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Proj. 5460065
 PN- (2)

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT PAPER FACESHEET
 TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CO (FIX) APPROPRI
 ORIGINAL
 Add 11p.

2. COUNTRY/REGIONAL ENTITY/GRAantee
 ROCAP/INCAP

3. DOCUMENT REVISION NUMBER

4. PROJECT NUMBER
 596-0065

5. BUREAU
 A. SYMBOL LA B. CODE 3

6. ESTIMATED FY OF PROJECT COMPLETION
 FY 8|0|

7. PROJECT TITLE - SHORT (STAY WITHIN BRACKETS)
 REGIONAL NUTRITION

8. ESTIMATED FY OF AUTHORIZATION/OBLIGATION
 MO. YR.
 A. INITIAL 7|6 B. FINAL FY 7|9

9. SECONDARY TECHNICAL CODES (MAXIMUM SIX CODES OF THREE POSITIONS EACH)
 340

10. ESTIMATED TOTAL COST (\$000 OR EQUIVALENT, \$1= _____)

A. PROGRAM FINANCING	FIRST YEAR			ALL YEARS		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	485		485	1760		1760
(GRANT)	(485)	()	(485)	(1760)	()	(1760)
(LOAN)	()	()	()	()	()	()
OTHER 1. Consortium	576		576	576		576
2.						
HOST GOVERNMENT		54	54		234	234
OTHER DONOR(S)	284		284	978		978
TOTALS	1345	54	1399	3314	234	3548

11. ESTIMATED COSTS/AID APPROPRIATED FUNDS (\$000)

A. APPROPRIATION (ALPHA CODE)	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE	FY 76		FY 77		FY 78		ALL YEARS		
			D. GRANT	E. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN	J. GRANT	K. LOAN	
FN	297	340	335		40			290		1610	
FN	297	340	150							150	
TOTALS			485*		40			290		1760	

12. ESTIMATED EXPENDITURES 200 250 450

13. PROJECT PURPOSE(S) (STAY WITHIN BRACKETS) CHECK IF DIFFERENT FROM PID/PRP

Establishment of a National Food and Nutrition Program technical and administrative structure that has the capacity to initiate and sustain an effective programming; implementation and evaluation process in Central America and Panama.
 *This includes \$150,000 for emergency rehabilitation of INCAP.

14. WERE CHANGES MADE IN THE PID/PRP FACESHEET DATA NOT INCLUDED ABOVE? IF YES, ATTACH CHANGED PID AND/OR PRP FACESHEET.
 YES NO

15. ORIGINATING OFFICE CLEARANCE

SIGNATURE *[Signature]*

TITLE *Mission Director*

DATE SIGNED MO. DAY YR. 02 20 76

16. DATE RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION



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TAGS:

SUBJECT: REGIONAL NUTRITION PROJECT NO. 596-11-560-065
GUATEMALA FOR RUCAP

1. SUBJECT PROJECT WAS APPROVED FOR GRANT FUNDING UP TO
1,750,000 DOLLARS WITH THE FOLLOWING CONDITIONS:

2. AFTER APPROXIMATELY ONE YEAR, THE ACTUAL DEMAND FOR
INCAP SERVICES WILL BE EVALUATED IN LIGHT OF SIGNED COUNTRY
TECHNICAL ASSISTANCE AGREEMENTS TO VERIFY CURRENT
ASSUMPTIONS ON LEVEL OF EFFORT, TYPE OF ASSISTANCE, AND
FUNDING LEVELS. AID/W SHOULD BE ADVISED OF RESULTS.

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3. CONCERN WAS EXPRESSED THAT THE MEMBER COUNTRIES BEGIN TO SUPPORT INCAP'S SERVICES FROM THE APPLIED NUTRITION DIVISION BEFORE THE CESSATION OF AID FUNDING. THIS CONCERN WOULD BE DISCUSSED WITH INCAP AT THE OUTSET OF THE PROJECT. IN ADDITION, IT WAS AGREED THAT LONG TERM SUPPORT FOR THE APPLIED NUTRITION DIVISION WOULD BE EXAMINED DURING A MID-PROJECT EVALUATION SO THAT APPROPRIATE ACTION COULD BE TAKEN IF NECESSARY TO INSURE THAT THE DIVISION WOULD BE SUPPORTED IN THE 1980S AT A LEVEL COMMENSURATE WITH DEMANDS FOR THEIR SERVICES.

4. AGREEMENTS WITH MEMBER COUNTRIES WILL INCLUDE A PROVISION TO ENSURE THAT DATA DEVELOPED BY INCAP WILL BE AVAILABLE TO INCAP AND THE USAIDS.

5. FUNDS FOR EARTHQUAKE REHABILITATION FOR INCAP WILL BE DIRECTED FOR REPAIR OF INCAP'S DAMAGED FACILITIES IN THE FIELD AND GUATEMALA CITY AND NOT FOR COMMUNITY REHABILITATION.

6. ROLE OF WOMEN. INCAP WILL BE MADE AWARE OF AID'S POLICY ON MAXIMIZING THE ROLE OF WOMEN IN DEVELOPMENT.

7. FUNDING LEVELS. AID/W PLANS TO PROCEED WITH NOTIFICATION TO CONGRESS SO THAT REHABILITATION COMPONENT CAN BE FUNDED. MISSION SHOULD BE AWARE THAT FUNDING AVAILABILITIES FOR FY 76 ARE EXTREMELY SHORT AND THERE IS NO ASSURANCE THAT 76 REQUEST LEVEL WILL BE MADE AVAILABLE. MISSION IS REMINDED THAT FUNDING WILL BE PROVIDED IN ACCORDANCE WITH LEVELS IN FY 77 CP FOR TQ AND FY 77 RATHER THAN PP LEVELS.

8. EVALUATION. COUNTRY SPECIFIC OBJECTIVES, OUTPUT TARGETS, AS WELL AS TA INPUTS SHOULD BE IDENTIFIED IN THE COURSE OF DEVELOPING TECHNICAL ASSISTANCE AGREEMENTS BETWEEN INCAP AND THE HOST COUNTRIES IN ORDER TO ASSIST INCAP AND AID EVALUATE THE SUCCESS OF INCAP'S SERVICES.

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REGIONAL NUTRITION PROJECT PAPER

ROCAP, February 1976

REGIONAL NUTRITION PROJECT PAPER

1. SUMMARY AND RECOMMENDATIONS
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 - 1.2 Description of the Project
 - 1.3 Summary Findings
 - 1.4 Project Issues

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 - 2.3 Principal Consequences of Malnutrition
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for INCAP)

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- B. Preprogramming Stage and Programming Stage
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- D. Logical Framework
- E. Project Performance Tracking Network Chart and PERT Chart
- F. Statutory Checklist - Does not pertain to this Project
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- H. Proposed Personnel for the Basic Program Staff
- I. Project Description to be used in the Project Agreement
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- K. Seminars, Courses, Conferences to be Financed by NFNP's Projects
- L. Agenda for Evaluation
- M. References Used in Preparation of Regional Nutrition Project Paper
- N. INCAP 1975 Operating Budget Detailed by Projects

1.2 Description of the Project: The proposal presented here is for a technical assistance project to enable the Central American and Panamanian governments to establish in four of the six countries a technical and administrative structure capable of analyzing nutritional problems, selecting appropriate "interventions" or projects to resolve the problems, implementing the interventions and evaluating their effectiveness. The continuing task of these technical-administrative units will be the incorporation of analyses, design of interventions and evaluation into National Food and Nutrition Programs (NFNP). The national units will by the project's end be institutionalized to such a degree that they will be able to sustain a planning, implementation and an evaluation process on a continuing basis. This project will also provide funds for rehabilitation of part of the INCAP installations that were damaged by the February 4 earthquake.

The agent which will provide technical assistance to the various governments will be the Institute of Nutrition for Central America and Panama (INCAP), a regional organization for nutritional research founded some 25 years ago by the six countries of the region, the Kellogg Foundation and PAHO (the Pan American World Health Organization). INCAP has enjoyed an international reputation for some time in the field of nutrition research. This project will be the organization's first large-scale effort at technical assistance in applied nutrition.

Financing required for the activity will be approximately \$1.75 million over four fiscal years.

The effort will consist of INCAP project staff working with entities of the six governments in attempting to (1) strengthen the concern, as necessary, of the participating governments with regard to their country's nutritional problem, its effects on the society and the economy and their awareness of the methods by which they can attack the problem; (2) seek a commitment from the government in the form of staff and resources to begin, or continue, assessing the national nutrition situation; and (3) sustain a planning, implementation, and evaluation process.

The national counterpart staffs organized to work with INCAP in the initial analysis, selection, and design of interventions will form the nucleus of the on-going technical and administrative units for planning, coordinating, and implementing the Food and Nutrition Programs.

The conditions expected to exist at the end of the project period are the following:

1. Technical and administrative units capable of continuing analyses, design, implementation, and evaluation of nutrition interventions will be operating in 4 of the 6 participating countries.

2. All of the six countries will be working toward, or actually undertaking, the implementation of a nutrition intervention, and four of the six countries will be receiving funding for their National Food and Nutrition Programs Planning staffs from national sources (or international sources) sufficient to carry out their programs for the 12-month period following the Final Contribution Date of the ROCAP Agreement.

3. Rehabilitation of damaged INCAP installations.

An extremely valuable component of the technical assistance activity will be the refinement, by INCAP, of a tested methodology for the delivery of technical assistance designed to promote nutrition as a major element in a national development strategy. This methodology is expected to have applicability elsewhere in the world. In addition, the Applied Nutrition Staff of INCAP will have an experienced staff which will be able to supply highly specialized technical aid to the six countries in a systematic and efficient fashion whenever the need for such assistance may arise.

Major Outputs which will be accomplished are: (1) strengthening recognition by each of the six governments of the dimensions of the national nutritional problem and its socio-economic implications to the nation; (2) the commitment by the government of funds and personnel to seek solutions to the problem; (3) the establishment of the technical-administrative structure to carry out nutrition planning, project design, and implementation; (4) the analysis of causes of national nutritional problems; (5) the formulation of goals of the National Food and Nutrition Program based on the analyses; (6) the design of appropriate interventions to reach the causes of the problem; and (7) implementation of these interventions.

It is important to note that all six countries are not at the same starting point in this undertaking. Consequently, while El Salvador or Nicaragua, for example, may begin the project with INCAP at the beginning of the Planning and the Preprogramming process, Costa Rica and Panama are well beyond this point and would begin their participation at the stage of the design or implementation of interventions, having already analyzed their priority problem areas. Annex C, "Country Specific Situation: Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panama" is a detailed description of the present status of each country in terms of nutrition planning and project implementation.

INCAP and the cooperating country will develop an agreement defining the nature of the INCAP technical assistance inputs and the specific nature of the government's counterpart commitment. The agreement will be followed by a Calendar of Operations, to be developed by INCAP, detailing that organization's inputs for a twelve month period.

The Inputs required to produce the Outputs and to accomplish the Project Purpose and the End-of-Project Status planned are summarized in the following table.

On the 29th and 30th of January the 6 USAIDs sent representatives to Guatemala City to meet with ROCAP and INCAP to review the Regional Nutrition Project Paper. The Paper as presently presented, with the exception of the emergency rehabilitation component, was reviewed in detail by the USAIDs, and they affirmed their support for the project.

INPUTS TABLE^{1/}

	First Year				Second Year				Third Year				Fourth Year			
	INCAP	PAHO	KELLOGG	ROCAP	INCAP	PAHO	KELLOGG	ROCAP	INCAP	PAHO	KELLOGG	ROCAP	INCAP	PAHO	KELLOGG	ROCAP
Personnel	46	121	112	174	47	115	112	222	52	126	114	231	53	126		199
Travel		3	12	60		5	14	76		5	11	75		5		65
Seminars, Conferences Training Courses			7	14			6	12				37				10
Evaluations								9				9				9
Other Services			4	25			4	35			3	35				32
Supplies and Equipment			1	11				3				3				3
Other Direct Costs	8		24	51	9	8	24	64	10		24	70	9			57
Inflation								19								
Total	54	124	160	335	56	120	160	440	62	131	152	460	62	131		375
Emergency Rehabilitation				<u>150</u> 485												

PROJECT OVER FOUR YEARS

	<u>INCAP</u>	<u>PAHO</u>	<u>KELLOGG</u>	<u>ROCAP</u>	<u>Consortium Fund For Reconstruction</u>
Total	234 (7%)	506 (14%)	472 (13%)	1760 (50%)	576 (16%)
Personnel	198	488	338	826	
Travel		18	37	276	
Seminars, etc.			13	73	
Evaluation				27	
Other	36		84	539	576
Inflation					19

^{1/} ROCAP inputs will be financed by the following fiscal year funding inputs:

FY 1976 - \$485
 I.Q. - \$ 40
 FY 1977 - \$290
 FY 1978 - \$460
 FY 1979 - \$485
 Total - 1760

- 1.3 Summary Findings: All six countries have indicated an interest to develop a nutrition planning and programming process utilizing the technical resources of INCAP; hence, judged by the intentions of the respective governments, the project is deemed ready for implementation.

Recruiting of 10 technicians will be required to fully staff the INCAP Basic Program Group. It is expected that this recruitment will require four to six months after approval of the project. It will not delay implementation of the activity, which is expected to begin in June, 1976.

- 1.4 Project Issues: In the course of developing this project, the following issues were identified and have been addressed either immediately below or in the text of the Project Paper:

- A. Issue: What is the regional rationale for this project? ROCAP set forth a strategy contained on page 34 of the Revised ROCAP DAP defining action areas designed to implement the decisions and apply criteria of the Mission Directors Coordinating Committee (MDCC). The action areas that relate directly to the Regional Nutrition Project are (1) "Projects which further Regional Integration" (See Chapter 4, REGIONAL ANALYSIS), and (2) "Projects which Directly Support Bilateral Programs and which Lend Themselves to Regional Application because of Potential Economies and Efficiencies". A single project for funding technical services from INCAP, carefully managed by ROCAP, will insure that similar methodological approaches for nutrition planning are utilized and that innovations in both the assessment process and design of interventions are shared among the six countries. Through national and regional seminars funded by this project, Central American host countries will exchange experiences in the applied nutrition field and the central institution, INCAP, will be the depository for future reference.

ROCAP monitoring of the INCAP grant, a single source of funding, will permit a much closer and more timely coordination of technical services from INCAP to the member countries than if each USAID or host country were to fund individually the the required services on an ad-hoc basis. This coordination will maximize the efficient use of INCAP's Applied Nutrition Staff, permitting the staggering of services and thus preventing gaps in workloads.

In sum, a regional program provides both substantive and administrative economies of scale.

- B. Issue:** What is the relationship of the proposed activity to the nutrition loans currently being developed by the three USAIDs? Where does this project complement, duplicate or otherwise touch upon the activities being proposed under the loans?

The 3 AID loans proposed for the region have essentially two components: (1) the loan development stage, when the USAID is concerned with the initiation of an institutional process comparable to the Planning and Programming Process described in Annex B "The Planning and Programming Process", and (2) the loan implementation phase when specific interventions directly address the nutrition problem in terms of the protein/calorie/vitamin A deficiencies, and iron deficiency anemias. It is possible that AID will want to finance INCAP technical assistance inputs designed to assist in the supervision/implementation of AID capital financed interventions. As described in Annex B "The Planning and Programming Phase" is a dynamic process that does not stop with the design and implementation of specific projects, but is a continuous institutional activity. Not only will this grant to INCAP facilitate INCAP's involvement in the loan planning and the loan implementation stages, but it will also contribute to insuring that planning, implementation and evaluation is a sustained institutional activity, therefore extending the viability of the AID loans for nutrition in Central America and Panama. As described in Chapter 5, TECHNICAL ANALYSIS OF INCAP CAPABILITY, INCAP is the major resource for providing the technical assistance critical to helping AID in the design and implementation of the loans, and as further described in Chapter 3, DETAILED PROJECT DESCRIPTION, and Annex C, "Country Specific Situations: Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panama" the role that INCAP has already played regarding NFVP development has been significant in facilitating AID work in the nutrition field.

In the countries where the USAID is providing loan funds, it will be essential for USAID and INCAP, which will be providing technical assistance partially funded by ROCAF, to coordinate efforts. Both entities will be working directly with the same nutrition planning unit which, at best, will be in its early development stages.

- C. Issue:** Does funding for this project imply that AID is involved in an open-ended process; therefore, it will be critical that AID continue funding this activity after 1960? No, the project will continue with financial support from several sources. (See Chapter 7, FINANCIAL ANALYSIS, pages 39 and 40).

D. Issue: At the goal level, can we predict measures of goal achievement when at this juncture we do not know what specific nutrition interventions are to be undertaken in each of the six countries?

The project's purpose is to promote the creation, in each of the six countries, of an institutional infrastructure responsible for the planning/selection/design/implementation/evaluation of interventions that will impact directly on the nutrition status of the poorest majority. Therefore, at this point, it is not reasonable to pinpoint specific areas of the nutrition problem that will be affected by interventions since the specific interventions have yet to be selected. Though one can hypothesize that interventions will be selected to attack either the protein-calorie malnutrition problem, iron anemia, or Vitamin A deficiency, the level of resources commitment will directly influence the degree of effectiveness of any one intervention. Therefore, we are in an highly problematical area when it comes to attempting to predict the degree or percentage of incidence of reduction we can expect with regard to any of the major nutrition problems in any one country in the region. However, as specific interventions in each country setting evolve, it will be necessary to address this problem of measuring goals achievement on an intervention basis.

As specific interventions evolve, there are ways to measure goal achievements. For example, should a country select as its goal the improvement of the nutritional status of high risk groups such as preschool children (3 to 5 years of age), the most common indicator of the nutritional status of children, the Gomez classification, would certainly be employed. This classification looks at body weights relative to a standard weight corresponding to age. Weight for height relations would also be employed because they reflect more accurately the current nutritional status of children. Data on heights and weights should become available through national surveys conducted periodically by the countries. These surveillance systems are not yet established in all of the countries, but UNICEF is actively promoting their establishment and is providing technical assistance to this end. Surveys could also indicate deficient levels of plasma retinol or other measures relating to Vitamin A deficiency, and deficient levels of hemoglobin or other measures relating to iron deficiency.

2. PROJECT BACKGROUND

2.1 Nutritional Situation of the Region: Based on the national nutrition surveys conducted by INCAP during 1965-1967 and subsequent studies updating the surveys, the nutrition problems affecting the poorest segment of the population in the region are:

1. Protein-Calorie Malnutrition
2. Nutritional Anemias
3. Hypovitaminosis A

Protein-Calorie Malnutrition (PCM) is by far the most serious of the three problems. It severely affects the physical and mental growth, morbidity and mortality of children, particularly during the first 5 years of their life. Recent INCAP studies have established a strong relationship between PCM in the late stages of pregnancy and subsequent child development. The prevalence of PCM among young children is high in the region as shown by the data in Table 1. Projections made by FAO, with the collaboration of INCAP, indicate that the consumption of protein and calories by the poorest 50% of the population will continue to be inadequate in the majority of the countries of the region for the next 25 years. In view of the present problems with respect to inflation, energy, and food production, along with continued high rates of population growth, these projections may be overly optimistic. Consequently, it appears that PCM will continue to be severe unless the countries adopt major efforts to combat it.

The other two nutritional problems, (nutritional anemias and Hypovitaminosis A) are theoretically easier to attack because, in principle, each may be eliminated by means of a cost-effective technological solution: the fortification of a widely consumed product with the nutrient deficiency.

As may be seen in Table 2, the results of the survey of 1965-67 indicate that the deficiency of vitamin A was substantial in the region. Recently, INCAP has developed a simple process for fortifying sugar with vitamin A, and it is expected that this will provide an effective low-cost solution to Hypovitaminosis A. At present, however, only Costa Rica and Guatemala have passed laws that require sugar mills to implement the fortification process.

The problem of nutritional anemias is severe in the region as indicated in the statistics for iron deficiency shown in Table 3. It is more difficult to solve nutritional anemias than Hypovitaminosis A because nutritional anemias are due not only to the deficient intake of iron in a form that can be utilized by the body, but also to the loss of blood and impairment of absorption of iron caused by intestinal parasites such as hookworms. Nutritional anemias may also be related to self-induced pregnancy terminations. An appropriate iron fortification process does not yet exist, but INCAP is now testing a promising scheme of fortifying sugar with iron. A complete solution to iron deficiency anemias requires an attack on intestinal parasites by improving living conditions, latrines, and particularly water supply.

Note: Following three pages contain Tables 1, 2 & 3.

Table 1

CHILDREN BELOW 5 YEARS OF AGE, BY DEGREE
OF MALNUTRITION ACCORDING TO THE GOMEZ
CLASSIFICATION 1/

CENTRAL AMERICA 2/

Country	1st degree		2nd degree		3rd degree	
	Number	%	Number	%	Number	%
Guatemala	453,296	49	249,775	27	54,580	5.9
El Salvador	338,171	49	158,733	23	21,394	3.1
Honduras	222,161	43	139,497	27	11,883	2.3
Nicaragua	167,452	42	51,830	13	7,177	1.8
Costa Rica	121,076	44	33,021	12	4,128	1.5
Panama	131,398	49	29,498	11	2,950	1.1

1/ Based on the Gomez classification, the degree of malnutrition of children is based on the extent to which their weights fall below an expected weight vs. age standard: 1st degree= weight deficit of 10-25%; 2nd degree= deficit of 25-40%; 3rd degree= deficit greater than 40%.

2/ The figures given are calculated applying the % from the 1965-67 surveys to estimated population in 1975.

Table 2

POPULATION WITH LOW AND DEFICIENT LEVELS OF VITAMIN A
PLASMA RETINOL IN THE RURAL POPULATION OF
CENTRAL AMERICA AND PANAMA *

Country	Population with low or deficient levels:			
	Male Number	%	Female Number	%
Guatemala	309,851	17	145,812	8
El Salvador	385,228	31	173,974	14
Honduras	207,181	22	188,346	20
Nicaragua	81,663	13	69,100	11
Costa Rica	94,755	16	94,755	16
Panama	48,394	11	26,397	6

* The figures are calculated applying the % from the 1965-67 surveys to estimated population in 1975.

Table 3

IRON DEFICIENCY ANEMIA IN THE RURAL POPULATION
OF CENTRAL AMERICA AND PANAMA

Country	Population with low or deficient levels of:			
	<u>Hemoglobin</u>		<u>Transferrin saturation</u>	
	<u>*</u> Number	%	<u>*</u> Number	%
Guatemala	291,624	8	1,130,045	31
El Salvador	298,241	12	745,602	30
Honduras	301,354	16	659,212	35
Nicaragua	125,636	10	213,581	17
Costa Rica	106,599	9	343,486	29
Panama	193,578	22	316,764	36

* The figures given in this form are calculated applying the % from the 1965-67 surveys to estimated population in 1975.

2.2 Causes of Malnutrition: The principal cause of malnutrition in the region is the existence of wide-spread poverty in many rural areas and in urban slums. This condition is the result of a variety of social and economic deficiencies including lack of employment, low wages, poor land distribution and utilization, traditional agricultural practices, lack of community organization, inequitable marketing systems, and especially large family size. Associated with these deficiencies are those relating to poor environmental conditions, inadequate education, and insufficient health services.

Another way of viewing the causes of malnutrition is in terms of the following three interrelated factors:

1. Inability of a family to obtain, to purchase and/or grow the necessary foods for providing the recommended quantities of calories, protein, vitamins and minerals.
2. Inadequate knowledge of the family with respect to:
(a) the selection and utilization of foods, including preparation and storage; and (b) the use of special diets for weaning-age children and for pregnant and nursing mothers.
3. Inefficient utilization of the foods by the human body as a result of gastrointestinal problems, such as parasites and diarrheal diseases.

As described in Chapter 3, DETAILED PROJECT DESCRIPTION, the project will focus on developing a country capability that will investigate the significance of these three factors as they impact on the nutrition status of the poorest majority, as a step in designing specific nutrition interventions designed to address the problems of malnutrition.

2.3 Principal Consequences of Malnutrition: Data obtained by INCAP indicate that the principal consequences of malnutrition may be summarized as follows:

1. Malnutrition of pregnant women leads to a high incidence of infants with low birth weights i.e., weights of 2.5 kilograms or less which in turn leads to a higher prevalence of malnutrition and a much higher rate of infant morbidity and mortality which in turn leads to shorter interbirth intervals and high parity.

2. Malnutrition of children, especially during the first 5 years of life, reduces their possibility of reaching their full developmental potential both with respect to physical growth and thus learning potential as well as greatly increasing the rate of mortality and morbidity.
3. Malnutrition of adolescent females may impose the physiological demands of early pregnancy, common in LDC's, upon the stresses of continuing body growth resulting in a high health hazard to the expectant mother.
4. Malnutrition of adults reduces their capacity for daily work output thereby decreasing family incomes assuming that adequate employment exists, and reduces their potential contributions to afterwork activities that improve the conditions of the family and community.
5. Malnutrition of persons at any age lowers their resistance to some infections, as well as decreasing the rate at which they recover from illnesses.

These consequences are interrelated in a manner that each consequence tends to worsen the future nutritional status of the family, thereby making it extremely difficult to effect a major change without adopting a comprehensive plan that attacks malnutrition among persons of all ages.

- 2.4 Nutrition Activities in the Region: As described in CAPTO CIRCULAR A-11, there is a variety of nutrition activities in the region being financed by the six governments, the USAID Missions, and/or private voluntary agencies. Most are directed at pregnant and lactating women and the malnourished child. There has been a tendency to view these projects, particularly those executed jointly by the USAIDs and private voluntary agencies, i.e. CARE and CRS which have received the bulk of their programming support from Title II food, as add-ons, which are not an integrated part of the country's development plan. The net effect of these projects has not resulted in a significant reduction in the intensity or magnitude of the nutrition problem in the region.

As described in Annex C, "Country Specific Situations: Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panama", there is considerable USAID activity concerned with

nutrition in Central America. Three of the USAIDs (Honduras, Nicaragua and Costa Rica) are developing loans for either FY 76 or FY 77, directly addressing nutrition problems. As outlined in Chapter 1, "Issue C", INCAP is working with the USAIDs in the planning phase of loan development. Though this phase is concerned with the development of a data base for AID loan definition in the 3 countries, it also marks the beginning of an institutional process concerned with data gathering and analysis that should continue through and beyond the loan implementation period.

The following INCAP research programs which currently receive support from TAB are:

1. Influence of Maternal Nutrition on Infant Mortality and Morbidity: The purpose of this project is to study the effect of food supplementation during pregnancy and lactation on child growth, morbidity and mortality within the first year of life. This project is part of a larger effort that focuses on the relationship between malnutrition, physical growth and mental development of infants and preschool children. The larger longitudinal study that has been ongoing since 1969 is funded by NICHD/NIH. AID support for the maternal nutrition activity began in FY 1975 and is to continue through FY 77.
2. Vitamin A Delivery System - Evaluation of Sugar Fortification with Vitamin A: The purpose of this project is to assist the Government of Guatemala in evaluating a new program of sugar fortification with Vitamin A. In addition, the prevalence of Vitamin A deficiency will be determined in El Salvador prior to a determination by this government of whether or not to fortify sugar with Vitamin A. These fortification programs in Central American countries are the first of their kind and give AID the opportunity to evaluate this method of Vitamin A fortification as part of the Agency's overall program to develop and evaluate Vitamin A delivery systems.
3. Analysis of Nutritional Data: The purpose of the project is to quantify the social, economic and environmental determinations of malnutrition in Central America and Panama by editing a data set, constructing conceptual models and analyzing a pre-existing base of information.
4. Evaluation of Measures for Reduction of Food Wastage Project: The purpose of this project is to develop, field test and prepare a manual describing a methodology which can be utilized to determine the economic relationship between different levels of improved environmental sanitation, a given level of nutritional supplementation and the waste of food energy from inefficient absorption of food and intestinal diseases transmitted under unsanitary conditions.

5. Corn Fortification - A Field Demonstration: The purpose of the project is to test the feasibility of fortifying the basic food of Central America, corn tortillas, with protein and amino acids and to measure the effects of the fortification on the morbidity and mortality of the village children and women of child bearing age. The project village has been studied for more than ten years to obtain a complete record of mortality and morbidity and causes. Fortification with soy flour and amino acids at the level of 4-6% of the diet was begun in 1972 and at the present time only tentative findings can be reported. It appears that mortality has fallen by 50% in the villagers who regularly accept the soy; morbidity has fallen by 33%. AID support for the activity is expected to continue through March 1976, after which a new study will be implemented to test the effects of increasing the calorie as well as protein supplements.
6. Brady Crop Cooker Evaluation: Through an ongoing AID/USDA RSSA, the usefulness of a Brady Crop Cooker (A low cost cooker extruder useful for processing soy on the farm is being evaluated for its utility in processing mixtures of soy and other cereals into useful blended foods.) is being evaluated at INCAP.

The following research programs of INCAP are currently being considered for funding by TAB:

1. Calorie Supplementation of Corn Foods: Based on the results of fortifying corn with protein, in the project above, it is evident that 4-6% supplement is insufficient to achieve all of the benefits expected from a fortificant to the diet. During the previous project it was learned, however, that the basic corn diet even though including beans, and accounting for the cooking pattern of the foods is extremely low in fat and thus low in energy density. The purpose of the present project will be therefore to increase the calories and caloric density of the diet as well as the protein. The proven feasibility of the corn fortification will be extended and used to accomplish the supplementation in the new project.
2. Legume Utilization: The headquarters for legume utilization project planning is expected to be CIAT in Colombia. At INCAP, however, it is expected that the highly variable use pattern of legumes in the region will be studied as a sub-contract from CIAT. The INCAP project will examine the constraints to increase consumption as a function of the regional and environmental differences of the Central American area.
3. Nutritional Impact of Opaque-2 Corn: The nutritional impact of Opaque-2 corn under field conditions has not been evaluated. Dr. Bressani of INCAP has submitted a proposal to T.A.B. for

carrying out such a study on coffee fincas near Guatemala City.

4. Fortification of Sugar with Iron: The purpose of this proposed research project is to evaluate the biological effectiveness and general practicability --including cost considerations-- of iron fortified sugar when fed to populations showing high prevalence of iron deficiency anemia. A complex iron salt, NaFeEDTA, (sodium ferric ethylene diamine tetra-acetate) will be incorporated into the dietary sugar. To date, this iron salt has not been used commercially as an iron fortificant in foods; however, its merits for such use are: (a) mixable with sugar, (b) consists of bio-available iron and (c) no undesirable interactions when added to food and beverages.

3. DETAILED PROJECT DESCRIPTION

3.1 Project Description: On the basis of data summarized in this Project Paper, it is apparent that nutritional deficiencies will continue to be severe in the population of Central America and Panama for at least the next 25 years unless the governments adopt a radically different approach to the problem. Due to the interrelated, multi-causal nature of these nutritional problems, this approach should be a coordinated, multisectorial effort and an integral component of the overall development policies of the countries. This approach requires a strong political decision by the governments, the commitment of considerable resources, effective collaboration of different sectors, and would constitute the formation of a National Food and Nutrition Program (NFNP). To carry out successfully a NFNP, the countries need to develop an institutional capacity for: (1) describing national nutrition problems; (2) identifying major determinants; (3) defining the goals; (4) selecting, designing, and implementing interventions; (5) training and supervising personnel; (6) monitoring and evaluating interventions; and (7) integrating these activities to form a sustained, dynamic process that seeks to improve performance and adjust to the changing national conditions.

INCAP, the Institute of Nutrition for Central America and Panama, has the responsibility of assisting its member countries to develop this capacity. To increase its ability to meet this responsibility, INCAP proposes to form a project on national food and nutrition planning that will involve the collaboration of virtually all of the Institute's resources. The principal objectives of the project are: (1) to assist the member countries to develop their institutional capacity to formulate and carry out a NFNP; (2) to help establish a basis for a Central American Food and Nutrition Policy that will strengthen both the individual food and nutrition programs of the countries and the renewed trend toward Central American integration, and (3) to develop and test an intersectoral nutrition planning methodology utilized by the planning entity to analyze nutritional problems and design solutions which may be applicable in other regions of the world. In response to these objectives, INCAP proposes to concentrate upon technical assistance and training activities that will aid the establishment of national and regional institutional capabilities for carrying out the sustained planning process described above. These activities are defined in terms of a preliminary model for the programming, implementation, and evaluation of a NFNP. The proposed project includes a plan for technical assistance and training activities for each of the member countries.

The proposed staff for carrying out these activities is a multidisciplinary group with specialists in public health including family planning, nutrition, and mother and child care; food science and technology; epidemiology; education; economics; planning; agricultural sciences including production and marketing; etc. The majority of these professionals are experienced members of INCAP who will devote full or part-time to the project, either as on-going participants or as short-term consultants. The balance of the project staff will be recruited to provide those disciplines that are essential, but unavailable at present within INCAP. It is proposed that the project will be supported by a combination of four sources: (1) the INCAP regular budget which is received in the form of annual quotas from the Central American governments and Panama; (2) on-going core support from the Pan American Health Organization (PAHO); (3) a renewed grant from the Kellogg Foundation; and (4) the present proposal to ROCAP.

The purpose of the project is defined in terms of the expected consequences in the countries, as well as in terms of the estimated levels of technical assistance and training activities to be provided by INCAP. A principal output of the project will be the development of methodologies for this application of technical assistance to nutritional planning programs and operational procedures that should be of value to NFNP efforts in other regions in the world.

The NFNP approach is considered to be one of the essential components of a national policy for social and economic development of the poorest segment of a country's population. Although it is clearly not a complete or simple solution, it is expected to lead to substantial improvements in nutritional and health status in a relatively short period of time, and thereby enhance the performance of other components of the development effort, such as those aimed at employment and wages, agriculture, health, education, and demographic change.

- 3.2 Rationale: In recent years there has been a growing recognition of the importance of combatting malnutrition, but policy makers in the region, such as national planners, are still moving cautiously in attendant resource allocation, due to uncertainty about the costs and likely consequences of various programs. Many governments have not hesitated to initiate child feeding programs when there has been free or low-cost food available thereby reducing the amount of funding commitment required, and where they could clearly perceive other than nutritional benefits. By contrast, the benefits of widespread fortification

programs are more difficult to measure since there is little experience to go by, and there are questions not only of initial capital costs, but of how a possibly increased product cost would affect consumer demand.

Therefore, better data is required on the various program possibilities in terms of how they work, what they cost, under what conditions they are most suitable, what results they are likely to attain, as well as a systematic way of assessing a country's malnutrition problem and of choosing the most cost-effective approaches to its solution.

Even if an appropriate course of action were agreed upon by any one government in the region, the government faces the equally important task of implementing those actions. The extreme difficulty of this task is evidenced by the fact that, throughout the world, there are very few examples of the effective implementation of large-scale interventions in any sector, such less for intersectorial interventions. A common problem is that the political and socio-cultural factors of a country often are severe obstacles to the formation of an organization that is essential to the implementation process; that is, an organization with efficient lines of authority and communication; adequate recruitment, training, supervision, and motivation of personnel; effective systems for monitoring, evaluating, and correcting the performance of the overall program.

The powers and resources needed to address the nutrition problem on a national basis clearly rest at the highest political level of government. Understanding of and commitment to the nutrition factor at this level is critical if a systematic planning/implementation/evaluation effort is to result in a marked decrease of malnutrition. Furthermore, because of the diverse and complex causes of malnutrition, the task of formulating a national nutrition program requires (1) a team of professionals with the necessary disciplines, (2) methodologies for guiding the formulation process, and (3) information system that is essential to the process. In the majority of the countries of the region, there is a severe scarcity of both qualified professionals, necessary information, and a methodology for guiding the process of designing and on analyzing nutrition interventions that will impact on the poorest majority.

For the reasons described above, the Special Inter-American Commission of INCEP has for the last several years, been working with the Central American countries in developing a comprehensive strategy to assist these countries in developing their own capacity to formulate, implement and evaluate a National Food and Nutrition Program. This process is just beginning, and it is recommended that this critical effort continue.

The following is a summary of the logical framework for the Project:

3.3 Sector Goal: To create an environment, in the countries, in which the rural poor have increased opportunities for participation in the national development process in the rural countries.

Project Goal: To create a participatory development of the rural sector in the rural countries and to create, especially of the population groups who are most vulnerable.

3.4 Project Purpose: To create an environment of a National Food and Nutrition Program in the rural countries and to create the opportunity to participate and to create an effective development process in the rural countries and to create a National Food and Nutrition Program in the rural countries.

3.5 List of Project Objectives: The National Food and Nutrition Program will be able to create the following objectives:

1. To create an environment of a National Food and Nutrition Program in the rural countries and to create the opportunity to participate and to create an effective development process in the rural countries.

2. All of the rural countries will be able to create an environment of a National Food and Nutrition Program in the rural countries and to create the opportunity to participate and to create an effective development process in the rural countries.

3.6 Project Purpose and Objectives: The National Food and Nutrition Program will be able to create the following objectives:

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countries will continue to request assistance for specific programs (e.g., design and implementation of a nutritional survey of a supplementary feeding program) even before they have decided to formulate a NNP. The technical assistance, provided by INCAP is the project input impacting in the context of the specific country situation and should result in government actions that take the form of supports following a logical sequence which is described in Annex B "The Planning and Programming Process".

- 3.7 Implementation Plans: The purpose of this section is to estimate the type and intensity of technical assistance that each member country may require from INCAP with respect to their NNP efforts during the next four years. These estimates provide a tentative basis for describing the expected activities in each country and for estimating the budget necessary to provide the corresponding assistance.

In these discussions, the technical assistance activities of INCAP are considered in terms of the planning and programming process described in Annex B. This must be a dynamic on-going process that results in the continual improvement of the overall performance of the NNP by: (1) modifying existing interventions on the basis of evaluation data; (2) designing new interventions and to reorient the NNP to the changing food and nutrition conditions resulting of the principal causes of the country's food and nutrition problems; and (3) adopting improved programming methodologies. Since the NNP should be an integral component of the country's national development plan, it will most likely be thoroughly reviewed every five years and after changes of the governing political party.

INCAP and the country will develop an agreement defining the nature of the INCAP technical assistance inputs and the specific nature of the government's counterpart commitment, once the ROPET contract with FAO is completed. This agreement is to: (1) insure the provision of host country personnel who will work with INCAP activities for the duration of the ROPET grant; and (2) insure that INCAP will supply the exact type of technical assistance the host country requires. The agreement will be followed by a calendar of operations to be developed by INCAP detailing specific INCAP inputs by activity for a twelve month period and will be updated on an annual basis.

In Annex C, "Country Specific Situations: Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panama", the present situation in each member country is summarized and estimates of future expenditures are discussed. NNP activities are defined in input/output terms for each country in Annex B, "Project For-

formance Tracking Network Chart and PERT Chart". Project milestones are highlighted for each country in these charts.

3.8 Administrative Arrangements:

- A. Recipient: INCAP via PAHO will be the recipient of the proposed grant funds. INCAP's Basic Program Staff will work closely with sundry government agencies in the six countries including Ministries of Health, Agriculture, Education, Finance, Planning. ROCAP places its fullest confidence in INCAP's ability to administer the grant. For the technical assistance described in this chapter, the project requires the participation of professionals representing a wide variety of specialties. It is proposed that this participation be organized in two components:
1. Basic Program Staff: A closely integrated core group from the Applied Nutrition Division of INCAP who devote full time to the project. (See Annex H, "Proposed Personnel for the Basic Program Staff").
 2. Extended Program Staff: Includes the participation of professionals representing all the disciplines at INCAP since the formulation and execution of a NFNP will require this breadth of technical assistance. (See Annex J, "Capabilities of INCAP to Provide Assistance Relating to National Food and Nutrition Programs"). Participation will be of two types:
 - (a) members who devote a fixed percentage of their time to the project as on-going participants in specific activities;
 - (b) members who serve as short-term consultants when there is a need for their particular specialty.

This manner of organization has the advantage of the stability and close integration of a core group while also utilizing the collaboration of the larger pool of human resources existing within INCAP who will be dedicating the major part of their time to other projects. The past experience of INCAP's Division of Applied Nutrition indicates that a core group is absolutely essential because assistance relating to developing a NFNP requires a closely integrated effort of several disciplines and the sustained involvement of the same persons in particular countries. This results in establishing better continuity in working relations with the national staff, plus a deeper understanding of the specific situation of each country, political as well as nutritional. The nucleus of this Basic Program Staff has been formed in the Division of Applied Nutrition during the past three years after costly delays associated with the time required to recruit highly qualified personnel to fill the positions and to integrate these new members in the working group. This group is considered to be one of the

major achievement of the Division, and it is an extremely valuable asset for the NFNP Project. However, the group must be expanded if it is to meet the expected demand from the member countries in the immediate future.

It is proposed that the Basic Program Staff should include the personnel described in Annex H, "Proposed Personnel for the Basic Program Staff". This design is based both on INCAP's recent experience in providing NFNP assistance to the countries and estimated of the nature and magnitude of future requests for assistance already described in this chapter.

Since it is not practical to attempt to describe the potential contribution of each person in the Extended Program Staff, to the NFNP Project Annex J, "Capabilities of INCAP to Provide Assistance Relation to National Food and Nutrition Programs", is presented as illustrative of INCAP's assistance capabilities. The description in this Annex is quite general and brief, but it provides an indication of the type of assistance available within INCAP.

- B. AID: A straightforward project monitoring role is foreseen for ROCAP. A direct Hire AID employee with nutrition planning experience will be the Project Manager. This individual would monitor and insure the effective coordination of INCAP's activities in the six countries especially as they relate to USAID - funded nutrition programs.

3.9 Emergency Rehabilitation of INCAP Installations

As a result of the earthquake on February 4th and subsequent aftershocks, INCAP sustained serious damages on their campus and at several of their field sites seriously curtailing both research and training activities. The most serious and costly damage resulted from an explosion on the Second Floor of INCAP Building No. 2 on the INCAP campus. This explosion in one of the laboratories started a fire which spread throughout most of the Second Floor causing major damage to both the laboratory and library installations located on the Second Floor.

Another critical link in the research chain in many of the INCAP research projects that has been seriously affected by the earthquake are the rural communities and field installations which are sites for INCAP field stations located for field testing and training purposes. Not only is it necessary to address the problem of rehabilitating these rural communities and various other field installations to insure that the research and training effort will continue on a sustained basis to protect prior invest-

ments particularly in longitudinal studies, but the human dimension of this problem make it imperative that INCAP help support the rehabilitation of those communities where INCAP field installations were located. Every effort will be made to link this rehabilitation function with projects designed to address to broader, more long range problems of the development of these rural communities.

Though for the short run, the damage to the research component will not adversely affect the applied nutrition work anticipated over the next 12 months, it is critical that the research arm of INCAP be fully rehabilitated so that over the medium and long terms research functions* continue to contribute to the expanding bio-medic base from which nutrition interventions evolve. Also it is critical that the training functions which complement the applied nutrition activity be reinstated as soon as possible.

To raise funds to meet the total rehabilitation requirement, INCAP has made plans to create a consortium under PAHO leadership of the principal donor to INCAP over the last several years, i.e. Kellogg Foundation, Research Corporation, Canadian Government. It is hoped that the various members of the consortium can pledge sufficient funds to cover the entire costs of rehabilitation currently estimated at \$725,625. It is proposed AID provide an amount of \$150,000 in FY 1976 thus making it possible for INCAP to immediately begin the rehabilitation of the library and field installations.

Based on the expression of interest of other donors, we are hopeful that this \$150,000 will constitute an appropriate AID contribution to the consortium.

It is planned that the \$150,000 would be allocated in the following manner:

1. Library Construction	\$ 50,000
2. Furniture for Library	5,000
3. Book and Journal Replacement	33,000
4. Field Installation Reconstruction	20,000
5. Field Training Center	42,000
	<u>\$150,000</u>

However, depending on how the consortium wishes to attribute contributions to support the rehabilitation needs of INCAP, it is possible there may be an allocation of part of the \$150,000 to rehabilitate other components of INCAP described in greater detail in Chapter 9, ENGINEERING AND EQUIPMENT ANALYSIS, which are determined to have a higher priority.

* Annex N describes in detail on a project by project basis the extent of U. S. public and private financial involvement in research being executed by INCAP.

4. REGIONAL ANALYSIS

In lieu of a SOCIAL ANALYSIS CHAPTER, the Project Paper includes a REGIONAL ANALYSIS CHAPTER which addresses the role of INCAP as a regional institution in the Central American setting with particular emphasis on its policy-making dimension. This substitution is in keeping with AID/W's guidance message on preparation of the PP (AIDTO CIRCULAR A-241, dated 4/23/75, pp 3 and 6). Because the project does not "deal directly at the people level", but works with technical, planning structures within host country governments, the intended beneficiaries, i.e. the population group at highest risk of malnutrition, will be indirectly affected by achievement of the project purpose. Therefore, a social analysis section of such factors as characteristics of the target group, their role in formulating the project, and possible social impediments to project success do not pertain to this project. However, individual countries, establishing technical planning units, will undertake social analyses as part of the planning, implementation, and evaluation process. In fact, much data on social characteristics of the target group will be, or already has been, collected during the assessment or programming stage in many of the Central American countries.

This chapter is also concerned with the role of women as they relate to this project.

4.1 Central American Food and Nutrition Policy: The five Central American countries (Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua) were integrated in one geopolitical unity for almost three centuries during the Spanish Colonial domination. Since the proclamation of their independence in 1821, the five countries have formed separate nations and, with the exception of a short period, all attempts to reunite them have failed. The five Central American governments, conscious of the benefits of jointly facing problems common to the areas, initiated, in the decade of the fifties, a movement designed to promote regional economic systems. It was not until 1960, however, that the Central American General Economic Treaty was signed with the Permanent Secretariat for the Central American Economic Integration (SIECA) becoming its permanent Secretariat. The war between two of the members in 1969, Honduras and El Salvador, severely strained the Central American Integration process, but SIECA continued its effort to hold the five countries in an economic union, and in 1972 it presented to the five countries a document entitled

"The Integrated Development of Central America in the Present Decade, Basis and Proposals for Perfecting and Restructuring the Central American Common Market". The countries appointed a High Level Committee to study SIECA's proposals and to arrive at a consensus in respect to the different actions recommended in the document. It is at this stage that SIECA began to make serious efforts to integrate all the various regional agencies as means to increase their contribution to the integration process.

In spite of the fact that INCAP is the oldest Central American agency, the Institute remained practically isolated from the integration process during the first years because of the purely economic approach that the process took during this period. But with the new social outlook of the 1972 proposal, and with SIECA becoming more interested in coordination with the other institutions, INCAP is now considered as one of the truly regional institutions whose contributions can be very important to the integration process. A series of events took place that illustrate this new role expected from INCAP which was in part stimulated by INCAP's work in the countries to establish NFNFs.

These are:

- A. In 1972 INCAP collaborated with GAFICA, the FAO Advisory Group for the Integration of Central America, and SIECA in the nutritional interpretation of the food demand projections for Central America, elaborated as part of a document entitled "Perspectives for the development and integration of Agriculture in Central America".
- B. October 18-20, 1974 in Guatemala - XII Meeting of Ministers of Economy. The Director of INCAP presented a brief summary of the nutritional situation of Central America, perspectives under present conditions, and the need for a multisectoral approach to the problem.
- C. October 25-26, 1974 in San José, Costa Rica - II Meeting of Ministers of Agriculture of Central America and Panama. The Director of INCAP presented the draft document on food and nutrition policies prepared by the Division of Applied Nutrition of INCAP, placing emphasis on the role of the agriculture sector in a NFNP. The Ministers of Agriculture recommended that national and regional efforts in agriculture research be coordinated, particularly those carried out at INCAP, so as to maximize the benefits.

- D. November 11, 1974 - The Directors of INCAP and SIECA, along with other officials, discussed the coordination of activities.
- E. November 18-20, 1974, in Managua, Nicaragua - The VIII Meeting of the High Level Committee (CAN); INCAP attended as an observer to this and most of the subsequent meetings of CAN.
- F. February 5-6, 1975, in Guatemala - INCAP participated in the First Meeting of the "Special Work Group" to prepare a plan of action at the regional level for basic grains to be presented to the Minister of Agriculture at their III Meeting. The Institute presented an analysis of the nutrition situation and the urgent need for actions both at the national and the regional level.
- G. February 20-22, 1975, in Guatemala - The XIII Meeting of Ministers of Economy. The Guide for the formulation of a NFNP was sent to the Ministers beforehand, but could not be discussed at the meeting.
- H. April 1-4, 1975, in San José, Costa Rica - INCAP attended the III Meeting of Ministers of Agriculture of Central America as an observer.

In 1973 SIECA and INCAP, along with UNICEF, FAO, and UNESCO formed an Interagency Group for the formulation of a food and nutrition policy at the regional level within an interagency agreement made by those organizations. Due to the work already done in the area by INCAP, the Institute was named coordinator of the group at the Central American level. The group all agreed that a policy at the Central American level would eventually be necessary, but that substantially more work at the country level was necessary. INCAP's NFNP document was also discussed. The group made a recommendation to SIECA that the Central American countries attend the World Food Conference well prepared, and if possible take a uniform position in relation to presenting the problem of the area and possible solution from a regional point of view. This recommendation was put into effect.

As will be seen in the country descriptions that follow, INCAP's work in the area of NFNP has been extensive. It has been one of continuous promotion that has resulted in governments taking interest in this area... the degree varying from one country to another. With the present situation in

Central America, the countries are becoming increasingly aware of the need to have regional programs in different areas. But, just as there exists a need for regional cooperation in agriculture and health, the need to coordinate all of these different efforts into a Central American Food and Nutrition Policy also exists. SIECA, on different occasions, has implicitly mentioned the need for this, and INCAP has also done so at the different high level meetings.

At this stage of the integration process the "High Level Committee" (CAN) is studying the restructuring of the Central American Common Market, and is now reviewing the draft treaty that creates the Central American Economic and Social Community in which INCAP is specifically mentioned as the agency responsible in advising the Executive Commission on food and nutrition policy.

- 4.2 Future Regional Activities: INCAP will collaborate with SIECA, or its successor agency in the case of approval of a new Central American Integration Treaty, in establishing the basic information and in creating a structure or a mechanism for formulating a Central American Food and Nutrition Policy. Efforts will be made to have a working draft of such a policy under consideration at the end of the period. The development of NFNPs in each country is an integral part of this process.

Besides its direct relationship with SIECA, INCAP will continue participating with the Interagency Group referred to above. One of INCAP's responsibilities to this group is to advise UNICEF on the use of small grants to Central American countries designed to promote and implement NFNPs. INCAP will also pursue its present efforts to be recognized permanently as the technical reference agency of the Central American Bank for Economic Integration and other similar agencies operating in the area.

- 4.3 Women in Development: Because this project is basically to provide grant assistance to enable INCAP to aid the six countries in the development of a technical and administrative capability in national nutrition planning and programming, the specific impact on the economic and social role of women is indirect. Clearly, lactant and pregnant mothers and female (and male) children under five will be the most important target group for all the Central American nutrition programs

because the highest rates of malnutrition are concentrated in these two population groups. Poor nutrition status of a pregnant woman increases the risk for a disturbed pregnancy or for a child of low birth weight which in turn causes increased risks of infant and child morbidity and mortality.* A child of low birth weight is also at increased risk of deficient mental development. Lactant mothers have increased need for nutrients, and nutritional deficiencies and diarrheal diseases contribute toward an insufficiency of breast milk. Therefore, specific interventions developed by each of the six countries must focus on these groups as primary beneficiaries.

In addition, however, it is likely that nutrition education and training programs will utilize many women as actual program implementors, developing and delivering the information required to change food behavior and breast-feeding practices. Perhaps some female nutritionists will be trained as systems analysts or planners to staff the technical-administrative units.

Direct benefits will accrue to women with improved nutritional status resulting from national nutrition programs in each of the six countries. Such benefits as healthier babies with higher birth weights and fewer infections, prolonged lactation resulting in longer intervals between pregnancies, and improved health of mothers and children in general should be notable by the end of the project period.

* In parts of Latin America malnutrition has been identified as the primary or associated cause in 57% of all deaths of one to four year olds; it is an important factor in more than 50% of infant deaths and a contributor to the immaturity responsible for 50% to 75% of deaths in the first month of life. (PAHO, Patterns of Mortality in Childhood, 1973).

5. TECHNICAL ANALYSIS OF INCAP CAPABILITY

5.1 Background of INCAP: INCAP was founded 25 years ago by an agreement between the six countries of the region, the Kellogg Foundation, and the Pan American Health Organization, a branch of the World Health Organization of the United Nations. The mission of INCAP is to assist the six countries of the region through research, education, and technical assistance to combat their nutrition problems. Initially, the main emphasis was given to: (1) Research directed towards identifying and understanding the dominant nutritional problems of the region; and (2) Education of students from the region in specializations relating to nutrition, dietetics, public health, food technology, and agricultural sciences, plus short courses and in-service training for professionals.

Although technical assistance designed to apply their nutrition findings has always been an important activity of INCAP, both the Institute and the member countries agreed about five years ago that it should be greatly increased in the future. Consequently, the Division of Applied Nutrition was strengthened by hiring a new chief and additional professionals. At present, the Division consists of a team of 10 members: 3 M.D.s with specializations in mother and child care, nutrition, and epidemiology; 3 nutritionists; 1 dietician 2 agricultural economists and 1 systems analyst. (See Annex G, "Professional Members of the Division of Applied Nutrition of INCAP".) The principal responsibilities of the Applied Nutrition Division are:

- A. Technical Assistance: to the six countries of the region with respect to: (1) the promotion, formulation, and implementation of National Food and Nutrition Programs (2) assistance with the specific nutrition projects of the health sector and other sources.
- B. Liaison: between the countries and all of INCAP; e.g., informing the countries of the capabilities of the various divisions of INCAP, and arranging for communication and visits when appropriate. Recently this liaison has been extended to include the Central American regional development organizations.

- C. Education: (1) teaching of applied nutrition in INCAP's graduate course on "Nutrition in Public Health"; (2) organization of short courses, seminars, workshops, in-service training, etc., for professionals in the countries; (3) collaboration in courses, seminars, etc. organized within the countries.
- D. Methodologies: Development of concepts and techniques that will facilitate the accomplishment of the three preceding responsibilities (e.g., formulation of methodologies for guiding, planning, programming, supervision, evaluation, etc.)

The Division of Applied Nutrition has made substantial advances recently with respect to all three of these responsibilities, but the task is rapidly becoming too big for the present resources of the Division, especially in view of the increasing concern of the countries with respect to food and nutrition problems.

Furthermore, a general re-evaluation of INCAP was initiated in 1974 as a result of changes in the directors of both INCAP and PAHO, and it was decided that the priorities of the Institute needed to be redefined in terms of its present and future responsibilities to the countries. Although this process has not yet been completed, the Institute has agreed that one of its primary objectives is to assist the countries in the formulation and execution of National Food and Nutrition Programs (NFNP). To attain this objective, INCAP has created a project devoted exclusively to the developments of NFNPs in each country. It is this project that is described in this Project Paper.

- 5.2 INCAP Compared With Other Alternatives: A technical analysis of the proposed project consists briefly of an assessment of INCAP's capabilities to provide the required organizational and technical assistance, but it must also address the issue of whether INCAP can provide these services competetively measured against alternate sources. (Also refer to Chapter 6, ECONOMIC ANALYSIS).

The salary scales and overhead rate for INCAP are considerably less than that what would be obtained at a U.S. University or a private consulting company. Furthermore, INCAP boasts a worldwide reputation in nutrition, and much of the research that has led to this renown has been financed in part by AID. Hence, INCAP's contribution should be of the highest quality, making use of current technical developments. Additionally, INCAP's particular familiarity with the nutrition problems of Central America and Panama make it, in ROCAP's view, the only logical entity to carry out the project.

6. ECONOMIC ANALYSIS

The economic effects of the project include largely non-quantifiable benefits which make calculations of any internal or external rates of return impractical at this time. However, INCAP, as the implementing agency, has been requested and is prepared to develop during project implementation, quantifiable measures of the impact of changes produced by improvement in nutrition of the target population. These measures will provide the material needed to calculate rates of return to project outlays by INCAP and host countries and help managers guide future resources toward those activities with greater rates of return.

An example of what can be achieved through nutritional interventions is given by the World Bank in a recent study in Indonesia. A summary follows: 1/

"The health of the labor force is generally assumed to be an important factor in the productivity of labor. To investigate this more fully, the Bank within the framework of its study on the use of labor and equipment in civil works construction is undertaking several studies to verify and quantify the importance of this assumption.

Initial investigations of the labor force in Indonesia (see Working Paper No. 152) revealed that a major factor likely to affect the productivity of the labor force is the prevalence of iron deficiency anemia (1). This prevalence of iron deficiency anemia is the highest ever recorded in any adult male population during non-famine conditions. Eighty-five percent of the population study suffered from hookworm infestation. This was largely responsible for the finding that 45% of the adult male laborers suffered from iron deficiency anemia.

1/ International Bank for Reconstruction and Development, Staff Working Paper No. 175, "Iron Deficiency Anemia and the Productivity of Adult Males in Indonesia", April 1974.

In order to quantify the effects of anemia, a study was undertaken in which an attempt was made to correct this nutritional deficiency since it was found that the productivity of non-anemic laborers was approximately 20% greater than the productivity of anemia laborers. Treatment was elemental iron for a period of 60 days (at a cost of US\$0.13 per laborer per day) and this resulted in an increase in productivity of approximately 15% for tappers and 25% for weeders as compared to control groups.

These findings are highly significant. The benefit cost ratio in terms of latex production alone, for example, of correcting this deficiency could be 260:1. The high rate of anemia in the adult male population is almost doubled in the population of females and children. The effects of anemia on women and on the learning behavior patterns of school children is documented in other studies.

In Indonesia it would cost approximately US\$0.50 per year per person to cure the anemia and US\$0.75 per year per persons to reduce hookworm infestation in a given area, including distribution costs. The evidence suggests that an increase in the consumption of some local foods whose supply is plentiful, could lead to significant improvements in blood iron status".

While a similar cost-benefit analysis is not practical for the proposed project because returns are largely non-quantifiable in dollars and cents at this early stage, the Mission has sought to determine the cost effectiveness of the project as it has been designed. Analysis of the project's cost-effectiveness can be conducted in a straight-forward manner if it is assumed that the same benefits could be achieved with the same probability by employing other mixes of institutions like the executing agency. However, there is ample reason to believe that the magnitude and probability of achieving the same benefits by means other than those proposed in this paper would be substantially less. The assumption does permit comparing costs among alternative implementation plans which in turn permits identifying the relative effectiveness of the project.

One can identify four alternatives to permit a comparison of cost-effectiveness:

- a. INCAP coordination with the six C.A. countries i.e., the present project proposal. The cost of this project has been estimated at \$1.610 million.
- b. Each of the six countries independently contracting with INCAP for assistance in defining, analyzing, and recommending nutrition programs.

This might be a viable alternative if all countries were at the same stage of awareness of their nutritional problems and development of nutritional programs. Because they are not, it is not possible to achieve the purpose of the project in the four year time-frame without regional coordination from INCAP. In addition, past experience of the Applied Nutrition Division of INCAP has proven the necessity of maintaining a core group of experts because the development of a NNP requires the integrated assistance of multisectorial disciplines and the continuity of the same advisors working in particular countries over a period of time in order to establish the best possible working relationships with host country staffs. It would be extremely difficult, if not impossible, to hold together a core group of interdisciplinary advisors with ad hoc funding coming from six different countries on an intermittent basis. Furthermore, ROCAP estimates that the duplication involved in bilateral funding of INCAP would result in costs which would be up to 50% greater than that of alternative (a), not to mention the inefficient performance on the part of INCAP likely to result from this arrangement.

- c. A regional project similar to the one designed here, but managed by an extra-regional institution, e.g. PAHO or WHO. In view of their higher costs, overhead and greater travel and set-up expenses, we estimate this alternative to be about 20% more costly than alternative (a).

- c. The establishment of a new regional institution to conduct the project. To gear up a new entity to carry out the proposed project would require an extensive and expensive effort. We conservatively estimate that the cost of this effort would be 2 to 3 times the cost of alternative (a).

On the basis of the above, we see no economic alternative to carrying out the project with INORP as described in this project paper. The reader is again referred to Chapter 5, TECHNICAL ASSESSMENT OF INORP CAPABILITY, where it was concluded that INORP was the only logical entity to implement the project.

7. FINANCIAL ANALYSIS

The budget for the NFNP project is shown in Table 4, which provides an overall view of support from three definite sources, INCAP, the Pan American Health Organization (PAHO), and the Kellogg Foundation; and the potential source, ROCAP. The support from INCAP, PAHO, and Kellogg demonstrates that INCAP's recurring operating and maintenance costs are adequate and reasonably assured.

The INCAP Fund consists of the annual contributions of the member countries, a total of \$250,000 per year, plus \$96,000 miscellaneous income. These funds are used to support basic activities of the Institute which include three members of the NFNP Basic Program Staff identified in Annex H. Salaries that appear in the budget for these members were estimated on the basis that 50% of their time will be devoted to the project. The INCAP Fund also supports four members of other programs, and it is estimated that they will devote at least 10% of their time as participants in the Extended Program Staff, except for the coordinator of technical assistance who will devote about 30% of his time.

PAHO has contributed to INCAP throughout its history by providing salaries for several positions that are essential to the basic operational and technical assistance capabilities of the Institute. As indicated in Annex H, "Proposed Personnel for the Basic Program Staff", two of the proposed members are supported by PAHO. It is estimated that these members will dedicate full time to the program, and the figure appearing in the budget Table 4 reflects this estimate. Fifteen members of the Extended Program Staff are also supported by PAHO, and the figure given in the budget is based on the conservative estimate that they will dedicate an average of 10% of their time to the project's planning and technical assistance activities.

The Kellogg Foundation has contributed to the support of the NFNP activities of INCAP during the past three years, and the Foundation has recently approved a grant for continuation of the work through August, 1978. The requested budget of this proposal is shown in Table 4, with the main feature being the continued support of two of the present professionals. The grant will contribute substantially to funding the Extended Program Staff, travel, seminars, and short courses.

ROCAP is requested to augment the support of the "P" project in a manner that will enable INCAP to fulfill the estimated needs of the member countries during the next four years as defined in Chapter 3, DETAILED PROJECT DESCRIPTION. The proposed budget is presented in Table 4 with footnotes that describe various items in some detail. However, several points deserve special consideration:

- A. Basic Program Staff. The budget proposed to ROCAP provides sufficient funds for employing the equivalent of 3.5 members; (i.e. the equivalent of one fulltime professional and 2.5 research associates). INCAP has recently created the position of Research Associate to facilitate the employment of persons for: (1) a trial period; or (2) a short period, e.g. one year or less. This arrangement is due to the restricted scope of the task, to budget limitations, or to the fixed time of availability of the candidate, such as a sabbatical or leave of absence, since a portion of the salaries of some members will be charged to other programs, and the positions may be vacant for short periods due to the turn-over of personnel.
- B. Extended Program Staff. The INCAP budget proposal includes the full-time equivalent of one professional and 2.5 research associates. As described in Chapter 3.8, ADMINISTRATIVE ARRANGEMENTS, this line-item will be used to pay members of other programs for: (1) Part-time participation on a continuing basis in specific projects that are of high priority to the countries' NFNP efforts; and (2) short-term participation as consultants when their specialties are needed by the member countries.
- C. Short-term Consultants. The services of short-term consultants, from the region and from abroad, will be used to supplement the capabilities of INCAP, especially with tasks that are too highly specialized or of too short a duration to warrant employing a full-time professional
- D. Seminars, Courses, and Conferences. It is proposed that:
 1. National and regional seminars be organized in the countries to promote government concern with and commitment to the formulation of NFNP's.
 2. Short courses on particular aspects of NFNP's be offered; some in the countries and others at INCAP. This courses will provide training to government personnel at different levels, ranging from high-level members of the National Planning Office to auxiliary personnel involved in the

implementation phase.

3. An international conference on NFNP's be held with guest speakers and participants from all parts of the world, but with emphasis on Central and South America.

E. Other Direct Costs. Includes on-site cost of building services (maintenance, utilities, janitorial, etc.) library materials and personnel, supply procurement services, accounting and other clerical services. These costs are apportioned by INCAP as direct costs among the several projects and are charged to suitable cost categories.

INCAP has established the following cost categories and method of applying costs:

<u>Cost Category</u>	<u>Basis for Project Distribution</u>	<u>Formula for Applying Cost</u>	
Building Services	Square meters assigned to the project	$\frac{\text{Total Center m}}{2}$	$\times \text{Total m on any project}^2$
Reading Room (Library)	Professional Salaries	$\frac{\text{Total Center Cost}}{\text{Total Profes. salaries (all projects)}}$	$\times \text{Profes. Salaries on any project}$
Clerical Services	Total Proj. Expenditures	$\frac{\text{Total Category Cost}}{\text{Total Expend.}}$	$\times \text{Expenditures on any project}$

For budget purposes, 18% of cost of all project activities is included. This percentage is based on INCAP's past experience and appears reasonable.

Although the proposed budget does not extend past 1980, the project will continue with financial support from several sources. It is expected that funds from PAHO and INCAP will continue to support at least the five members of the Basic Program Staff indicated in Annex H. This insures that the project will have a minimum basis for future work. It is hoped that additional members of the Basic Program Staff will be supported, at least in part, by grants from: (1) foundations that are interested in financing specific collaborative projects in the member countries (e.g., the

Kellogg Foundation); and (2) donor organizations that wish to stimulate the development of methodologies for nutrition planning, programming, and evaluation (e.g., World Bank, IDB). Furthermore, in the case of countries that will have loans from AID or other organizations for nutrition programs, there will most likely be specific funds for technical assistance and collaborative projects that are too extensive to be fully covered by INCAP's budget. If the nutrition efforts of the member countries progress at the rate estimated in this project, there will be no need for assistance with the preprogramming activities, and the countries will have increased their capacity to handle the tasks associated with the on-going process of programming-implementation-evaluation. However, due to the size of the countries and their limited resources, it will probably not be feasible for all of them to develop the capacity necessary for handling all aspects of this process. In this case, the future role of INCAP will be to provide specialized assistance with the most complex problems, such as those encountered in the detailed design and evaluation of interventions. Much of this assistance will fall in the area of other project within the Institute and the NFNP project will focus on providing assistance that is essential to improving nutrition planning as a basic component of the national development planning process.

The Financial Analysis and Table 4, page 42 were developed on the assumption that the project would start April 1, 1976. Table 4 was prepared to reflect the calendar year operations of INCAP. The budgets indicated ROCAP's contribution for the calendar years 1976, 1977, 1978 and 1979. These contributions relate to the proposal in the Project Paper Face Sheet that ROCAP's grants would be \$335 thousand for FY 1976, \$440 thousand for FY 1977, \$460 thousand for 1978 and \$375 thousand for 1979.

With the delays in the start of the project and the reduced funding for FY 1977 in the Congressional Presentation the start of the project is now contemplated as June 1, 1976, with proposed funding as follows:

- a) \$485,000 granted in FY 1967 of which \$335,000 is for nine months funding of the project June 1, 1976 through February 28, 1977 and \$150,000 is for emergency rehabilitation of INCAP
- b) \$40,000 5th quarter funds and \$290,000 FY 1977 funds granted to fund additional nine months of March 1, 1977 through November 30, 1977;
- c) \$460,000 FY 1978 funds granted for funding December 1, 1977 through November 30, 1978;

- d) \$485,000 FY 1979 funds granted for funding December 1, 1978 through January 30, 1980.

FOOTNOTES TO ROCAP'S BUDGETED LINE-ITEMS - TABLE 4

1. Represents the full-time equivalent of two professionals and five research associates for the first, second and third year. The Basic Program Staff includes three secretaries and two program assistants during the life of the project.

In the fourth year, a 1.5 research assistant level for the Basic Program Staff is reduced by 50% and a 25% reduction is made for the Extended Program Staff because of early termination or positions absorbed by new grants. All levels are reduced by 25% in the first year because the average recruitment period is assumed to be three months.

In addition to salaries and benefits this line-item includes recruitment, installation (first year), home leave (third year) and repatriation costs (fourth year) for each of the two professionals.

Salary levels are based on INCAP's actual salary scales which are approved by the Pan American Health Organization. These scales were reviewed and found to be reasonable.

2. Equivalent to five man-months of consultant services in the first and fourth years and 10 man-months in the second and third years. An average rate of \$3,000 per man-month has been used to cover travel, per diem, and honoraria. This amount has been established by the Pan American Health Organization and is used in all programs for budgeting purposes.
3. Travel within Central America and Panama has been based on the estimated demand for technical assistance. Average cost of \$420 per man-week has been used for budgeting purposes (\$250 for airfare and ground transportation, \$150 per diem for an average trip of five days at a rate of \$30 per day, and other \$20).

It is expected that the Basic Program Staff will be traveling 1/3 of their active time (44.5 man weeks) and the Extended Program Staff 100% of their active time.

In addition to travel costs this line-item includes \$2,800 per year to cover costs related to the use of INCAP's vehicles which has been based on an average cost of \$20 per Km. including driver, depreciation, gasoline, etc., and \$3,000 in the first year to cover recruitment expenses for five of the eight candidates at an estimated cost of \$600 each (air fare \$400, per diem \$150 for five days at \$30 each, and other expenses \$50).

(Continuation)

FOOTNOTES TO ROCAP'S BUDGETED LINE-ITEMS - TABLE 4

4. Eighteen national seminars - courses for high and medium level host government employees will be organized within the member countries to promote NFNP's and to provide specialized training. The estimated cost is \$1200 per seminar or course (three the first year, six the second and third years and three the last year). This amount does not include transportation or per diem which will be paid by the host countries.
5. A one-week regional-level seminar on NFNP will be held at INCAP during the first year to acquaint representatives from all countries of the region with: (a) the existing methodologies and the experience of several countries; (b) the capabilities of INCAP to provide assistance. The estimated cost is \$10,000 for travel, per diem, and preparation of materials (12 participants at \$400 each, one consultant at \$3,000, materials and supplies \$2,200). One-week courses on nutrition programming will be offered at INCAP during the second, third and fourth years, at an estimated cost of \$5200 each (consultant one month \$3,000; materials and supplies \$2,200).
6. An international conference on NFNP is included for the third year. The estimated cost for travel, per diem, and preparation of materials will be \$25,000 (20 participants at \$850 each, two short-term consultants \$3,000 each, materials and publications \$2,000).
7. Expenses associated with the periodic evaluation of the program. Includes travel, per diem, honoraria for eight persons every 16 months at a rate of \$1,100 per person (airfare \$500, per diem, \$150 for five days at \$30 each., honoraria \$400, and other \$50).
8. An additional \$150,000 has been added to the budget after its completion to provide assistance for rehabilitation of INCAP facilities and equipment which were damaged in the earthquake of February 4, 1976. This amount is not intended to cover all of the restoration requirements but is designed to provide an AID input which, when meshed with the anticipated inputs of the consortium, will cover the costs necessary to rehabilitate INCAP's operating facilities.

SUMMARY COST ESTIMATE AND FINANCIAL PLAN

(US \$ 000)

PROJECT PAPER

Source	AID		Host Country		Other (s)		Total
	FX	LC	EX	LC	EX	LC	
Personnel	826			198	826		1850
Travel	276				55		331
Seminars, Conferences Training Courses	73				13		86
Evaluations	27						27
Other Services	126				11		137
Supplies & Equipment	21				1		22
Other Direct Costs	242			36	72		350
Inflation factor	19						19
Contingency							
Total	1610			234	978		2822
Emergency Rehabili- tation	<u>150</u>						<u>150</u>
	<u>1760</u>						<u>2972</u>

COSTING OF PROJECT OUTPUTS/INPUTS

(In \$000 or equivalent)

Project Paper

X New
Rev #

Project # 596-00-65

Title Regional Nutrition Program

Project Inputs								TOTAL
	# 1	# 2	# 3	# 4	# 5	# 6	# 7	
<u>AID Appropriated</u>								
Personnel	37	132	44	214	177	132		736
Consultants	5	16	5	26	22	16		90
Travel	14	48	17	60	66	51		276
Seminars, Courses, Conferences		6	6	12	17		32	73
Other Services	6	23	8	37	30	22		126
Supplies and Equipment	1	4	1	6	5	4		21
Program Evaluation	1	5	11	8	6	6		27
Other Direct Costs	12	44	15	70	57	44		242
Inflations			3	3	3	5	5	19
Other U. S. Kellogg								472
Host County INCAP								234
Other Donors Pan American Health Organization								506
TOTAL: AID Appropriated	76	278	100	456	383	280	37	1610
Other Donors								1212

NOTE: AID's input is increased by \$150,000 for emergency rehabilitation of INCAP facilities.

8. PROPOSED PROJECT EVALUATION PROCEDURES

8.1 Purpose of Evaluation: The objective of this chapter is to propose an evaluation procedure that would provide the following benefits to the NFNP project:

- A. Establishment of a periodic review of the achievements of the project in relation to the proposed goal and purpose of the project as defined in Chapter 3, DETAILED PROJECT DESCRIPTION.
- B. Thorough re-evaluation of priorities with respect to specific country situations and up-dating of the estimated schedule of technical assistance for each country.
- C. Identification of activities that need to be strengthened added, or omitted in order to improve the effectiveness of the project.
- D. Critical consideration of the past and future performance of the program by: (1) professionals from abroad who are considered to be among the leading authorities in problems relating to NFNP; (2) government officials from the member countries actively involved in the project; (3) representatives from institutions and agencies that provide financial and/or technical assistance to the member countries for nutrition related programs; (4) representatives of the institutions and agencies that sponsor INCAP's Project on NFNP.
- E. Joint communication between INCAP and the various institutions and agencies that provide financial support for the project concerning progress, budgetary matters, etc.
- F. Reinforcement of the awareness and commitment within INCAP to the NFNP project, thereby leading to better collaboration between the Institute's other programs and the project by identifying the most urgent potential contributions of each program, and professional at INCAP.

The past experiences of the NFNP effort of INCAP indicate that a periodic evaluation would be especially valuable to this type of project because of the wide scope of the problem that involves the collaboration of persons with diverse specialties. A definite meeting date provides a deadline to

each project member for: (1) completing certain tasks that might be postponed indefinitely due to the constant pressures of responding to the immediate needs of the countries; (2) taking a more objective view of his or her particular contributions, past and future, to the project; and (3) becoming familiar with the overall activities of the project, thereby obtaining a more integral approach and closer collaboration between members.

The evaluation procedure proposed in 8.2 represents a preliminary attempt to fulfill the objectives described above. It is expected that this procedure will also fulfill satisfactorily the primary objective of the sponsors of the project; i.e., to review the progress of the project with respect to its goal and purpose, verify continuing host country commitment to establish a planning unit to attack the nutrition problem, and to identify and approve modification as necessary for improved future performance.

- 8.2 Evaluation Procedure: Due to the unusual nature of the project and the high cost of the proposed evaluation procedure, it is suggested that the evaluation sessions be held every 16 months rather than every 12 months. This would allow for a total of 3 evaluation sessions during the proposed 4 year period. (In addition, an annual FAR will be prepared by ROCAP for the project.)

Evaluation Team: On the basis of the purpose of the evaluation proposed in this chapter, it is suggested that the evaluation team be selected according to the following guideline provided as an illustration:

<u>Designation of team members</u>	<u>Number of persons</u>
Representatives of the sponsors of the NEFP Program: 1 person each from ROCAP, Kellogg Foundation, and PAHO.	3
Government officials who are in charge of the NEFP of the member countries: 2 per session from different countries.	2

<u>Designation of team members</u>	<u>Number of persons</u>
Representatives of Central American regional organizations that are related to food and nutrition (one each session from a different organization, such as SIECA, ICAITI, CATIE, INCAE, etc.)	1
Representatives from organizations that provide nutrition-related loans to the member countries (2 from AID Missions and/or AID/Washington, one from BCIE, IDB, World Bank, etc.)	3
Officers of international organizations that provide financial and/or technical assistance to the member countries with respect to food and nutrition projects (1 each session from either UNICEF, FAO, UNDP, etc.)	1
Professional "experts" in national nutrition planning (2 persons per session from different organizations, such as the nutrition programs at John Hopkins, Cornell, Harvard, MIT, London, Sussex, or from consulting organizations such as the Transecentury Corp. and CSF Ltd., or from active governments in other regions, such as Colombia, Chile, or India.)	2
TOTAL	12

Although a team of 12 persons is so large that it might hinder communication between the team and INCAP members, the broad scope of the NFNP project requires an evaluation representing the different disciplines and experiences included above. It is strongly believed that the benefits of the evaluation process to all persons concerned will be far less if there is not a careful selection of team members to attain a proper balance representing the radically different perspectives of the NFNP problem; e.g., those of the national governments, the regional organizations, the technical assistance organizations, the source of financial support, and the theorists. A session that does not include all of these perspectives could lead to distorted, counterproductive results.

It is believed that the proposed evaluation procedure may be more clearly defined in terms of an illustrative agenda for the evaluation effort. For this reason, Annex L, "Agenda for Evaluation" has been included.

9. ENGINEERING AND EQUIPMENT ANALYSIS (Emergency Rehabilitation For INCAP)

As described in Section 3.9 "Emergency Rehabilitation of INCAP" the \$150,000 will be allocated in the following manner:

1. Library Construction	\$ 50,000
2. Furniture for Library	5,000
3. Book and Journal Replacement	33,000
4. Field Installation Reconstruction	20,000
5. Field Training Center	<u>42,000</u>
	<u>\$150,000</u>

Estimates for the line items described in Table No. 5 were determined in the following manner:

- A. INCAP Campus General: Throughout the INCAP campus there were several windows broken, items of equipment and material damaged, and superficial damage done to the buildings. The estimated cost of repair of buildings and replacement of equipment is approximately \$40,000 all of which should be covered by insurance.
- B. INCAP Building No. 2: Building No. 2 is located on the southerly boundary of INCAP and is a reinforced concrete structure. This building is made up of 3 structurally separated elements. The Basement is used for laboratories, administrative offices and a computer installation. The First Floor is used for training. The Second Floor is used for laboratories and a library installation.

This building was subjected to earthquake forces which resulted in some broken windows on all four sides of the building. Some non-bearing walls were cracked, and 3 columns along the north side of the corridor of the First Floor, Middle Section show failures due to compression.

The Second Floor suffered serious damages due to an explosion which started a fire in a warehouse located on the north side of the Middle Section on this floor. This fire caused major damage throughout the Second Floor. In the east wing electrical connections, including ducts, boxes, panels were 100% destroyed and all electrical fixtures were 100% destroyed. Damage to installed equipment was about 80%. Damage to building due to fire consisted of destroyed windows, doors, roof joists, suspended ceiling,

plaster, floors, stair railings, and roof of warehouse. The roof top shows no signs of structural damage except for displacement at expansion joints between buildings which performed very well during the lateral movement of the buildings. Two self acting air-vents were 100% destroyed.

Summary of Cost

1. Structural damage	\$68,500
2. Electrical installations	40,000

To rehabilitate Building No. 2 it is critical that certain safety innovation be introduced that include:

3. Moving Training from 1st to 2nd Floor	2,000
4. Electrical wiring & duct work	40,000
5. Ductwork for gas, steam, water, air	75,000
6. Inside plumbing for 3 labs.	35,000
7. Cabinets & counters for 3 labs.	12,000
8. Removal of brick partitions and building of fire proof partitions	10,000
9. Construction of emergency exists at east, west & south sides of building	22,000
10. Fire sprinkler system (1st. Fl.)	<u>12,000</u>
Total	316,500
+ 10% Contingencies	31,650
+ 15% Inflationary factor	<u>47,475</u>
Total	395,625
- Insurance coverage	<u>100,000</u>
TOTAL	<u>\$295,625</u> =====

The research installation located on the Second Floor will be moved to the First Floor and the training installation will be moved to the Second Floor. This is necessary due to the extremely heavy nature of the equipment used in the research laboratories.

- C. Library: Due to the fire in Building No. 2 approximately 45% of the library materials were destroyed. Previous to the destruction of these materials the INCAP Nutrition

Library was considered the best of its kind in Latin America. As such, it was an indispensable part of the research, training, and applied nutrition components of INCAP, and it must be rehabilitated to the fullest extent possible. It is necessary to locate the library in a structure other than Building No. 2 where research activities are going to be continued. For this reason INCAP has already contracted for a modest building to be built that will house the library materials because there was no other space at the INCAP campus available.

Library Rehabilitation:

1. Library construction	\$ 50,000
2. Furniture replacement	10,000
3. Book and journal replacement	<u>70,000</u>
	\$130,000
- Insurance refund	<u>42,000</u>
	<u>\$ 88,000</u>
	=====

- D. Equipment in Building No. 2: Based on a \$1,000,000 inventory listed, ROCAP estimates that there was a loss of about \$500,000 of equipment and materials in the Unified Food Control, Physiology, Chemical, and Bio-Medical Laboratories. Of the \$500,000 loss as much as half of that amount could be covered by insurance. The remainder of the \$250,000 for equipment and materials would have to be provided by the consortium.
- E. INCAP Farm: As a result of the collapse of several adobe structures on the INCAP experimental farm, two new structures will cost approximately \$22,000. ROCAP anticipates that only \$2,000 of the \$22,000 need will be covered by insurance. Additionally, INCAP had to procure a generator immediately after the earthquake to restore electricity and water to the farm installation in order to save the animal stock located on the farm.
- F. Chimaltenango Student Installation: The student field installation which is an integrated feature of the training program was completely destroyed by the earthquake. To replace it would cost approximately \$50,000 of which only \$8,000 would be covered by insurance. The original structures were constructed of adobe, but the new structures will have to be of better materials.

- G. Field Station Installation: INCAP runs 7 field stations located in villages where research data is collected. At the very least there was \$35,000 of damage scattered throughout the 7 sites of which no more than \$10,000 will be recovered by insurance.

It is quite possible that as more information from INCAP becomes available and is verified, the cost for rehabilitation will increase. All existing construction drawings of the buildings will be obtained from the Government of Guatemala's Division of Public Works. Reconstruction drawings will be prepared by qualified engineering firms, and reconstruction contracts will be a result of public bidding procedure.

TABLE No. 5

ESTIMATED COST TO REHABILITATE INCAP

	Cost	Estimated Insurance Coverage	Need
1. INCAP Campus General	\$ 40,000	\$ 40,000	
2. INCAP Building No. 2	395,625	100,000	\$295,625
3. Library	120,000	32,000	88,000
4. Equipment Building No. 2	500,000	250,000	250,000
5. INCAP Farm	27,000	2,000	25,000
6. Chimaltenango Student Installation	50,000	8,000	42,000
7. Field Station Installation	35,000.	10,000	<u>25,000</u>
			\$725,625

ANNEXES

ANNEX A

Note on the Absence of a PPP

ROCAP submitted a Preliminary Project Paper to AID/W on January 27, 1975, proposing the Regional Nutrition program described in this Project Paper. The PPP was discussed intensively with members of the DAEC who provided useful guidance. The proposal was then included in the Congressional Presentation and approved for funding for FY 1976 at a level of \$1.8 million.

Subsequently, the PBAR system, including PPPs, was developed and ROCAP moved from the development of a PROP to the development of a PP. Detailed discussions of the project and the required PP inputs took place in AID/W in July, 1975, with representatives of several DAEC members. This PP is responsive to the guidance provided the Mission representative during these consultations.

THE PLANNING AND PROGRAMMING PROCESS

OUTPUTS - ACTIONS IN COUNTRY	INPUTS - ASSISTANCE FROM INCAP
<p>1. <u>RECOGNITION OF PROBLEM:</u> Development/strengthen political and public concern for the food and nutrition problems of the country.</p> <p>1.1 <u>Significance of Malnutrition:</u> Recognition that poor nutritional status is a reliable indicator of the existence of deficient conditions of employment, health, education, housing, food supply, etc., that result in inadequate diets and high rates of morbidity, and consequently, in high rates of mortality.</p> <p>1.2 <u>National Situation:</u> Recognition of the nature, magnitude, and implications of the country's food and nutrition problems - present and future. Review of existing programs relating to these problems.</p> <p>2. <u>GOVERNMENT COMMITMENT:</u> Decision by government to give high priority to combatting food and nutrition problems.</p> <p>2.1 <u>Official Declaration:</u> Statement of the government's intent to plan and implement a national nutrition policy.</p>	<p>1.1 Reports, seminars, and discussions for informing members of the government, national institutions, and news media of the implications consequences, and costs of poor nutritional status to societal well-being and to national development.</p> <p>1.2 Information and assistance on: (a) analysis of currently available information, and planning, execution, and interpretation of food and nutrition surveys; (b) formulation of projections of food supply and demand, and of the resulting nutritional implications; (c) considerations of the potential effects of disasters; (d) evaluation of existing programs.</p> <p>2.1 Discussions with government officials for emphasizing the importance of making an official declaration at the highest political level of their intent to formulate and implement a national nutrition policy.</p>

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<p><u>2.2 Establishment of Authority and Allocation of Resources:</u> Structure for taking action to combat malnutrition including planning and implementing a National Food and Nutrition Program (NFNP).</p> <ul style="list-style-type: none">- Decision by government regarding the organizational structure for planning and implementing the NFNP, i.e. creation and training, if necessary, of a counterpart group to work with INCAP.- Allocation of existing government funds and/or creation of new funding sources to include external resources for funding the planning unit and intervention. <p>3. <u>FORMULATION OF GOALS:</u> Selection of the desired achievements (outcomes) of the NFNP defined clearly in terms of the quantitative improvements (measured by specified indicators) that are expected for the chosen target groups and geographical areas.</p> <p>3.1 <u>Target Groups:</u> Decision concerning which groups within the population should be given highest priority (e.g., pre-school children, pregnant and lactating women, landless farmers, families with unemployment).</p>	<p>2.2 Reports and discussions on the necessity for the government to establish an organizational structure that integrates the relevant ministries, offices, and institutions in a manner that insures effective channels of authority, responsibility, and communication; suggestion of possible structures, with consideration of advantages and limitations. Training programs for personnel. Suggested alternatives by which the government may finance the NFNP with existing or new sources; consideration of the relative pros and cons for each country.</p> <p>3.1 Information on the design, execution, and analysis of low-cost surveys for determining the nature and magnitude of a country's nutritional problem. Guidelines for identifying the most vulnerable groups of a population. Consideration of the relative benefits of concentrating actions on different vulnerable groups.</p>

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OUTPUTS - ACTIONS IN COUNTRY	INPUTS - ASSISTANCE FROM INCAP
<p>3.2 <u>Geographical Areas:</u> Assignment of priority to specific areas of the country.</p> <p>3.3 <u>Indicators of Nutritional Status:</u> Choice of specific indicators to be used in the statement of the goals.</p> <p>3.4 <u>Quantitative Statement:</u> Formulation of goals in terms of desired quantitative improvements to be achieved by a specific date.</p>	<p>3.2 Guidelines for interpreting available data (and collecting additional data, when feasible) to determine the needs of the different regions of a country.</p> <p>3.3 Information on the relative advantages and limitations of different indicators of nutritional impact and the conditioning factor.</p> <p>3.4 Reports and discussions on the importance of formulating quantitative goals that are realistic; guidelines for estimating the magnitude of a realistic change.</p>
<p>4. <u>ESTIMATION OF PRINCIPAL CAUSES:</u> Attempt to determine which factors are the principal causes of the country's food and nutrition problem, e.g., land availability, dietary habits, sanitary facilities and habits, etc.</p> <p>4.1 <u>Collection of Data:</u> Gathering of existing data and, if feasible, performing of surveys to obtain essential data.</p>	<p>4.1 Description of the possible causes of nutritional problems. Guidelines on the types of data that are most valuable in attempts to determine causal relations. Reports and assistance on: (a) locating and reviewing existing data; (b) designing and executing low-cost surveys (ranging in complexity from a quick trip through the priority regions to a formal survey of the country).</p>

THE PLANNING AND PROGRAMMING PROCESS

OUTPUTS - ACTIONS IN COUNTRY	INPUTS - ASSISTANCE FROM INCAP
<p>4.2 <u>Analysis of Data</u>: Examination of data to estimate the relative importance of different causes.</p> <p>5. <u>SELECTION OF INTERVENTIONS</u>: Comparison of possible interventions to determine which ones appear to be most appropriate with respect to the goals, conditions, and constraints of the country.</p> <p>5.1 <u>Essential Characteristics</u>: Definition of the desirable characteristics of an intervention (e.g., low cost, rapid implementation, high coverage, etc.)</p> <p>5.2 <u>Candidate Interventions</u>: Listing of all interventions that are considered as possible candidates.</p> <p>5.3 <u>Screening of Interventions</u>: Preliminary evaluation of interventions to select the most promising ones that should be evaluated in greater detail.</p>	<p>4.2 Methodology for analyzing data to determine the approximate relative importance of causal factors.</p> <p>5.1 Guidelines for determining what characteristics are most essential to the success of interventions under different situations.</p> <p>5.2 Extensive list of interventions that relate to the desired goals; brief description of each intervention.</p> <p>5.3 Semi-quantitative methodology that enables planners to perform a rapid, preliminary evaluation of the interventions (listed in 5.2) in terms of the characteristics defined in 5.1. (The purpose of this methodology is to reduce substantially the number of interventions that will be evaluated in detail in 5.4).</p>

THE PLANNING AND PROGRAMMING PROCESS

OUTPUTS - ACTIONS IN A COUNTRY	INPUTS - ASSISTANCE FROM INCAP
<p>5.4 <u>Detailed Evaluation</u>: Performance of a more quantitative comparison of the most promising interventions to determine which should be selected for implementation.</p>	<p>5.4 Methodology for assisting planners to conduct a more quantitative evaluation (e.g., in terms of estimated costs and effectiveness in attaining goals) of the interventions selected in 5.3, thereby providing a basis for estimating the relative value of each intervention.</p>
<p>5.5 <u>Final Selection of Interventions</u>: Final selection of interventions to be implemented taking into account expected benefits, costs, feasibility, and inter-relationship.</p>	<p>5.5 Assistance in weighing the proposed set of interventions and assessing their consistency in relation to the previously established goals.</p>
<p>6. <u>PROGRAM DESIGN</u>: Formulation of a detailed design of each of the selected interventions.</p>	
<p>6.1 <u>Design Teams</u>: Organization of appropriate groups for designing each intervention; establishment of lines of authority, responsibility and communication.</p>	<p>6.1 Guidelines for creating an effective organization for performing an integrated program design of the selected interventions. Considerations of the structure of authority and responsibility; personnel requirements (e.g., number and specialists); training and technical assistance. Organization of specialized training programs.</p>
<p>6.2 <u>Program Goals</u>: Formulation of goals for each intervention in a manner that is consistent with the goals of the overall program in a manner that is consistent with national nutrition goals.</p>	<p>6.2 Guidelines for determining specific goals for each intervention that are: (a) clearly defined; (b) realistic; (c) consistent with the overall goals. Recognition that these goals may be modified as the design progresses and yields a clearer understanding of the interventions.</p>

THE PLANNING AND PROGRAMMING PROCESS

OUTPUTS - ACTIONS IN A COUNTRY	INPUTS - ASSISTANCE FROM INCAP
<p>6.3 <u>Detailed Design</u>: Thorough design of each intervention, leading to specification of the personnel, supplies and facilities, delivery system, training, supervision, time schedule, budget, field tests, and built-in evaluation procedure, etc.</p>	<p>6.3 Methodology for detailed design of interventions. Acquisition of information essential for design purposes e.g., data on the costs and effectiveness of interventions through field tests and existing literature. Assistance in program design and evaluation.</p>

COUNTRY SPECIFIC SITUATIONS:
GUATEMALA, EL SALVADOR, HONDURAS,
NICARAGUA, COSTA RICA AND PANAMA.

I. Country Specific Situations - Guatemala:

A. Present Situation: Although the Government of Guatemala formulated a nutrition policy in 1969, and passed a decree creating a coordinating committee composed of the four Vice-Ministers of Health, Agriculture, Education, and Economics, this policy was never put into effect due to the lack of subsequent effort to develop a detailed plan. The government, however, expressed concern with the problems of food production and malnutrition, but there continued to be a lack of full awareness at high levels of the severity of the nutritional situation. Various unsuccessful attempts were made by INCAP to interest the government in the formulation of a National Food and Nutrition Program (NFNP), or to incorporate nutritional components in the national development plan. Meetings were held in 1973, with high ranking officials of the Planning Council and the Ministries of Health and of Agriculture, but with no practical results because the development plan followed a classical model predicated on accelerated economic growth.

Since 1974, however, the situation seems to be changing. A law passed late in that year requires that sugar be fortified with Vitamin A. The President, and more generally the government, recognize that adequate supply and consumption of basic grains is an essential part of their policy. There is genuine concern in the face of rising prices, speculation, and scarcity, and as a result ambitious plans are underway to increase the grain storage capacity of Guatemala. Government outlays for buying grain abroad and selling it at a loss to the population have been substantial.

Mid 1974, INCAP was approached by the Planning Council (Consejo Nacional de Planificación Económica), and requested to assist in the technical aspects of the formulation of a NFNP. A team of three INCAP professionals - a public health physician, a nutritionist-dietitian, and an agricultural economist met with planners and economists from the Planning Council. The work lasted about six months and was done on the premises of the Health Unit of the Planning Council. It consisted in: (a) collecting and analyzing available information on the nature and magnitude of the country's nutritional problem; (b) updating the projections for food demand in collaboration with a group of FAO experts and members of the Office of Statistics (Dirección de Estadísticas y Censos); (c) reviewing the current projects and sectorial plans that have nutritional impact; and

(d) discussing the results of this analysis with personnel in the various sectorial offices. Each of the traditional sectors that have nutrition-related interventions were visited, plus the Agrarian Institute (Instituto Nacional de Transformación Agraria, INTA), the Ministry of Labor, and the Social Security Institute (IGSS). Thus, besides collecting information, an intensive promotional campaign was carried out, involving many agencies.

The process ended with the publication of a document ("Política Nacional de Nutrición" Document 3, Unidad Salud, División de Recursos Humanos, SCNPE). The document expresses the nutritional dimension of the National Development Plan for 1975-1980. It also provides a basis for planning specific programs aimed at the most critical problems.

An important outcome of the group's work was the finding that the problems vary widely between regions of Guatemala in terms of both indicators of malnutrition and institutional resources. An attempt to try to interpret problems and assess plans and programs on a regional basis is required. Unfortunately, the division of the country into regions differs from one Ministry to the other. There is therefore, great urgency for a unified definition of major geographical regions through multi-disciplinary studies involving geographers, sociologists, economists, administrators, and nutritionists.

Different government agencies of Guatemala related to the Ministry of Agriculture (INDECA, Instituto Nacional de Comercialización Agrícola; BANDESA, Banco Nacional de Desarrollo Agrícola) or to the Ministry of Finance or Social Welfare, regularly request technical assistance from the Division of Applied Nutrition for program design of some of their projects. Those services are, unfortunately, provided to them on a limited basis, due in part to lack of staff time, but also to the lack of coordination between those agencies. This lack of coordination has been a major drawback to implement activities within a nutrition policy.

In sum Guatemala is still in the initial stages of beginning the planning and programming process in terms of developing public concern for the country's nutrition problem and strengthening the government's commitment to combatting this problem.

B. Estimated Future Activities: The principal objectives of the work proposed for Guatemala are: (1) to actively promote the continuation of the planning and analysis effort at an intensified level; (2) to provide the technical assistance needed for this continuation; (3) to assist in securing resources for those interventions, within the Development Plan, that will contribute to nutrition improvement.

In the promotional aspects of the project, INCAP will take the initiative to arrange meetings with high-level government officials for the purpose of emphasizing the importance of an intensified effort. The Director of INCAP would participate in these meetings to stress the Institute's concern and interest. To catalyze immediate action, INCAP would suggest what steps are most essential and would provide technical assistance specifically for these steps.

The government will be encouraged to make an official declaration of its commitment to formulate a NFNP, and it should appoint a NFNP committee, or the equivalent, with adequate authority to handle this responsibility. INCAP would then assist the Committee in programming stages, in the implementation of selected interventions, and in evaluation. Special attention will be given to the regional aspects of nutrition planning, and studies on regional problems and resources will be promoted and/or conducted.

Besides working with the Central Planning Council, INCAP will assist the health and agriculture sectors with their programming-implementation-evaluation efforts through the Ministry of Health, the Ministry of Agriculture, and ICTA (Instituto de Ciencia y Tecnología Agrícola).

II. Country Specific Situation - El Salvador:

A. Present Situation: The Republic of El Salvador compared with the other countries of the Central American Isthmus has a considerably higher population density and a scarcity of arable land. Furthermore, its other natural resources are extremely limited given the high population density. The future of its population is therefore increasingly dependent on intensifying agriculture and industrialization. More than any other Central American country, El Salvador needs to manage adequately its economic development. The same applies to the necessity of a National Food and Nutrition Program (NFNP). The need for planning and coordinating at the high level has been recognized by successive governments, and this is why El Salvador probably has the strongest, most experienced, and best organized development planning capability in the area: CONAPLAN (National Council for Economic Planning).

INCAP collaborated intensively in 1971 and 1972 with CONAPLAN in updating food consumption sheets and projections for demand, setting nutritional targets for the national development plan, and advising on sectorial interventions within the plan. The Institute also actively promoted the formulation of a NFNP.

In early 1973, a joint MIT-INCAP mission attempted to interest the government in both a supplementary feeding program, as a short term

measure, and in a long range planning process on a larger scale. Although the mission had been formally invited by the Secretary of Planning, the period of the year was poorly chosen and, due to lack of communication, the desired counterparts were not available. The mission, was therefore, a complete failure. No further work on NFNP was done in 1973 with the assistance of INCAP, although CONAPLAN, the Ministry of Health, and the Central Bank continued to meet regularly to discuss nutritional implications of parts of the Development Plan.

INCAP, however, provided a substantial amount of assistance on related problems through 1973 and 1974; (a) participation in the national cattle census (Division of Statistics and of Applied Nutrition); (b) planning of dietary surveys focusing on cowpea consumption - cowpea being recently introduced on a large scale; (c) collaboration with the Ministry of Agriculture in animal nutrition research at the experimental station at Sonsonate (Division of Food and Agricultural Sciences). Due in part to strained relations between INCAP and the Ministry of Health, and institutional jurisdiction problems between the latter and CONAPLAN, little progress was achieved towards the formulation of a NFNP in 1974. Still, as a result of three years of work, the Development Plan of El Salvador was published with nutrition guidelines, the first one in Central America. These guidelines were based, to a large degree, on earlier work done by INCAP and by GAFICA (FAO Group for Central American Integration). USAID also provided support with consulting services from the Transcentury Corporation and by sending two high ranking professionals from the Ministry of Health and from CONAPLAN to the Nutrition Planning Course at MIT in early 1975.

Since the beginning of 1975, there are signs of renewed interest in national nutrition planning, and meetings have been held both at the Ministry of Health and at CONAPLAN. The Government has taken a great interest in making the country self-sufficient in basic foods and has expressed interest in sugar fortification with Vitamin A and in vegetable mixtures.

In early 1975, a staff member from the Division of Applied Nutrition of INCAP, was stationed in El Salvador at the request of the Minister of Health and remained there until the end of June. Throughout this period, she received constant support from INCAP professionals. Later in the same year, INCAP again at the request of the Minister of Health, stationed a full term professional in El Salvador to coordinate all INCAP activity there. The presence of this permanent staff member suggests a stronger collaborative approach between INCAP and the Government of El Salvador.

B. Estimated Future Activities: CONAPLAN, with proper advice and good coordination with the Ministry of Health, could best absorb the assistance of INCAP and develop specific action programs. For the reasons expressed above, INCAP feels that it is essential to continue and intensify the action taken towards formulation of a NFNP. In a first period, which will last approximately two years, the promotion of a NFNP will receive emphasis. Teams of two or three professionals from various Divisions of INCAP will travel to El Salvador and consider, together with their Salvadoran counterparts, the different aspects of existing or projected development plans, either national or sectorial. A national seminar will be held during the first year to gain government and public opinion support for a NFNP, to define guidelines for further work, to promote multisectorial collaboration, and to motivate government authorities to allocate more resources for nutrition. Special efforts will be made to interest the private sector in the nutritional problems since influential groups are investing in agriculture and industries.

Among the actions that could be programmed and implemented for the short term are a national goiter survey (to assess the results of salt iodization), sugar fortification with vitamin A, and the development of vegetable mixtures for supplementary feeding. A permanent nutrition planning unit with minimum staff would be created and given funding, and staff. Personnel from other sectors as well would be trained. At the same time, INCAP would assist the government in finding financial support from international and bilateral sources for nutrition programs. An intensified effort is planned for the third year when an INCAP staff member would be stationed on a full-time basis in El Salvador. He would benefit from the experience accumulated by INCAP in the other countries.

III. Country Specific Situation - Honduras:

A. Present Situation: After the INCAP-OIR survey and the national seminar which followed, Honduras became the first country to create a National Nutrition Council at the ministerial level.

In 1971, CONSUPLANE (The National Economic Planning Council) sought assistance from INCAP in the formulation of nutrition guidelines within the development plan that was then being drafted. INCAP actively collaborated in the design of such guidelines which were actually incorporated in the plan. Presentation of the plan to Congress was delayed. Then, a military coup overthrew the government in 1972. The planning process, long interrupted, was resumed in 1973 and, as a part of it, an analysis of the food and nutrition situation of the population was performed. This analysis included

a study of supply and demand of foods and alternative strategies for the selection and design of interventions. Most of this analysis was incorporated in sectorial chapters of the revised national development plan. Real progress, however, was hindered by jurisdictional problems between the Ministry of Health, CONSUPLANE, and the dying National Nutrition Council. The latter was eventually declared extinct in April, 1975.

In 1974, the Ministry of Health held a seminar to which all major sectors and autonomous organizations related to nutrition sent top level executives. The seminar lasted two days, during which the INCAP Document 7 on NFNP was discussed in detail, and accepted as a general guide. Also during 1974, the development Plan was finally published. Although the Plan does not suggest specific nutrition programs, it does provide guidelines for further programming. A multi-disciplinary group of national specialists and a team from the Division of Applied Nutrition of INCAP reviewed the plans of each sector and made recommendations for specific action.

Hurricane "Fifi", in late 1974, disrupted the planning process, and did considerable harm to the economy of Honduras, both in 1974 and in 1975.

In February 1975, the Minister of Health invited a group of professionals representing key sectors in nutrition, to analyze the nutritional implications of the policies, implicit or explicit, that were embodied in the last version of the National Development Plan 1975-80. The group worked intensively during two weeks with assistance of a three-member party from INCAP. The outcome of this work was the publication of a document, "Report of the Inter-ministerial Commission for Evaluation of the National and Sectorial Plans of Social and Economic Development with respect to Food and Nutrition and for Setting the Basis for the Formulation of National Food and Nutrition Plan for Honduras, Tegucigalpa."

AID discussed with the Honduran government its interest in making a nutrition loan, and the government in turn invited INCAP to participate on the advisory team for a nutrition assessment, an initial step in the preparation of the loan.

With INCAP playing a major role, this assessment was completed December 1975. The assessment identified the major bottlenecks in the nutrition sector and proposed a list of interventions designed to address these bottlenecks. From this list of interventions the Government selected a series of interventions which they have suggested to AID be funded by the AID Loan. Presently AID is in the process of developing their loan paper which will reflect the suggestions of the Government.

The government has designated a multisectorial group within CONSUPLANE to be responsible for the planning and programming of nutritional projects. INCAP, using funds from the Kellogg grant, has provided \$22,000 to the Government of Honduras to support this group for one year.

The future activities of the Applied Nutrition Division of INCAP being dictated by the results of the assessment are:

1. Training of the multisectorial nutrition group in CONSUPLANE.
2. Collaboration with this group in the elaboration of specific projects identified in the assessment.

IV. Country Specific Situation - Nicaragua:

A. Present Situation: The interest of the Government of Nicaragua in formulating a NFNP has been sporadic. In 1972, as a result of an intensive promotion campaign by INCAP, a law was drafted creating a National Nutrition Council. Although a number of high officials seemed genuinely interested, the law was never signed. Various reasons explain why no further action was taken: general lack of awareness of the economic and social implications of the nutritional problem among government circles, press, and the public; the continued ineffectiveness of the Ministry of Health; and the almost non-existence of a Department of Nutrition. In addition, prior to the Agricultural Sector Assessment, there was a general lack of appreciation of, or desire to recognize, the importance of low income and income distribution inequalities as the major causes of malnutrition.

In 1973, however, partly with nutrition goals in mind, the National Agriculture Committee (Comité Nacional Agropecuario) undertook an assessment of the agricultural sector, surveying 1,200 families. A number of Nicaraguan and international organizations provided assistance, and INCAP participated in methodological aspects through its Divisions of Statistics and of Applied Nutrition. There is no doubt that the results of this assessment contributed to the current increased concern for nutrition problems. In 1973, INCAP also participated in the updating and nutritional interpretation of the supply and demand projections for basic grains for the period 1973-77, and in a fish consumption survey of 1,500 families conducted by the Development Institute (INFONAC).

In the emergency and post-emergency periods following the Managua earthquake of December 1972, the major concern of the Government was reconstruction. In 1974, however, a definite renewed interest in formulating a NFNP could be observed. There are various reasons for this: (1) the world food crisis; (2) the announcement of the progressive phase-out of U.S. food aid; and (3) the results of the

Agricultural Sector Assessment of 1973. The second reason may be important, since the supplementary feeding programs operated by CARE, CARITAS, and the World Food Program have been the only sizeable nutrition interventions in the country. A fourth reason can be speculated: the prospect of two loans from AID for health and for nutrition.

In late 1975, INCAP participated in the Nicaraguan health sector assessment, updating their earlier nutritional status study and formulating recommendations for Ministry of Health Nutrition related activities. The assessment document is presently under review by the Nicaraguan Government.

B. Estimated Future Activities: The role of INCAP as advisor to the Nicaraguan Government in the formulation and implementation of a NFNP must, by necessity, be very flexible and pragmatic. This role will largely depend on the results of the present negotiations between the government and AID for a nutrition loan. The government will show its interest by securing counterpart funds to the projected loan.

INCAP would provide technical advisory services to the government in three stages of the national effort:

- 1) Creation of a planning structure at the central level to formulate, coordinate, and evaluate the NFNP, provision for training the staff; and performance of special studies.
- 2) Formulation of a nutrition policy as a general guideline for the design and implementation of sectorial and intersectorial programs.
- 3) Programming and implementation of interventions.

The assistance of INCAP would be focused on those interventions with which the Institute is particularly skilled and experienced (Nutrition and health delivery systems; food sciences; food technology, etc.) In addition to providing advisory services, the Institute will assist in developing human resources through the formal courses and seminars and by on-the-job training of key counterparts.

Two important considerations must be kept in mind when discussing the Nicaraguan situation. The first is the heavy emphasis that will be required during the first year on informing and motivating the government, public opinion, and the private sector about the nutrition factor. The other is the close collaboration

required with other agencies who are already or will be working in nutrition, such as CARITAS, CARE, FAO, UNICEF, and INCAE.

V. Country Specific Situation - Costa Rica

A. Present Situation: The government of President Oduber declared that high priority would be given to the problem of combating malnutrition. Consequently, during 1974 the GOCR with assistance from INCAP established the basic guidelines for a National Food and Nutrition Policy. At the request of the Minister of Health, a 3-man team went to San Jose in May, 1974, to discuss these guidelines with members of different ministries. This was followed by a visit in July which included meetings with the First Vice President and the Ministers of Health, Agriculture, Economy and Education. The Director and the Vice-Director of the Caribbean Food and Nutrition Institute joined INCAP in this visit to describe Jamaica's recent experience in formulating a NFNP.

In December, 1974 the GOCR passed the Social Development and Family Assistance Law which established special taxes whose revenues would be utilized to finance a large scale multi-pronged nutrition program. In 1975, the GOCR devoted \$25 million to this program and had budgeted \$32 million for 1976. The basic strategy consists of utilizing measures to attack the causes of malnutrition as the principal means for improving the socio-economic status of marginal population in both rural and urban areas.

Parallel to these efforts, in 1974 the GOCR passed a law requiring that sugar be fortified with Vitamin A. INCAP collaborated actively with local groups in promoting this law, and the government adopted the fortification process developed by the institute. During the year, INCAP also provided technical assistance relating to nutrition surveys, on-going nutrition programs of the Ministry of Health, dietary services and hospital, and feasibility studies for producing a low-cost food product (vegetable mixture).

In May 1975 INCAP participated in the drafting of the work-scope for the nutrition assessment which preceded the development of a nutrition loan proposal by USAID/Costa Rica. This loan was authorized by AID/W in December 1975.

B. Estimated Future Activities: Costa Rica has already developed a planning and programming capability and is well into the implementation phase of its national nutrition program. Given these circumstances, the role of INCAP technical assistance as provided under this grant over the next few years, is envisioned as concentrating in the fields of systems design, evaluation of interventions, strengthening of institutional capability and recommending possible

reorientations to the GOCR's on-going program. In this regard, it is essential that INCAP inputs through this grant be coordinated with the technical assistance provided under the AID Loan 515-T-026.

A brief description of what the GOCR's national food and nutrition program consists of. The following is a brief description of the five major interventions which is the essence of the GOCR's national food and nutrition program:

- 1) Preventive health services in rural communities with an emphasis on rural population living in towns of 500 people or less.
- 2) Feeding programs for children 0 to 12 years of age in poor rural areas and in marginal urban communities.
- 3) Construction of water systems in rural communities with between 200 and 1,000 inhabitants.
- 4) Installation of sanitary latrines in homes of poor rural families.
- 5) Construction of low-cost homes for poor rural families.

In order to better illustrate the magnitude of this program, the following list indicates the targets reached by the above five interventions since they were initiated in April of 1975.

- 1) The program is supporting the operation of 114 health posts covering approximately 350,000 rural inhabitants in dispersed rural areas.
- 2) The feeding program consisting of the provision of two meals per day is covering 32,500 pre-school age children and 100,000 school-age children.
- 3) 70 rural water systems were built covering approximately 50,000 people.
- 4) 7,000 latrines were installed in rural areas.
- 5) 740 low-cost homes were built for as many poor rural families.

Costa Rica, due to a strong commitment to education, has now developed the human resources base needed to meet most of the requirements of government, industry, and universities. Recently, the country has indicated that all foreign technical assistance should be truly

collaborative under the direction of Costa Rican nationals. It is expected that INCAP and Costa Rica will continue to have a very active and productive relationship, but with technical assistance in the traditional sense being replaced by collaborative efforts on the development of improved methods for evaluating, assessing and, if necessary, re-programming nutrition interventions and their related programs.

VI. Country Specific Situation - Panama:

A. Present Situation: The nutritional status of the people of Panama is substantially better than in the other member countries of INCAP with the possible exception of Costa Rica. All available indicators point to a steady improvement of nutrition, although there remain pockets of poverty and malnutrition, particularly in isolated areas. Panama is, in classical economic terms, relatively more developed. The government, and particularly the Ministry of Health, have more resources available for services to the population. The situation, therefore, is different from most of the countries of the area: less malnutrition, more resources to combat it, and a general trend towards improvements.

More importantly, perhaps is the genuine and rather long-standing interest of the government in improving nutrition as a part of its overall policy. Still, such institutional problems overlapping of responsibilities of the various ministries and conceptual differences in development approaches have slowed the formulation of a NFNP:

To date, activities in the area of nutrition have been taken largely by the Ministry of Health with an ancillary role for the voluntary agencies. The Ministry has a dynamic approach to health and nutrition, which includes community responsibility and participation in delivering health services, the decentralization of health planning activities, an emphasis on nutrition and health education, and the creation of an awareness of public health problems in the populace. In addition, the Ministry was successful in installing a public service attitude among health personnel. In 1971, the first of a series of nutrition seminars was conducted in one small village, followed by numerous sessions in which the village and the civil servants from the health sector discussed nutrition problems. This led to a joint decision-making process to confront nutrition problems. The active participation of government personnel in the discussion of local problems was a revolutionary approach to community nutrition problems. INCAP participated in some of these seminars, including the first one at Cerrocama and has continued to follow the development of this program. Specific AID support to the program has been in the form of a \$3.8 million loan for Rural Community Health and Nutrition.

In 1973, nutrition was recognized as a basic government responsibility, and the task to formulate a NFNP was described in a special article of the new Constitution of the Republic. The Ministry of Planning started a study of poverty in the same year, a study in which INCAP participated in the development of certain methodological aspects such as the analysis of diets and diet deficits according to socio-economic level. In 1973, and 1974, the Institute actively participated in drafting an intervention program with a multisectorial group of national professionals. In the first phase, which is now operational in one province, supplementary feeding was given to deprived groups in selected communities, followed as soon as possible by a rehabilitation program involving technical and financial assistance in agriculture, sanitation, health services, and community organization. The budget for this program in 1975 was estimated at approximately \$1,000,000.

INCAP also provided assistance in 1974 to the Ministry of Agriculture, the office of Census and Statistics, and the Ministry of Planning, in assessing the food and nutrition situation of the country and updating the annual food balance sheets. Staff from FAO and AID collaborated in this activity. Later in the same year, a study group was appointed to review the food and nutrition components of existing sector development plans.

Additionally in 1974 INCAP participated in the design of the supplementary feeding program put in operation in the Veraguas province and in an endemic goiter survey covering the whole country which was a part of a national nutrition survey.

B. Expected Future Activities: Although Panama has not begun the formulation of an explicit NFNP, the government has underway several programs which clearly indicate that nutrition is a high priority concern for improving the conditions of the rural poor. A NFNP would provide the government with a broad, systematic framework for defining the principal nutritional problems and goals, achieving better cooperation among the various agencies with ongoing nutrition programs, determining which new interventions would be most cost effective, and for monitoring the overall effort. There is also the immediate need to develop a specific capability to evaluate on-going nutrition activities. For example, the community garden and water supply components of the AID loan have been implemented but no attempt has been made to measure nutritional impact. Prior to continuing with these two activities some concrete assessment must be made regarding their impact on nutritional status of the target group.

The new chief of the Nutrition Department of Panama's Ministry of Health completed INCAP's post-graduate course in 1974 and remained for five additional months to concentrate on areas of special interest.

During this period he devoted the major part of his time to working closely with the Division of Applied Nutrition in the area of NFNP. An excellent working relationship was established, and he expressed a desire to have INCAP's assistance in the formulation of an NFNP in Panama.

The Minister of Health, when visiting INCAP in November 1975, outlined his requirements for specific technical assistance from INCAP. Later in the year, a mission consisting of representatives for four divisions of INCAP visited the country to set the basis for joint work in the future which included some of the preliminary steps to the formulation of a national nutrition plan. During the visit several projects for INCAP technical assistance to Panama were identified which included evaluation of the supplementary feeding program, development for nutritional surveillance system, training of nutrition auxiliaries, normalization of the auxiliaries' activities in the health posts, enrichment of Nutrebien with iron, development of a program for the conservation of agricultural products that easily deteriorate, using yucca flour in bread preparation, and preparation of banana, plantain and yucca flour fortified with protein.

At the end of the first year of the project, a high-level, multi-sectorial regional meeting on NFNP should be held in Panama. The purpose of the meeting would be to: (a) discuss the reason for formulating a NFNP; (b) stress the necessity of establishing an integrated, multi-sectorial planning approach for nutrition and (c) formulate a future plan of action. Representatives from the other five countries would discuss the progress made toward developing a NFNP in their respective countries, thereby promoting an inter-change of ideas, experiences, and methodologies.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ANNEX D

Life of Project: 76 to FY 80
Total Project Cost: \$1,760,000
Date Prepared: January 19, 1978

REGIONAL NUTRITION PROJECT

NO.	OBJECTIVE	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
1	General objective to create an environment in which the rural population in the six countries can benefit from development in the six countries.	Measures of Goal Achievement At the Project Purpose level, the project is designed to promote creation, in four of the six countries, an institutional infrastructure responsible for the selection/design/implementation/evaluation of interventions that will impact directly on the nutrition status of the poorest majority. Therefore, ROCAP concluded that at this point, it was not reasonable to pinpoint specific areas of the nutrition problem that will be affected by interventions since the specific interventions have yet to be selected. Though we can hypothesize that interventions will be selected to attack either the Iron Anemia, Vitamin A, or PCM problem, the level of resource commitment will directly influence the degree of effectiveness of any one intervention. Therefore, we are in highly problematical area when it comes to attempting to predicting the degree or percentage of incidence of reduction we can expect with regards to any of the major nutrition problems in any one country in the region. However, as specific interventions in each country setting evolve, it will be absolutely necessary to address this problem of measuring goal achievement on an intervention by intervention basis, particularly as a means for calculating the relationship in project terms between the Project Goal and the Project Purpose.	As specific interventions evolve, there are ways to measure goal achievements. For example, should a country select as its goal the improvement of the nutritional status of high risk groups such as preschool children (0 to 5 years of age), the most common indicator of the nutritional status of children according to the Gomez classification would certainly be employed which looks at body weights relative to a standard weight corresponding to age. Weight for height ratios would also be employed because they reflect more accurately the current nutritional status of children. Data on heights and weights should be available in the future as a result of national surveys conducted periodically by the countries. These surveys are not yet established in all of the countries, but INCAP is actively promoting their establishment and is providing technical assistance. Surveys could also indicate deficient levels of plasma retinol or other measures relating to Vitamin A deficiency, and deficient measures relating to iron deficiency.	Assumptions for achieving goal: That the six countries: 1. Recognize malnutrition as a serious national problem. 2. Have the capability to formulate and implement National Food and Nutrition Programs. 3. Have the financial and human resources as well as the political will to carry out selected nutrition interventions.
2	Specific objective to establish a National Food and Nutrition Program (NFNP) technical assistance unit that has the capacity to initiate and sustain an effective programming-implementation-evaluation process in four of the six countries in Central America and Panama.	Conditions that will indicate purpose has been achieved: End of project status: The conditions expected to exist at the end of the project period are the following: 1. Technical and administrative units capable of continuing analysis, design implementation and evaluation interventions will be operating in 4 of the 6 participating countries. 2. All of the countries will be working toward or actually undertaking implementation of a nutrition intervention, and four of the six countries will be receiving funding for their National Food and Nutrition Program Planning staffs from national sources or international sources on a nutritional basis.	1. INCAP Trip Reports. 2. ROCAP Trip Reports. 3. INCAP/ROCAP Quarterly Reviews. 4. Major evaluation to be undertaken every 16 months including end-of-project evaluation. 5. Annual Calendar of Operations detailing inputs for each country over each 12 month period prepared by INCAP. 6. Agreements detailing INCAP and host country participation and commitment.	Assumptions for achieving purpose: 1. That INCAP can locate and attract professionally competent staff members. 2. INCAP will continue to be able to attract outside funding for its Applied Nutrition Division. 3. Governments of the six countries will continue to request the technical assistance of the Applied Nutrition Division of INCAP.

INPUTS TABLE^{1/}

	First Year				Second Year				Third Year				Fourth Year			
	INCAP	PAHO	KELLOGG	ROCAP	INCAP	PAHO	KELLOGG	ROCAP	INCAP	PAHO	KELLOGG	ROCAP	INCAP	PAHO	KELLOGG	ROCAP
Personnel	46	121	112	174	47	115	112	222	52	126	114	231	53	126		199
Travel		3	12	60		5	14	76		5	11	75		5		65
Workshop Conferences			7	14			6	12				37				10
Workshop Courses								9				9				9
Consultations							4	35			3	35				32
Other Services			4	25				3				3				3
Supplies and Equipment			1	11												
Other Direct Costs	8		24	51	9		24	64	10		24	70	9			57
Inflation								19								
Total	54	124	160	335	56	120	160	440	62	131	152	460	62	131		375
Emergency Rehabilitation				150				485								

PROJECT OVER FOUR YEARS

	Consortium Fund For Reconstruction			
	INCAP	PAHO	KELLOGG	ROCAP
Total	234 (7%)	506 (14%)	472 (13%)	1760 (50%)
Personnel	198	488	338	826
Travel		18	37	276
Supplies, etc.			13	73
Other	36		84	339
Inflation				576

^{1/} ROCAP inputs will be financed by the following fiscal year funding inputs:

FY 1976 - \$485
I.O. - \$40
FY 1977 - \$290
FY 1978 - \$460
FY 1979 - \$485
Total - 1760

SAMPLE FORM

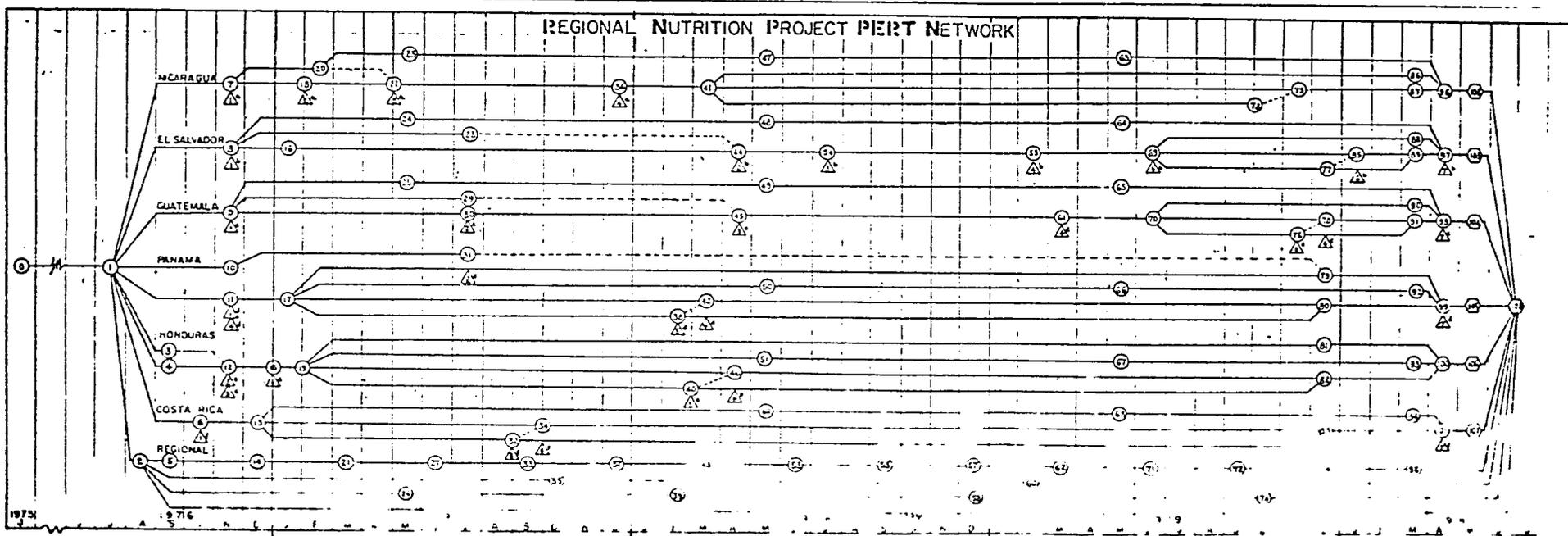
country:	project no:	project title:	date:	/ / original / / revision #	approved:
ROCAP	596-0065	REGIONAL NUTRITION PROGRAM			
<u>CPI NARRATIVE</u>					
1. 08-15-76	Basic and extended program staff personnel on board at INCAP.				of NFNP's (15 to 25 participants).
2. 12-01-76	Undertake review of the specific situation of all six countries with regard to status of development of National Food and Nutrition Program (NFNP) and prepare and sign an annual calendar of operations with each member country. Prepare and sign a formal protocol describing govt. and INCAP participation with each member country.		7. 03-15-78		Preliminary Assessment Documents of the food and nutrition situation, which analyze existing data on the nature, magnitude, and implications of the problem; review existing policies and interventions relating to the nutrition problem, completed in at least four of the six Central American countries.
3. 06-01-77	First Regional Seminar held to promote government concern and commitment to the formulation of NFNP's. (15 to 25 participants).		8. 06-15-78		National Seminars on data analysis interpretation of assessment findings and elaboration of quantitative nutrition goals held in each of the Central American countries. (15 to 25 participants per country).
4. 06-15-77	National Seminars held in Guatemala, El Salvador, and Nicaragua to promote government concern and commitment to the formulation of NFNP's. (15 to 25 participants).		9. 08-01-78		Official government statements of the intent to establish and implement NFNP's with preliminary description of the national situations and the proposed approaches to include organizational and financial plans. (Four of the six Central American countries.)
5. 11-15-77	First interim evaluation completed by: ROCAP, Kellogg, PAHO, Central American Governments, Central American regional organizations, professional experts, etc. for a total of 12 members, to determine progress to date in achieving project objectives and to expose implementation problems.		10. 11-15-78		International seminar held on NFNP to include methodologies, practical case studies, evaluations, with guest speakers from all parts of the world, but with emphasis on Latin American. (Participants: 35 to 50).
6. 02-01-78	Hold Second Regional Seminar for high				

SAMPLE FORM

country: ROCAP	project no: 596-0065	project title: REGIONAL NUTRITION PROGRAM	date:	/X / original / / revision #	approved:
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CPI NARRATIVE

- | | |
|---|--|
| <p>11. 03-01-79 Third Regional Seminar held on nutrition programming for planners and administrators from government and private agencies. (15 to 25 participants)</p> <p>12. 04-01-79 Design of NFNP planning units that will serve as the technical administrative arm of the NFNP committees: organizational structure and responsibility and selection of the staff, completed in at least four of the six Central American countries.</p> <p>13. 05-01-79 Second interim Evaluation completed (some as CPI No. 5).</p> <p>14. 06-15-79 National Seminars in nutrition planning and programming held in each of the six Central American countries. (15 to 25 participants per country).</p> <p>15. 12-01-79 Detailed design completed of new interventions (in all six countries) based on a planning capability already in place (in at least 4 of the 6 countries)</p> <p>16. 01-02-80 Fourth Regional Seminar to exchange experiences in nutrition planning, programming, and evaluation (15 to 25 participants).</p> | <p>17. 02-01-80 Evaluation of new interventions (See CPI No. 15) carried out by at least four of the six Central American countries.</p> <p>18. 04-01-80 National Seminars on nutrition planning and evaluation problems held in Panama, Honduras and Costa Rica. (15 to 25 participants per Country).</p> <p>19. 04-15-80 Integrated planning, implementation and evaluation systems in place and working in at least four of the six Central American countries.</p> <p>20. 07-01-80 Final Project Evaluation completed.</p> |
|---|--|



PERT GUIDE

<u>No.</u>	<u>Description</u>	<u>Responsible</u>
0	Starting (January 75).	Designed and Submitted to AID/W
0-1	Prepare and obtain approval of PP, prepare and sign a contract with PAHO (June 1, 1976).	ROCAP, AID/W INCAP, PAHO
1-3	Analyze the specific situation of the country with regard to status of development of NFNP. Prepare an annual calendar of operations describing govt. and INCAP participation.	GOH, INCAP, ROCAP, USAID
1-6		GOCR " " "
1-7		GOES " " "
1-8		GOG " " "
1-9		GOP " " "
1-10		
7-20	Continue to strengthen political and public concern for the food and nutrition problems of the country. Meetings with high level officials.	INCAP - GON
9-29		INCAP - GOES
8-28		INCAP - GOG
16-44	Continue with the preliminary assessment of the food and nutrition situation; analyze existing data on the nature, magnitude, and implications of the problem; review existing policies and interventions relating to the problem.	INCAP - GOES
9-30		INCAP - GOG
1-4		INCAP - GOH
7-18		INCAP - GON
18-22	Formulate an official government statement of the intent to establish and implement NFNP with preliminary descriptions of the national situation and the proposed approach to include organizational and financial plans.	INCAP - GON
44-54		INCAP - GOES
30-45		INCAP - GOG
10-31		INCAP - GOP
4-12		INCAP - GOH
22-36	Design of a NFNP Planning Unit (PU) that will serve as the technical administrative arm of the NFNP Committee: organizational structure, responsibility, and selection of the staff.	INCAP - GON
54-59		INCAP - GOES
45-61		INCAP - GOG

<u>No.</u>	<u>Description</u>	<u>Responsible</u>
1-11 12-15	Continue designing of a NFNP Planning Unit (PU) that will serve as the technical-administrative arm of the NFNP Committee; organizational structure, responsibility, and selection of staff.	INCAP - GOP INCAP - GOH
36-41 59-69 61-70	Define general working plan; i.e., authority and responsibilities of Planning Unit (PU) in relationship to line Ministries. (Mechanisms for coordination and communication).	INCAP - GON INCAP - GOES INCAP - GOG
11-17 15-19	Continue defining general working plan; i.e., authority and responsibilities of Planning Unit in relationship to line Ministries: (Mechanisms for coordination and communication).	INCAP - GOP INCAP - GOH
41-86 69-88 70-90 17-79 19-81	Develop planning capability along the lines described in Annex B and gather baseline data.	INCAP - PU N INCAP - PU ES INCAP - PU G INCAP - PU P INCAP - PU H
6-13	Complete the detailed design of new interventions based on a planning capability already in place.	INCAP - PU CR
41-73 69-77 70-76 17-38 19-40 13-32	Implement newly designed interventions with integral evaluation component.	INCAP - GON INCAP - GOES INCAP - GOG INCAP - GOP INCAP - GOH INCAP - GOCR
73-87 77-89 76-91 38-80 40-82 32-83	Complete newly designed interventions.	INCAP - GON INCAP - GOES INCAP - GOG INCAP - GOP INCAP - GOH INCAP - GOCR

<u>No.</u>	<u>Description</u>	<u>Responsible</u>
41-75	Implement integral evaluation component of intervention.	INCAP - GON
69-85		INCAP - GOES
70-78		INCAP - GOG
17-42		INCAP - GOP
19-46		INCAP - GOH
13-34		INCAP - GOCR
75-87	Continue design new interventions based on evaluation findings.	INCAP - GON
85-89		INCAP - GOES
78-91		INCAP - GOG
42-80		INCAP - GOP
46-82		INCAP - GOH
34-83		INCAP - GOCR
20-23	Conduct National Seminars on an annual basis in each country over the life of the project.	INCAP - GON
23-47		" "
47-63		" "
3-24	Conduct National Seminars on an annual basis in each country over the life of the project.	INCAP - GOES
24-48		" "
48-64		" "
9-25	Conduct National Seminars on an annual basis in each country over the life of the project.	INCAP - GOG
25-49		" "
49-65		" "
17-50	Conduct National Seminars on an annual basis in each country over the life of the project.	INCAP - GOP
50-66		" "
66-92		" "
19-51	Conduct National Seminars on an annual basis in each country over the life of the project.	INCAP - GOH
51-67		" "
67-93		" "
13-52	Conduct National Seminars on an annual basis in each country over the life of the project.	INCAP - GOCR
52-68		" "
68-94		" "
63-96	Integrate the individual activities to form a national system for sustaining the programming, implementation, and evaluation process.	INCAP - GON/PU
86-96		
87-96		
64-97	Integrate the individual activities to form a national system for sustaining the programming, implementation, and evaluation process.	INCAP - GOES/PU
88-97		
89-97		

<u>No.</u>	<u>Description</u>	<u>Responsible</u>
65-98 90-98 91-98	Integrate the individual activities to form a national system for sustaining the programming, implementation and evaluation process.	INCAP - GOG/PU
79-99 92-99 80-99	Integrate the individual activities to form a national system for sustaining the programming, implementation and evaluation process.	INCAP - GOP/PU
81-100 93-100 82-100	Integrate the individual activities to form a national system for sustaining the programming, implementation and evaluation process.	INCAP - GOH/PU
94-101 83-101	Integrate the individual activities to form a national system for sustaining the programming, implementation and evaluation process.	INCAP - GOCR/PU
96-102 97-103 98-104 99-105 100-106 101-107	Execute a country program evaluation.	INCAP - ROCAP - GON INCAP - ROCAP - GOES INCAP - ROCAP - GOG INCAP - ROCAP - GCP INCAP - ROCAP - GOH INCAP - ROCAP - GOCR
1-2	Begin the regional system for nutrition information exchange among the six countries.	INCAP
2-5 5-14 14-21 21-27 27-33 33-37 37-43 43-53 53-55 55-57 57-62 62-71 71-72 72-84 84-95	Quarterly Project Reviews.	INCAP/ROCAP

<u>No.</u>	<u>Description</u>	<u>Responsible</u>
2-35 35-60	Performs interim program evaluation every 16 months.	INCAP/ROCAF/GOVTS/USAIDS
2-26	One Regional Conference.	INCAP
26-39 39-58 58-74	Three Regional courses, one per year.	INCAP
2-56	One International Conference.	INCAP
102-108 103-108 104-108 105-108 106-108 107-108 95-108 60-108 74-108 56-108	Final program evaluation.	INCAP - ROCAF

OUTPUTS = Δ

<u>No.</u>	<u>Description</u>	<u>Responsible</u>
1A	Formal Protocols (Agreements) and annual calendars of operations drafted and signed.	GON
1B		GOES
1C		GOG
1D		GOP
1E		GOH
1F		GOCR
2A	Preliminary Assessments Documents completed. (Analysis of nutrition problems and programs)	GON
2B		GOES
2C		GOG
2E		GOH
3A	Evidence of official host country commitment, to establish a planning unit (Statement of Intent, Decree, etc.)	GON
3B		GOES
3C		GOG
3E		GOH
4A	Design for Planning Unit completed	GON
4B		GOES
4C		GOG
4D		GOP
4E		GOH
5A	Design of New Interventions completed.	GON
5B		GOES
5C		GOG
5D		GOP
5E		GOH
5F		GOCR
6A	Evaluation of initial new interventions completed.	GON
6B		GOES
6C		GOG
6D		GOP
6E		GOH
6F		GOCR
7A	Integrated Planning, Implementation, and Evaluation System operational.	GON
7B		GOES
7C		GOG
7D		GOP
7E		GOH
7F		GOCR

ANNEX F

The Statutory Checklist has not been developed for grant projects.

ANNEX G

PROFESSIONAL MEMBERS OF THE DIVISION OF APPLIED NUTRITION OF INCAP (as of June 30, 1975).

José ARANDA-PASTOR, M.D., M.P.H., formerly Professor of Epidemiology, University of The Andes, Venezuela. From Spain.

Marly BAEZ, M.P.H. (Puerto Rico), Assistant Professor, Institute of Nutrition, on leave from the University of Pernambuco, Recife, Brazil. From Brazil.

Ivan BEGHIN, M.D. (Brussels, Belgium), M.S. (Columbia University), Chief of the Division, formerly PAHO Nutrition Advisor in Haiti, Washington, D.C., and Brazil. From Belgium.

Vernon BENT, B.S. (Interamerican Agriculture College, Zamorano, Honduras); M.S. (University of Florida); agricultural economist formerly with CEDINA, the National Food Distribution Center, Nicaragua. From Nicaragua.

Ana Rosa CAMPOS, formerly Chief Dietitian, Social Security Hospital, San Salvador, El Salvador. Past President, Central American Association of Dietitians and Nutritionists. From El Salvador.

Juan DEL CANTO, B.S. (University of Chile); M.S. (Michigan State University), agricultural economist, formerly one of the three directors of the Agricultural Development Planning Agency of Chile and Associate Professor of Agricultural Economics, University of Chile. From Chile.

Marina FLORES, B.S. (Harvard School of Public Health), M.S. (Cornell University), Chief, Dietary Studies Section. From Guatemala.

María Teresa MENCHU, Biochemist (San Carlos University, Guatemala), M.P.H. (Puerto Rico), Public Health Nutritionist presently stationed in Honduras. From Guatemala.

Alberto PRADILLA, M.D. and Pediatrician (Cali, Colombia), formerly Associate Professor and Head of Department of Pediatrics, Cali, Colombia. From Colombia.

Robert STICKNEY, B.Sc., (UCLA), Ph.D. (Berkeley), Systems Analyst and Professor of Mechanical Engineering, Massachusetts Institute of Technology, on leave from the Department of Mechanical Engineering, MIT. From the U.S.A.

PROPOSED PERSONNEL FOR THE BASIC PROGRAM STAFF^{a)}

Job Title	Job Description	Salary provided by:
Program Director	Manage the overall program, including financial responsibilities, recruiting assignment of duties, contractual obligations, relations with countries, collaboration and coordination with other INCAP programs.	PAHO
Country Project Officer #1	Stationed in Honduras to: assist the Ministry of Health with Nutrition programs; collaborate with an intersectorial committee in the formulation of a NFNP; serve as a liason between INCAP and the government, arranging for technical assistance as needed.	INCAP
Country Project Officer #2	To be stationed in a country (e.g., Panama, El Salvador) that has interest in formulating and executing a NFNP; collaborate directly in the government effort, and arrange for technical assistance from INCAP as needed.	Kellogg
Development Planner	Assist the National Planning Offices of the member countries in: understanding the need for a NFNP as a component of the overall socioeconomic development plan taking into account the demographic component as it impacts on the nutrition problem; establishing an effective planning effort with the necessary resources; carrying out the planning and programming stages.	ROCAP
Agricultural Economist	Provide assistance on the agricultural component of a NFNP, including food balance calculations and projections, and strategies for relieving nutrient deficits. Participate in regional organizations related to agricultural policy (SIECA, CAN, BCIE).	PAHO

PROPOSED PERSONNEL FOR THE BASIC PROGRAM STAFF

Job Title	Job Description	Salary provided by:
Health Officer #1	Specialist on the design and execution of nutrition and health programs including family planning, with emphasis on the operational aspects of delivery systems (e.g., training of auxiliaries, designation of tasks, systems of supervision and evaluation).	INCAP
Health Officer #2	Provide assistance with the health component of a NFNP, including diagnosis of the nutrition-health-family planning problems and comparison of the potential value of various health programs (basic MCH/FP care, potable water, supplementary feeding, etc.)	Kellogg
Nutritionist #1	Assist countries with: the design, execution, and interpretation of nutritional surveys, which include a fertility component; formulation of low cost diets that satisfy the recommended daily nutrient intakes; calculation of food balance sheets.	INCAP
Nutritionist #2	Specialist on the design and execution of supplementary feeding programs and nutritional rehabilitation centers, including training and supervision of personnel, norms, evaluation procedures, etc.	ROCAP
Systems Analyst	Collaborate with other program members in the development of a flexible, simplified planning methodology that will guide the countries in: (a) diagnosing their specific food and nutrition problems; and (b) estimating which potential interventions are expected to be most appropriate.	ROCAP

PROPOSED PERSONNEL FOR THE BASIC PROGRAM STAFF

Job Title	Job Description	Salary provided by:
Statistician/ Epidemiologist	Assist the program and the countries with the design and implementation of information systems, i.e., the collection, processing, and interpretation of food and nutritional data needed for planning and evaluation.	ROCAP ^{b)}

Notes:

- a) The job titles and descriptions are illustrative rather than restrictive, since the success of the team approach requires a collaborative effort in which the participants are not bound by titles or post descriptions.
- b) 50% of his time will be devoted to the project. Therefore, it is proposed that 50% of his salary be paid with ROCAP funds.

ANNEX I

Draft of Project Description for Use in the Project Agreement

ROCAP does not intend to use a Project Agreement for obligation of funds for this activity. A contract with the Pan-American Health Organization (PAHO), representing INCAP, will be developed.

The Summary Description, the Detailed Project Description, Logical Framework, and Implementation Plan will make up the general Scope of Work for the Contractor. Moreover, the entire Project Paper will be attached to the Contract as an Annex in order to give the Contractor the required background and perspective on the design and scope of the total program.

Capabilities of INCAP to Provide Assistance Relating
to National Food and Nutrition Programs

Areas	Assistance Capabilities
<u>Sources of Nutrients</u>	Technical and economic considerations of nutrients with emphasis on their contributions to specific nutrient deficiencies of the given area or country.
<u>Basic Foods</u>	Determination of the properties (e.g., nutrition value, physical and organoleptic characteristics) of the basic cereals and legumes of the region; effects of processing and storage.
<u>Utilization of Agro-Industrial By-products</u>	Technical assistance on the potential use of agricultural by-products in a manner that is attractive from the viewpoint of economics and ecology.
<u>Diets</u>	Determination of the nutrient deficiencies of current diets, and suggestions regarding dietary changes that will reduce these deficiencies in a manner that is consistent with economic and cultural constraints.
<u>Food Technology</u>	Assistance with the technology of processing foods and food mixtures to obtain low-cost, highly-nutritious products.
<u>Control of Foods</u>	Analysis of the chemical composition of foods to determine if health and nutritional standards are satisfied.
<u>Interventions in the Agro-industry Sector</u>	Technical and economic considerations of the potential benefits of different agro-industrial interventions.

Program Title	Assistance Capabilities
<u>Nutrition, Growth, and Physical and Mental Development</u>	Provide information of the effect of malnutrition on physical and mental development, and on improvements obtained by supplementary feeding.
<u>Population and Demography</u>	Information on the effects of nutrition and health interventions on population growth rate, cultural, and socio-economic factors that influence the desired family size.
<u>Rural Development</u>	Provide assistance with respect to the nutritional consequences of various rural development activities and the contributions of nutrition interventions to rural development.
<u>Nutrition Inter- ventions in the Health Sector</u>	Technical assistance on design, execution, and evaluation of nutrition interventions which include a family planning component and are carried out by the health sector; utilization of auxiliary personnel, training, supervision.
<u>Communications</u>	Provide assistance on the use of appropriate means of communication in nutrition and health education, promotion of the sales of special food products, and publicity of new programs.
<u>Nutrition and Infection</u>	Information on the interrelation between nutritional status and morbidity due to infectious diseases; technical assistance on interventions aimed at combatting infection (potable water, hygiene education, treatment of diarrhea, etc.)
<u>Nutritional Surveil- lance</u>	Technical assistance on the design, implementation, and utilization of information systems relating to food and nutritional conditions of an area, country, or region.

<u>Program Title</u>	<u>Assistance Capabilities</u>
<u>Food Economics</u>	Assistance with economic analysis of the dependence of food consumption on income (seasonal and annual), land, food prices, etc.
<u>Nutritional Requirements</u>	Determination of recommended daily intake of calories, protein, aminoacids, vitamins, and minerals; dependence on age, sex, health status, physical activity, pregnancy and lactation.
<u>Physiology and Biochemistry of Nutrition</u>	Information on the utilization of nutrients by the human organism, and the consequences of deficiencies of specific nutrients; development of survey indicators and instruments.
<u>Nutrition and Productivity</u>	Information on the degree to which the work capacity of an adult is reduced by deficient intakes of calories, iron, and other nutrients; economic consequences; possible interventions.

SEMINARS, COURSES, AND CONFERENCES

TO BE FINANCED BY NFNP PROJECTS

1. Central American seminar to promote government concern and commitment to the formulation of a NFNP.

Participants: High-ranking public servants from the different sectors: vice-ministers, directors of government, autonomous, and semi-autonomous agencies or their deputies, leaders of public opinion and private sector; approximately 15-25 people from the six countries; 2-4 day.

Place: Conference facility (e.g., international hotel); possible assistance from INCAE.

2. National seminars to promote government concern and commitment to the formulation of a NFNP.

Participants: same as above.

Place: Preferably away from the capital city of the country; approximately 25 participants; 2-4 days.

3. Short course on data analysis and interpretation (including diagnosis, surveillance, and elaboration of quantitative goals).

Participants: middle and lower ranking officers involved in programming, from ministries of planning, health, agriculture, etc., from 4 to 6 countries; approximately 15-25 participants; 2 weeks.

Place: INCAP

4. Short course on program design and/or evaluation.

Participants: middle-ranking officers in charge of program design and implementation; administrators in charge of divisions and departments from the different sectors; approximately 15-25 participants; 3-4 weeks.

Place: the capital city of the country.

5. International meeting on NFNP (methodologies, practical case studies, evaluation), with invited speakers from all parts of the world, but with emphasis on Latin America.

- Participants:
- guest speakers
 - invited participants from Central America, South America and the Caribbean
 - observers (not covered by the budget)

Approximately 35-50 people for one week.

Place: INCAP or a conference facility in Guatemala.

6. Course on nutrition programming. INCAP will offer annually from the second year on, a specialized, interdisciplinary course on nutrition programming for planners and administrators from government and private agencies involved in nutritional and related interventions. This course will last between 3 and 4 months.

The course will be directed to approximately 15-25 professionals from government agencies (ministries of health, agriculture, education, labor, economics, etc.; national planning agencies; development banks and institutes; semi-autonomous institutes such as social security institutes; agencies regulating food supply and marketing; etc.) and private agencies, national or international (National Emergency Committees; foundations; CARITAS, CRS; CARE; etc.). Participants will be selected among officers with a university degree who either actually design programs, for example as planners in their own organization, and/or who direct, supervise, and evaluate, interventions.

The course will revolve around nutrition and development problems in Central America and Panama, although in later years it could widen its basis if circumstances command. It essentially will consist of the expansion and development of the teaching unit on NFNP offered at INCAP every year since 1972 to the students of the MS course on Public Health, Nutrition and Mothers and Child Health.

The teaching will be practical, based on case material from Central American countries. The faculty will work as an integrated team, not as individual lecturers. The aim of the course is to provide people who already have notions of planning and administration with:

- 1) the fundamentals of nutrition, but only to the extent necessary for the design, implementation and evaluation of nutrition programs;
- 2) a clear view of the place of nutrition in the global context of social and economic development;

3) skills in being able to communicate with other sectors, and in developing multisectorial programs, from the planning stage through implementation and evaluation.

Course content will include, among other topics:

- Nutritional diagnosis
- Importance of surveillance of nutritional status and of evaluation of interventions
- The concept of a NFNP, illustrated with case studies
- Conferences
- Planning and programming techniques
- Exercises in programming multisectorial interventions as a group.

The core faculty will consist of INCAP staff members, supported by visiting lecturers from institutions such as INCAE, INP of MIT, IDS (UK), Transcentury Corporation, UN agencies, SIECA, etc. Students will come from the Central American countries. Participants from other countries (at least during the first years) will be admitted only if there are vacancies in the course, if they strictly meet the eligibility requirements, and if they are able to cover all their expenses. The course will be conducted in Spanish.

In later years, if demand appears from, for example, South America, the terms of reference of the participants and the basic material of the course could be liberalized.

AGENDA FOR EVALUATION

I. Introductory Remarks (one hour)

1. Introduction of each member of the evaluation team and of the NFNP Program; brief summary of the persons, interests and experiences relating to NFNP.

2. Statement of the purpose of the evaluation session and how it is reflected in the selection of the agenda.

II. Summary Report ("Overview") by Program Director (one hour)

1. Statement of the purpose and goals of the Program.

2. Brief progress report with emphasis given to:
(a) the extent to which the goals were attained; (b) significant changes in the situations in each member country; (c) principal changes in the technical assistance capacity of INCAP relating to NFNP (e.g., new professionals; formulation of guidelines, methodologies, etc.) recent developments in other INCAP programs that will contribute to the NFNP effort; (d) statistics on frequency, duration, cost, and nature of technical assistance; (e) indication of how the agenda is designed to provide more detailed reports on these items, leading to a final discussion of future modifications of the Program's priorities, goals, activities, personnel, working procedures, etc.

III. Description of the NFNP Situation in each Member Country (5 to 7 hours)

1. Detailed descriptions of the situations in two countries that represent the differences and similarities of national efforts; e.g. the countries selected might include those that have made the greatest and the least progress towards formulating and executing a NFNP. These "case studies" would serve to provide a more accurate view of both the principal problems encountered by the countries and the role of INCAP. Each case would be described in terms of the chronological order of the events, thereby presenting the situation in a realistic manner. A discussion period of at least one hour would be scheduled after each case to enable through discussion of the details.

2. Brief descriptions of the situations in the remaining countries, with emphasis on the similarities and differences between each of these situations and those selected for the case studies in the preceding step.

IV. Description of Central American Regional Activities Relating to Food and Nutrition (1 to 3 hours)

1. Brief summary of steps taken by regional organizations and bodies, and the role of INCAP.

2. Summary of progress made towards the formulation of a Regional Food and Nutrition Policy.

V. Progress Reports on Specific Projects relating to the NFNP Program (6 to 8 hours)

1. Descriptions of the status of projects directed towards the development of the guidelines, norms, methodologies, etc. that are most essential to the promotion, formulation, implementation, and evaluation of a NFNP. The right-hand columns of Tables 5 and 6 describe examples of possible projects with respect to the Preprogramming and Programming Stages. The selected projects will not be limited to those of the NFNP Program, since other INCAP programs have activities that contribute directly to NFNP (e.g., to the design and evaluation of interventions).

2. Small group discussions of selected projects; opportunity for detailed considerations of the current status of the projects and proposed future efforts. These discussions would be held simultaneously during one afternoon, with evaluation team members being assigned to the project that is closest to their area of interest and competence.

VI. Proposed Plan of the NFNP Program for the future (2 to 4 hours)

1. Proposal of how the goals, priorities, activities per country, personnel, projects, etc. should be modified, in view of the experience gained to date, in order to improve the output (Section 6.3) of the Program.

2. Brief discussion of the budget of the NFNP Program, including a summary of past expenditures and a proposed budget for the coming period. Note: A more detailed discussion with only the sponsors will be arranged if necessary.

VII. Response of Evaluation Team (8 to 12 hours)

1. Private discussions among the members of the Evaluation Team to arrive at a consensus regarding the past performance of the NFNP Program

and the proposed plan for the future.

2. Verbal presentation of the report of the Evaluation Team to INCAP, followed by a joint discussion aimed at clarifying the principal points and coming to a mutually acceptable plan for the future.

Total estimated time = 24 to 36 hours

Since the estimated time does not include time for coffee breaks, meals, unexpected delays, etc., it is concluded that four to five days are needed for this proposed agenda. Possibly the best solution is to invite the team members to come for five days, but arrange the agenda so that all work would be completed in four days if all goes well. This would leave the fifth day for individual conversations between team members and INCAP professionals, a tour of INCAP, trips to the INCAP field studies, etc.

REFERENCES USED IN PREPARATION OF
REGIONAL NUTRITION PROJECT PAPER

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Valverde, V.E., et al, "Evaluación Nutricional del Cantón de San Ramón, Costa Rica", Universidad de Costa Rica, Facultad de Medicina, 1974.
3. Data are continually collected by INCAP in six Guatemalan villages where longitudinal studies are being carried out.
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5. INCAP, "Fortificación del Azúcar con Vitamina A en Centro América y Panamá, Guatemala", 1974.
6. Puffer, R.R., and C.V. Serrano, Patterns of Mortality in Childhood, Scientific Publication No. 262, Pan American Health Organization, Washington, D.C. (1973);
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9. Viteri, F.E., and G. Arroyave, "Protein-calorie Malnutrition, in Modern Nutrition in Health and Disease", R.S. Goodhart and M.E. Shils, (ed), Lea & Febiger, Philadelphia, Pa., 5th Edition (in press).
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13. Berg, A., D.L. Call and N.S. Scrimshaw (editors), Nutrition, National Development and Planning, MIT Press, Cambridge, Mass., 1973.
14. "Proceedings of the Symposium on Nutrition and Agricultural and Economic Development in the Tropics". INCAP, Guatemala, December, 1974 (In Press).
15. Berg, A., The Nutrition Factor, The Brookings Institution, Washington, D.C., 1973.
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17. CAPTO CIRCULAR A-11, "Joint ROCAP-INCAP Nutrition Conference" (Nutrition Projects in Central America and Panama).
18. Development Assistance Program, (Revised ROCAP), FY 1975.
19. National Academy of Sciences, "Nutrition and Fertility Interrelationships, Implications for Policy and Action", Washington, D.C., 1975.

INCAP 1975 OPERATING BUDGET
DETAILED BY PROJECTS

<u>Project No.</u>	<u>Grantor</u>	<u>Description</u>	<u>Budget Amount-1975</u>
PA/AMR/1430	Member Countries Contributions and Other General Income	Advisory Services, training and Research	360,000
PL/AMR/1430	Pan American Health Org.	Advisory Services, training and Research	594,387
PG/GMT/3500	Government of Guatemala	Food Control Laboratory	55,529
PL/GMT/3500	Pan American Health Org.	Food Control Laboratory	92,043
WT/GMT/3500	U.N.D.P.	Food Control Laboratory	188,945
PN/288	N.I.H.	Studies on Growth and Development	713,102
PN/770	N.I.H.	Analyses of Data from and Ecologi- cal Study in Guatemalan Villages	11,384
PN/782	N.I.H.	Malnutrition, Infection and Human Leucocyte Metabolisms	10,909
PN/898	N.I.H.	Aminoacid Requirements of Pre- School age Children	61,539
PN/959	N.I.H.	Studies on Interaction between Mal- nutrition and Infection	50,724
PN/998	N.I.H.	Assessment of Nutritional Losses due to Malabsorption	49,392
PN/012	A.I.D.	Evaluation of Sugar Fortification with Vitamin "A"	5,450
PN/822	A.I.D.	Influence of Maternal nutrition on Infant Mortality and Morbidity	18,224

BN/382	A.I.D.	Technical Assistance to Honduras	24,000
BN/383	Kellogg Foundation	Interventions in the Health Sector	25,425
BN/384	Kellogg Foundation	Nutrition & Productivity of Agricultural Workers	19,765
BN/385	Sugar Producers	Sugar with Vitamin "A" Premix	16,000
BN/372	A.I.D.	Technical Assistance to Nicaragua	24,000
BN/382	University of Chicago	Special Tutorial Training in Clinical Nutrition	7,910
BN/480	Josiah Macy Foundation	Training in Pediatrics, Nutrition, and Public Health	65,000
BN/480	W.H.O.	Human Testing of Protein-Rich Food Mixtures	22,500
BN/506	US Army Research and Development Command	Invest. of the Forces of Infection Acting on the C. A. Population	1,809
BN/520	W.H.O.	Protein Requirements of Pre-School age Children	10,000
BN/582	Nestle Foundation	Training on Nutrition	4,000
BN/700	W.H.O.	Studies on Iron Supplementation and Fortification of Food	13,842
BN/720	A.I.D.	Studies on Corn Fortification	154,417
BN/732	University of North Carolina	Studies on Intestinal Malabsorption	223,455
BN/740	Research Corporation	Graduate Training on Agricultural Sciences	457,328