 1987 in response to newly expanded

project was amended for the first time in November 1987 in response to newly expanded bilateral Mission child survival programs in Central America as well as a general increase of outside donor support to the sector. Amendment No. 1, therefore, eliminated activities considered duplicative of other national or regional efforts and strengthened areas seen as high priority and where INCAP appeared to have a comparative advantage based on the external evaluation. The PACD was extended to December 31, 1990 and \$1 million in funding was added. The project was amended a second time to add a specific Vitamin A component with funds from the Congressional earmark; inclusion of this new component contributed directly to the project's goal, given the importance of Vitamin A in contributing to growth and development and combatting infection.

Following the second external evaluation, ROCAP and INCAP agreed to concentrate remaining resources on integrating project activities with 596-0116 and activities that would bridge with the planned institutional strengthening project with INCAP (596-0169).

The main activities of the project included technical cooperation and funding to member countries to strengthen maternal-child health activities in the areas of:

1. Promotion of effective national strategies and plans;
2. Strengthening health service delivery and information systems;
3. Improving professional, paraprofessional, and community worker skills and public education;
4. Increasing the availability of scientific and technical information;
5. Increasing availability and improving distribution of oral rehydration salts (ORS);
and
6. Control of Vitamin A deficiency.

To develop these areas, INCAP has assembled a group of professionals that include medical doctors, public health specialists, bacteriologists, biochemists, statisticians, systems analysts, microbiologists, epidemiologists, nutritionists, educators, sociologists, anthropologists, administrators and communications specialists. In addition, a permanent INCAP delegation (Basic Technical Group) has been assigned to each country. This group collaborates in the identification of technical cooperation needs and coordinates the support provided by the Institute and by other cooperation agencies in the country.

The following is a review of major activities:

1. PROMOTION OF EFFECTIVE NATIONAL STRATEGIES AND PLANS

Regional and Interagency Coordination: Since the project began, INCAP has worked in coordination with UNICEF and WHO/PAHO as an active member of the Interagency Technical Focus Group. The purpose of this group is to coordinate the technical cooperation activities of each agency with national and regional maternal-child health efforts. INCAP has also participated in the Ad-Hoc Technical Committee, which is composed of the national child survival coordinators of the Central American countries. The main responsibility of this Committee has been to program, monitor and evaluate regional child survival activities.

Private Sector Support: Through the project, INCAP supported non-governmental organizations (NGOs) and professional associations (physicians, nutritionists, pharmacists and nurses) with a view to promoting their participation in child survival programs. Support included technical and financial assistance, training, educational materials development and information dissemination. INCAP also collaborated in the organization of workshops and seminars in the areas of major interest of these groups, including program management and social marketing. Methodologies and guidelines were developed to evaluate maternal-child health and nutrition programs implemented by NGOs.

Applied Research: In all of the countries in the region, INCAP supported diagnostic studies and follow-up of the maternal-child health situation. These studies made it possible to improve health service delivery and training, which increased the effectiveness of child survival programs. Among these were anthropological knowledge, attitudes and practices (KAP) studies of health service providers and users, as well as national surveys on the maternal-child health and nutrition situation. INCAP, in conjunction with the University of California at Los Angeles, developed and promoted Rapid Assessment Procedures (RAP), which made it possible to use anthropological methods to assess health behavior rapidly at family level, as well as interactions among service providers, both modern and traditional, and users.

2. STRENGTHENING HEALTH SERVICE DELIVERY AND INFORMATION SYSTEMS

Evaluation of Maternal and Child Health and Nutrition Systems: INCAP provided technical and financial support to promote the use of the "evaluation of the conditions of effectiveness" methodology, developed by the WHO/PAHO, to evaluate the operational capacity of health services deliver. This methodology has made it possible to obtain information rapidly that can be used to identify and eliminate constraints to effective service delivery.

Specific Research: INCAP carried out periodic research on specific subjects, which contributed to improving the planning and evaluation of national and regional programs. Included were national nutrition surveys, and national maternal-child health and nutrition surveys. Through these studies, reliable and valid information on infant morbidity and mortality in the region was obtained. In addition, changes in nutritional status, and the effects of child survival interventions were assessed. One of the most successful methods promoted by INCAP was the First Graders' Height Census. During the years 1985-90 this method, which had been developed previously, was extended to all the Central American countries. In addition, the height census methodology was integrated into nutrition surveillance systems in Costa Rica and Panama.

Sentinel Surveillance Systems: In some member countries, INCAP gave technical and financial support to the establishment of sentinel surveillance systems. These systems consisted of a network of sentinel areas (communities) and sites (establishments), where information was collected on health, morbidity and mortality, the nutrition situation and socioeconomic and cultural factors in the population. This information subsystem supports the routine health information system, providing low-cost information for the purposes of local programming and of process and impact evaluations of child survival activities. This methodology is being applied by other international agencies in various Central American countries, with excellent results.

Information Systems: Another important activity was technical assistance in strengthening health information systems. INCAP worked together with national institutions to improve the type and quality of information collected, introduce new technologies and promote compatible systems through which users could share information and make comparative information analyses between countries. As a result, INCAP developed the SIMAP computer software, a computer mapping system, which has been distributed and used widely both within and outside of Central America. Through this program, users can integrate information from many sources, update it and analyze it easily through the use of graphs, maps and tables. It also can make population projections.

3. IMPROVING PROFESSIONAL, PARAPROFESSIONAL, AND COMMUNITY WORKER SKILLS AND PUBLIC EDUCATION

Education Program Integration: INCAP participated in activities of the Regional Training Project for Maternal-Child Health Personnel, which was designed jointly with PASCAP, and with UNICEF and WHO/PAHO support. In accordance with the focus of this project, INCAP collaborated in the development of activities in the areas of academic program development, continuing education, community education and education- assistance integration, so that academic training would respond to the requirements of assistance programs. In addition, INCAP promoted the intraregional exchange of professional staff and public health service providers, and in the revision of curricula in universities, professional schools and in public health service provider

training programs (Ministries of Health and Social Security). Regional and national workshops and conferences, were carried out to promote this objective. As a consequence, the teaching of nutrition and of the components of child survival were strengthened in training schools for medical, nutrition and nursing professionals, as well as in primary and secondary education programs.

Educational Reference Centers: The project supported the establishment of educational reference centers in the most important training hospitals in each member country. These centers train health professionals in maternal-child technologies, standardize health services in accordance with national norms, convey technical information and provide high-quality treatment to mothers and children. The centers have made possible better integration between education and assistance initiatives, an increase in the number of maternal-child health components in health professional training programs (for doctors, nutritionists, nurses, social workers and others), and in-service training of individuals who have replicated the attention and educational model to other levels of implementation.

Regional Education Units: INCAP also supported the development of regional education units. These units, located in country health regions, train regional and local-level personnel, promote community-level health education and provide maternal-health services. As a result, area or regional-level results have been obtained that complement those of the educational reference centers, and community-level health education models have been developed and tested.

Special Health and Nutrition Units: Technical assistance was provided for the creation and strengthening of nutrition and health units with specific purposes within the educational centers mentioned. Included were units on oral rehydration therapy, growth monitoring and treatment of the malnourished child. The units, located in hospitals, schools, and health centers or posts, contribute to improving attention to specific problems, increasing coordination in the integration of levels of attention, training volunteers and service users, especially mothers, and testing methods, procedures and transferable educational materials.

Training Methods: In collaboration with Ministries of Health, INCAP developed and tested integrated training modules in each country on child survival. The modules are related to national maternal-child health plans and norms, and to public sector programs. These modules are technical reference guidelines for central, regional and local-level personnel. Applicable support materials were developed by INCAP to facilitate and promote their use. Over 500 people throughout the region were trained using the child survival modules. The materials also served as the basis for the revision of curricula and the development of a module for the training of primary school teachers. Presently, non-governmental organizations are also using these materials to develop training activities for their own staff.

Educational Materials: One of the strategies used to transfer technical information and research findings to the operational level was the design, testing and production of educational materials for the community and volunteer health personnel. Using anthropological information, audio cassettes were developed with illustrated brochures on oral rehydration therapy and growth monitoring for mothers and health workers. This methodology was evaluated, and was found to have caused a positive change in the level of mothers' knowledge. Another successful methodology was the SILOGUIA, a guide for planning, developing and evaluating educational activities at the local level. This guide was developed as a pilot test for a specific group in El Salvador, and is being transferred to other sectors using distance learning techniques.

4. INCREASING THE AVAILABILITY OF SCIENTIFIC AND TECHNICAL INFORMATION

ASI Bulletin: INCAP published 25 issues of the bimonthly bulletin entitled, Progress in Child Survival (ASI), to inform users of child survival activities carried out in the region, and to provide basic technical information to health providers ASI was distributed to more than 8,000 technical people in the region, together with the Spanish version of the bulletin, Mothers and Children, Dialogue on Diarrhea and IRA News. Towards the end of the project, this bulletin was replaced by the institutional bulletin entitled, Progress in Food and Nutrition, which included general information on INCAP's institutional purpose and on food and nutrition subjects.

Distance Learning: With a view to updating the knowledge of health providers in aspects of maternal-child health, INCAP used the distance learning methods. It developed two courses in Guatemala, one on management of the malnourished child, and the other on monitoring the physical growth of children. Both courses were endorsed by the Association of Medical Doctors and Surgeons and the Guatemalan Pediatrics Association. In light of the success of this methodology, which has made it possible to update of the knowledge of professionals without their leaving their work, a third course on nutrition during the pregnancy and breastfeeding is being developed. The expertise acquired has been used by INCAP to present a proposal for developing a regional distance learning course. Moreover, the materials produced are being transferred to the other countries for adaptation and use.

Packets of Technical Documents: Every quarter, INCAP produced and distributed information packets with important articles and bibliographical summaries on child survival. These packets were sent to 1,000 users in the region. In addition, technical packets were developed that contained documents on maternal- child feeding and nutrition. These documents reflected INCAP's position, as did reference materials for more than 80 national and regional seminars.

Information Requests: The INCAP information Clearinghouse responded annually to about 900 information requests from individuals and institutions on maternal-child health. It also responded to requests for reference materials on the control of diarrheal diseases, growth monitoring and child feeding. Many of the latter came from training and education programs. Through this component, INCAP distributed over 400,000 documents in the Central American region.

5. INCREASING AVAILABILITY AND IMPROVING DISTRIBUTION OF ORAL REHYDRATION SALTS (ORS)

Quality Control: Ensuring the quality of oral rehydration salts (ORS) was a service provided by INCAP to all member countries. INCAP collected samples of salts being used in both public and private sector programs and available commercially. These samples were then analyzed in INCAP's laboratories using WHO-approved procedures. The results were sent to Ministries of Health for their information and follow-up.

6. Applied Research

Operations Research: Under the project, INCAP promoted operations research to identify and solve specific problems in the delivery of health services to mothers and children in Central America and Panama. Standardized methodologies and instruments were developed to provide training and technical assistance to national researchers developing operations research projects for funding by INCAP and other donors. Operations research was carried out in growth monitoring and in the prevention and management of diarrheal disease. As a result, the capacity of country professionals in carrying out operations research was strengthened. It could thus be better used as a tool for helping to improve service delivery. It also became possible to institutionalize operations research as an INCAP programmatic area.

Basic Research on Risk of Peri- and Neonatal, and Maternal Mortality

Five interrelated basic research projects were developed in one of Guatemala's health areas to determine the biological, environmental and sociocultural factors related to high-risk pregnancy, low birthweight of newborns and inadequate post-natal growth. These studies were jointly carried out with the Guatemalan Ministry of Health. They showed the following:

- The most sensitive factors for predicting low birthweight are maternal anthropometry (arm circumference) and a history of other low birthweight children.
- Traditional cooking methods produce toxic levels of CO in the home and in women, as shown by toxic levels of carboxyhemoglobin, which could affect fetal growth.

- For the first time, the positive effect of food supplementation for malnourished nursing mothers in increasing milk production in the first six months of breastfeeding was clearly shown.
- In addition, specific problems that affect maternal and peri- and neonatal mortality were determined. Based on this information, a preventive intervention model is being developed which will include the joint development of activities by local and hospital staff.

Dietary Management of Children with Diarrhea

Through studies funded under this project, it was shown that the use of various foods commonly consumed in homes, such as corn flour or tortillas, cooked rice, black beans or Incaparina (corn flour and cotton seed cakes) does not increase the severity or duration of diarrhea in children one to three years of age. Moreover, some of these foods reduce the duration of the illness. In a clinically controlled study in a hospital, children were given an Incaparina drink and a cornmeal, black bean and vegetable gruel from the time they entered the hospital. The foods were well tolerated by the children, and nutrition and food energy absorption was relatively high, which suggests that prompt use of these foods will prevent or diminish the nutritional damage caused by the illness. In addition, these high-fiber foods reduced the duration of the illness by an average of 3.5 days, compared to foods used more frequently by children with diarrhea. These results were the basis for other studies done by INCAP scientist in hospital centers and at community level funded by other organizations. These studies have confirmed the tolerance of many common foods by children with acute or persistent diarrhea and their positive effect on the duration of acute diarrhea. At the end of 1991, various studies which provided additional information on the effect of acute or persistent diarrhea on child nutritional status were completed. Furthermore, these studies and the results of anthropological-nutritional studies spawned a multicenter study, funded under this project, to evaluate the customs and foods used in various Central American countries when children have diarrhea, as well as the economic and cultural feasibility of improving these feedings habits.

Multicenter Study the Management of the Feeding of Children with Acute Diarrhea

This study was carried out in Costa Rica (Limon), El Salvador (San Salvador), Guatemala (Quetzaltenango), Nicaragua (Esteli) and Panama (Chiriqui), with the participation of multidisciplinary groups of local researchers and under the supervision and with the support of INCAP scientists. The groups of local researchers included nutritionists, medical doctors, educators and social workers, who received basic training in a seminar-workshop at INCAP, based on which they developed a common work protocol. In addition to stimulating the participation of professionals in research pertinent to their own countries, this study sought: (a) knowledge of the beliefs and practices of women with few economic resources related to child feeding when children are healthy and when they have diarrhea; (b) to compute the nutritional value of these

diets and the possibility of improving them with food available in the home; and (c) to explore whether mothers accept the idea of modifying household diets and to carry out practical food preparation demonstrations. The results made it possible to test efficiency and effectiveness, using the most adequate diets acceptable to mothers and children of each locality.

Persistent Diarrhea

INCAP carried out a longitudinal study that included field studies and laboratory analysis of infants and small children whose diarrhea lasted two weeks and was resistant to known treatments, including ORT. The aim of the studies was to determine the causes and nutritional consequences of persistent diarrhea. The results of these studies confirm that children older than two are at greater risk of persistent diarrhea, and that the greater the number of infections, the greater the risk of persistent diarrhea. The preventive focus has thus been extended to improving health conditions and environmental sanitation as a way of reducing the high incidence of persistent diarrhea.

7. CONTROL OF VITAMIN A DEFICIENCY

Food Fortification: Since the 1960s, INCAP has been developing the technology for fortifying sugar with Vitamin A, which has reduced the incidence of Vitamin A deficiency from 25% to 10%. Through the project, INCAP channeled funds for the development and transfer to El Salvador of machinery for the rapid and effective fortification of sugar with Retinol Palmitate.

Vitamin A Information Dissemination: Manuals and videocassette on the techniques of Vitamin A fortification of sugar, bibliographic compilations with updated information on this subject were developed, and, in coordination with ISTI/VITAL, INCAP organized a Latin American meeting of strategies for improving the Vitamin A situation in the region.

2.5 PROJECT MONITORING AND EVALUATION

Ongoing Monitoring and Evaluation

Several instruments were used to ensure regular ongoing project monitoring and evaluation:

Quarterly INCAP reports--These reports provided a review of activities planned for the reporting period (the previous quarter) and those completed, explanations of any delays or constraints, and the discussed plans for the next quarter. They also assessed progress made toward producing project outputs and meeting project objectives.

Monthly INCAP financial reports--They provided a record of inputs on INCAP's part. They were often late because INCAP waited for financial reports from INCAP country teams, which went from each country PAHO office to PAHO/Washington, back to INCAP when compiled, and then from INCAP to ROCAP.

Technical Advisor's daily contact with INCAP--This contact helped ROCAP and INCAP ensure that the project was on track, and identify potential problems and solutions.

ROCAP Semi-Annual Project Reports (SARs)--Through these reports, ROCAP was able to monitor inputs, outputs and progress toward objectives.

Interim Evaluations--Both external and internal evaluations were carried out during the LOP.

External: The first external evaluation was carried out in November, 1986 by a team of PRITECH consultants. In summary the team found that the Project had a highly motivated, young and energetic staff led by a highly capable expert in the nutrition field (by the end of the project, he had been named INCAP Director). The team identified a notable increase in INCAP's acceptance as a source of technical expertise by the Health Ministries in the region. The team noted the substantial increase in donor resources for child survival which had emerged in the region since the project's initiation and therefore recommended that the project should focus its limited resources on a more restricted set of priorities, using and building INCAP's comparative advantages. The team also recommended greater attention to developing and implementing effective monitoring and management systems within the project.

A second external evaluation was carried out jointly with Project 596-0116 under a contract with John Snow Int'l. This second evaluation looked at project specific as well as institutional effects of the two projects. It became the basis for the development of the follow on institutional strengthening Project. 596-0169 with INCAP.

Key recommendations from the evaluation included the following:

1. INCAP should strengthen its in-country presence and decentralize its planning assistance, giving greater emphasis to field activities.
2. INCAP should develop an information and education strategy, giving special attention to opportunities for more effective use of mass media.
3. INCAP should assume an activist role in operations research with a view to becoming a center of regional expertise in this area.
4. INCAP should emphasize those technologies and methodologies which have greatest potential for effectiveness and concentrate on transferring and sustaining their use.

5. INCAP, AID/ROCAP and PAHO need to resolve continuing issues related to INCAP's need to serve a dual constituency; these issues are both technical and administrative. Of particular importance is finding ways to improve communications and coordination between INCAP and bilateral AID missions.
6. INCAP should actively seek ways to work more closely with NGOs as a separate channel from the MOHs to better ensure local impact.
7. INCAP needs to assess areas where it has capability for excellence and concentrate its efforts on ensuring that excellence is achieved in these areas, using external advisors to assist in the review.
8. INCAP needs to plan for its future financial sustainability, exploring ways to sell its services.
9. The PACD should be extended, with emphasis given to integrating the project with 596-0116 and consideration given to a future integrated project with AID/ROCAP support.

Internal:

INCAP conducted internal assessments of project activities routinely throughout the LOP, both by component and for the project as a whole. Two formal internal, interim assessments were made prior to the two external evaluations mentioned above.

INCAP also conducted an end of project assessment based on the documentation of project activities and accomplishments during the final year of the project. A formal internal review was carried out in October, 1991 in conjunction with project 596-0116 involving both INCAP and A.I.D. staff.

3.0 CONTRIBUTION SUMMARY

Project Contributions:

INCAP has prepared and presented evidence of its required counterpart contribution for the project. This information is being reviewed as part of the final financial management review for the project initiated in August, 1993. Member countries also provided counterpart support to the Project. INCAP developed and presentation information to substantiate this contribution but this part of the counterpart contribution cannot and will not be subject to the final financial management review.

The major contributors in support of the ORT Growth Monitoring and Education Project were as follows:

- USAID/ROCAP: Regional Office of Central American Programs.
- INCAP: Institute of Nutrition for Central America and Panama (INCAP).
- Host Country Counterpart: Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panama.

<u>Cooperating Institution Contributions</u>	<u>Planned Contributions</u>	<u>Value of Contributions</u>	<u>% of Total Contributions</u>
USAID/ROCAP	\$9,650,000	\$9,647,830	100 %
INCAP	\$1,100,000	\$1,784,000	100 %
Host Country	<u>\$1,530,000</u>	<u>\$1,530,000</u>	<u>100 %</u>
TOTAL	\$12,280,000	\$13,961,830	100 %

4.0 PROJECT ACCOMPLISHMENTS

The INCAP ORT, Growth Monitoring, and Education Project contributed greatly to the development of national maternal-child health programs, as well as to the implementation of adequate strategies for improving long term maternal-child health.

- Close coordination was established at regional and national levels with WHO/PAHO, UNICEF, USAID and other bilateral and international agencies.
- The development and implementation of national member country maternal-child health plans were promoted.
- Regional evaluation systems were developed, and national information, monitoring and evaluation systems were strengthened.
- The dissemination of scientific and technical information on child survival was strengthened.
- INCAP contributed to the strengthening of institutions through the development of their managerial capacity to establish priorities, adapt technologies and establish administrative infrastructure.
- INCAP promoted the development and implementation of regional and national maternal-child health training and education activities.
- INCAP's image as a source of technical expertise in maternal-child health and of collaboration for Ministries of Health in the region was strengthened.

- The process of decentralization and deconcentration of INCAP's technical assistance to member countries was supported.

Institutional Capacity After the End of the Project: As a result of the project, the INCAP's technical cooperation capacity in aspects of maternal-child health was strengthened. In recognition of this fact, the INCAP Board of Directors, in its 1991 annual meeting, requested that INCAP coordinate regional activities in this area. In addition, in all member countries, a professional responsible for technical cooperation in maternal-child health has been established. He/she will coordinate his/her actions with those of other professionals who are members of the Basic Technical Groups. The support of AID/ROCAP to this and other projects, as well as the cooperation of other regional projects, definitely contributed to the establishment of the Basic Technical Groups in each country, with the strategy of strengthening the transfer of knowledge, methodologies, technologies and guidelines from INCAP Headquarters to member countries.

The decentralization process supported by this project has continued at country level through the formation of technical groups that are supporting local health systems or their equivalents in various countries. This development is particularly noticeable in Guatemala, El Salvador and Honduras, in which the project has supported decentralized cooperation actions.

At regional level, the participation of INCAP, with project support, contributed significantly to the strengthening of regional activities and programs in maternal-child health and to interagency coordination of these efforts.

5.0 PROGRESS TOWARDS ATTAINMENT OF PURPOSE-LEVEL OBJECTIVES

All purpose level objectives were met by the PACD. Regional as well as country-specific child survival plans, strategies and programs were developed and functioning.

INCAP staff have demonstrated their capacity to contribute practical solutions to critical child survival and health problems. This was demonstrated in the final year of the project as cholera reappeared in the Americas. INCAP developed and helped member countries use a rapid assessment approach to diagnose specific needs for improving quality of care and to implement solutions.

Country counterparts have also gained new skills, both technical and managerial, to better implement child survival activities. Norms have been improved at the national level and operations improved at local level. INCAP has established its ability to work effectively nationally and locally.

While work remains to institutionalize improvements to assure gains made over the last several years are maintained, the region and individual countries are in a better position to meet this challenge and INCAP is much more able to support them.

6.0 LESSONS LEARNED

1. Interinstitutional coordination among donors or implementing agencies and at a regional or national level will significantly slow project activities at the outset. Coordination requires considerable investment of time and resources, but where it can be achieved it is worth the time and effort and conserves resources over the long run.
2. The effectiveness of INCAP, like other technical support organizations, depends on the ability and willingness of governments to implement the technical improvements introduced. INCAP was limited at times by government's lack of follow through, lack of resources and by frequent changes among high level officials. These realities must be taken into account if INCAP is to provide effective technical assistance. Useful strategies to counter the effects of elements outside INCA's control have include work at the local as well as national level and work with private as well as public sector entities.
3. INCAP staff as well as their counterparts are often more limited by their lack of management skills than technical know how. INCAP recognizes that it must offer both technical and management expertise in order to provide effective assistance and it must train counterparts to be both better managers and better technicians.
4. A country or even locality-based approach to problem solving is required to complement regional programs. The latter are useful when there are gains due to economies of scale, e.g., in certain kinds of training, equipment-intensive analyses and basic research. Country or local level action however is needed to effectively respond to variations in conditions, capabilities, interests etc.
5. Multicenter studies can be effective means to transfer new knowledge and technologies, while checking applicability under differing conditions. However they require closer supervision and more frequent follow up than a set of unrelated studies. This implies more time and resources which should be planned for at the outset.

7.0 RECOMMENDATIONS

1. INCAP should give greater emphasis to applying and assessing the effectiveness of technologies and methodologies developed by the project at the local level in member countries. The identification of targeted local health areas in each member country for INCAP assistance is an important opportunity.
2. INCAP should continue and expand efforts to improve the quality and usefulness for decisions of national and local health information systems and to develop national counterparts' capabilities in operations (i.e., problem solving) research.
3. INCAP should concentrate its training activities where there is potential for multiplier effects, i.e., INCAP should whenever possible be training trainers.

4. **INCAP should strengthen its support for building national and regional networks for communications, reference and information exchange. This is a logical extension of INCAP's past leadership based on its technical library capacity.**