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MATERNAL/INFANT NUTRITION PROJECT
931-1010

INTERIM EVALUATION

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EXECUTIVE SUMMARY

The Maternal/Infant Nutrition (MIN) Project began during a time when breast-feeding/infant feeding was a central focus of attention in national and international health. In 1978, the U.S. Congress mandated AID to investigate the role of infant formula in developing countries and its effect on infant nutrition. As a result, AID developed Project 931-1010 to respond to the concerns about infant feeding.

Project Strategy ("What Was Supposed To Happen")

The MIN Project was originally designed with three major contractors: APHA, to establish a clearinghouse and newsletter on maternal/infant nutrition; INCS, to provide ad hoc technical assistance to field projects; and the Population Council consortium, to carry out a major research project.

The project funded research on the determinants of infant feeding behaviors, particularly breastfeeding, through the Population Council four-country (Colombia, Indonesia, Kenya and Thailand) study, known initially as the Infant Formula Study. The outcome of this research was to be twofold: a methodology for investigating infant feeding which could serve as a model for use in other countries, and a data set specific to each country which could be used to design interventions to promote breastfeeding.

In addition to supporting research into infant feeding, the Project highlighted the benefits of breastfeeding through a series of sensitization seminars organized primarily by INCS during 1979-81, the purpose of which was to "raise the consciousness" of health professionals in developing countries. Specific program interventions to support and promote breastfeeding in the early stages of the Project were less clearly defined, although there was an expectation that public education and mass media breastfeeding promotion campaigns would be developed in several sites.

In addition to the three major contracts of the project's early years, a number of small contracts and grants (e.g., Sigma One and RAND) were written, whose purpose was to further investigate and analyze infant feeding practices. The results of these research efforts are of more theoretical than practical interest, perhaps in part because they were never intended to tie directly into program or country interventions. The Bangladesh Nirog project was an exception in that it was designed in two parts, a research phase followed by an intervention phase. However, so much effort was expended on the initial research that the intervention was almost an afterthought.

The newest focus of Project 931-1010--those contracts begun in late 1984-85, the Weaning Project and the Dietary Management of Diarrheal Disease Project--are of particular interest to this evaluation. These represent a narrowing of the focus of the umbrella project to two contracts which concentrate on very discrete problems in the area of infant feeding. They also represent an evolution in thinking and approaches to infant feeding problems by AID's Nutrition Office, other nutrition experts, and developing countries themselves. One can trace the derivation of the Weaning Project, at least in part, to a series of events and accumulated experience which grew out of

successful experiments with the use of social marketing and growth monitoring in the Dominican Republic and Ecuador.

The Dietary Management of Diarrheal Disease Project (which was not planned at the outset of the Project) is not an obvious extension of any of the earlier work of Project 931-1010, but rather a tribute to the flexibility of the overall project and its capacity to be adaptive and responsive to emerging needs. This appears to be a logical and intelligent outgrowth of the recent funding and program development in ORT, by AID and other health and donor organizations. It is an opportunity to capitalize on the international interest in diarrheal disease (as the infant feeding research capitalized on international interest in infant formula in the earliest days of the MIN Project), as well as a chance to demonstrate the importance of feeding and nutrition to child survival programs.

Project Experience ("What Actually Happened")

The individual country research findings and preliminary analyses of the Infant Feeding Study, which were available close to schedule in three out of four sites, led to important interventions in Indonesia, Thailand, and Honduras. In each case, the research revealed that attitudes and practices of health care providers were important factors affecting initiation of breastfeeding in hospital and, ultimately, breastfeeding duration. Specific country interventions, such as lactation management training for hospital staff, were designed to address this problem.

INCS was instrumental in providing technical assistance for development of in-country breastfeeding promotion and a project in Thailand. Originally under the auspices of INCS, the San Diego Lactation Management Training Program trained four sets of health professionals from developing countries between 1983 and 1985. The returned trainees capitalized on the training and developed active in-country follow up in Indonesia and Thailand and have been responsible for a remarkable spread effect, through training of trainers and colleagues in clinical management of lactation.

APHA established its Clearinghouse on maternal/infant nutrition and in 1979 began publication of an information bulletin titled "Mothers and Children." The newsletter is published three times a year in English, Spanish, and French, and distributed to over 12,000 recipients, 85 percent of them in developing countries. The APHA contract has been the one constant throughout the life of Project 931-1010. It fulfilled the earliest expectations of AID and the Project for an Information Center and Clearinghouse focused on maternal and infant nutrition.

Maternal nutrition was supposed to be a targeted focus throughout the life of the project, but particularly during Phase II (1983-88), when research and field interventions were to be designed and tested. However, the only concerted effort to investigate maternal nutrition was through a project in the Philippines which compared various combinations of food and iron supplementation and their effect on weight gain during pregnancy and subsequent birth weight. That research, carried out in only one province of the country, bogged down in bureaucratic inertia, and no final results were available at the time of this evaluation. Possible explanations for the Project's failure

to identify and develop other interventions in maternal nutrition are discussed in Section II.B.2.

Project Effectiveness and Impact ("So What?")

The early research activities of Project 931-1010 represented a systematic effort to collect information about infant feeding. In fact, the model originally designed for the four-country study was also utilized, with some modifications, for infant feeding research in Honduras and Cameroon. However, the greatest impact from this research was manifest in the countries where the studies were originally undertaken. The fact that this evaluation highlights Indonesia, Thailand, Honduras, and Kenya (four of the six countries where the infant feeding studies took place), is testimony to some lasting effect and concern for breastfeeding. However, the influence of the study methodology and findings do not seem to have extended much beyond the original sites of the research.

This limited impact is explained in part by the fact that the final summary report of the four-country Infant Feeding Study was not published until spring of 1986, by which time it was of minimal interest or relevance to the international community which was distracted by competing events that dissipated the support and enthusiasm breastfeeding had hitherto enjoyed. The Child Survival Revolution was declared, heralding ORT as a "miracle technology," and focusing on it and immunizations. Breastfeeding, while included in the GOBI strategy, did not receive the prominence or promotion of the other components.

The "Mothers and Children" Bulletin is an attractive, technically appropriate, and field-oriented information resource. Clearly, the APHA Clearinghouse represents one of the most comprehensive and well-managed collections of infant and maternal nutrition information in the U.S. Readership surveys and outside evaluations have documented the conclusion that the Bulletin successfully reaches its target audience in the developing world. Beyond this, however, there has been no careful assessment of the real impact of the information provided by the Clearinghouse or the Bulletin.

Other activities funded by Project 931-1010 are so individualized that they are difficult to summarize and almost impossible to assess impact, except on a case-by-case basis. This set of activities, categorized as "interventions," include the EDC/INCS contract, CEDPA's work with community nutrition demonstration projects in four countries, and INCAP. Of these, there are impact data only from CEDPA's work in Kenya (and its similar projects in Indonesia, Nepal and Senegal). Although limited in scope and size, the CEDPA projects are indicative of the potential benefit of even a small amount of money when it is channelled through a group of committed individuals. Community nutrition demonstration programs in that country have identified local feeding problems and made possible real responses with local solutions.

Both the Weaning Project and the DMD Project have just recently begun, so it is too early to assess the impact of either. Both have begun with emphasis on data collection leading to program interventions, and model building with potential for replication elsewhere.

In reflection on the project's overall design and strategy, there is a sense of "great expectations," particularly in the area of breastfeeding. Without question the project, as originally designed, was an ambitious undertaking, a wheel with spokes extending in many directions, encompassing research, training, education, information, interventions, and evaluation. These strategies were devised to focus not only on breastfeeding but also on infant feeding and maternal nutrition. Combined, these represented a complex matrix of activities that was too difficult to manage from an organizational viewpoint, and too large for its management base, regardless of the quality and competence of the Project Manager. One observer summarized the project as, "too many players, too much content."

Although some of the separate subprojects achieved significant results, the project as a whole, as an umbrella activity, displays a certain incoherence, largely because of the sheer diversity of activities. While there was cross-fertilization of idea and activities (for example, the research methodology from the Population Council Infant Feeding Study was applied in Honduras; the social marketing methodology from the INCS Dominican Republic work was expanded upon in the Weaning Project), this did not occur in an orderly or systematic fashion. At the same time, in defense of the umbrella project as a project type, we agree that such a mechanism is useful in the early stages of a new sector, to assess field needs; to filter out the real problems, and to identify the approaches and activities that are worthwhile. This is, nevertheless, a basically inductive process which can be costly, time-consuming, and inefficient.

Recommendations ("What Ought To Happen Next")

The evaluation generated some generic conclusions which the team thinks apply across the board to centrally-funded project strategy and design. These are:

- o An umbrella project is a useful strategy in the early stages of a new sector activity to assess field needs, filter out real problems and identify worthwhile approaches and activities. As these become apparent, however, the project should focus on a more limited set of activities.
- o Vertical programs make sense when a new sector activity is to be undertaken and explored. In fact they may be essential to highlight a given development problem. However, utilization of a vertical approach does not preclude subsequent integration and may even foster it.
- o Because of the diversity of the project components, the management burden for a large umbrella project is characteristically larger than the management base, regardless of the competence of that base. It is unrealistic to expect a project manager to assume both supervisory and technical responsibilities for many discrete, geographically and substantively dispersed subprojects.
- o No matter the quality and rigor of the research carried out under any project, if its findings are not available with reasonable speed in a comfortably accessible fashion for both donor and host country counterparts, they can quickly become useless.

- o The Maternal and Infant Nutrition Project shares the same stress as S&T/N itself, that is, the need to be responsive to ad hoc, ad libitum, short-term technical assistance requests, versus the need to have a rational, focused approach to a particular development problem. The result of this stress is that the responses of an umbrella project are not always coherent except within the broadest interpretation and do not efficiently lead to project outcomes. A tightly focused, proactive approach (e.g., the Weaning and Dietary Management of Diarrheal Diseases Projects) appear to be a much more effective way of channelling funds into a priority sector activity, than a more fragmented, reactive approach which consists of responding to ad hoc requests for technical assistance which may or may not develop into a project activity and may or may not fit with a specific, consistent set of priority objectives.
- o Attempts to institutionalize project activities have met with varied success. The project has demonstrated the need for training in clinical management in urban-based hospitals and that such training can alter health professionals' attitudes toward breastfeeding and correlated behaviors and produce increased breastfeeding. There is also evidence that spread effect from training is substantial in selected countries. The impact on durable behavior change (e.g., continued as opposed to early breastfeeding) is less clear; little is known about breastfeeding duration after the six-week postpartum period, an area where research is badly needed.
- o Replicability of the breastfeeding component of the project is demonstrably possible, given the fact that breastfeeding projects have been, as development interventions go, relatively easy to launch. The models generated seem to be models which can be reiterated from country to country with some positive outcome. There is no evidence yet, within the parameters of this project, that any of its component subprojects will be autonomously maintained. The project has been most efficient in its use of its limited resources in those countries where it has piggy-backed a project onto those of existing organizations. Project sustainability appears most likely where skills are institutionalized through on-site training for counterparts in participatory methodologies (like focus groups), where the same consultant/s have an ongoing relationship with a subproject activity, and where ownership of an activity resides in a local organization.

Specific recommendations on "what ought to happen next" are given in Section V of this report.

I. INTRODUCTION

A. PROJECT BACKGROUND

The project entitled "Improving Maternal and Infant Diet" (931-1010) began in 1979 as a four-year activity designed to improve the nutritional status of women and infants in developing countries. The basic assumption of the project was that a significant reduction in infant mortality and malnutrition could be achieved in developing countries if maternal nutrition were improved and adequate infant nutrition sustained throughout the critical first years of life. The project had four major goals:

- Sensitization
- Education and Training
- Research
- Program Intervention.

Phase I

In Phase I of the project, there were to be four major activities: an information clearinghouse, studies on the role of infant formula, coordination and consultation activities, and nutrition education and training. Although the major thrust of the Maternal/Infant Nutrition (MIN) Project was to service field projects, provision was also made for stimulating awareness and motivation at the policy level.

The project was to provide the following services:

- Educational activities using mass media such as radio and/or other mechanisms to reach target populations
- Activities to incorporate appropriate materials into the curricula of primary and secondary schools
- Activities which train workers from various sectors such as community health aides, agriculture extension workers, feeding program advisors, family planning workers, etc.
- National, regional, or international meetings to sensitize medical personnel such as deans of medical schools, hospital administrators, pediatricians, obstetricians, etc.
- An international information clearinghouse which would disseminate a newsletter containing a broad range of information on new developments in the areas of policy and programs, as well as science and technology.
- Studies of infant feeding trends and their determinants, including analyses of policy options to improve feeding practices.

In 1983, the four-year Phase I effort (at approximately \$7.8 million) was successfully completed. AID believed that the first phase laid the groundwork for expanded programs and effective policies "through a series of maternal and infant nutrition (MIN) sensitization and planning workshops (in 17

countries) and research on problems and determinants of infant feeding practices (in 14 countries)." Training curricula were in the process of development and expected to be in place in 20 countries by 1985. National scale multi-component programs were being initiated or designed with assistance from the project in eight countries.

A table summarizing Phase I outputs is given below.

TABLE 1

PHASE I OUTPUTS 1/

TYPE	ESTIMATED NUMBER
1. National level multi-component programs	8 countries <u>2/</u>
2. Medical and nursing curricula	12 countries
3. Other education and training activities	12 countries
4. Sensitization and planning workshops	17
5. Newsletter (12 issues in 3 languages)	12,000 readers
6. Requests for publications and materials	500
7. Country Profiles in MINRs	42 countries
8. Worldwide review of policies and legislation of MIN	1
9. Country studies on infant feeding and nutrition	14

1/ NOTE: Period of obligation FY 1979-83
Period of implementation FY 1979-85

2/ Indonesia, Thailand, Kenya, Honduras, Tunisia, Brazil, Panama, Haiti.

Project Funding - Phase I and Phase II

The following table gives the breakdown of projected funding by fiscal year:

TABLE 2
AUTHORIZED PROJECT BUDGET

<u>Fiscal Year</u>	<u>\$ 000</u>
1979	869
1980	728
1981	1,500
1982	2,850
1983	2,300
1984	2,380
1985	2,125
1986	2,550
1987	2,775
1988	<u>1,900</u>
TOTAL	\$19,977

Phase II

In May 1983, an extension of the Maternal/Infant Nutrition Project was authorized, which extended project implementation through 12/31/89 and increased the life-of-project funding level from \$7,297,000 to a new total of \$19,977,000. The overall goal of Phase II of the Maternal/Infant Nutrition project is the same as that for the first phase: to improve the nutritional status of women and infants in developing countries.

The rationale for the focus of the second phase of the project is stated in the project paper for Phase II:

"In the next five years AID can make major contributions in the area of nutrition interventions specifically focused on reducing infant mortality. This calls for a shift in emphasis toward the mother who is the chief source of the infant's nutrition reserves at birth and nutrients consumed through breastfeeding."

The project as designed in the second phase would continue to expand in the areas of education, training, and information dissemination. The second phase, however, will also emphasize field studies on maternal/infant nutrition and

low birthweight determinants and interventions. Unlike the Phase I activities, which included a diversity of project activities through a wide assortment of contracts, grants, and cooperative agreements, the second phase will concentrate funds in three major contracts, through Manoff International, Johns Hopkins University, and APHA.

The underlying assumption of both Phase I and Phase II of the project is that "poor infant feeding practices and maternal nutrition are important constraints in reducing high levels of infant mortality in disadvantaged populations." Without significant improvements in infant feeding practices and nutrition, and reductions in percentage of low birth weight babies and incidence of diarrheal disease, mortality rates will continue to be unacceptably high. AID believes that the limited resources available for nutrition programming should be aimed at development of nutrition technologies with the specific objective of bringing down infant mortality.

Table 3 compares the respective program objectives of Phase I and Phase II of the project.

TABLE 3

PHASE I AND II PROGRAM OBJECTIVES

<u>PHASE I OBJECTIVES</u>	<u>PHASE II OBJECTIVES</u>
<u>Breastfeeding/Infant Nutrition</u>	
<ul style="list-style-type: none"> • Sensitization of policymakers • Transfer of existing knowledge • Develop new knowledge in breastfeeding (patterns, causes & high risk subpopulation identified) • Technologies for education and training adapted and tested for breastfeeding 	<ul style="list-style-type: none"> • Institute changes in health sector policies • Training at all levels • Evaluation techniques design & testing • Interventions tied into infant mortality reduction and field studies • Continue analysis and transfer of knowledge
<u>Maternal Nutrition and Infant Mortality</u>	
<ul style="list-style-type: none"> • State of the art reviews • Initiate field studies on a small scale 	<ul style="list-style-type: none"> • Expand field studies to understand patterns & causality • Develop and test field indicators & intervention protocols linked closely with LBW, infant mortality & maternal nutritional reserves

B. EVALUATION BACKGROUND

In April 1986, Management Sciences for Health was asked by S&T/N to carry out an interim evaluation of Project 931-1010, the Maternal/Infant Nutrition Project. This report describes that interim evaluation, funded by S&T/N, conducted between June 15 and September 30, 1986 by Jean Baker, Polly Harrison, and Richard Yoder. The evaluation methodology is described in the following section.

Information and data for the evaluation came from four primary sources:

- Interviews with AID Office of Nutrition and other AID staff, project contractors, and consultants;
- Review of project reports, research, and other documents;
- Field visits to Kenya, Tunisia, Honduras, Panama, Thailand, and Indonesia;
- A survey of all project subcontractors and grantees, requesting information on reports, publications, and finances.

Each of these is described in a separate section in the following pages.

1. Interviews

Between June 15 and September 30, 1986, several meetings were held with S&T/N staff to discuss the overall background of the Maternal/Infant Nutrition Project and expectations for the evaluation. Meetings were also held with AID Regional Bureau and USAID mission staff. The evaluators met regularly, as a team, throughout this period.

Because of the size, diversity, and number of activities which have been undertaken to date, it was not possible to carry out a comprehensive review of all aspects of the project, in the time allotted for the evaluation. After a preliminary review of documents, and consultation with S&T/N, the evaluators decided to structure the evaluation with three general sections:

- The project's theory and strategy: What was supposed to happen during the project? Were the original theory, strategy, and design sound?
- The project's experience: What actually happened? What activities were carried out during the project? In what technical areas? Which countries? How much money was spent?
- The project's effectiveness and impact: So what? What impact has the project had to date? Has it been effective in meeting its original objectives?

For each of these principal areas, a set of issues was identified and corresponding questions developed, which were used as the basis for collecting and analyzing information for the evaluation. These issues are represented as subtopics in the evaluation outline.

The technical areas of focus are those prescribed in the original project objectives:

- Breastfeeding, both promotion and advocacy of policy changes;
- Infant feeding and weaning practices, especially determinants; and
- Maternal nutrition, particularly the association with low birth weight.

2. Review of Project Documentation

In addition to the general technical areas of the evaluation focus, the activities undertaken in pursuit of the project's objectives can be further classified as one of the following: research; information, education, and communication; training; or program interventions. These headings have been used in grouping the project's activities in the tables in Section III.A.

An extensive collection of project documents was reviewed during the evaluation, including the original project paper, project amendments, AID internal project reviews and other reports. Specific materials relevant to each sub-contractor or grant, such as trip reports, quarterly and annual reports, outside evaluations, and research documents were also reviewed. A comprehensive list of these documents is given in Annex C.

3. Field Visits

In order to provide a more in-depth assessment of the project's activities and impact, field visits were made to several countries where the project has been particularly active. These countries, which are discussed in detail throughout the evaluation, are: Kenya, Tunisia, Indonesia, Thailand, Honduras, and Panama (the last in the context of both country and regional activities). Beginning June 19th, 1986 evaluation visits were made to Kenya, Tunisia, and Honduras. Thailand and Indonesia were visited during the INCS evaluation in July 1985. Information on those countries was updated during the current evaluation.

These six countries are representative of the variety and types of interventions the project has provided since its initiation. While it is certainly not fair to make generalizations about the project based on the experience of these six countries alone, the evaluators feel the experience of these countries is characteristic of many aspects of the project as a whole.

4. Survey Questionnaire

In order to update information on publications and reports generated by this project, a questionnaire was sent to all contractors, asking them to provide a current listing of all project-related reports. This comprehensive list is provided in Annex B.

Previous Evaluations

Prior to the current evaluation, Project 931-1010 was reviewed on several other occasions:

- In September 1980 the first-year project activities were reviewed internally by AID. Project activities, by component, were listed, as well as funding levels. No analysis was undertaken. The review noted that "contractor mobilization was 4-6 months delayed" but that project assumptions were holding up and progress/monitoring information was being received in a timely fashion.
- In March 1982, an AID Internal Management Review of Project 931-1010 was convened. That evaluation concluded that this was an essential S&T/N project and should be continued. It was also decided that a Project Paper Revision should be drafted for Phase II to enable continuation of activities at the present level during FY 1983 through FY 1988.
- In September 1982, Devres, Inc. submitted a report titled A Review of Nutrition: Improving Maternal and Infant Diets - Phase I (931-1010). The objectives of the review were (a) to provide a basis for designing a second phase of the project, and (b) as a reference for AID staff on AID's experience in breastfeeding promotion and improving weaning practices and diet during pregnancy. The report summarized project activities and funding to date but did not attempt to assess impact.
- Between December 1983 and March 1984, the National Science Foundation began a review of Phase I of Project 931-1010. The evaluation was never completed, although a short report on utilization of funds, project outcomes, contractor performance, and estimated counterpart and USAID contributions was prepared.

II. THEORY AND STRATEGY ("WHAT WAS SUPPOSED TO HAPPEN")

A. PROJECT DESCRIPTION

Throughout the life of Project 931-1010, 19 different "subprojects" have been funded, either through a grant, cooperative agreement, or contract. These subprojects and their dates of implementation are listed in Table 4. The overall design and purpose of each of these is briefly described in the sections which follow. These descriptions are meant primarily to serve as a reference for the reader and background for the discussions of project activities and impact which follow in the later parts of this report.

1. The Population Council Contract

In 1979 the Population Council, in conjunction with Columbia University and Cornell University, was awarded a contract to undertake a collaborative study with institutions in four developing countries to investigate infant feeding practices in those sites. The scope of work for this study called for "an investigation of the impact of a broad range of biological, social, cultural, and economic factors on infant feeding practices in order to determine the nature and magnitude of their contribution to problems of infant nutrition." The research was to focus particularly on breastfeeding practices and the role of infant formula. Research was conducted in four sites: Thailand, Kenya, Colombia and Indonesia. The research had three components:

- Ethnographic field work, consisting of participant observation of infant feeding practices in the home and community contexts
- A cross-sectional household survey of mothers of infants under one year of age (18 months in Nairobi, 24 months in Semarang) which included infant feeding practices and consumer behavior relating to infant foods
- A market study, on a national basis, of the infant feeding market, including analysis of the development and state of the industry and the structure of the market in each city.

Several hypotheses were formulated which guided the research and subsequent data analysis. Additionally, five questions were developed for the marketing research data collection. These hypotheses and questions are listed in Annex D.

TABLE 4

PROJECT 931-1010

MAJOR CONTRACTORS/GRANTEES BY PROJECT YEAR

ORGANIZATION AND ACTIVITY	PHASE I					PHASE II				
	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
I. Research Studies										
A. Infant Feeding/Breastfeeding										
1. Population Council	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX					XX				
2. Cameroon			XXXXXXXXXXXXXXXXXXXXXXXXXXXX			XXXX				
3. Honduras			XXXXXXXXXXXXXXXXXXXXXXXXXXXX			XXX				
4. RAND					XXXX					
5. Sigma One					XXXX					
6. Bangladesh					XXXX					
7. Tunisia						XXXXXXXXXXXXXXXXXXXXXXXXXXXX				
8. Dietary Management of Diarrheal Diseases				XXXXXXXXXXXX						
								XXXXXXXXXXXXXXXXXXXXXXXXXXXX		
B. Maternal Nutrition										
1. Philippines					XXXX	XXXXXXXXXXXX				
2. Cornell					XXXXXX	XXXXXXXXXXXX				
II. Information/Education/Training Programs										
1. EDC/INCS	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX					XXXXXXXXXXXXXXXXXXXXXXXXXXXX				
2. CEDPA					XXXXXX	XXXXXXXXXXXX				
3. Tunisia			XXXXXXXXXXXXXXXXXXXXXXXXXXXX			XXXXXX				
4. Honduras			XXXXXXXXXXXXXXXXXXXX			XXXXXXXXXXXX				
5. INCAP					XXXX	XXXX				
6. Development Associates					XXXX	XXXX				
7. Weaning Project							XXXXXXXXXXXXXXXXXXXXXXXXXXXX			
8. San Diego Lactation Program								XXXXXXXXXXXX		
9. APHA	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX							XXXXXXXXXXXX		
									XXXXXXXXXXXX	
										XXXXXXXXXXXX

2. Cameroon

A weaning practices research project was begun in Cameroon in 1981, conducted by the Institute for Medical Research (DGRST). The research was to be conducted in several northern provinces of the country. Through a series of consultants provided by the INCS Project, a research methodology was designed. The original research protocol called for anthropometric data (height and weight), socioeconomic indicators, and an ethnographic component to collect observations on feeding practices. A one-year study of the growth patterns and feeding practices of 300 infants was recommended which would include the following:

- Surveillance of health status of children, focusing on incidence of infectious diseases during the research year;
- A theoretical model which identified three levels of variables threatening morbidity and feeding practice variables as intervening between anthropometric outcomes, and a cluster of socioeconomic, hygienic, domestic, and ideational variables;
- Observation procedures documenting feeding practices (rather than reliance on parental recall and reporting); and
- A substantial period of village-based preparation for the year's surveillance, in which the objective was to produce effective instruments, both for the observational study and survey components.

INCS sent a series of consultants to assist with the research, one of whom the DGRST Director found unacceptable. Ultimately, an anthropologist spent most of 1983 in the field collecting the ethnographic information. On the basis of this ethnographic work, a full-scale survey instrument was designed and a survey carried out by DGRST.

As of March 1986, data analysis from the survey was not completed and no final report was available. This was apparently due to inadequate computer capabilities to analyze the data and to competing demands for the Project Director's time and attention. Furthermore, several consultants mentioned serious flaws in the data base itself.

3. Honduras

The principal expression of Project 931-1010 in Honduras was, and is, the "Proyecto en Apoyo a la Lactancia Materna" (PROALMA/Project in Support of Breastfeeding). Honduras has one of the highest infant mortality rates (95-115/1000 live births) in Latin America and the highest urbanization rate in Central America. It has also displayed a pronounced trend toward decrease in initial breastfeeding, diminished duration of breastfeeding, and the early introduction of bottles and other foods.

Concern about this trend is not new in Honduras. As of 1981, there were at least three La Leche League leaders in Honduras, one of whom had been operating a program for the previous nine years to provide support for breastfeeding mothers in San Pedro Sula, Honduras' second largest city and its burgeoning commercial center. The program was becoming institutionalized within the

Social Security Hospital in San Pedro and its services included distribution of publications for professional staff, training lectures for nurses, and direct support to women delivering in hospital. Growing demand for these services in Honduras, coupled with the experience of El Salvador's CALMA project, had led this group to seek resources for expanding their program to explore with the Honduras USAID alternative funding mechanisms for establishing a comparable program in Honduras. In September 1982, a Limited Scope Grant Project Agreement was signed between the USAID and the Honduras Ministry of Health (MOH), the Social Security Institute, and the National Social Welfare Board (Junta Nacional de Bienestar Social (JNBS)). The Project Assistance Completion Date (PACD) was 31 December 1985, the amount of the AID grant was \$399,700, and the grantee contribution (in-kind) to the project was \$134,130.

The purpose of the project was to develop, implement, and evaluate a self-sustaining national maternal breastfeeding program, with the goal of promoting the health and welfare of infants in Honduras. The project was to concentrate its initial efforts on the urban population, which has the lowest prevalence of breastfeeding, with special emphasis on patient teaching, counseling, and follow-up in the major public urban hospitals.

4. RAND Contract

Research conducted under a grant to the RAND Corporation included both new analyses of trends and determinants of infant feeding choices in Peninsular Malaysia, and analyses of the implications of these and other studies for public health policy in Malaysia and in developing countries. The research was conducted using data available from the Malaysian Family Life Survey. This research is reported in four documents (listed in Annex B). In addition to these documents, articles were prepared for technical journals, and the research formed part of a doctoral dissertation for the principal investigator.

Originally, a comparative study of Guatemala and Malaysia was intended, but it soon became apparent that the difficulties involved in preparing the data from Guatemala for analysis were greater than anticipated. Consequently, it was considered more efficient to concentrate an in-depth analysis on the Malaysia data, to insure that policy-relevant results from at least one country could be produced within the time and budget constraints.

5. Sigma One Contract

In 1982 the Sigma One Corporation was awarded a contract to carry out secondary analysis of breastfeeding data from urban Panama and from a low-income urban population in Cali, Colombia. The analysis was to examine "the use of optimal feeding practices by households with infant children and relate the prevalence of adoption of optimal feeding practices to socioeconomic and other determinants within the context of economic decision making by households."

The purpose of the analysis was to contribute to the design and evaluation of interventions to promote optimal feeding practices and also to identify socioeconomic and other risk factors associated with the decision not to breast-feed or with the decision to adopt other feeding practices. The focus of the

analysis was to be on economic and health variables believed to be subject to modification through public policy changes rather than through specific interventions, as the policy changes were thought to be more cost effective than intervention programs.

In May 1983 Sigma One produced a report which was reviewed by S&T/N and several outside experts. The overall response to the report seems to have been negative; its critics questioned many aspects of the research and its conclusions. One reviewer categorized it as "a prime example of the kind of work generated by authors knowledgeable about economics and data manipulation but uninformed about the substance of breastfeeding issues."

6. Bangladesh Infant Feeding (NIROG) Project

Project NIROG, subtitled "A Culturally Based Nutrition Education Action - Cum Research Project to Improve the Feeding of Young Children in Bangladesh," was funded in 1982. The project was designed to explore the problem of inadequate food intake among young children in Bangladesh which leads to serious malnutrition and frequent gastrointestinal infections.

The project was undertaken in four villages in a rural area 60 miles north of the capital city, Dhaka. The objectives of the research component of the project were:

- To identify the complex sets of factors affecting food intake and in turn, the nutritional status of young children;
- To develop nutritional education messages, taking into account the effects of multiple factors and to deliver these messages to mothers and grandmothers for modifying their feeding practices;
- To evaluate the impact of nutrition education messages, both through short term evaluation of maternal/caretaker's feeding behavior and long-term impact of nutrition education messages on children's growth.

The baseline research was begun in 1982 and consisted of the following components: (a) a socioeconomic survey; (b) survey and anthropological investigation of infant feeding practices; (c) a study of food beliefs; (d) dietary intake data through a 24-hour recall method of the young child's food; (e) anthropometric measures; (f) a weekly morbidity record through open-ended interviews. Baseline data were collected on 150-200 children in the four villages, aged two years and under, on the six categories listed above.

The second phase of the project, that of development and testing of a communication intervention focusing on child feeding, began in September 1985 and was called the "Pishpash Campaign." Messages were developed with the intention of bringing about behavioral change among rural mothers, and centered on pishpash, a home-prepared weaning food. The intervention was tested in one village, which contained approximately half of the eligible infants, and lasted for five months. Health workers, who were to be used as behavior change agents and chief carriers of the pishpash message, received training in the methodology of the campaign. Their job was to attempt, through "cultural bargaining," to induce changes in mothers' feeding behaviors. This required a series of intensive home visits by the health workers.

7. Tunisia

The activities supported by Project 931-1010 in Tunisia had two basic objectives: (a) to increase the coverage and effectiveness of nutrition education for the public, and training given to medical and paramedical personnel, in the areas of maternal and infant nutrition in general, and breastfeeding, weaning, and diarrheal disease in particular; and (b) to utilize the experience and expertise acquired in Tunisia for expanding maternal and infant nutrition activities in other French-speaking countries in the region.

The project supported a number of activities in Tunisia during the period 1980-84, primarily through the INCS Project. Assistance was provided to the National Institute of Child Health (INSE), to strengthen its nutrition education capabilities. The assistance was to result in the establishment of an Education and Training Center within which would be developed an Audio-Visual Production Unit, and also a Data Processing Unit. The Education and Training Center was to be responsible for the design and implementation of a nutrition KAP survey and a management study of MCH centers. In March of 1981, INCS sent a consultant to help the Institute design an infant feeding habits survey. The following year INCS sent another consultant to refine the methodology and content of a KAP survey on maternal and infant nutrition and to clarify data-processing requirements for the survey analysis.

Since 1984 INSE has been dissolved and is now called the Children's Hospital, a new Institute of Public Health has been created to replace INSE.

8. Dietary Management of Diarrheal Diseases Program

In September 1985, the Department of International Health at Johns Hopkins University was awarded a three-year cooperative agreement by S&T/N to implement the Dietary Management of Diarrheal Diseases Project. The objective of the project is to:

"Integrate into ongoing diarrheal disease control, nutrition, and/or primary health care programs of two less developed countries, safe and effective intervention strategies for improving the dietary management of acute childhood diarrhea."

The project, which is being implemented in Nigeria and Peru, is designed in two phases. During the first phase, sample surveys will be conducted to collect data on current feeding practices during diarrhea and to catalogue locally available foods and their form of preparation. Simultaneously, ethnographic evaluations will be completed to identify cultural factors associated with feeding during diarrhea. During Phase II, with the information derived from this research, optimal dietary regimens will be designed, evaluated, and modified and will then be promoted during pilot field studies. The success of the interventions will be assessed, as well as their nutritional impact. Finally, the experience gained during these preliminary phases will be used to develop educational and communications techniques to "disseminate information to families and to health practitioners on the appropriate dietary management of acute diarrhea in the context of local diarrheal disease control, nutrition, and/or primary health care programs."

9. Philippines

In 1983 the Nutrition Center of the Philippines began work on a research project to test the effects of iron and food supplementation and nutrition education for pregnant women within the framework of a primary health care program in that country. The goal of that project is to reduce the prevalence of nutritional anemia among pregnant mothers and low birth weight infants. Research in the Philippines suggests that from 31-85 percent of all pregnant mothers are anemic, and the percentage of low birth weights is approximately 20 percent. The intervention is being carried out by midwives in the rural health units (RHU), in the province of La Union. The RHUs were randomly assigned to one of six treatment groups:

- Iron (I)
- Food formulation (F)
- Cooking oil (O)
- Food formulation with iron (FI)
- Oil with iron (OI)
- Control (C).

Nutrition education is delivered in a standardized manner to all treatment groups as a common intervention.

The project was divided into phases: the first phase (1983) was the preparatory phase during which the research design, training materials, and so on were prepared; Phase II (1984-86) is the implementation phase. This research is being jointly undertaken by the Nutrition Center of the Philippines in collaboration with the Nutrition Section of the Ministry of Health. A final report is expected in June 1987.

10. Cornell University

A pre-existing cooperative agreement between Cornell University and S&T/N, (Cornell/AID Cooperative Agreement on Nutritional Surveillance), was amended to allow a "buy-in" from the Maternal and Infant Nutrition Project. The purpose of amendment was to encourage development of maternal nutrition and infant feeding indicators for possible inclusion in national nutritional surveillance systems. A three-year agreement was made. The three main subject areas investigated by Cornell and the activities carried out are listed below:

- Determinants and consequences of low birthweight:
 - A state-of-the-art literature review was developed.
 - Five research projects were completed, using data from Guatemala, Bolivia, and Malaysia.
 - Consultations and seminars were conducted.

- Determinants and consequences of weaning practices:
 - A state-of-the-art literature review was completed.
 - Four research projects were completed using data from Indonesia, Colombia, and Honduras as well as data from the World Fertility Survey.
 - One consultation was held.
- Intrafamily food distribution:
 - A state-of-the-art literature review was prepared.
 - One research project was undertaken using data from Guatemala.

The literature reviews were presented first as reports to AID and then circulated as a numbered paper in the Cornell Nutritional Surveillance Program Working Paper Series. The research results were initially presented as progress reports; some were then submitted for publication in scientific journals.

11. EDC/INCS Contract

In 1979 the Education Development Center (EDC) was awarded a two-part contract to establish the International Nutrition Communication Service (INCS). INCS was a consortium composed of EDC, Manoff International, and Save the Children Federation. The second part of the INCS contract was to be focused on "maternal and infant diet practices: nutrition education and training." The major activities to be undertaken under this contract were:

- A series of sensitization workshops for health professionals on breastfeeding;
- Mass media campaigns;
- Survey research on infant feeding practices;
- Publications.

Through a joint decision between INCS and the AID Office of Nutrition in 1982, the focus of those activities was narrowed to center almost exclusively on breastfeeding, and the INCS scope of work was altered to reflect this change of emphasis. The main activities undertaken by INCS through this contract during the period 1979-1986 are summarized in the table below:

TABLE 5

INCS STRATEGIES AND ACTIVITIES - PART II

INCS STRATEGY	MAIN ACTIVITIES
Lactation management training for health professionals	San Diego Lactation Management Training Program
Improved hospital practices	Sensitization workshops
Breastfeeding policies and regulations	Bangkok breastfeeding promotion project; intensive technical assistance to PROALMA Project in Honduras
Strengthened community-based support groups for breastfeeding mothers	Help draft Thailand hospital practices regulations; Nyeri workshop gives birth to Kenyan regulations
Improved data base	Technical support for CALMA Project
Development of overall conceptual model of breastfeeding promotion	International conference for breastfeeding mother
	Maternal Infant Nutrition Reviews
	INCS technical assistance missions to 12 countries

A comprehensive evaluation of the INCS project, undertaken with AID funding in 1985, provides more detail on INCS activities.

12. CEDPA Contract

The Center for Development and Population Activities (CEDPA) is a PVO specializing in training supervisors and mid-level women managers of community-based programs, particularly in family planning and population. In April 1981, CEDPA was awarded a grant for development, field trial, and distribution of a management training module to be used with women-to-women, community-based nutrition programs. In September 1982, an amendment to the grant was awarded, based on an expanded scope of work which called for CEDPA to combine nutritional management training with the development and support of small nutrition demonstration projects in several countries. The amendment also called for development of a second training module and completion of an organizational diagnosis as part of project documentation. To meet those two objectives, CEDPA proposed to work through alumnae of its Women in Management training series, providing technical assistance for project design, adaptation of training materials, seed-money support for small projects, and assistance in monitoring and documenting project results.

CEDPA has worked in four countries: Kenya, Nepal, Indonesia, and Senegal. Major in-country activities are summarized below.

a. Kenya

During 1982-83, CEDPA worked with the Ministry of Culture and Social Services in the development of a Family Life Training Program, in which 17 trainers and supervisors were trained, along with 29 field staff and extension workers. In 1982, the CEDPA WIM Unit began work with the Society for Advancement of Community and Women's Studies. In March 1983, they held a training of trainers course for four people, followed by a workshop for 24 representatives from 17 community women's self-help groups. A subgrant was awarded to the Society to provide technical assistance and follow-up to the workshop participants. Subsequently, nutrition demonstration projects were planned and implemented with five women's groups in the Coast province. The aim of the project is to introduce routine growth monitoring, nutrition and health education, and family planning promotion through existing women's groups in these five rural villages.

b. Nepal

Beginning in May 1983, in collaboration with the Family Planning Association of Nepal (FPAN), training and feasibility studies were conducted, leading to development of a proposal for a Nutrition Training and Services project. In November of that year, a training workshop was conducted for 14 program, clinic, and field supervisors and the FPAN was awarded a subgrant for a 16-month demonstration project. The project goal is to integrate basic nutrition services with family planning and rural development activities in 10 of 43 subdistricts involved in the FPAN's Welfare Project. The FPAN conducted a training workshop for 22 field promoters and women volunteers recruited from the project area. Village nutrition monitoring and education activities were begun in February 1984 in each of the targeted subdistricts. Results of a midterm evaluation of the project were very positive.

c. Indonesia

In 1983, CEDPA began working in Nusa Tenggara Timur (NTT) Province with the National Family Welfare Movement (PKK), a voluntary women's movement charged with village implementation of numerous intersectoral activities including growth monitoring, nutrition education, and referral activities to the national nutrition program. Training and feasibility studies resulted in development of a proposal for a nutrition demonstration project. The project was to strengthen PKK's role in the supervision and support of village nutrition volunteers (kaders). Funding for this demonstration project was made through the CHIPPS Project (a USAID mission-supported activity). Training needs assessments were carried out in the project areas, and a curriculum module developed for training of the management team. Three subdistricts and nine villages were selected for participation in the project. Ten managers were trained in September 1984, followed by training for 24 subdistrict managers in November, and more than 120 village volunteers early in 1985. The subproject has a village weaning food production component, which is viewed as a way to combine income-producing activities with nutrition activities.

d. Senegal

CEDPA/Senegal is an indigenous PVO founded in 1983 by graduates of the WIM training program. This group developed a preliminary plan for a training workshop in late 1983 designed to improve the community nutrition skills of women managers and enable them to add nutrition activities to their ongoing projects. The CEDPA Community Nutrition Action Module was revised and translated for use in a training workshop for 20 women managers, held in January 1985. It was a ten-day program designed to improve the participants' nutrition intervention skills, which provided information on basic nutrition interventions (e.g., growth monitoring), an exercise in planning nutrition project with the community, and a mini-workshop on proposal writing.

13. INCAP

The Institute for Nutrition of Central America and Panama (INCAP) was funded by Project 931-1010 to carry out the Regional Lactation Promotion Project. The purpose of the project was to stimulate and guide the design, implementation, and evaluation of coordinated multidisciplinary national projects in the promotion of breastfeeding. The project was to carry out the following tasks:

- Assemble and continuously update information on lactation activities in the coverage area;
- Provide technical assistance;
- Publish and distribute a newsletter;
- Organize one national and two international seminars;
- Develop a position paper on infant feeding practices;
- Provide training for hospital-based personnel in lactation management;
- Publish case studies of exemplary breastfeeding promotion projects.

By summer 1986 the INCAP Project had accomplished many of its objectives. An international seminar on breastfeeding was held in Panama which focused on multisectoral planning for lactation promotion. The Newsletter "Madres y Ninos" was distributed in Central American and the Caribbean. A Clearinghouse was established to respond to field requests for information on breastfeeding. INCAP provided technical assistance in the development of curriculum outlines for elementary and middle schools on infant feeding and INCAP staff participated in various regional meetings, primarily health professional societies and congresses.

14. Development Associates

In 1982, Project 931-1010 "bought in" to an existing Development Associates (DA) family planning training project for the Latin America Region. The intention of the "buy-in" to the population project was to integrate and expand

support for breastfeeding and maternal/infant nutrition education activities in population programs throughout the region. In the 18 months after the nutrition amendment was added to DA's training contract, thirteen projects were negotiated. The focus of these projects was nutrition education and promotion of breastfeeding. DA offered technical assistance to each of the subcontractors initiating nutrition activities, as well as a Spanish-language training package and nutrition information and materials from the APHA Clearinghouse. Technical assistance was provided to the country projects from a variety of sources, including INCAP, UNICEF, and DA staff.

DA developed training materials aimed at trainers in family planning programs responsible for intermediate or field-level workers. Four subject areas were highlighted:

- Breastfeeding
- Maternal nutrition
- Infant nutrition
- Family planning/nutrition interrelationships.

Country plans were developed for Bolivia, Brazil, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Paraguay, and Peru. Evaluations were carried out of project activities in Ecuador, Guatemala, Brazil, and Paraguay. It was decided that the other projects would not be mature enough at the termination of the DA contract to warrant evaluations.

15. Manoff Weaning Project

The Weaning Project being implemented by Manoff International is one of the most recent activities to be funded under the Maternal/Infant Nutrition Project. The contract, awarded in 1985, was intended to support "research and provide technical assistance services to improve weaning practices and weaning behavior in developing countries," using a social marketing approach. The research component of the project was to assess the various factors which contribute to weaning behavior, identifying beneficial and harmful effects on the nutritional status of infants and young children. The second component of the project, technical assistance, was to be used to help host countries and PVOs take actions to ensure that weaning practices and behavior in developing countries are nutritionally sound.

The major task of the project was originally envisioned as provision of technical assistance to four countries (one from each of the four AID geographic regions) to promote nutritionally beneficial weaning practices. Emphasis is placed on heavy "up front" work in-country, to analyze determinants of infant feeding before other training and materials development begins. The project expects to collaborate, where possible, with PVOs like CRS and CARE. Since its beginning, the project scope of work has been amended to expand its focus to eight countries, although the full package of project services will not be available to the additional four countries. The eight countries where the project will be implemented are: Ghana, Cameroon, Indonesia, Peru, Ecuador, Swaziland, Zaire, and the Caribbean Region.

The major outcomes of the Weaning Project will be:

- A description of the current weaning practices;
- An action strategy for their improvement;
- An assessment protocol to share with other countries;
- People trained in-country in the qualitative research methodology and other skills necessary for project implementation;
- Four implemented and evaluated projects from which to learn about improving weaning practices.

16. San Diego Lactation Training Program

In August of 1983, the San Diego Lactation Program began the Lactation Specialist Training Program, with funds provided through INCS. The goal of the project was:

"To assist the promotion of breastfeeding in developing countries by improving the knowledge regarding the clinical management of lactation and breastfeeding of current and future prenatal health care providers."

The project had four basic objectives:

- To train teams of physicians and nurses from teaching hospitals in developing countries as lactation specialists;
- To assist these teams in developing a model of service delivery and teaching appropriate to their own hospital conditions;
- To assist each in designing in-service and training activities in support of breastfeeding for their physician and nursing colleagues;
- To assist the teams in selecting or developing appropriate teaching materials for their own programs.

Between August 1983 and February 1985, four training sessions were carried out for a total of 20 physicians (18 pediatricians and 2 obstetricians), 12 nurses, and 3 nutritionists. These trainees developed similar training programs for their colleagues when they returned home. The ultimate project objective was that through a "multiplier effect", a significant portion of health care professionals in each country would benefit from the lactation management training.

In September 1985, the San Diego Lactation Program (Wellstart) was given a direct grant to continue training activities for 18 months, independent of INCS. A second grant, to begin in mid-1987, will contain a limited amount of money to be used as "seed" funds, in addition to support for continued training.

17. APHA Contract

The Clearinghouse on Infant Feeding and Maternal Nutrition was established with funds from the Maternal/Infant Nutrition Project in 1979, through a contract with APHA. The purpose of the project was twofold:

- To improve access to information and materials on child and maternal nutrition for developing country health and nutrition practitioners and policymakers, and
- To help them implement more relevant and effective programs and policies to improve maternal and child nutrition.

Two specific activities were designated for the Clearinghouse:

- To establish a clearinghouse specializing in information on both the technical and programmatic aspects of breastfeeding, infant and child feeding, maternal nutrition, and training and legislation;
- To publish a newsletter on these topics, three times a year in English, French, and Spanish.

Through a competitive bidding process, APHA won the first contract to undertake this work in 1979.

The work of APHA under this contract is divided into three major activities:

- "Mothers and Children" Bulletin on infant feeding and maternal nutrition;
- Clearinghouse on Infant Feeding and Maternal Nutrition;
- Advisory Board.

The "Mothers and Children" Bulletin was begun to provide information to nutritionists, health practitioners, policy makers, and project personnel working in developing countries. APHA, AID, and the Project Advisory Board developed an editorial policy which served as the framework for the publication and reflected its ultimate goal: to promote better understanding of infant feeding and maternal nutrition. The policy considered regional coverage, style, format, focus, content, and readership. The content of each issue of the newsletter is distributed evenly among the following topics: breastfeeding, child feeding and weaning, maternal nutrition, and related topics. In 1985, the newsletter was distributed to 12,821 recipients, 85 percent of them in developing countries.

The Clearinghouse was originally intended as a small component of the overall project, to provide support to the newsletter and assist in the selection and distribution of documents for "Mothers and Children." However, the information dissemination role of the Clearinghouse gradually expanded, in response to expressed needs from the field. The collection now contains over 5400 catalogued documents, books, and education materials, including foreign language materials, primarily in French and Spanish. The Clearinghouse has an active information service which provides a variety of services to the field, including photocopies of articles in the collection, bibliographies, referrals, and workshop/conference information packets.

The Advisory Board was formed in 1980 and met three times during the span of the first contract. Initially the Board's role focused on development of an editorial policy for the newsletter and a work scope for the Clearinghouse. Once these main issues were agreed upon, the Board became more concerned with review and evaluation of project activities, and plans for future ones.

Again in 1985 APHA, through a competitive bidding process, won the contract to continue the functions of information and clearinghouse in maternal and infant nutrition.

B. STRATEGY ISSUES

This project was initiated at a time when AID believed there was

"a genuine need for giving greater emphasis in the ongoing programs of nutrition, health, and education to the well-being of the infant and young child, specifically through breastfeeding and weaning practices and maternal dietary patterns."

The project was planned to "reinforce existing programs" and "create new mechanisms for facilitating this process," through strategies at several levels: sensitization of policymakers, education and training, development of an information base, information dissemination, research into breastfeeding/infant feeding determinants and other surveys and research, breastfeeding support groups, and focused interventions. As mandated, breastfeeding was clearly the priority.

Figure 1 illustrates the program logic of Project 931-1010, and lists the project strategies.

The sections which follow discuss some program factors which were influenced by the overall project strategies and which the evaluators believe shaped the project and influenced its approaches and outcomes.

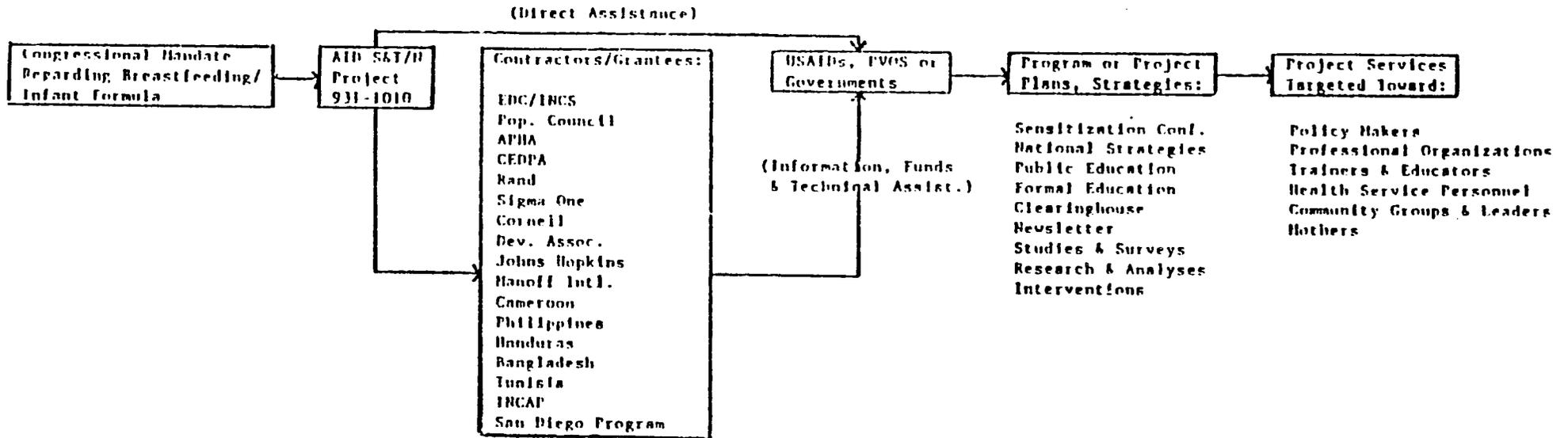
1. Breastfeeding "Success"

Of the three technical areas of focus in the project, the largest number of activities and the greatest proportion of the overall budget have been spent on breastfeeding projects. There are several explanations for this skewing. First and foremost, breastfeeding was the topic around which the project was developed, and so, was the first priority. The "success" of breastfeeding interventions is due in part to the historical events which surrounded the issues at the startup of the project, not the least of which was the mandate of the U.S. Congress to AID, and political pressure, to make a public show of "doing something" about breastfeeding. Political and organizational will, available funding, and the nature of the subject, combined to create a series of effective research and action projects.

Relative to maternal nutrition or other nutrition interventions, breastfeeding may be perceived as more "do-able" because of some of its inherent qualities. In most cultures one can identify three aspects of breastfeeding which are universally accepted:

FIGURE 1

PROGRAM LOGIC OF PROJECT 931-1010



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Adapted from: Devres, A Review of Nutrition: Improving Maternal and Infant Diets, phase I (931-1010), September 1987, p. 25

- It is traditional, normal, and has been accepted as the standard for many years;
- Promoting breastfeeding encourages a respected tradition which has been lost or is perceived to be deteriorating; it is also perceived as maintaining a valued mother/child image which is not antagonistic to anyone other than those selling canned milk or formula;
- Unlike some public health interventions (e.g., family planning, ORT, pharmaceuticals), which are seen as unnatural, breastfeeding is literally a "sacred cow" in that it is psychologically, socially, politically, and culturally unexceptionable.

2. Limited Role of Maternal Nutrition in the Project

Compared to the number of breastfeeding/infant feeding activities in the project, maternal nutrition has received negligible attention. There seem to be some philosophical as well as practical reasons for this. First, in an era when the focus of international public health is on "child survival" and prevention of childhood illnesses and death, mothers' health receives only secondary attention. Unfortunately, a malnourished mother is not as heart-rending, nor as compelling, as a malnourished child. As one USAID health officer from an African country commented, "Women are like chattel, especially in Muslim societies" where men believe "I can get another wife" if the first one dies. Women in many developing societies do not compete well either for nutritional or economic resources, and therefore end up last in terms of health and nutrition priorities.

Second, there is no simple, handy technology for upgrading maternal nutrition, nor are there any simple tools for measuring and evaluating maternal nutrition as there increasingly are for infants and children. Even measurements of body composition are still fairly primitive. The lack of such tools is, in itself, striking and troubling.

Several AID health officers also commented that maternal nutrition projects are of low priority, difficult to conceptualize because so little is known about factors affecting maternal nutrition, and believed to be too difficult to implement. Often there is no constituency within developing country health ministries for designing or carrying out projects with a maternal nutrition focus. The problem of maternal malnutrition may also be viewed as a product of the larger problem of general food insufficiency and inadequate overall development, both beyond the scope of a ministry of health. This political view of maternal under-nutrition as basically rooted in poverty has proven to be more durable and more prevalent than seems to be the case with regard to child undernutrition. Perhaps this is so because no "simple" approach such as child survival has appeared to supplant it.

The Project 931-1010 Amendment of May 1983 postulates another theory for the lack of activities in maternal nutrition:

"The absence of field methods for identifying maternal malnutrition and an understanding of how 'intervenable' factors such as food intake, energy expenditure, infections etc. may interact with immutable characteristics to produce low birthweight infants and undernourished women. There is very little information which can be used as a basis for low-cost effective interventions for improving nutritional status in this group. Further work is needed in the form of field projects aimed specifically at answering these questions."

This description of the "state-of-the-art" in maternal nutrition in 1983 characterizes the current situation as well. Little has changed.

3. Relative Weight of Various Project Components (Right Issue at the Right Time)

The MIN project was described by one of its earliest project managers as a "rare opportunity within AID to have funds and technical assistance at the right time in the right place." She disputed critics at the time who believed AID was "too trendy and riding on the WHO publicity surrounding infant formula." Instead, she maintains that it was precisely because of the opportunity to capitalize on the international controversy surrounding breastfeeding, that this project was able to successfully research breastfeeding trends and plan interventions to promote breastfeeding. In fact, she believes that the AID-funded research undertaken during this project went much beyond the issue of the marketing code, to identification of the real issues in the decline in breastfeeding. This flexibility is a design feature worthy of replication.

During the first phase of the project, the main focus was on breastfeeding, as intended. From 1979 to 1983, 45 percent of total project funds went to breastfeeding alone. During Phase II, however, when the project emphasis was to have shifted to maternal nutrition, only 2 percent of the project funds were actually spent on maternal nutrition activities. These figures indicate that the problem is not in the lack of funds or priority, but in a failure to identify subprojects which address maternal nutrition problems.

As in other areas, there are popularity trends in international public health. One can follow the funding trails for recent, popular health issues like ORT, in developing countries dependant on international funding for support of many health programs. Within this project, maternal nutrition seems to have been the "right issue at the wrong time."

4. Centrally-Funded Projects as Catalyst

The traditional role of a centrally-funded project has been to highlight a new area of development activity, develop interest in a program, approach, or research topic. Both AID and UNICEF have used this approach successfully to encourage development of ORT and EPI activities. Centrally-funded projects can provide the initial start-up or seed money for an activity which can later be supported bilaterally. A centrally-funded project can be used to encourage USAID missions to undertake an activity they would not otherwise embark on, either because it is not a priority or they do not have money to support it. A central project can be used to respond to a country's interest

in a sector, even when a country or mission (e.g., Panama) does not have a health portfolio or a technical person to develop and manage projects. Officers in the Health Office in the Honduras AID mission noted that, while they would probably have gotten around to a breastfeeding project, it would have been--inappropriately--rural- rather than urban-based.

The potential for a centrally-funded project to serve as a catalyst has been demonstrated many times in this project. The Director of Maternal/Child Health Services in Honduras said that PROALMA served as a catalyst to the Ministry of Health by putting constant pressure on the Ministry to "do something" about breastfeeding. Similarly, in both Thailand and Indonesia, an initial focus on breastfeeding promotion and lactation management training for health professionals has prompted Ministries of Health in both countries to adopt aspects of the curriculum on a national basis.

There seems to be some consensus that centrally-funded projects prime pumps and act as catalysts for projects, especially "new wave" projects which might not have been generated at the mission level, which might have been generated somewhat later, or, as in the case of the Honduras project, would have taken a somewhat different form. However, it often happens that, when projects are centrally generated and funded, the USAID feels no sense of ownership and will, at a minimum, ignore the project or, at worst, try to sabotage it.

The cases of Honduras and Panama are instructive in this regard. The Panama USAID has no health portfolio and was uninterested in developing one after years of public sector involvement. At the same time, the Mission was keenly sensitive to any regional or central incursions. Thus, there was no support for the project, which looked for all help to the Regional Breastfeeding Project based in Guatemala. Thanks to the vigor of that project and the excellent performance of the INCAP coordinator, the project flourished but in spite of the USAID, rather than because of it.

In Honduras, in contrast, although the project was centrally funded, the presence of a PSC health officer assigned to the activity engendered a management role for the USAID which, as burdensome as it may have become, served to invest the mission in the project and elicit the support that helped it become become a vigorous project. It is both engaging and symptomatic that a new AID health officer, after being in-country awhile, was surprised to discover that the PROALMA project was, in fact, centrally funded.

The INCS role as a catalyst in promotion of breastfeeding in Indonesia was noted in the 1985 evaluation of that project. It said:

"The current supportive practices found in several hospitals in Indonesia are the result of an evolutionary process of raised consciousness and shifting attitudes about the importance of breastfeeding and particularly the role of the hospital. Much of the current success grew out of the manner in which the change was brought about. INCS' greatest contribution to this change was through its role as a catalyst in assisting some of the early meetings and seminars. The travelling seminars brought about a consensus of opinion among the medical community in Indonesia as to what hospital practices should be. These group endorsements of a certain approach and set of accepted practices were important in a historical context, and set precedents for the changes which followed."

Related to the discussion of centrally funded projects as catalysts is their role in "pump priming," or providing funds for start-up of activities. During discussions about the design of this project, a contractor commented, "the APHA Clearinghouse, as part of this centrally funded activity, represents one of the best roles for AID--that of an information rich country making technical information available worldwide, but without any of the usual strings attached. The information is free and the user can apply it as he sees fit." It would appear that for a global approach to information dissemination, central funding is a prerequisite.

5. Project Size (Many Small Grants Versus a Few Large Ones)

The evaluators believe there are two basic issues central to the question of whether a project such as this one should be designed to fund many small sub-projects (as was the case in Phase I), or concentrate its funds in several large contracts (as is being done in Phase II). The first of these is a strategy question: Which design is more likely to bring about the desired project objectives? Innovation comes from small projects (pilot projects in many fields have traditionally been used in this role), where a concentration of resources, commitment and expertise is more apt to produce results.

GEDPA's work in four countries and the PROALMA Project are examples of the beneficial outcome of such small, focused activities. On the other hand, the impact of such projects may be minimal, because they serve a limited area or population. However, as with PROALMA, when a Ministry or national organization adopts the project's responsibilities, a much greater effect is possible.

The second basic issue is that of overall project management within S&T/N. This is a key factor, regardless of whether the project is concentrated in a few large grants or many small ones. Although one might assume that large contracts with a few recognized organizations would ease the management burden, this is not necessarily the case. Historically, the project manager's role in this project has been an active one, even to the point that one contractor complained of being "overmonitored."

Given these considerations, it is hard to align on one side or other of the size issue, which is not one of absolute right or wrong. In the beginning of an experimental project like this one, it makes sense to "cast a large net" and support a wide variety of subproject activities. Through this filtering mechanism, the fundamental problems and the approaches most likely to succeed can be identified, allowing the project to concentrate its resources. Perhaps the model which makes most sense is a sequential one, beginning with a large number of subprojects, then condensing to the few which appear most promising (which in fact is what has happened in the MIN project whether by design or accident).

C. DESIGN ISSUES

Project 931-1010 was designed to make use of three major contractors to carry out the early activities of the project. The four-country infant feeding study (originally referred to as the Infant Formula Study) was conducted by a consortium led by the Population Council. Other contractors were recruited, primarily to service field projects; two of the initial contracts (INCS and

the APHA Clearinghouse) were developed with this goal in mind. The major output of INCS was to be ad hoc technical assistance to USAIDs, PVOs, and host country organizations, while the Clearinghouse was to be a major information resource for field projects. As the project evolved, a number of other small contracts and grants were made for breastfeeding/infant feeding research and data analysis, in-country research projects, and interventions. The project was also a source of funding for small activities such as invitational travel and support for conferences and participants. In FY 1981 and FY 1982, the project funded over 25 different activities. Some observers referred to the project as a "grab bag" because of the variety of activities it supported.

The design issues discussed in the sections which follow relate primarily to the individual subprojects. They are issues of project design identified by the evaluators during the project review.

1. Verticality Versus Integration/Horizontality

A prevailing perspective in international health thinking is that, somehow, integrated (or horizontal) programs are inherently better than vertical programs. Like most simplistic models, this one merits dispute. Vertically organized programs have valuable uses in the evolution of any development effort. The most salient of these are the following:

- A vertical approach highlights a development problem and calls attention to the need for new program ventures (examples: the PROALMA Project in Honduras and the Panama Breastfeeding Project);
- A vertical program is useful for getting things started, for assembling data and information on the problem, and attracting experts to lend credibility to the prospective activity (example: the Population Council Infant Feeding Study);
- A vertical program can relieve a Ministry of Health from responsibilities it is not prepared to take on economically or logistically, even though it may be interested in the subject (example: Helen Keller International doing cataract surgery);
- A vertical program keeps a fledgling independent intervention from being swallowed up by larger MOH programs, which are typically integrated, before it has sunk some conceptual roots and generated a body of supportive human resources. This is particularly threatening when the "swallowing" organization is not adequately staffed, financed, and organized.

On the other hand, a vertical program may find itself in a double bind. Particularly if it is in the private sector, it may become an institutional orphan, unaccepted by the national health program, a victim of institutional jealousy and perhaps even perceived as an adversary. It then becomes persistently dependent on special (usually outside) funding this serves as an additional irritant. Furthermore, and maybe corollarily, the vertical program may have trouble sustaining an independent constituency and expanding its base, especially if it depends on volunteers and has a limited geographical focus, e.g., urban.

The case of the PROALMA project in Honduras is instructive. The PROALMA project was created by the Ministry of Health (MOH), the Social Security Institute (IHSS), the National Social Welfare Agency (JNBS), and the Agency for International Development (AID). Although all four institutions signed the agreement creating PROALMA, none provided the project an institutional home. PROALMA, established to execute the project, was to be a temporary organization; that is, at the PACD, PROALMA should have completed its work and would be disestablished; the promotional/educational activities initiated under the project would then be integrated into the operations of the various institutions.

During the period from the signing of PROALMA I in September 1982 until the evaluation of December 1985, PROALMA functioned as an autonomous organization. It enjoyed independence and flexibility in its relationships with its counterpart institutions, was able to work and coordinate with all national health care providers, and was relatively free of bureaucratic struggles and logistical problems. These benefits of independence were well recognized by PROALMA and its counterparts, with corresponding appreciation for the organization's substantial achievements.

At the same time, that autonomy created institutional stresses. The arrangement was managerially burdensome for the USAID, which was paying PROALMA staff through individual personal services contracts and handling all voucher-ing for PROALMA's operating expenses. In the search for an alternative institutional arrangement, consideration was given to the possibility of making PROALMA a PVO which would execute the second phase of project implementation; the idea was discarded, largely due to MOH objections.

The sources of the MOH objections were several. First, while there was agreement that PROALMA's success justified expansion of the program from an urban to a national focus, its staff and logistical capacity would have to have been dramatically augmented to duplicate the regional and local networks supported by the MOH; the MOH could see no good reason for such duplication.

Second, the MOH was philosophically and bureaucratically uncomfortable with PROALMA's verticality. The Ministries of Health of the Central American region shared a growing concern with the proliferation of more or less autonomous, single-intervention projects (e.g., breastfeeding, food supplementation, ORT, EPI, family planning, and even Child Survival) which they preferred to think about and manage under the integrating umbrella of Maternal Child Health.

Third, the MOH frankly chafed at not having in its fold a project which had achieved some success outside that fold and had something of a national profile; which was communicating directly with its own regional offices and operating freely in major national hospitals, including those of Social Security and of the MOH itself; and which it saw as attempting to assume hegemony over breastfeeding as an important health intervention in Honduras with little communication with the ministry which was charged with the responsibility for the nation's health.

The resolution was to reduce PROALMA's ambition and to reassign certain responsibilities. The Federation of Private Development Organizations of Honduras (FOPRIDEH) was brought into PROALMA II as a new signatory and made the administrative-financial unit, taking over that work from the USAID.

The Board of Directors, somnolent during most of PROALMA I, was reactivated. The JNBS and the IHSS were confined to activities within their own systems, with a mandate to coordinate both with PROALMA and the MOH. PROALMA was assigned the role of providing technical assistance to the MOH in its breastfeeding program, at an essentially participatory level rather than the executive level to which it was accustomed; its executive purview was limited to the JNBS and FOPRIDEH. The MOH assumed the primary planning, programming, regulatory, organizational, training, supervision, information, and evaluation role for nationwide breastfeeding activities throughout its system.

In sum, a small, committed, energetic group put into place a successful breastfeeding program in two urban areas in Honduras. Never meant to be permanent institution, its success paradoxically contained the seeds of change in its role as innovator and executor, as the primary responsibility for breastfeeding as an MCH intervention becomes integrated into the broader MOH program.

This account, together with a quite similar experience in the Panama Breastfeeding Project, has a moral. It is that neither verticality nor integration is inherently superior to the other; each has its purposes in the birth and growth of new development interventions. The Maternal Infant Project, appropriately in our view, relied on a vertical approach to project launching and, as individual projects mature, seems to be able to adjust to integration of those ventures into broader institutional contexts.

At the same time, there are some echoes in the PROALMA experience which are instructive. PROALMA is being expected to follow much the same route to institutionalization as was the very large public-sector AID/MOH project, Health Sector I. Both will have had to pass through a sequence of establishing relationships, mutual abrasion and misunderstanding, learning new modes of behavior, earning mutual trust, giving up and letting go of ownership, being technical advisors rather than administrators, and building consensus instead of imposing positions.

2. Urban Versus Rural Focus

Again, the Honduras case is instructive. To talk about an urban vis-a-vis a rural focus in the design of the PROALMA project is to talk about a hospital/clinic-based focus vis-a-vis a community focus. PROALMA was designed with an urban focus which will be retained for PROALMA II. The approach was taken for two reasons. First, it was potentially more cost-effective than such alternatives as mass media campaigns, community outreach programs, or extensive networks of mother support groups. By concentrating resources on doctors and nurses in training institutions, rapid dissemination and replication of PROALMA's messages were possible. Second, an urban, hospital-based approach was isomorphic to the breastfeeding problem in Honduras where, as in most of the developing world, the decline in breastfeeding is associated with in urban populations and hospital-attended births.

In PROALMA II, project activities in hospitals will consist of training and clinical supervision of hospital staffs; support, education, and clinical consultation with mothers; and monitoring of procedures and implementation of national norms for service delivery to promote breastfeeding. Regional outreach will be based in regional hospitals.

The strategy is expected to be effective for several reasons. First, in PROALMA I it proved more effective than anticipated in urban areas. Although mothers' contacts with health providers and health institutions prior to, during, and following birth are relatively brief events, those are such critical times that mothers' experiences are highly salient. Based on the evaluation data, mothers who initiate lactation at birth, who are with their newborns continuously, who do not see bottles and formula in the hospital where they give birth, and who are encouraged and shown how to breastfeed, do in fact breastfeed successfully and for longer periods than they otherwise would.

Second, hospitals are very visible and respected. The effects of their practices are felt beyond the women who directly experience them. Changes are initiated in a hospital, but are spread through non-formal communication channels to the wider community. This diffusion model is critical to the rationale for regional implementation since, at the regional level, less than 20 percent of births are attended in hospital.

Third, hospitals are centers of both formal and non-formal learning for health care providers. Personnel in hospitals are explicitly trained by PROALMA, but health care personnel outside of hospitals look to those institutions for models of optimal clinical care. The effects of training and changes in procedures of care are felt far beyond each hospital.

Finally, hospitals and professional staff are the court of last resort in the Honduras health system. An excellent community-based program will fail if health care providers and patients are not supported at the tertiary care level. Hospitals have a prestigious and learned profile; knowledge and practices which support breastfeeding in those institutions are essential to stemming the decline of breastfeeding in Honduras. As PROALMA II progresses, the intent is that more direct community outreach will be undertaken in regions where hospital practices encourage breastfeeding and hospital personnel have adequate knowledge about lactation. Training and supervision of midwives will be the primary outreach mechanism.

In sum, in the Honduran context--and, again, the experience is paralleled in the Panama project--an urban-based national breastfeeding promotion program has made sense, for reasons that appear to go well beyond the experience of a single country or region.

Given the data on breastfeeding trends in most developing countries, and urban/rural differentials, the focus of many of the breastfeeding projects in this project on urban areas seems appropriate. The infant feeding study data from several countries indicate that where hospital births predominate, as they do in most urban areas, the factor which may influence breastfeeding behavior the most is interaction with health professionals in hospital. In rural areas, where hospital births are less common, other factors influence breastfeeding behavior.

3. Involvement of Client Population

The services of this project were "targeted" to a number of audiences which included policymakers, professional and medical organizations, government and private health workers, trainers and educators, community groups and mothers.

For the most part, the services of the project were delivered to or used by mid-level health personnel in government organizations or PVOs. Research was carried out primarily in university settings, often with a research protocol imposed from outside. Of all the subprojects, only the CEDPA work with nutrition demonstration projects in four countries, and the Weaning Project, stressed involvement at the community level and engaged the project's ultimate client, a mother in a developing country. This was partly due to the design and nature of the project's activities, especially the research, and partly due to the strategy of starting from the "top down" with policy-makers and doctors, in an attempt to bring about policy changes.

4. Nutrition As A Mission Priority

For a number of reasons, it has been some years since nutrition has been a strategy priority for many USAIDs. A major contributor to this state of affairs has been the evolving perspective that nutrition (and malnutrition) are basically structural problems deriving from production and market dysfunctions on the one hand and inadequate consumer buying power on the other. Most recently, the assumption has been that more income had to be generated before people could or would eat better, so that nutrition became a residual category, largely filled by different kinds of feeding programs. Nutrition interventions came to be seen as not working and certainly hard to do. Interest waned as did nutrition officer slots; at present there are only four in the entire agency.

The Child Survival initiative and its GOBI-FF rubrics have refocused attention on nutrition. However, in the lean years of nutrition, along with the loss of faith that anything important could be accomplished came loss of touch with the state of the art. Missions need to be educated to the fact that there are things that can be done while awaiting nirvana, in potentially effective areas such as weaning and dietary management of child diseases.

The Maternal Child Nutrition Project has moved some distance to redressing this neglect, although the crucial area of maternal nutrition remains virtually untouched. The degree to which the project has been able to accomplish this varies among missions, who differ in their perception of the utility of centrally-funded activities in general and in their view of the value of nutrition interventions in particular. The Kenya mission characterized its posture as one of "passive acceptance," arguing that, since nutrition was not a portfolio priority, breastfeeding and infant feeding were similarly non-priorities; the Cameroon USAID perceived the infant feeding study as an external imposition not congenial with mission strategy. Panama, which has no health portfolio, only tolerated the project as a regional endeavor. In contrast, some missions (e.g. Indonesia) seized upon the project as harmonious with their priorities and useful for doing some refocusing.

Some of the remoteness encountered, according to one contractor interviewed, may be related to the type of contractual arrangements that get established. If a given contractor is operating under an independent contractor, the USAID is perforce involved; if the mechanism is a cooperative agreement, the contractor can essentially bypass the USAID and negotiate directly with an NGO. The latter involves little or no formal contact with the USAID and hence can remain removed from mission priorities and interests. From the standpoint of a mission which cares about the subject, this is obviously undesirable; for

missions which do not care, laissez faire is comfortable. From the standpoint of the central project's purposes, more rather than less involvement would seem to be preferable, in order to engage the mission's attention to the subject of maternal infant nutrition. Cooperative agreements may be easier in some ways in the short term, but they may not be productive in the longer term.

III. PROJECT EXPERIENCE ("WHAT ACTUALLY HAPPENED")

A. MAJOR PROJECT ACTIVITIES

The subproject activities by contractor are reviewed in the descriptions which appear in Section II. Those activities are also presented in this section in tabular form, classified under one of three major headings:

- Breastfeeding
- Infant feeding
- Maternal nutrition.

Within each table, they are further broken down by one of four overall project objectives: sensitization, research, IEC (including training), or interventions.

Table 6 : Maternal/Infant Nutrition Project (931-1010) Activities

I. Breastfeeding

Objective	Year	Country	Contractor	Activity
Sensitization	1980	Nepal	INCS	Consultants for a Maternal and Young Child Nutrition Seminar.
	1980	Colombia		Andean Region Seminar on Maternal/Infant Health and Breastfeeding.
	1980	Gambia		Breast Feeding, Nutrition and Maternal/Child Health Seminar.
	1980	Indonesia	INCS	Two Consultants for Second National Symposium for Promotion of Breastfeeding.
	1980	Brazil		International Congress of Nutritionists and Dietician.
	1980	Panama	INCS	Consultants for a Maternal/Infant Nutrition Seminar For Health Professionals to Promote Breastfeeding.
	1981	Kenya	INCS	Consultant for a Health Professionals' Maternal and Infant Nutrition Workshop.
	1981	Costa Rica	INCS	Consultants for a National Workshop on Breastfeeding.
	1981	South Pacific	INCS	Consultants for the First South Pacific Regional Mother and Infant Nutrition Seminar.
	1981	Lesotho	APTECH	Consultant for National Workshop on Breastfeeding.
	1981	Sierra Leone	INCS	Consultant for Maternal Child Nutrition Conference.

Table 6: Maternal/Infant Nutrition Project (931-1010) Activities

I. Breastfeeding (continued)

Objective	Year	Country	Contractor	Activity
Sensitization	1981	Worldwide	INCS	Consultant Recommendations for Improving Seminar Formats, Substance and Effectiveness.
Research	1979-83	Colombia	Population Council	Consortium conducted research on marketing, maternal employment, health care system effects and bio-medical aspects of infant feeding practices in four countries. Research focus was breastfeeding and infant formula use.
	1979-83	Indonesia	Population Council	
	1979-83	Kenya	Population Council	
	1979-83	Thailand	Population Council	
	1982-83	Malaysia	Rand	
	1982-83	Panama	Sigma One	
IEC	1979-85	Worldwide	APHA	Conducted secondary analysis of breastfeeding data.
	1980	El Salvador	INCS	Establish clearinghouse specializing in information on technical and programmatic aspects of breastfeeding, infant and child feeding, maternal nutrition, and training and legislation. Begin publication of "Mothers and Children" newsletter, in three languages.
				Organize workshop to evaluate Le Leche League materials for CALMA project.

Table 6: Maternal/Infant Nutrition Project (931-1010) Activities

I. Breastfeeding (continued)

Objective	Year	Country	Contractor	Activity
IEC	1981	El Salvador	INCS	Assist CALMA project develop breastfeeding counsellor's curriculum.
	1981	USA/ Chicago	INCS	La Leche League International Conference.
	Ongoing	USA	INCS	Planning conference of breastfeeding mother support group.
	1982	India	INCS	Keynote speaker for the National Workshop to formulate strategies for implementation of India code for protection and promotion of breastfeeding.
	1982	Indonesia	INCS	Training in lactation management for health professionals. Assistance in development of breastfeeding promotion and nutrition education activities.
	1982	Thailand	INCS	Training in lactation management for health professionals.
	1982	Philippines	INCS	Training in lactation management for health professionals; training in supplement distribution, maternal education and management for MOH personnel.
	1982	Kenya	INCS	Training in lactation management for health professionals; development of training module on nutrition management; training in management skills and nutrition for rural community workers.

Table 6: Maternal/Infant Nutrition Project (931-1010) Activities

I. Breastfeeding (continued)

Objective	Year	Country	Contractor	Activity
IEC	1982 & 1983	Worldwide	APHA	Reader surveys undertaken to verify 1) news- letter readership, 2) usefulness of information, 3) specific topics requested by readers; and 4) to evaluate effective- ness of efforts to broaden readership base to enhance multiplier effect.
	1984	Indonesia	INCS	Participation in workshop on Breastfeeding/ Seminar on Perinatology and 6th Indonesia Pediatric Congress.
	1984	Indonesia	INCS	Third Lactation Management Seminar in San Diego.
	1984	Honduras	INCS	Assist PROALMA with Second National Breast- feeding Seminar for physicians, San Pedro Sula.
	1985	Costa Rica	INCS	Visit to San Diego Lactation Program by Central American health professionals.
	1985-88	Honduras	PROALMA	Training of health personnel on the theory and practice of breastfeeding.
				Development of educational materials on breastfeeding for health personnel in hospitals and health centers, and general public.
				Implementation of a national medical breastfeeding seminar directed at general practitioners and specialists in pediatrics and gynecology.

Table 6: Maternal/Infant Nutrition Project (931-1010) Activities

I. Breastfeeding (continued)

Objective	Year	Country	Contractor	Activity
IEC	1985-88	Honduras	PROAIMA	Establishment of a documentation and information center on breastfeeding.
Interven- tions	1980	Gambia	INCS	Evaluate Family Planning Associates request for funds to promote breastfeeding.
	1982	Brazil	INCS	Review Brazilian national breastfeeding promotion program; recommend strategy for 2nd phase; develop mass media breastfeeding promotion evaluation methodology.
	1982	Panama	INCS	Recommendation for the development of a multimedia national breastfeeding promotion campaign.
	1982	Honduras	INCS	Proposal for a national breastfeeding promotion program.
	1982	Panama	INCS	Design implementation plan for communications component of Panama breast-feeding promotion campaign.
	1982	Brazil	INCS	Advise Institute of Nutrition on Developing of network of educational incentives for breastfeeding mothers as part of a national breastfeeding campaign.
	1983	Haiti	INCS	Develop strategies for strengthening proposed breastfeeding intervention project Cite Simone area of Port-au-Prince.
	1983	Jamaica	INCS	Develop proposal for a Breastfeeding Mother Support Group.

Table 6: Maternal/Infant Nutrition Project (931-1010) Activities

I. Breastfeeding (continued)

Objective	Year	Country	Contractor	Activity
Interven- tions	1983	Brazil	INCS	
	1983	Thailand	INCS	Follow-up visit to assess progress of the national breastfeeding promotion program. Design Bangkok-area breastfeeding promotion project.
	1984	Tunisia	INCS	Help Institute of Child Health analyze data from KAP study.
	1984	Indonesia	INCS	Review data from Population Council study of determinants of infant feeding practices
	1984	Tunisia	INCS	Confer and coordinate future activities for management Study of Maternal Child Health Centers, with M. Marx.
	1984	Indonesia	INCS	Review data from Population Council study of determinants of infant feeding practices
	1984	Thailand	INCS	Mid-point evaluation of Bangkok breast-feeding project (with Mahidol University).
	1984	Panama	INCS	Review Government proposal for national breastfeeding campaign and advise on mass media use.
	1985	Honduras	INCS	Evaluation study PROALMA (Honduras).
	1985	Kenya	INCS	Kenya follow-up.
	1985	Thailand	INCS	Breastfeeding for Working Mother (Project development and follow-up).

Table 6 : Maternal/Infant Nutrition Project (931-1010) Activities

I. Breastfeeding (continued)

Objective	Year	Country	Contractor	Activity
Interventions	1985-88	Honduras	PROALMA	<p>Establishment of a national breastfeeding policy.</p> <p>Establishment of institutional procedures and norms in support of breastfeeding.</p> <p>Establishment of a breastmilk bank in each hospital project site for premature infants and sick newborns.</p> <p>Coordination with health personnel trained in breastfeeding for assisting and supporting lactating mothers.</p>

Table 7: Maternal/Infant Nutrition Project (931-1010) Activities

II. Infant Feeding

Objective	Year	Country	Contractor	Activity
Research	1981	Congo	INCS	Review of nutrition survey information and identification of educational concerns and preliminary messages for weaning practices.
	1981-83	Cameroon	INCS	Survey of weaning practices in several northern communities, using an ethnographic approach which fed into a national survey.
	1982-83	Kenya	CEDPA	Training and product feasibility study conducted.
	1982-84	Honduras	INCS and Mission Funded	Two part study beginning with an ethnography, followed by a cross sectional survey of infant feeding practices in Tegucigalpa.
	1982-84	Tunisia	INCS	National Institute of Child Health conducted a feeding habits survey, including a KAP survey.
	1982-85	Bangladesh	Bangladesh	Baseline research undertaken in order to identify factors affecting food intake and nutritional status of young children.
	1982-85	Various Countries	Cornell	Cornell Nutritional Surveillance Program analyzed infant feeding data and intra-household food distribution.

Table 7: Maternal/Infant Nutrition Project (931-1010) Activities

II. Infant Feeding (continued)

Objective	Year	Country	Contractor	Activity
Research	1982-86	Bangladesh	INCS	Ethnographic research was undertaken in four villages to document infant feeding practices, leading to recommendations for behavior change messages for mothers.
	1984-85	Bangladesh	Bangladesh	In-depth anthropological study of cultural beliefs and practices surrounding feeding by maternal/caretakers.
	1986-88	Peru	Johns Hopkins	Currently collecting data on diarrheal disease and nutrition, to be used for development of strategies for improving dietary management of childhood diarrhea.
IEC	1980	Peru	INCS	Voluntary Agencies: develop curriculum and training materials on nutrition, oral rehydration, weaning.
Interventions	1981	Congo	INCS	Help design a beliefs and practices survey for CARE/GOC nutrition education project.
	1981	Cameroon	INCS	Evaluate design of a MOH/USAID survey of weaning food practices in northern provinces.
	1981	Tunisia	INCS	Develop plan to strengthen nutrition education capabilities of Institute of Child Health; help design feeding habit survey.
	1981	Congo	INCS	Design a survey to assess the determinants of infant feeding practices.

Table 1: Maternal/Infant Nutrition Project (931-1010) Activities

II. Infant Feeding (continued)

Objective	Year	Country	Contractor	Activity
Interventions	1981	Honduras	INCS	Study of infant feeding practices in Tegucigalpa, Honduras.
	1982	Honduras	INCS	Recommendations for a survey design to assess the determinants of infant feeding practices in urban Honduras.
	1982	Congo	INCS	Present results of computer analysis of nutrition survey for CARE nutrition project.
	1982	Bangladesh	INCS	Help ICDDR design baseline survey project.
	1982	Honduras	INCS	Recommendations for a survey design to assess the determinants of infant feeding practices in urban Honduras.
	1982	Cameroon	INCS	Study of determinants of infant feeding practices in Northern Cameroon.
	1982	Tunisia	INCS	Study of maternal and infant nutrition knowledge attitudes, and practices under for Tunisian governments.
	1982-83	Latin America /Caribbean	DA	Training for PAC personnel.
	1982-83	Kenya	CEDPA	Training workshop for 17 trainers and supervisors and 29 field staff and extension workers.

Table 1: Maternal/Infant Nutrition Project (931-1010) Activities

II. Infant Feeding (continued)

Objective	Year	Country	Contractor	Activity
Interventions	1982-84	Kenya	CEDPA	<p>Training feasibility study conducted.</p> <p>Training for four training coordinators.</p> <p>Training workshop conducted for 24 representatives from 17 community (womens') self-help groups.</p> <p>Subgrant awarded to Society to provide follow-up technical assistance to workshop participants.</p>
	1983	Bangladesh	INCS	<p>Technical assistance to help design and implement a weaning food nutrition education campaign.</p>
	1983	Cameroon	INCS	<p>Ethnographic study to help assess the determinants of infant feeding practices.</p>
	1983-84	Nepal	CEDPA	<p>Training and project feasibility studies conducted.</p> <p>Training workshop conducted for 14 program, clinic and field supervisors.</p> <p>FPAH conducted training workshop for 22 field promoters and women volunteers.</p>
	1983-85	Indonesia	CEDPA	<p>Training and project feasibility study conducted and proposal for nutrition demonstration project developed.</p> <p>Training needs assessment conducted with PKK in the project area and curriculum and module developed for training of project management team.</p>

Table 7: Maternal/Infant Nutrition Project (931-1010) Activities

II. Infant Feeding (continued)

Objective	Year	Country	Contractor	Activity
Interventions	1983-85	Indonesia	CEDPA	PKK conducted training for 10 project manager/trainers, 24 subdistricts, and for more than 120 village nutrition volunteers. Evaluation of P2GK training for managers, supervisors and village nutrition volunteers and in-service training for project management team and supervisors conducted.
	1983-85	Senegal	CEDPA	Preliminary plan for training workshop developed. Feasibility study and planning for workshop conducted. CEDPA Community Nutrition Action Module revised and translated. Training workshop for 20 women managers conducted.
	1984	Guatemala	DA	International Workshop on Nutrition and Family Planning.
	1985	Peru, Cameroon, Ghana, and Indonesia	Weaning Project	Selection of potential field sites and establishment of country assessments including literature reviews, interviews with country specialists, assessment methodologies and complete country profiles.

Table 8: Maternal/Infant Nutrition Project (931-1010) Activities

II. Infant Feeding (continued)

Objective	Year	Country	Contractor	Activity
Interven- tions	1985-86	Bangladesh	Bangladesh	<p>Message design and justification exercises for Pishpash campaign.</p> <p>Focus group sessions held with health workers to introduce Pishpash campaign methodology.</p>
	1986-87	Nigeria, Peru	Johns Hopkins University	<p>Preliminary ethnographic studies conducted on beliefs concerning childhood diarrhea, feeding practices, and treatments given and avoided during and after diarrheal illnesses.</p> <p>Applied clinical studies to determine the effect of these diets on the severity of diarrhea (amount and duration) and its nutritional consequences.</p> <p>Quantitative dietary intake studies to measure the nutrient consumption from these diets by children during and after diarrhea.</p>

Table 8: Maternal/Infant Nutrition Project (931-1010) Activities

III. Maternal Nutrition

Objective	Year	Country	Contractor	Activity
Research	1982-83	Philippines	Nutrition Center of Philippines	Phase I of two part study completing research, design and methodologies used to study iron and food supplementation for pregnant women.
Interventions	1981	India	INCS	Evaluate maternal infection and its effect on infant birth weight.
	1984-85	Philippines	Nutrition Center of Philippines	Phase II involving baseline survey, training of midwives, and delivery and monitoring of interventions.

B. MANAGEMENT ISSUES

1. Role of Technical Assistance and Expatriates

Technical assistance lies at the heart of almost every AID-supported project, and this one is no exception. Until its termination in December 1986, the INCS contract was the major source of maternal/infant nutrition technical assistance in Project 931-1010. INCS provided a wide variety of consultants to USAID Missions, host country projects, and PVOs, as well as to several of the other subprojects funded by 931-1010 (e.g., Cameroon, Bangladesh, Tunisia). Some of these TA activities are described in Section II.A.11.

It appears that the INCS project was used as a convenient mechanism for USAID missions to respond to ad hoc requests for nutrition assistance from PVOs such as CARE and CRS, rather than to design or otherwise assist AID bilaterally-supported projects. This is explained in part by the fact that USAID Missions are often unwilling or unable to use bilateral funds to support short-term technical assistance.

Technical assistance was also built into several of the other subprojects funded by 931-1010. For example, TA was available for in-country activities in the Population Council Infant Feeding Study, the CEDPA contract, and the newly-funded Weaning Project.

During the INCS evaluation of 1985, and the current evaluation, a number of criticisms of this type of TA were noted from the field perspective:

1. Some consultants have not had sufficient or appropriate technical skills to carry out the assignment adequately.
2. Consistency is lacking, either because the same consultant is not available on repeat occasions, or because consultants do not utilize a consistent approach or methodology.
3. Available consultant time in the field is not adequate to complete the scope of work.
4. Follow-up is minimal or nonexistent.

Providing TA creates problems as well. Such as:

1. The difficulty in arranging TA assignments lies in matching time availability of the consultant to the dates of the assistance request, for which there is often little flexibility.
2. TA requests are received on short notice, or Missions may change dates without advance warning.
3. Missions may attempt to use the contract as a "catch-all" for TA, asking for assistance outside the scope of work of the contract. This forces the contractor to use scarce funds for non-priority work.

Those situations where the technical assistance was perceived to be of highest quality and of most benefit, shared several characteristics:

1. Technical assistance was provided by the same person consistently (P. Taylor for CEDPA in Indonesia, M. Griffiths for INCS in the Dominican Republic, or J. Leslie for the Weaning Project in Cameroon).
2. Consultant visits were preplanned and scheduled so that in-country counterparts knew when to expect consultant assistance.
3. Consultants were able to establish collegial relationships with host country counterparts, and the latter felt "ownership" for the project activities.
4. There was skills transfer by the consultant, either through training workshops, or "hands-on" training.
5. The USAID Mission perceived the TA visits to be useful and productive, and took an interest in their conduct.

2. Role of Seed Money

Seed money, as used in this project, is a small amount of money which can be used by a subproject or in-country organization to support training, fund a small research grant, purchase training or reference materials, or otherwise support "start up" activities. Initially, seed money was not included as an option in any of the subprojects, until the need for such a mechanism was identified in the INCS project. After several years of providing only technical assistance, INCS received AID approval to provide seed money to the Thailand Breastfeeding Promotion Project, to pay for development of promotional and training materials, some training costs for staff from the nine hospitals participating in the project, and minimal support to the project's secretariat. That investment paid off and the successful outcome of the Thailand project spurred INCS to move in the direction of project-based activities.

There is provision for seed money in the new agreement with the San Diego Lactation Program as well. This will allow the San Diego Program to assist returned trainees with small research projects, training and follow up activities, once they return home.

3. Collaboration with Other Projects and Coordination of Nutrition Activities

Very little collaboration between the Maternal/Infant Nutrition subprojects and other AID (or other donor-funded) projects took place. The INCS evaluation in 1985 noted:

"It is unclear why INCS has not been more proactive in seeking out opportunities for collaboration with other AID projects, given its association with PVOs in field activities."

Although INCS professed an interest in collaborating with programs in related sectors such as diarrheal disease, it did not, in fact, collaborate with other major contractors.

In the two most recently funded 931-1010 subprojects there is an encouraging trend toward more collaboration with other centrally-funded activities. For example, the Weaning Project is collaborating with CARE in Cameroon and attempting to make use of data collected during the infant feeding survey conducted there with INCS assistance during 1981-84. The Weaning Project's initiative in Ecuador stemmed from technical assistance supported by INCS in planning and implementing a pilot project in two rural areas to improve the government's feeding program by adding growth monitoring and nutrition education activities.

The Dietary Management of Diarrheal Diseases Project was explicitly designed as a collaborative effort. Collaboration is to take place at two levels: the DMD Project is collaborating with the AID centrally-funded HEALTHCOM Project to develop communication support for feeding interventions; and, in both Nigeria and Peru, the project is collaborating with the National Diarrheal Disease Control Programs. Through its association with HEALTHCOM, the DMD Project gains the benefit of expertise in health communications (social marketing) for design of the communication interventions. The fact that the DMD Project is affiliated closely with the National Diarrheal Disease Programs means that both the strategies and educational/promotional activities of the pilot interventions will be continued on a larger scale through the government operated programs. Such collaborative efforts improve the overall efficiency of the Project by building on a base already established in-country.

4. Public/Private Sector Relationships

Location of a project in the private or public sector is a decision which can have far-reaching ramifications. For example, in both Honduras and Panama, starting breastfeeding programs in the private sector contributed to jealousies, distress, and competition with the public sector programs. A successful, high-profile program in the private sector is often an irritant to the public health program, which may seem ineffectual by comparison. In many developing countries, quality of health care is perceived to be superior in the private sector, making it the preferred choice of individuals who can afford to choose. Occasionally, the mere start-up of a health sector activity outside a Ministry of Health program may be viewed as threatening, stemming from a sense of bureaucratic chauvinism. The personalities of individuals associated with private sector initiatives are often enterprising and resourceful, characteristics often stifled in large bureaucracies in developing countries.

The competition is unfortunate, since public sector resources are often inadequate to meet needs: the private sector has an important role to play and coordination is both necessary and useful.

5. Monitoring and Evaluation Issues

An unstated goal of the research funded by Project 931-1010 was to feed into the development of program interventions in breastfeeding/infant feeding, and

maternal nutrition. This goal was achieved in several of the research and intervention ventures funded by the project. These included the Population Council/Mahidol University research into infant feeding in Bangkok, the Honduras PROALMA Project, and the Panama Breastfeeding Promotion Project. Each of these displays different dimensions of the interrelation among monitoring, evaluation, research, and program design and modification.

The purpose of the infant feeding research in Thailand was to develop a Breastfeeding Promotion Project in nine hospitals in Bangkok. The project was designed organically around the study's most significant finding: that attitudes of health personnel in hospital negatively affects both initiation and duration of breastfeeding. As a result of the study findings, Mahidol University developed a proposal to support interventions which would alter hospital practices in support of breastfeeding, including promotion of rooming-in practices in hospital, training for hospital staff in clinical aspects of lactation management, and reduction of the practice of routinely providing infant formula to new mothers. Similar research was similarly used in Indonesia and Panama.

The Honduras PROALMA and Panama Breastfeeding Promotion Projects illustrate two major evaluation principles: 1) when an evaluation is wanted, its results are generally utilized, and 2) evaluation results are more likely to be utilized, wanted or not, if they are made available in reasonably agile and comfortably accessible fashion.

The evaluation plan for the Honduras project focused its effects on four main areas. The first scheduled evaluation considered what changes in hospital procedures and norms had been carried out, including the development of national policies. The second looked at the knowledge, attitudes, and practices of health personnel in relation to breastfeeding. The third covered postpartum care of mothers, and the fourth focused on the attitudes and nutrition practices of mother in the community. In all cases, post-intervention data collected in the 1985 evaluation were compared to baseline data collected in 1981-1982, in order to assess the impact of the project. The distinguishing features of the PROALMA evaluations were that, for the most part, the data produced were accessible with reasonable speed and, since they had been not only programmed but very much wanted as an integral part of the project, the findings not only substantiated visceral perceptions that the project was being effective but were used to reorient the project managerially and in the design of its expansion.

An example of the second principle is the Panama project, which generated large amounts of evaluation data, so large that their utilization became somewhat ponderous. The design of the national-level evaluation component was quite elaborate and involved a number of longitudinal approaches and some variability that made their potential for comparability somewhat dubious. At the same time, the Panama project, because of its flexibility and the rapidity with which regional-level MOH and hospital staff were incorporated into the national breastfeeding promotion effort, fostered a lot of local-level initiative and innovation. A number of the provincial sub-projects generated their own research designs and protocols and were producing truly interesting findings. What was lacking was quality control on methodology and some way of replicating study themes and approaches throughout the country for purposes of comparability and possible statements on overall project effectiveness.

C. RESEARCH

1. Major Research Findings

At the start of the MIN Project, there was concern that too little was known about determinants of infant feeding. There were many unanswered questions about the role of commercial marketing and advertising of infant formula in the decline of breastfeeding in developing countries. Little was known about weaning behavior, such as what factors influenced a mother to delay introduction of solid foods, effects of cultural beliefs, and so on. In order to fill this knowledge gap and create a data base on infant feeding which could be used to develop interventions in support of improved feeding, research was identified as an important initial strategy of Project 931-1010.

In fact, research has been a predominant activity throughout the project and approximately 38 percent of total project funds have been spent to date on research activities. The largest single research activity undertaken was the Population Council four-country Infant Feeding Study, funded at over a million dollars. At the time, that research was considered a watershed because of its "innovative" design and methodology, and use of ethnographic information to formulate a survey instrument. Since then, this approach has evolved into an accepted research strategy. This emphasis of the Council study was emulated in much of the subsequent research of the Project and was incorporated into the spinoffs in Honduras and Cameroon.

The San Diego Lactation Management Training courses helped initiate several small but interesting research projects in Thailand and Indonesia. For example, in an effort to document the effects of the changes made at Kariadi Hospital supporting breastfeeding, Dr. Soedibjakti and her colleagues undertook in Semarang, Indonesia, several studies. These studies attempted to identify changes which took place after the introduction of rooming-in at the hospital. For example, a retrospective study of neonatal diarrhea and rooming-in showed a sharp decline in the incidence of neonatal diarrhea following the introduction of universal rooming-in. Similar data showed declines in use of infant formula following rooming-in, and an associated rise in breastfeeding incidence. Other research focused on problems in lactation management identified by the lactation clinic, attitudes of mothers to breastfeeding and rooming-in, and breastfeeding patterns among working and nonworking mothers. Graphs depicting these changes are shown in Annex E.

The major research findings of subprojects funded by the MIN Project are listed below.

BREASTFEEDING RESEARCH

I. A Population Council-led consortium conducted research on determinants of infant feeding, especially breastfeeding, using ethnographic observations, a cross-sectional survey, and survey of infant formula marketing practices. Research was conducted in Colombia, Indonesia, Kenya, and Thailand. Major findings were:

- o There was a high level of initiation of breastfeeding among urban women in all 4 sites. 90% or more of women began breastfeeding after childbirth.
- o There was a high rate of very early supplementation of both milk and other foods.
- o Most births in 3 of the 4 sites took place in hospital. Mothers' contacts with health services were associated with shortened duration of breastfeeding.
- o Contact with more technology and more Western-type maternity services was associated with less breastfeeding.
- o Women expressed positive feelings about breastfeeding and the belief it is the best way to feed a baby.
- o Aside from overall findings of high initiation of lactation and early supplementation, specifics of feeding patterns varied markedly by site.
- o Median duration of breastfeeding varied by site:
 - 6.01 months in Bangkok
 - 6.91 months in Bogota
 - 16.2 months in Nairobi
 - 20.4 months in Semarang
- o Work was not significantly associated with breastfeeding duration in Semarang and Nairobi, but was very strongly associated with curtailed breastfeeding in Bogota and Bangkok.
- o All 4 marketing substudies identified strong commitment to marketing through the health system by sellers of infant formula, although there was a high level of government awareness of the international infant formula marketing code.
- o There is a widespread perception among mothers that they have insufficient milk, but it appears that this "insufficiency" may be a result and not a cause of early supplementation.

II. RAND conducted analysis of trends and determinants of infant feeding choices in Peninsular Malaysia, based on data available from the Malaysian Family Life Survey. Findings were:

- o Although breastfeeding is initiated, most infants receive supplementation (infant formula or sweetened condensed milk) well before 4 months.
- o Despite the decline in breastfeeding and the trend toward earlier supplementation, infant and child mortality have improved. It is improvements in socioeconomic factors affecting mortality and in medical care that have offset the influences of feeding trends.
- o Ethnicity affects feeding choices, even where other factors like level of education, urban residence, and income, are controlled.

- Survey data show an increase in percentage of infants breastfed, at least initially, from 75% in 1970-74 to 79% in 1975-77. This increase crosses socioeconomic and income lines. The increase was especially marked for infants born in hospital and private maternity clinics. The speculation is that this rise is due to changes in hospital practices.

III. Sigma One carried out secondary analysis of breastfeeding data from Panama and Cali, Colombia. The major finding was:

- Breastfeeding in conjunction with certain socioeconomic factors may not necessarily be beneficial from either a nutritional or a health standpoint, for either a family or a developing society as a whole. (This finding was disputed by several reviewers.)

IV. A study of infant feeding practices among low-income women in Tegucigalpa, Honduras, was conducted, combining ethnographic observation with a cross-sectional survey. Findings were:

- There were differences in duration of breastfeeding by both maternal age and area of residence.
- In general, urban women breastfed for a shorter period of time than rural women.
- 36% of urban births took place in hospital.
- An average of 68.5% of mothers delivering in Ministry of Health and Social Security Institute Hospitals in Tegucigalpa introduced bottles within 24 hours of birth.
- 13% of infants were exclusively bottlefed from the first month of age and over 80% had received bottles by 2 months of age.
- Breastfeeding was perceived as a problem closely associated with urbanization, and the use of modern health services.

INFANT FEEDING RESEARCH

I. Bangladesh "Nirog" Project carried out research on infant feeding in 4 villages using direct observation, dietary recall, study of food beliefs, morbidity history, and collection of socioeconomic data. Findings were:

- Malnutrition in children 5-24 months is due to inadequate food intake resulting from culturally restrictive beliefs about feeding (e.g., certain foods cause worms or diarrhea).
- There is no tradition of infant feeding before a child is 12 months old, with the exception of breastmilk and other milks. What solids are introduced are "just a taste," beginning at the earliest around 6-7 months.
- "Deviant" mothers who gave solid foods before 1 year did so not because they believed food was beneficial to the child, but because the child displayed interest in eating and it was difficult for parents to stop the child from helping himself.
- Women often believe they have insufficient breastmilk and introduce other milks as a supply as early as 1 month.
- When women do introduce solid foods, they do so as single-ingredient foods, not as a gruel or a porridge.

- Researchers concluded it is important to create an infant feeding tradition of solid foods before 1 year while retaining the breastfeeding tradition.

II. Cameroon infant feeding study conducted by the Institute of Medical Research, using anthropometric data, socioeconomic indicators and observed behaviors. Findings were:

- Preliminary analysis of ethnographic component documented a high level of malnutrition, early supplementation of breastmilk with water and abrupt cessation of lactation when a woman became pregnant again.
- The final report of the research is not available.

MATERNAL NUTRITION RESEARCH

I. Nutrition Center of the Philippines conducted research in one province on effects of iron and food supplementation for pregnant women on weight gain during pregnancy and birth weight. Findings were:

- Results are expected in late 1986.

Overall the MIN project produced some interesting and informative research results. It is difficult though, to make a summary statement which describes the totality of the findings. The one conclusion that can be drawn from this project's research is that breastfeeding/infant feeding is not a simple problem. Rather, it is a complex set of activities, tied to socioeconomic factors (e.g., women's work) and to the whole structure of maternal behavior and economic realities. It is a mistake to assume that the "problem" of breastfeeding or infant feeding can be addressed with a patent solution.

2. Use of Findings to Design and Redesign Projects

The ultimate, if unstated, goal of the research funded by Project 931-1010 was to feed into the development of program interventions in breastfeeding/infant feeding and maternal nutrition. In several of the research ventures funded by the project, this strategy worked well. The prime example is the use of Population Council/Mahidol University generated data on infant feeding in Bangkok to develop a Breastfeeding Promotion Project in nine hospitals in the city. This grew out of one of that study's most significant findings, that attitudes of health personnel in hospitals negatively affects initiation and duration of breastfeeding. As a result of the findings of the study, Mahidol University developed a proposal to support interventions which would alter hospital practices in support of breastfeeding. The project had three main objectives:

- Promotion of rooming-in practices in the hospitals.
- Training for hospital staff in clinical aspects of lactation management.

- Reduction of the practice of routinely providing infant formula to new mothers.

Similarly, the study findings in Indonesia prompted a series of training and hospital-based activities, directly related to the research outcome in that country.

Although much of the data in the Cameroon infant feeding practices survey was never analyzed, and a final report never prepared, interest in infant feeding as a research focus remains, and as a result, Cameroon was chosen as a site for the Weaning Project.

IV. EFFECTIVENESS AND IMPACT

Austin ^{1/} once described "the perilous journey of nutrition evaluation," likening it to a desert whose barrenness and mirages give good cause for trepidation. He cautions those undertaking nutrition evaluations to go beyond the "bottom linear" indicators of program performance to include explanations of why actual performance deviated from the expected (as it often does). He says:

"Understanding the variance should be the basic component of the funding review process. The basic question is not whether we got the expected impact, but rather, why not."

The evaluators of the Maternal/Infant Nutrition Project have attempted to explain both the "bottom line" indicators (what the project did) and the "why not" (the explanation of deviation from what was planned), but the project presents a number of frustrations for evaluators. As the 1982 Devres report noted, the difficulty in evaluation of Project 931-1010 is that "the project is a worldwide, promotional project," whose roles are "pathfinding and consensus-and momentum-building." Consensus and momentum are notoriously hard to quantify. The fact that it is an umbrella project, with a wide array of diverse activities, adds to the difficulty in assessing overall impact. Measuring changes in nutritional status is frequently an imprecise activity, particularly since baseline data are seldom available. Establishing functional relationships between project activities and nutritional outcomes is often impossible, given the many factors both intrinsic and extrinsic to programs which affect knowledge, attitudes, and behavior in the target group.

Despite these difficulties, the evaluators have tried to trace the project's success in carrying out intended activities. We have attempted to document examples of specific successes where it is possible to relate an outcome directly to a project activity (e.g., changes in attitudes and behaviors of health professionals about breastfeeding following lactation management training). We have presented nutritional impact data where it exists (such as the CEDPA project in Kenya). Largely, however, we have relied on field interviews with in-country counterparts or USAID officers, discussions with contractors, subproject monitoring reports, and other project documentation.

Section II of this evaluation described the theory and strategy of Project 931-1010, reviewing "What Was Supposed to Happen?" Section III presented the Project's accomplishments, detailing "What Actually Happened?" This Section describes the Project's effectiveness and impact, and attempts to answer the question "So What?"

^{1/} Austin, J. "The perilous journey of nutrition evaluation." American Journal of Clinical Nutrition. No. 31. December 1978. pp. 2324-2338.

A. APPROPRIATENESS AND EFFICIENCY

When discussing the MIN Project, appropriateness refers to the suitability of the subprojects and their activities to the identified problem and needs in breastfeeding/infant feeding. Efficiency refers to the agility and orderliness with which the contract was carried out.

INCS

Of the subprojects funded under 931-1010, the INCS contract was the largest. The INCS activities were grouped into three main areas:

- Short term-technical assistance
- Workshops and training
- Publications.

As was intended in the project design, the main activity of the INCS contract was the provision of short term technical assistance. The project was originally conceived as a mechanism for providing support to the field, primarily through short-term technical assistance, primarily at the request of USAID missions. The nature of the technical assistance, the duration, the geographic location, and the level of effort were all determined by mission requests.

This limited INCS to being reactive rather than proactive. The potential impact of much of the early INCS TA was limited because there was no mechanism for follow-up. Since INCS could provide no project funding, and only limited short-term technical assistance, the organization had very little leverage with in-country institutions. Ron Israel summarized the problem in his background paper for the 1985 INCS Board meeting this way:

"The role of INCS was to provide brief consultancies and advise on matters of design, implementation, or evaluation. Long-term or even medium-term technical assistance (beyond 3-4 weeks) was precluded, as was the provision of funding and materials support to in-country projects. Consequently, long-term relationships between INCS and a particular country or project were difficult to create. We had to trust that our words of wisdom, when we were in-country, rang true, and would be taken up by our host-country counterparts."

INCS consultants were recruited through a number of channels: contacts of Advisory Board members, affiliated organizations, and educational institutions. The INCS consultant roster is computerized, allowing the organization to identify a number of individuals with the appropriate skills, training, and experience for each assistance request. In general, INCS does not believe it difficult to identify and recruit consultants who are acceptable. Rather, from the INCS perspective, the difficulties in arranging consulting assignments lies in matching the time availability of a consultant to the dates of the assistance request.

Several individuals interviewed during the INCS evaluation in 1985 commented on the way in which INCS consultants were recruited, citing cases of consultants who were essentially unknown in the organization. It was suggested that such unknown and untested consultants might reflect poorly on the organization. Financial and time constraints occasionally did not permit consultants to receive an orientation to the INCS organization. As a result, some consultants did not represent a point of view or a process endorsed by INCS. For example, consultants used by INCS to provide technical assistance in nutrition education/communication were not generally conversant with the Manoff approach to development of nutrition education materials. Excluding Board members or consultants closely affiliated with EDC or Manoff, others were not conversant with the organizational focus on priorities. Without these monitoring mechanisms, ensuring "quality control" of consultants was sometimes difficult.

As is always the case in organizations specializing in provision of short-term technical assistance, INCS was often asked to provide specialized consultants on short notice. Because INCS (and the Office of Nutrition) attempted to be responsive to the AID field missions, INCS tended to accommodate the occasional requests outside their primary scope of work or focus. This occasionally forced INCS to expend limited funds on non-priority activities.

The question of efficacy of one-time versus multiple technical assistance to a country or project was addressed at several times during the span of the INCS project. During the management review of the project by AID in February 1982, S&T/Nutrition noted that INCS activities were being provided on a "one-shot" basis and not integrated into ongoing USAID country programs. The midterm evaluation recommended that INCS "concentrate on countries willing to make commitments to a large scale, comprehensive nutrition education project," with the admonition that INCS should also continue to generate new activities in all regions.

INCS responded to this suggestion by shifting toward more integration in their overall work, with less emphasis on responses to ad hoc requests. This trend was supported in part by the recent focus on breastfeeding promotion. In fact, since January 1984, all but a small percentage of INCS work has been in support of breastfeeding.

Beginning in 1979, INCS sent consultants to help organize and/or participate in "sensitization" workshops in nine countries. Although these workshops were originally intended to create awareness of the importance of breastfeeding among health professionals, it soon became clear that sensitization was not the issue. In fact, most health professionals attending the workshops were already committed to the benefits of breastfeeding. The most serendipitous outcome of these meetings was the realization that, instead of sensitization, training in the practical aspects of lactation management was needed by health professionals in developing country hospitals. These workshops were effective in identifying a critical area of breastfeeding promotion which had not been addressed earlier. The workshops also led to numerous follow-on projects in Thailand and Indonesia.

Although changes in national-level policies were originally goals of the contract, in reality that proved a difficult task. For example, INCS supported a workshop for policy-makers in Kenya which produced a set of recommendations. However, without funds and someone to stimulate and coordinate planning and

activities in-country, INCS was limited in the role it could play in formulating policy change. It was, as INCS characterized it, "a long term problem with a short term approach." However, INCS helped develop a new form of supportive policy (i.e., regulations covering infant feeding practices in public hospitals) as an outgrowth of the Kenya workshop. Similar policies were developed in Thailand and Brazil.

Mass media/communications approaches in support of maternal and infant nutrition were another goal of the project. However, INCS was able to identify very few opportunities to work with mass media nutrition programs. One of the few was the Brazilian national breastfeeding campaign, to which INCS provided short term technical assistance.

San Diego Lactation Program

Through the San Diego Lactation Management Training Program, teams of health professionals from seven countries were trained in a series of four training sessions. They, in turn, trained approximately 2,500 other health professionals through hospital in-service training programs in their home countries.

Kenyan participants in the San Diego Lactation Management Course gave the course and its facilitators good reviews. Course content reportedly met felt needs and feedback was positive. The mix of lecture and experience based training methods was appropriate to the audience, although there was some concern expressed that lecturing was overemphasized. The three participants, who were selected on the basis of their perceived potential for spread effect, returned from the training with high enthusiasm and motivation.

The Population Council

The Population Council Infant Feeding Study was the largest, most ambitious research activity undertaken with Project 931-1010 funding. As noted elsewhere, it was responsible for collection and preliminary analysis of a significant body of data on infant feeding determinants. Whether it was appropriate or efficient are separate issues. The study's objective was to produce a body of data which could be used for cross-cultural comparisons, and which focused on particular infant feeding issues, such as the role of commercial marketing and infant formula. Given these parameters, it was efficient, if not essential, to use a research protocol, developed by the Council consortium, which could produce comparable data sets in all four countries. It was also expected to be a "watershed" piece of research, which would test a research design not used before in infant feeding investigation.

In retrospect, it is easy to see the problems created by "imposing" a research protocol on a developing country, as was done with the research methodology for the Infant Feeding Study. For example, in Kenya, although the study provided needed information and important contributions to the body of knowledge about infant feeding in that country, Kenyan researchers resented the outside imposition of the research design. The Kenyans believed they could have played a more significant role in the study through (a) involvement in the study design and implementation, bringing in wider representation from the nutrition sector; and (b) institution building could have been enhanced if more active involvement of the Kenyan officials had been encouraged. As it was, completion of the study in a timely and cost efficient manner was difficult, and awareness of the study findings remains limited.

In Thailand, on the other hand, although the Thai investigators also resented the imposition of the study design, it allowed them to move very quickly to implementation, making only minor modifications in the research protocol.

APHA

Outside evaluations of the APHA "Mothers and Children" bulletin found that it was appropriately targeted to developing country policy-makers, health professionals, field workers, and others.

For example, the evaluation found, as a result of information obtained from the first survey, that the publication played an important role "in filling a worldwide gap in information dissemination in the fields of maternal and child nutrition." A second reader survey, undertaken in 1983, came to the following conclusions:

- Readership matches the target groups of the project.
- The readership base has expanded to enhance the multiplier effect of each issue.
- Information from the newsletter is being used primarily for training and in-service activities of staff, followed by use in counseling mothers, and for classroom teaching.
- Clearinghouse activities support and complement information activities in the field, such as providing information for other local publications.
- Although many readers make use of other services offered by the Clearinghouse, the utilization rate could be increased.
- Subjects of greatest interest to readers for future issues of the newsletter are: education and training, maternal nutrition, breastfeeding/lactation management, and weaning.

The information contained in the newsletter is programmatically relevant and keyed to implementation issues. And, given the information objective of the contract, mass mailing is a very efficient method of reaching the intended audience.

Reports from the field are somewhat unsettling, however, about the real impact of such an information approach.

Individuals receiving the APHA "Mothers and Children" bulletin in Kenya expressed appreciation for the bulletin and felt it had potential for playing a useful role. Still, it was felt that if the bulletin were more widely disseminated (to all health facilities, for example), benefits would be greater. The majority of people consulted, in Nairobi and in the field, were not familiar with the bulletin, nor was it clear how much the information contained in the bulletin is actually being used. "Mothers and Children" is mailed to some 35 individuals or institutions in Tunisia. As in Kenya, it is not clear how these bulletins are actually used, although the feeling was that, if gotten into the right hands in the right places, it could be useful.

APHA is currently exploring the possibility of support for in-country clearinghouses; with information dissemination via newsletter, through a locally known and recognized organization. This merits further investigation.

CEDPA

The strategy used by CEDPA for promoting improved nutrition in Kenya is more integrated and holistic in its approach, building on the organizational base and work of Tototo Home Industries (a division of the National Council of Churches of Kenya). This strategy seems to have met with measurable success in its efforts to improve nutrition by strengthening capabilities of five of the estimated 10,000 women's groups to identify, plan, and manage income-generating and food production projects. Components of the women's groups activities include growth monitoring, immunization monitoring, oral rehydration therapy, breastfeeding, and family planning.

CEDPA technical assistance has been supportive, continuous, and well received, although some frustration was expressed with having to relate to numerous people from the CEDPA home office and the time needed to meet the reporting and accounting requirements.

B. EFFECTIVENESS, IMPACT, AND SPREAD EFFECT

Effectiveness and impact refer to the accomplishments of the project (outputs), and discernable changes in knowledge, attitudes or behavior. Spread effects refers to extension or diffusion of project activity beyond that initially funded by the contract.

INCS

The INCS project was effective in achieving some of the aims of the Maternal Infant Nutrition focus of the contract. The two areas where the project was most effective were:

- Lactation management training for health professionals;
- Development of a model for using ethnographic research into infant feeding practices, to direct and focus cross-sectional surveys on infant nutrition and feeding.

During the period August 1983 through January 1985, the Lactation Specialist Training Program in San Diego trained 20 physicians, 12 nurses and 3 nutritionists from 14 teaching hospitals and 2 research institutes from 10 countries. The training course was effective in transferring knowledge about lactation management. Trainees were given pre-test and post-tests during each of the four sessions. The combined scores from all participants was 47.5 percent in the pretest, and 81.3 in the post test, a change of +33.7 percent. Since finishing the San Diego training the participants have given over 33 other training courses, workshops and lectures to over 2,500 health workers in their countries. The participants, interviewed during the evaluation field visit to Indonesia and Thailand, and the AID mission staff in those countries, were unanimous in their support of the San Diego course.

In Cameroon anthropologists supported by INCS pioneered a new approach to collection of information about infant feeding practices. Using ethnographic methods (through village based observations of what, how, and by whom infants are fed), they were able to collect specific information about local feeding customs, which was later incorporated into a cross-sectional survey of feeding practices. This model was used successfully in Honduras as well. INCS consultants, and the principal investigator of one study (who were interviewed about the research model) confirmed the effectiveness of this approach.

It is difficult to generalize about the effectiveness of many other INCS activities, either because the assistance provided was limited and short-term, or the activity itself was not evaluated. A summary of INCS support of breastfeeding activities and their outcomes is given in Table 9.

Of all of the subprojects funded by 931-1010, the San Diego Lactation Program seems to be one of the most successful. The San Diego Lactation Management training generated remarkable in-country spread effect. In Semarang, Indonesia, for example, the follow up activities initiated by the group of four returned trainees (which included several "cadre" training courses, establishment of a lactation clinic at the hospital, and conference presentations) was quite impressive.

The USAID health officer in Jakarta, who was extremely supportive of the San Diego Program, arranged for an additional two groups of Indonesians to attend that training course. Although the Semarang group is exceptional, the other returned trainees have organized multiple follow-up activities in their home localities as well.

TABLE 9

SUMMARY OF PART II BREASTFEEDING SIGNIFICANT OUTCOMES

Objectives	Activities	Activities Actually Carried Out	Description of Results Achieved
1. Better national maternal/infant feeding strategies and programs in at least 5 countries	<ul style="list-style-type: none"> • Workshops <ul style="list-style-type: none"> - for policy makers - training • Develop country specific data bases <ul style="list-style-type: none"> - MINRs - Short-term TA 	<ul style="list-style-type: none"> • 1983 workshop held in Kenya for policy makers • TA and training provided to national programs in Burma and Tunisia • 33 MINRs produced and disseminated • Draft breastfeeding policy prepared in Thailand • TA provided to more than 5 countries 	<ul style="list-style-type: none"> • Director of Medical Services issued decree to hospitals in support of rooming-in • In Tunisia, nutrition messages are being used in child health centers • Field questionnaire gave mixed review to utility of MINRs • Thai MOH awaits project results before implementing policy changes
2. Medical and paramedical curricula for short-term training in at least 5 countries	<ul style="list-style-type: none"> • Workshops <ul style="list-style-type: none"> - "Sensitization" - Training modules • Technical Assistance • Publications 	<ul style="list-style-type: none"> • Sensitization workshops held in 9 countries • 4 lactation specialist training courses given in San Diego • TA and in-service training in lactation management given in at least 5 countries • TA in development of a manual on breastfeeding practices • Guidelines for breastfeeding developed 	<ul style="list-style-type: none"> • Follow-up activities began in several countries • Multiplex effect from original trainees to over 300 health professionals • Development of an effective training model • Manual published by Felicity King • Not yet published; awaits S&F approval • INCS published conference proceedings
3. Integrate breastfeeding mothers' support groups into national education strategies to improve infant feeding in at least 3 countries	<ul style="list-style-type: none"> • Conduct International conference • Provide technical assistance 	<ul style="list-style-type: none"> • International conference held in 1982 in Jamaica - INCS supported along with other international agencies • TA to develop proposal for CRS project targeted to unwed mothers in Kingston 	<ul style="list-style-type: none"> • Project was never implemented
4. Demonstrate impact of at least 3 mass media or education programs in improved maternal nutrition and infant feeding in developing countries	<ul style="list-style-type: none"> • Technical assistance • Workshops 	<ul style="list-style-type: none"> • TA provided to breastfeeding promotion campaigns in at least 6 countries • TA in design and implementation of pilot weaning food nutrition education project in Bangladesh 	<ul style="list-style-type: none"> • Project not yet completed

* As stated in the 1982 contract amendment SOW

The current supportive practices found in several hospitals in Indonesia are the result of an evolutionary process of raised consciousness and shifting attitudes about the importance of breastfeeding and particularly the role of the hospital. Much of the current success grew out of the manner in which the change was brought about. INCS' greatest contribution to this change was through its role as a catalyst in assisting some of the early meetings and seminars. The travelling seminars brought about a consensus of opinion among the medical community in Indonesia as to what hospital practices should be. These group endorsements of a certain approach and set of accepted practices were important in a historical context, and set precedents for the changes which followed. Within Indonesia now there is agreement on the importance of early rooming-in, elimination of prelacteal feeds, and the role of education and counseling. One has the sense that the Indonesians are confident that they know how to proceed in encouraging breastfeeding within the hospital context. However, these practices are far from universal in the country and much work still needs to be done outside Java to bring other hospitals and maternity centers into conformity.

Only in a few of the larger hospitals has an attempt been made to document the medical, financial or other benefits of the effects of altered hospital practices. Data which support the benefits of the changes will aid those groups working to promote rooming-in, lactation clinics, and the overall contribution of breastfeeding to infant health.

In early 1984, a team of four Thai health professionals attended the San Diego Lactation Program. When they returned home, with the assistance of the Mahidol University Breastfeeding Promotion Project, they developed a plan for a series of short seminars on lactation management, based on their training in San Diego.

During 1984-85, four Lactation Management Seminars were held at Siriraj Hospital in Bangkok to provide in-service training for the staff of the nine hospitals in the project. To date, over 250 health professionals have completed the training. Each hospital was invited to send a team consisting of a pediatrician, an obstetrician, a pediatric nurse and an obstetric nurse. The content of the Seminar training focused on the practical aspects of breastfeeding practice in hospitals. These activities included early mother-infant contact, rooming-in, stopping prelacteal feeds, and elimination of infant formula supplementation or distribution.

The Bangkok project was successful in significantly altering hospital practices in six of the nine hospitals participating in the training/promotion.

Since the summer of 1985 additional developments in support and expansion of the lactation management training have taken place. The Thai Ministry of Health, which in 1985 maintained a "wait and see" attitude toward the outcome of the Bangkok Hospitals Project, decided to initiate a travelling seminar on lactation management for health care professionals outside the capital city. Several of the physicians who attended the first Bangkok training course were recruited to develop a short course for medical personnel in the provinces. This program has been funded from the Ministry's own resources as well as some support from UNICEF. This is a significant development in that the Ministry's acceptance of the importance of breastfeeding promotion and endorsement of need for training in lactation management for health profes-

sionals, is an important step in initiating changes in support of breastfeeding, particularly in government hospitals and clinics.

Additionally, the organizers of the lactation management program, based at Mahidol University, for the Bangkok urban hospitals, have developed a "nutrition package", the central focus of which is breastfeeding promotion but which also includes information on weaning, growth failure and nutrition education. This nutrition package is based on three concepts, identified from the earlier infant feeding research which was carried out in Bangkok by Mahidol University. These three concepts are: mothers don't recognize growth failure, mothers treat malnutrition or growth failure with medicine and not with food, and mothers don't understand the importance of weaning. With assistance from Lintas, a local marketing research firm, these concepts were field tested, and based on consumer responses, a series of flip charts were developed, for use by health workers. This work has been funded locally with a grant from the Bangkok Rotary Club, but additional assistance has also been requested from CIDA.

It is clear from discussions and observations both in Indonesia and Thailand, and from reports on the four training programs offered by the San Diego Center during 1983-85, that the Lactation Specialist Program has met its objectives. The Indonesia USAID Mission believes that the Program has had a "profound influence" on the focus and direction of breastfeeding activities in Indonesia. The Program has been very successful in transferring information and skills in the clinical management of lactation to the individuals who have undergone the training. The program has also been able to generate a genuine enthusiasm for breastfeeding promotion which has been evidenced in the range and intensity of activities in both Thailand and Indonesia. Dramatic changes have taken place in hospital practices in both countries as a result of training in the San Diego program.

Kenya

Unlike the other countries, the San Diego course appears to have met with limited success in Kenya. Full work schedules of course participants in their regular jobs has not permitted them to participate in infant feeding workshops as much as they would like. Lactation management practices have not been institutionalized in the curricula of medical, nursing, and related schools. The demand for training in infant feeding practices appears to be high, but the limited number of trained personnel who have sufficient time to do training is not enough to do justice to the demand.

The infant feeding training that has been done in Kenya (reaching an estimated 300 people) has been organized and conducted by either the "Infant Feeding Steering Committee," based in the Ministry of Health, or by the Breastfeeding Information Group (BIG). Efforts by the Infant Feeding Steering Committee to replicate the San Diego course locally has reportedly had problems with weak attendance, particularly among the more senior health officials. Because of limited staff and other resources in the MOH, it has been suggested that BIG play a larger role in promoting appropriate infant feeding practices.

Sensitivity to the importance of proper infant feeding practices, especially breastfeeding and weaning, does appear to have been enhanced at the senior levels but not among health workers at the lower levels and among those who

have daily contact with the public: this suggests that additional training is needed at this level. At the same time, the strategy of focusing educational efforts at the hospital level seems to be appropriate, since research suggests that children born in hospitals are less likely to breastfeed than children not born in hospitals.

The Population Council

The four country infant feeding study carried out by the Population Council successfully tested a methodology for investigating determinants of infant feeding, especially breastfeeding. It provided data in each country which included socioeconomic characteristics, work patterns of urban women with infants, infant formula marketing and advertising practices and, perhaps most importantly, information on breastfeeding attitudes and practices among health professionals. In each of the four countries, the research was used to plan interventions to enhance and promote breastfeeding. The effect of the research on policy at the national level is less clear.

The Population Council study and the follow-up 1983 Nyrei workshop converged with several other events and were instrumental in a MOH memorandum distributed to all government and non-government health facilities directing them to institute a number of changes surrounding infant feeding practices--rooming-in arrangements; breastfeeding on demand in health facilities; use of breast-milk substitutes, pre-lacteal feeds and supplemental foods; and display of infant formula company posters and free samples. These same events played a role in initiating the infant feeding workshops, in formulating the Kenya code of marketing breastmilk substitutes, and in preparing and printing a manual "Helping Mothers to Breastfeed" by Dr. F. Savage King.

The "Kenya Code of Marketing Breastmilk Substitutes" has been formulated and accepted by health officials. Formal approval of the code, however, awaits approval of the Kenya Bureau of Standards where it has been for over a year.

The infant feeding study in Indonesia was more problematic, and Council funds ran out before the data analysis and final report were completed. In the end, the analysis and final report were done with funds from the Ford Foundation. The study results did not lead directly to program interventions in that country, but helped highlight the importance of attitudes of health professionals to breastfeeding behavior in mothers with infants born in hospital.

AID funding to the Population Council ended in 1985. Since that time, however, the Population Council has continued to analyze data collected in each of the four sites during the project. In fact, the Population Council was able to raise money from UNICEF, IDRC and the Ford Foundation to carry on with data analysis when the AID funds terminated. UNICEF has provided funding for the development of a monograph on breastfeeding, based on the analysis of the data and its program implications, which will appear in late 1986. WHO has also made use of the data, and the Ford Foundation is particularly interested in the Asian data. The breastfeeding questions from the cross sectional survey influenced the Demographic Health Surveys (being carried out by Westinghouse and the Population Council) in that they showed that one can successfully collect breastfeeding information in the field.

CEDPA

Although it is too early to assess the impact of CEDPA activities in Kenya on nutrition status, there are some indicators. One of the women's groups reports that in their village 15 of the most severely malnourished children in the growth monitoring program have improved and are now in an acceptable weight range. An internal evaluation by CEDPA of the extent of participation and follow-up of malnourished children in the five project villages is shown in Table 10.

TABLE 10
ANALYSIS OF PARTICIPATION AND FOLLOW-UP OF MALNOURISHED CHILDREN
IN FIVE PROJECT VILLAGES

	<u>Makiwo</u>	<u>Viragoni</u>	<u>Ngamani</u>	<u>Mamba</u>	<u>Kibuyuni</u>	<u>Total</u>
1. Total Children Registered.	319	204	56	339	201	1,119
2. Total High Risk Children Ident'd	53	36	21	56	34	200
3. Total High Risk Children with follow-up record	23	24	16	19	34	116
4. High Risk Follow-up as % of Total High Risk Children	43%	67%	76%	34%	100%	58%
5. Total Children Assessed 1 or more times during year	75	40	28	20	145	308
6. As % of Total Registered	24%	20%	50%	6%	72%	28%

Source: CEDPA's Nutrition Management Project, Final Report, Section IV, March 31, 1986.

CEDPA's activities in Kenya appear to be playing a significant role in increasing self-confidence, pride and assertiveness among village women. Mechanisms have been supported and/or established for alumnae of CEDPA's training courses in delivering training and technical assistance to women's groups through the Society for Advancement of Community and Women's Studies. The women's groups have been successful in attracting complementary resources from the Family Planning Association of Kenya and the Ministry of Health. Mobile family planning clinics serve three of the five project villages and MOH district staff are coordinating their activities with the growth monitoring sessions carried out by village women. In at least one of the five project villages, a clinic is being constructed by the village which will be staffed and funded by the MOH when it is completed. Much of the credit for the successes of this project is due to the director of Tototo Home Industries, Ms. Elvina Mutua, who seems to know what she wants and how to get it, is highly committed and motivated and is well organized.

In general, project activities in Kenya appear to be useful for small interventions but the spread effect has been limited. The impact has been greater with the NGOs, but their base is small. Given the small base of the project, the wide dispersion of activities, and the low cognizance of the project, it has been difficult to reach a critical mass so that widespread improvements can occur.

Honduras (PROALMA Project)

The major activity of PROALMA, the entity established to execute the breastfeeding project in Honduras, was to be the educational component for health professionals, health workers, and the general public. It would also coordinate with the MOH in its diarrhea control and continuing education activities and with other pertinent organizations and groups.

By the end of the project, the following outcomes were expected:

- A national policy to promote breastfeeding adopted.
- Norms for maternal/infant nutrition developed and adopted.
- Educational materials for health professionals and the general public on maternal/infant nutrition and paternal bonding developed and distributed.
- Health workers trained in the theory and practice of maternal/infant nutrition.
- Breastfeeding seminars and workshops developed and held.
- Institutional procedures in support of breastfeeding and paternal-infant bonding established.
- A clearinghouse for information concerning breastfeeding and paternal-infant bonding established.
- A plan for the institutionalization of breastfeeding promotion activities after project completion adopted.

The project had five components, each of which was based in a different institution: The Hospital Materno-Infantil, the Social Security Hospitals in Tegucigalpa and San Pedro Sula, the Metropolitan Region of the Ministry of Health, and the JNBS. Each had a slightly different emphasis and a somewhat different clientele, but all fell comfortably within the broader project purpose and included activities which focused on training and information dissemination to doctors and nurses; support, information, and advice to mothers in clinical settings; development, adoption, and implementation of hospital and clinic norms for service delivery; and formalization of a national policy on breastfeeding.

An evaluation in December 1985 (discussed below in detail in Section III.C., "Monitoring and Evaluation Issues") documented significant achievements under the project. Knowledge, attitudes, and practices of health care personnel relevant to breastfeeding had improved dramatically. Norms favorable to breastfeeding had been drafted at the national level and for most hospital wards and clinics which deal with mothers and infants. Birthing and post-

partum routines had been modified to encourage rather than impede bonding and early initiation of breastfeeding. Most importantly, mothers in the PROALMA target area reported that they were initiating breastfeeding earlier, continuing to breastfeed longer, feeding other fluids and semisolid foods later, and introducing artificial milks to their children's diets less frequently and at older ages.

In sum, PROALMA had significantly improved health care related to lactation in urban areas. These changes "from the top" had positively affected urban mothers' breastfeeding practices. However, PROALMA's activities outside the two major urban centers of Honduras had been sporadic and ad hoc; demand for PROALMA's services in the regions of the public health sector with so much of its population in rural areas and secondary and tertiary settlements, was high and had not yet been met.

Development Associates

The Development Associates contract to incorporate nutrition into ongoing training for family planning and health workers in the Latin America region was unique in Project 931-1010 in that it was the only attempt to "buy in" to another AID centrally funded activity. Also, in contrast to the "vertical" emphasis in most of the Project's activities, this was a conscious effort to use an integrated approach to promote nutrition. The DA training was carried out with private sector organizations operating in rural areas, which included family planning service delivery agencies, women's groups, community development groups and MCH welfare organizations.

The training, which was begun only two years before the parent DA family planning contract ended, was very well received by all the agencies. DA believes this enthusiastic reception was due to the fact that most of the agencies were already providing integrated services, and training in nutrition was viewed as an opportunity to upgrade the technical skills of the workers, and as a natural extension of the services they were already providing. Nutrition (particularly breastfeeding) promotion was viewed as less politically charged than family planning promotion, especially in rural communities.

Breastfeeding was the major focus of the training, not because Development Associates nor the local organizations felt that was the most urgent need (in fact breastfeeding rates were quite high in most project areas), but because the AID Project monitor wanted to promote breastfeeding. Review of nutrition problems in the communities where the organizations worked indicated that weaning and maternal nutrition were considered more serious issues. Because of this, the training materials used, and the manual developed by DA for the courses emphasized breastfeeding but included materials on the other topics as well.

When the DA parent family planning project terminated, the nutrition training ceased as well. The nutrition project ended with an international workshop held in Guatemala in 1984 on integration of nutrition and family planning. Workshop recommendations included a series of nutrition interventions the conference participants felt could successfully be promoted by family planning programs. Family planning and nutrition was considered an excellent combination, with benefits for both program interests. After the project

terminated, several of the country programs continued nutrition activities on their own. For example, in Paraguay, the local organizations obtained funds from UNICEF to continue training and nutrition activities, and in Ecuador, MAP International assumed the cost and is continuing the nutrition program.

Tunisia

In Tunisia, the promotion of nutrition education, breastfeeding, weaning and maternal nutrition was to be done through the development and institutionalization of two units within the Institute of Child Health (INSE): (a) an Education and Training Center within which was to be developed an Audio-Visual Production Unit and (b) a Data Processing Unit. The Education and Training Center was to be responsible for the design and implementation of a nutrition KAP study and a management study of MCH Centers.

The group of people composing the Education and Training Center, headed by Drs. Hamzaa and Mhenni, was successful in designing and implementing the KAP and the MCH Center management studies as well as in producing five sets of "slide tapes" for nutrition education in five MCH Centers. There was not, however, the same success in establishing the Center as an institution with staff, budget and other resources. Individuals working on the project all had other full time jobs (with the exception of a part time secretary), so that when the project terminated, the work of the Center largely terminated, and the staff continued with their usual responsibilities. Although interest and motivation for establishing the Center was, and remains, high, the former Director of INSE was unwilling to commit the resources required to institutionalize it.

The creation of an Audio-Visual Production Unit did not materialize from an institutionalization standpoint. However, there is a group of approximately 13 people, primarily physicians and nutritionists, who, through the May 1983 workshop, have gained experience in producing audiovisual materials (slide-tapes). Although this experience was very useful, there is some feeling that slide-tapes are not the most appropriate form for conveying nutrition messages and that posters, widely distributed, may be a better media for reaching more people more effectively at lower cost.

The Data Processing Unit was primarily a group of people organized to analyze the data from the KAP and MCH management studies. In this, it was successful. The broader institutionalization objective, however, was not met. The computer hardware, software and computer expertise is with Dr. Gharbi at the Children's Hospital (formerly INSE) and Dr. Ben Abdulah at the Faculty of Medicine while the expertise in MCH, nutrition, etc., is with Dr. Mhenni at the Mellasseni MCH Center and the newly formed Institute of Public Health of which Dr. Mhenni is the Director. There remains a number of important questions from which feasible answers could be derived if the data from the two studies were further analyzed.

These studies were successfully carried out by the Education and Training Committee. The benefits and uses of the study are numerous: thirteen theses (PhD and MD) were written using the data set; the KAP findings were used for producing the audiovisual materials (the slide-tape sets) and health education messages on TV; the study was instrumental in making child health a MOH priority; a core group of people have developed and/or enhanced research

capabilities; a WHO project was revised to give priority focus to child health; AID financed projects in oral rehydration and diarrheal disease have their roots in the study's findings; attitudes and practices of physicians participating in the study and A-V workshop have been changed and updated with regard to infant feeding practices; the MCH Centers are reportedly promoting growth monitoring and appropriate infant feeding practices; the MOH organization and structure have been modified with INSE being dissolved and replaced with the Children's Hospital and the creation of the Institute of Public Health; the studies' findings were used in the preparation of the health sector component of the 7th National Development Plan; and perhaps most importantly, child health is now a priority within the MOH.

Tunisia has adopted a Code of Ethics for Marketing Breastmilk Substitutes that is apparently more restrictive than WHO's. As with the Kenyan case, it is not clear how strictly this is enforced.

In general, the project was not successful in its three primary objectives of establishing an Education and Training Center, an Audio-Visual Production Unit, and a Data Processing Unit. (It can be argued that these institution building objectives were not appropriate objectives for a two-year project with intermittent technical assistance provided.) However, it did successfully carry out two research studies, both of which had measurable impact on policy and programs in the country and on developing and/or strengthening capabilities in research methods and in production of audio-visual materials. It has been suggested that the project had significance and impact beyond what one would normally expect from a \$150,000 project.

Because the institution-building objectives were not met, the long-term impact on the purposes of the Tunisian project are limited. Perhaps the most significant contribution in this regard is that the project helped lay the groundwork for priority setting and institutionalization activities to be carried out in the future by the GOT and donor agencies.

C. SUSTAINABILITY AND REPLICABILITY

1. Great Man Theory

In analyzing the factors which make one project successful while another is not, the presence of a dynamic, committed individual often seems to make the critical difference. CEDPA's nutrition demonstration projects in Mombasa, Kenya, lactation management seminars in Semarang, Indonesia, a nine hospital training program in Bangkok, Thailand, a breastfeeding promotion program in Tegucigalpa, Honduras, can all trace their success to an outstanding person, committed to making the project work.

A USAID health officer from a large African country remarked that the "easiest way to get something going, is to build it around one charismatic individual." In fact, he admitted that the entire new five year bilaterally funded PHC project in that country is being designed around the skills and interest of one woman pediatrician.

In both the Kenyan and Tunisian cases, there is support for the theory of building projects around highly committed and motivated individuals. Both Dr. Mhenni in Tunisia and Ms. Mutua in Kenya have these characteristics and

whatever successes these projects have had are due largely to these two individuals.

The Semarang group was particularly successful in initiating hospital routines supportive of breastfeeding, making the changes immediately after their return from San Diego. Key to the success of the Semarang program were:

- The role of the Vice Rector of Diponegoro University in Semarang, who has been a long time supporter of breastfeeding;
- The influence of the woman pediatrician on the team described as almost ethereal, whose seniority and influence were crucial in bringing about changes.

2. Institution Building

The most beneficial outcome of the INCS work in Cameroon was the development of a methodology for studying weaning practices which can be used as a model for conducting similar research elsewhere. Although not mentioned in any of the consultant reports available, the development of the research model came about only through a rather "painful" evolution for INCS, the consultants and the Mission. Some of the problems grew out of the short-term nature of the TA provided, especially when counterpart infrastructure was not strong and USAID could not provide sustained backstopping, others from the fact that the several consultants who assisted the research did not agree on a single methodology or approach.

It is not clear what impact, if any, the project had in Cameroon. Attempts were not made to "institutionalize" the technologies and concepts of the interdisciplinary approach used in the study. However, absence of counterparts made the short-term TA less effective than its full potential. The INCS assistance was deemed as "potentially successful" by the Africa Bureau, depending on whether the research results are used to develop national programs.

Although changes in national level policies were originally goals of the INCS contract, in reality that proved a difficult task. For example, INCS supported a workshop for policymakers in Kenya which produced a set of recommendations. However, without funds and an individual able to stimulate and coordinate planning and activities in country, INCS was limited in the role it could play in formulating policy change. It was, as INCS characterized it, "a long term problem with a short term approach." However, INCS helped develop a new form of supportive policy (i.e., regulations covering infant feeding practices in public hospitals) as an outgrowth of the Kenya workshop. Similar policies were developed in Thailand and Brazil.

To the extent that project success is measured by institution building characteristics, neither the Kenya nor Tunisia projects can be considered successful. In the Tunisian case, where institution building was an explicit objective, this occurred with neither the Education and Training Center nor the Data Processing Unit. As noted earlier in the report, however, it can easily be argued that this was an unrealistic objective given the time and resources allocated.

3. Cost Issues

Breastfeeding was strategically selected to be the primary technical focus of the Project during Phase I, while a more balanced funding spread was planned for Phase II. Figure 2 compares the actual expenditures for Phase I, the planned proportionate funding for Phase II, and actual expenditures to date for Phase II. Breastfeeding activities or combined activities account for the greatest percentage of funds throughout the project. Maternal nutrition accounted for only 4 percent of funds during Phase I. The proportion of project funds devoted to maternal nutrition research or programs was to have expanded to 30 percent during 1983-88, but in actuality, by 1986, it accounted for only 2 percent. In fact, only one project, the Philippines maternal nutrition research project, was exclusively focused on maternal nutrition.

It was planned that during Phase II, 50 percent of funds would be allocated to combined activities. During 1983-86, about 47 percent of funds were expended on combined activities (combined activities are defined as one-half breastfeeding, one-quarter weaning and one-quarter maternal nutrition). However, a review of the activities in that category indicates that maternal nutrition was really a very minor focus of most programs. The exception is the APHA contract, both Clearinghouse and "Mothers and Children" Bulletin, which does attempt to devote a third of its resources to maternal nutrition.

The Project has initiated efforts in each of AID's three geographic regions. Figure 3 presents the distribution of funding by region. The funding trend which began in Phase I continued in Phase II, with the Latin America/Caribbean region receiving the greatest share of Project funds, and the Africa region the least. However, the proportion devoted to the Africa region doubled from Phase I to Phase II, growing from 13 percent to 26 percent. The Africa region receives a high priority in both the Weaning Project and the Dietary Management of Diarrheal Disease Project.

Research has been a major focus of the Project throughout its lifetime accounting for 38 percent of total Project funds through 1985. Technical assistance activities (primarily through the INCS contract) and program interventions accounted for one fourth of all Project funds, while IEC and training received about a fifth. Figure 4 presents the funding breakdown by type of activity.

By the end of FY 1986, five subprojects had each received over a million dollars from Project 931-1010. These are:

- The EDC/INCS contract
- The APHA Contract
- The Population Council Infant Feeding Study
- INCAP, and
- The Weaning Project

Together, these five projects account for 72 percent (approximately \$7 million dollars) of the Project's total funds.

Table 11 is a breakdown of all subproject funds by fiscal year.

Table 11. Project 931-1010 Funding by Subcontract FY 1979 - FY 1986

CONTRACTOR	PROJECT 931-1010		PHASE I	FUNDING FY 1979- FY 1983		PHASE I
	FY 1979	FY 1980	FY 1981	FY 1982	FY 1983	TOTAL (FY 1981)
1. POP COUNCIL	\$502,000	----	\$120,000	\$282,537	----	\$1,204,517
2. CAMEROON	N.A.	\$63,803	----	----	\$30,000	\$93,803
3. IKHOURAS	N.A.	N.A.	\$46,000	\$103,635	\$33,672	\$183,307
4. RANA	N.A.	N.A.	N.A.	\$34,311	----	\$34,311
5. SIGMA ONE	N.A.	N.A.	N.A.	\$43,000	----	\$43,000
6. DANGLAWESH	N.A.	N.A.	N.A.	\$24,000	----	\$24,000
7. TUNISIA	N.A.	N.A.	N.A.	\$24,000	----	\$24,000
9. DIETARY HGT. IND	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7. PHILIPPINES	N.A.	N.A.	N.A.	\$55,885	----	\$55,885
10. CORNELL	N.A.	N.A.	N.A.	\$256,219	----	\$256,219
11. INS	N.A.	N.A.	N.A.	\$2,220	----	\$2,220
12. EXTERNAL PANEL	N.A.	\$7,113	----	\$0,739	\$15,828	\$31,770
13. EXC. HKS (PART II)	\$74,500	\$189,000	\$279,126	\$590,907	\$655,000	\$1,788,533
14. CEDPA	N.A.	N.A.	\$120,000	\$221,250	----	\$341,250
15. INCAP	N.A.	N.A.	N.A.	\$115,304	\$342,670	\$457,974
16. DEV. ASSOC.	N.A.	N.A.	N.A.	\$193,985	----	\$193,985
17. HEATING PROJECT	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
18. SAN DIEGO PROGRAM	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
19. RWI	\$176,500	\$119,512	----	\$332,700	----	\$628,712
						\$5,762,116

N.A. not applicable

FY 1981,
\$25,072, HONMA Evaluation

FY 1983, INCAP: \$342,670
Funding

Table II - cont.

CONTRACTOR	PROJECT 221-1010		PIMISE II			OVERNIGHT PROJECT	
	PIMISE I TOTAL (9/79)	FY 1904	FY 1905	FY 1906	TOTAL (9/04-9/06)	TOTAL (9/79-9/06)	
1. PCW LAMAR IL	\$1,204,537	----	H.A.	H.A.	H.A.	\$1,204,537	
2. CUMBRIDGE	\$99,805	\$25,000	\$25,000	H.A.	\$50,000	\$149,805	
3. HANNAHNS	\$103,307	\$130,400	H.A.	H.A.	\$130,400	\$621,707	
4. RANKI	\$34,911	H.A.	H.A.	H.A.	H.A.	\$34,911	
5. SIGMA ONE	\$49,000	H.A.	H.A.	H.A.	H.A.	\$49,000	
6. BONDI MESH	\$24,000	\$30,000	\$22,900	\$5,725	\$50,625	\$02,625	
7. THUSIA	\$24,000	H.A.	H.A.	H.A.	H.A.	\$24,000	
9. DIETARY UGT. IND	H.A.	H.A.	H.A.	\$50,626	\$50,626	\$50,626	
9. PHILIPPINES	\$55,005	\$124,000	\$44,433	H.A.	\$160,433	\$224,324	
10. CORNELL	\$256,219	H.A.	H.A.	H.A.	H.A.	\$256,219	
11. IAS	\$2,220	H.A.	H.A.	H.A.	H.A.	\$2,220	
12. EXTERNAL FINEL	\$31,770	H.A.	H.A.	H.A.	H.A.	\$31,770	
13. EDUC/HS (PART II)	\$1,700,533	----	\$209,020	\$20,675	\$310,501	\$2,093,036	
14. LEON	\$341,250	\$90,000	\$69,140	H.A.	\$159,140	\$500,390	
15. HICAP	\$457,974	\$240,700	\$441,575	\$110,000	\$792,275	\$1,250,249	
16. DEV. ASSOC.	\$197,905	----	----	H.A.	H.A.	\$197,905	
17. HEADING PROJECT	H.A.	\$291,000	\$531,543	\$323,603	\$1,146,146	\$1,146,146	
18. SAN DIEGO PROGRAM	H.A.	H.A.	\$212,407	\$200,665	\$421,072	\$421,072	
19. ANTI	\$620,712	\$100,063	\$234,594	\$334,000	\$669,465	\$1,290,177	
	\$5,762,116				\$3,972,691	\$9,734,007	

H.A. not applicable

FY 1904, HICAP: \$130,400
 \$133,000, HICAP 1904
 \$ 5,400, HICAP Evaluation

FY 1905, HEADING PROJECT: \$531,543
 \$400,000, CB Transfer AFR
 \$100,000, CB Transfer AFR
 \$ 31,543, May to September 1905

FY 1904, HICAP: \$240,700
 Proj. Annual

FY 1906, HICAP: \$20,675
 October to December, 1905

FY 1905, HICAP: \$441,575
 \$175,000 Proj., 1905
 \$266,575 Annual, 1905

FY 1906, HEADING PROJECT: \$123,003
 \$200,603, Act., Oct. '05 June 1906
 Act., July-Sept. 1906
 \$100,000 Day-In Care
 \$ 15,000 Day-In Care

Table 11A. Summary of "Other" Funded Projects

FY 1979 - FY 1986

FY 1979 COSTS

Medical Workshop and Curriculum \$36,000

TOTAL FY 1979 COSTS \$36,000

FY 1980 COSTS

PERU-Maternal/Infant Nutrition Workshop	\$3,000
THAILAND-Invitational Travel-I. Wray	\$3,065
" " " -D. Jelliffe	\$3,065
" " " -P. Jelliffe	\$3,065
PANAMA-Infant Feeding Workshop	\$28,300
SOUTH PACIFIC-Nutrition Workshop	\$131,400
COLOMBIA-Participant Travel to Quito	\$1,900
COLOMBIA-Workshop Travel to Lima(5)	\$4,000
Switzerland for Pop Council Advisory Mtg.	\$7,973
FES Sensilization Workshop for LA	\$42,000
COLOMBIA-Invitational Travel-Parades	\$3,000
KENYA- " " -Singh	\$1,900
THAILAND- " " -Sanchai	\$3,000
INDONESIA- " " -Maslono	\$3,200
COLOMBIA- " " -Cali Workshop	\$3,100
BUKHA- " " -Asia Natl. Congress	\$4,282
INDONESIA- " " - " "	\$1,500
BRAZIL- " " -San Paulo Brfding Wks	\$20,000
Invitational Travel-Dr. Sai	\$1,250
Invitational Travel-Dr. Luffy to Barcelona	\$2,000
Invitational Travel-Dr. Hamza " "	\$1,500
Invitational Travel-Dr. Darmish " "	\$2,000
Invitational Travel-N. Battle ?	\$960
BOLIVIA-MIN	\$7,108
INDONESIA-MIN	\$4,840
GUATEMALA-Workshop	\$2,500
HONDURAS-Participant Travel	\$600
EL SALVADOR-8 Participants to Guat. Wkshop	\$4,000
PERU-MIN Workshop	\$25,400
PNV TR Wray to Wash., D.C.	\$530
" " Jelliffes to Manila	\$5,000
Invitational Travel-Chandra to Wash., D.C.	\$1,500
" " -Maletlona to " "	\$2,000
" " -to assist FSP	\$3,500
Biddulph	\$32,000

TOTAL FY 1980 COSTS \$370,438

FY 1981 COSTS

Small Grant ?	179,484
LESOTHO-Invitational Travel-N. Brouning	16,000
SIEFFID LEONE-Participant Travel	13,500
B. Popkin-Book Research ?	10,000
EL SALVADOR-Travel to Intl. Nutr. Plan Forum	8,000
THAILAND- " " " " " "	12,000
THAILAND- Conference Travel	15,500
BANGLADESH " "	1,000
INDONESIA " "	10,000
NEPAL " "	12,750
PHILIPPINES " "	14,120
INDIA " "	16,000
PAPUA NEW GUINEA " "	14,120
BURMA " "	11,750
FIJI " "	12,000
HONDURAS-La Leche League	11,652
THE GAMBIA-Infantfeeding Seminar	15,000
INDONESIA-Participant Travel	12,500
PHILIPPINES-?	1,140
NEPAL " "	1,100
BANGLADESH " "	1,210
MEXICO " "	19,000
THE GAMBIA-Conference	1,000
PHILIPPINES-Intl. Nutr. Plan Forum	184,453
INDONESIA-Travelling Seminars	15,630
SOUTH PACIFIC-Project ?	143,596
COSTA RICA-Workshop Materials	8500
BURMA-Participant Travel to Indonesia	12,674
COLOMBIA-Participant Travel	14,293

TOTAL FY 1981 COSTS \$250,552

FY 1982 COSTS

SUDAN-Invitational Travel	\$6,824
INDONESIA-Book Purchase	1200
Devere, Inc.-Liberstone Search	\$13,500
PHILIPPINES-Invitational Travel-P. Marin	\$1,538

TOTAL FY 1982 COSTS \$22,762

FY 1983 COSTS

HONDURAS-Paraja ?	\$1,054
HONDURAS-La Leche League Seminar	\$1,225
CHILE-Honolulu ?	\$2,100
GUATEMALA-PRVN-SULP	\$2,798

FY 1984 COSTS

Masera Breastfeeding Workshop	\$16,000
YOUNDE-Invitational Travel	\$2,700
TUNISIA- " "	\$4,000
PHILIPPINES-San Diego Training	\$18,300
THAILAND- " " "	\$16,000
KENYA- " " "	\$9,100

TOTAL FY 1983 COSTS \$7,177

TOTAL FY 1984 COSTS \$66,100

FY 1985 COSTS

Clearinghouse Review for EEP	\$457
Invitational Travel (2-P. Martin)	\$330

TOTAL FY 1986 COSTS

MEMBER Contribution	\$39,169
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TOTAL FY 1985 COSTS	\$787
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TOTAL FY 1986 COSTS	\$39,169
" " 1985 "	\$787
" " 1984 "	\$66,100
" " 1983 "	\$7,177
" " 1982 "	\$22,762
" " 1981 "	\$250,552
" " 1980 "	\$370,438
" " 1979 "	\$36,000

TOTAL FY '79-'86	\$792,985
------------------	-----------

FIGURE 2

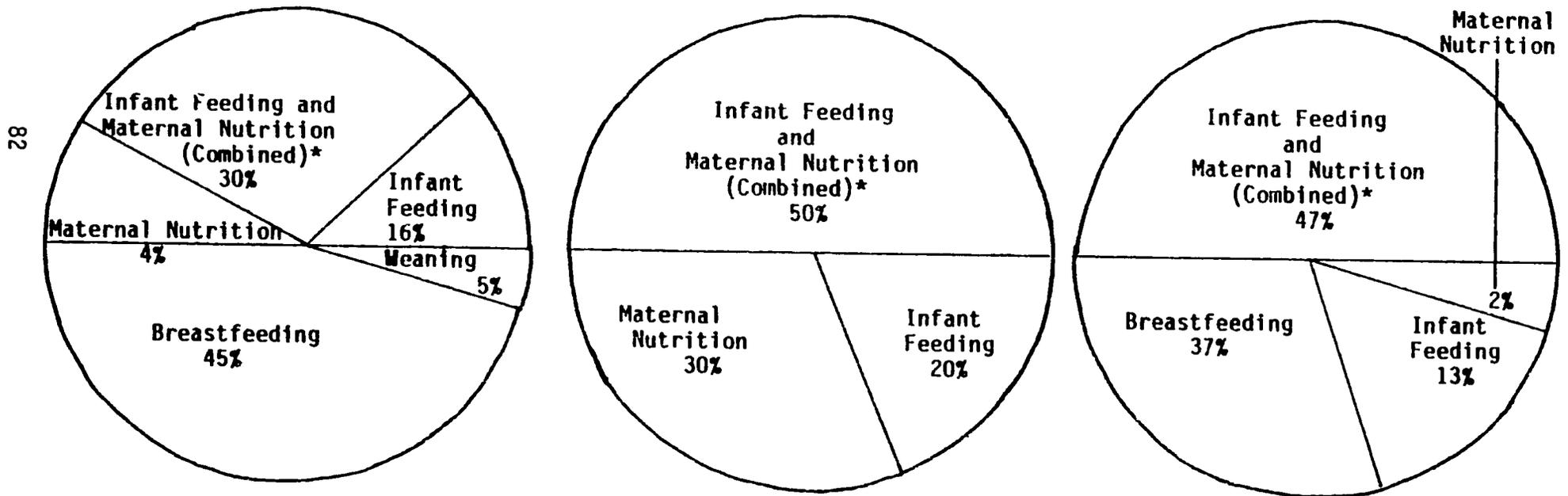
931-1010

PERCENTAGE OF FUNDS BY TYPE OF ACTIVITY

**Phase I
1979-1983**

**Phase II - Proposed
1983-1988**

**Phase II - Actual
1983-1986**



Total = \$6m

Total Estimated - \$12.7m

Actual to 9/86 = \$9.6m

* The combined category is estimated as: 1/2 breastfeeding, 1/4 weaning, 1/4 maternal nutrition.

FIGURE 3

REGIONAL DISTRIBUTION OF FUNDS

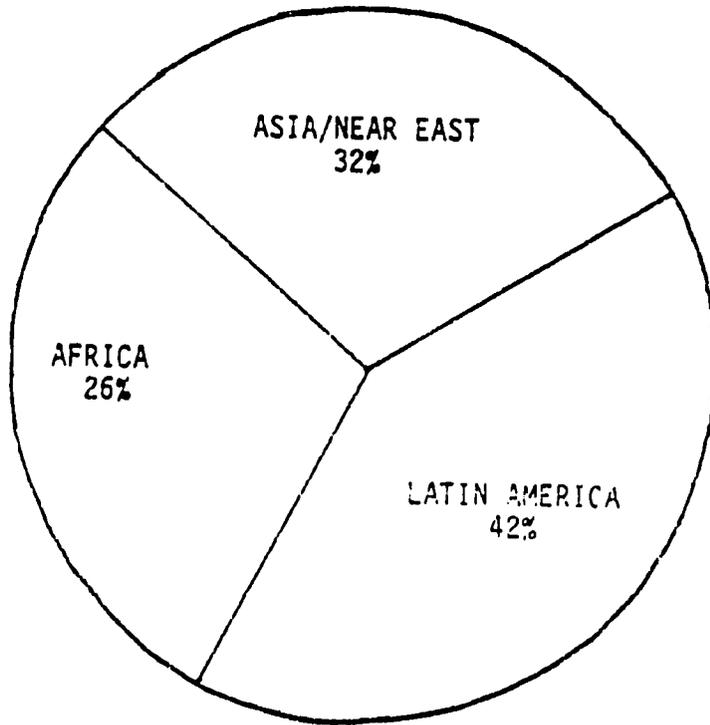
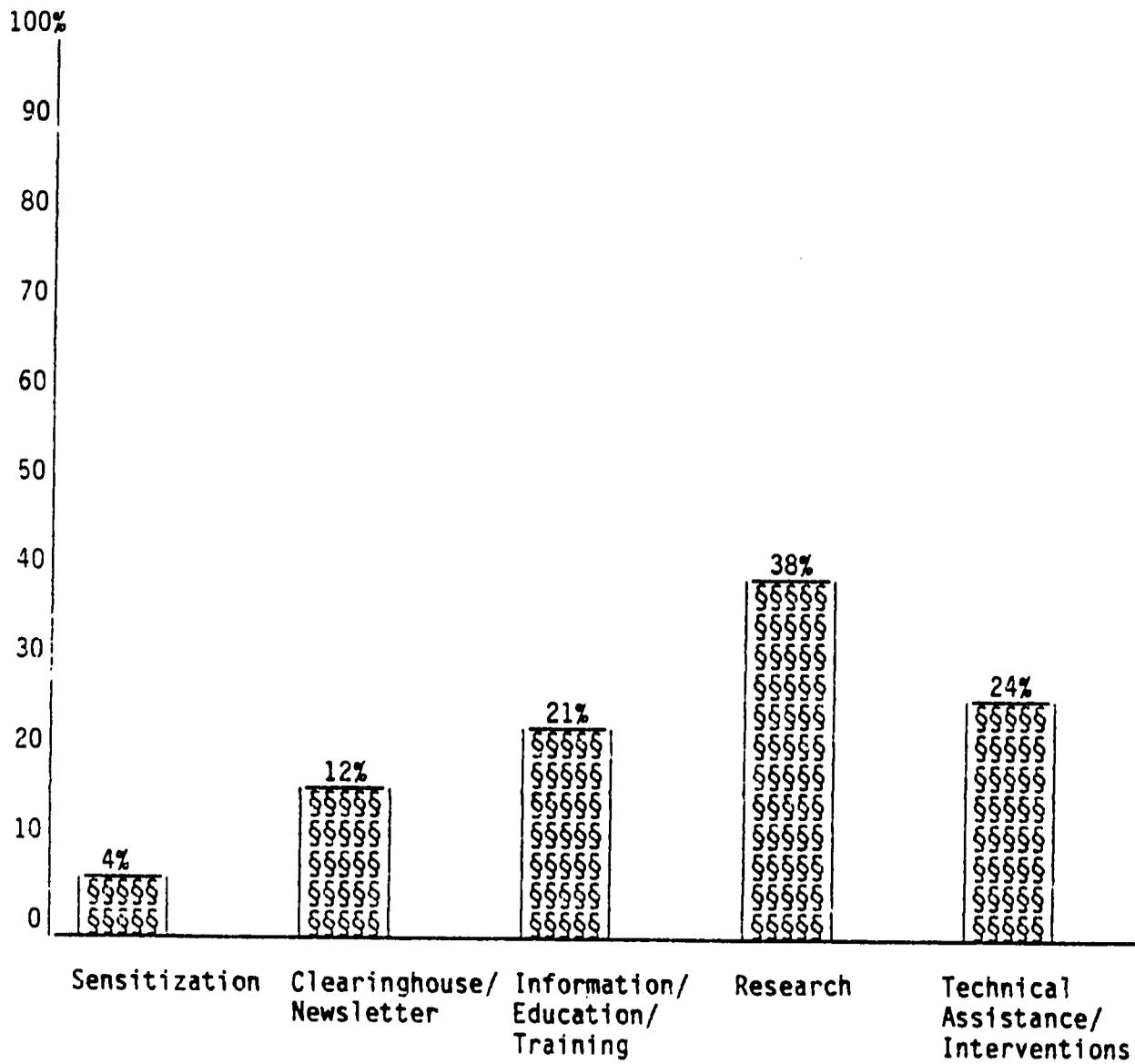


FIGURE 4

PROJECT 931-1010

SUBSTANTIVE FOCUS OF ACTIVITIES



A difficult question to answer, but one that must be addressed, is the opportunity cost question. Given the project goal of improving nutritional status of mothers and infants, was this the best way to spend 9 million dollars?

The San Diego Program prepared an estimate of the five year impact of the Lactation Specialist Training Project on breastfeeding mothers and their infants. Based on estimates of the number of mother-infant pairs in hospitals, the teams provided training or are affected by health professionals who received continuing education from team members (approximately 1,500, 138 pairs), and the cost of Sessions I-IV of the San Diego Program (\$333,041), the cost is about 22.2¢ per pair.

V. CONCLUSIONS AND RECOMMENDATIONS ("WHAT OUGHT TO HAPPEN NEXT")

The structure of this section follows the overall outline of this evaluation document. Each section begins with a general and rather sweeping conclusion which addresses some larger issue which emerged from the evaluation. We consider these to be germane to centrally-funded projects in general; in other words, they are generic issues. These are followed by the more specific issues which have to do with the strategy, design, experience, management, effectiveness, and impact of the project itself.

A. STRATEGY AND DESIGN ("WHAT WAS SUPPOSED TO HAPPEN")

1. Strategy Issues

General Issue: The Umbrella Project as a Viable Way of Improving Maternal/ Infant Nutrition

Conclusion: At the time this project was conceived, the argument was that not enough was known about maternal and infant nutrition to justify embarking on any single major intervention. From that perspective, a project which pushed research into largely uncharted waters and tested promising program interventions on a small scale in several areas made a lot of sense. At the same time, scattering resources among a large number of varied activities over a long period of time is not a good way to produce effect, except at the onset of a project when possibilities have to be determined, priorities set, the best implementers identified, and the largest gaps located. A project of this type should have as an objective an eventual focus on that smaller set of activities which seem most likely to achieve larger project objectives.

Specific Issue: Breastfeeding "Success"

Conclusion: The timing, the availability of funds, the variety of implementation mechanisms, the early focus on research, all combined to make the breastfeeding activities undertaken by the project its most successful component.

Recommendation: The project focus on breastfeeding should be maintained but should build on experience garnered to date. For example, training in lactation management has proven to be an essential component of altering hospital practices to promote breastfeeding; thus, this training should be not only continued but expanded.

Specific Issue: The Limited Role of Maternal Nutrition in the Project

Conclusion: Although maternal nutrition was supposed to be a major focus in the second phase of the project, in point of fact, both research on maternal nutrition and the development of initiatives and field-testing of maternal nutrition interventions have been negligible.

Recommendation: Vigorous encouragement should be given to the development of maternal nutrition field projects which will test various strategies for addressing the maternal nutrition problem, and to whatever research or literature review necessary for launching such strategies. USAID missions and PVOs should be motivated to design pilot maternal nutrition projects. The same initial vertical approach, which proved to be effective for breastfeeding, should be utilized for promoting interest in maternal nutrition.

Specific Issue: Centrally-Funded Projects as Catalyst

Conclusion: This project has demonstrated the ability of a centrally-funded project to function as a catalyst for the development of new activities. Still, this is only true when the project is explicitly activist and committed: the project's catalytic role in the area of breastfeeding was well realized but inconsequential in the area of maternal nutrition.

Recommendation: The project should continue its catalytic role in the area of infant feeding and reassess its obligations and potential in the area of maternal nutrition.

2. Design Issues

General Issue: Verticality Versus Integration/Horizontality

Conclusion: At the point in a sector when new ventures are to be undertaken and virgin territory explored, verticality makes sense--and may even be essential--to highlight a given development problem and get to work on it speedily. A judgmental distinction between verticality ("bad") and integration ("good") is arbitrary and artificial: each has its value in program and project lifetimes. The utilization of a vertical approach does not preclude subsequent integration and may even foster it.

Specific Issue: Urban Versus Rural Focus

Conclusion: The initial focus of breastfeeding promotion to urban, hospital-based populations was appropriate. The evidence for this is twofold: research undertaken as part of the project supports the hypothesis that it is in urban areas where most breastfeeding attrition is occurring and 2) modifying the knowledge, attitudes, and practices of policy-makers and medical professionals from the outset is crucial to short- and long-term project impact.

Recommendation: The urban, hospital-based focus should not be abandoned and should, in fact, be replicated for new projects coming on stream. Older projects which have already begun with an urban emphasis (e.g., Panama, Thailand, Indonesia, Honduras) should expand their endeavors to rural populations, at least on a pilot basis. Such expansion should be accompanied by ancillary research, probably operations research, to account for the difference in practices and problems between urban and rural contexts.

B. PROJECT EXPERIENCE ("WHAT ACTUALLY HAPPENED")

1. Management Issues

General Issue: The Management Burden

Conclusion: Because of the diversity of the project components, the management burden for a large umbrella project is characteristically larger than the management base, regardless of the competence of that base. It is unrealistic to expect a project manager to assume both the supervisory and technical responsibilities for so many discrete, geographically and substantively dispersed subprojects.

Recommendation: Large umbrella projects should be adequately staffed. There are several ways of designing the managerial and technical division of labor for such projects and these should be explored as the project continues and certainly if it is to expand. Even a reduction in the number of subprojects does not address the perennial tension between demands on a project manager for managerial and technical quality control, and between supervisory needs and an active technical role on the part of a manager.

Specific Issue: The Role of Technical Assistance

Conclusion: The success of the technical assistance carried out under this project has varied by contractor. It has been most effective when it has been provided by the same consultant/s, at timely and prearranged intervals, and has included skills transfer to host country counterparts.

Recommendation: Technical assistance for each subproject should be provided according to an annual plan, negotiated among host country counterparts, the firm involved, central project management and, where appropriate, the concerned USAID. Each scheduled piece of assistance should be prefaced and guided by a small scope of work and statement of objectives.

Specific Issue: Monitoring and Evaluation

Conclusion: The conclusion of the 1982 project amendment document was that "inadequate mechanisms exist in the project to fully capture the lessons learned and the significance or contributions of this project for the field of maternal and infant nutrition." The evaluation team did not perceive any substantial improvement in this state of affairs.

Recommendation: More systematic and rigorous evaluation mechanisms need to be introduced immediately into existing subprojects and inserted a priori into any new subprojects. The central project should also make explicit a policy and implement a procedure for disseminating lessons learned in some simple, agile format.

2. Research Issues

General Issue: The Availability of Research Findings

Conclusion: No matter the quality or rigor of the research carried out under any project, if its findings are not available with reasonable speed in a comfortably accessible fashion for both donor and host country counterparts, they can become quickly useless.

Specific Issue: Dissemination of Research Findings

Conclusion: The significant project findings concerning infant feeding have not, in general, been available in timely fashion nor have the available findings been actively disseminated.

Recommendation: In its final year, the project should publish and disseminate widely a popular monograph entitled something on the order of: "Infant Feeding: What Research Has Taught Us." This publication should include the results of both basic and operational research.

Specific Issue: Use of Findings to Design and Redesign Projects

Conclusion: The link between infant feeding research and design of project interventions was successfully made in several countries (e.g., Thailand, Indonesia, Honduras). It was most successful when preliminary analysis and findings were promptly available to country planners and managers for use in design or redesign of program interventions.

Recommendation: The Weaning and Dietary Management of Diarrheal Diseases projects should both be reviewed to assure that there is provision for quick turnaround of research results and for their incorporation into new project activities.

C. EFFECTIVENESS AND IMPACT ("SO WHAT?")

General Issue: Appropriateness and Efficiency

Conclusion: The Maternal and Infant Nutrition Project shares the same stress as S&T/N itself, that is, the need to be responsive to ad hoc, ad libitum, short-term technical assistance requirements, versus the need to have a rational, focused approach to a particular development problem. The result of this stress is that the responses of an umbrella project are not always coherent except within the broadest interpretation and do not efficiently lead to project outcomes. A tightly focused, proactive approach (e.g., the Weaning and Dietary Management of Diarrheal Diseases Projects) appear to be a much more effective way of channelling funds into a priority sector activity, than a more fragmented, reactive approach which consists of responding to ad hoc requests for technical assistance which may or may not develop into a

project activity and may or may not fit with a specific, consistent set of priority objectives.

General Issue: Effectiveness, Impact, and Spread Effect

Conclusion: Attempts to institutionalize project activities have met with varied success. The project has demonstrated the need for training in clinical management in urban-based hospitals and that such training can alter health professionals' attitudes toward breastfeeding and correlated behaviors and produce increased breastfeeding. There is also evidence that spread effect from training is substantial in selected countries. The impact on durable behavior change (e.g., continued as opposed to early breastfeeding) is less clear; little is known about breastfeeding duration after the six-week postpartum period, an area where research is badly needed.

General Issue: Sustainability and Replicability

Conclusion: Replicability of the breastfeeding component of the project is demonstrably possible, given the fact that breastfeeding projects have been, as development interventions go, relatively easy to launch. The models generated seem to be models which can be reiterated from country to country with some positive outcome. There is no evidence yet, within the parameters of this project, that any of its component subprojects will be autonomously maintained. The project has been most efficient in its use of its limited resources in those countries where it has piggybacked a project onto those of an existing organization (e.g., the Weaning Project's collaboration with CARE in Cameroon). Project sustainability appears most likely where skills are institutionalized through on-site training for counterparts in participatory methodologies (e.g., problem-solving and focus groups), where the same consultant/s have an ongoing relationship with a subproject activity, and where ownership of an activity resides in a local organization. The project should incorporate mechanisms for tying project funds disbursement for research to milestones which mark the availability, in appropriate formats and at a comfortable level of confidence, of research findings. A project manager should not be left with only moral persuasion as a tool to accomplish this.

LIST OF PERSONS INTERVIEWED DURING EVALUATIONAID/W

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Sallie Mahoney
Maura Mack

Other AID Staff

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Molly Mayo Gingerich, USAID/Jakarta	Grace Mule, USAID/Nairobi
Julie Klement, USAID/Jakarta	Carl Harris, USAID/Nairobi
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Narintra Tima, USAID/Bangkok	
Gary Lerman, USAID/Yaounde	

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Tina Sanghvi
Terry Elliott
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Mr. Harold Miller, Mennonite Central Committee, Nairobi, Kenya
Mr. Otieno, Food & Nut. Plan Unit, Ministry of Planning, Nairobi
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PROJECT 931-1010 REPORTS AND PUBLICATIONS

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A. NATIONAL STRATEGIES: SEMINARS AND MULTIFACETED PROGRAMS

1. Baumslag, N. National Workshop on Breastfeeding: LESOTHO (January 28 - February 12, 1981). APTECH for AID, 1981.
2. Baumslag, N. Trip Report Describing a Maternal and Child Nutrition Conference: SIERRA LEONE. (February 22 - March 6, 1981). INCS for AID, 1981.
3. Berggren, G.G. Policy Recommendations for Alleviating National Maternal and Infant Nutrition Problems: BURMA (May 4-9, 1980). INCS for AID, 1980. 47 pp.

The consultant spent 5 days in Rangoon and rural areas. The Burmese MOH was primarily concerned with the development of health care messages. The consultant found that the principal problem in Burma was that of the type of weaning food introduced rather than the timing of the introduction of weaning and supplementary foods. Dr. Berggren suggested further studies of weaning foods, including present practices, snacks, "nutri-packs" (weaning food mixes), extrusion pilot studies for urban areas, and multi-mix pilot demonstrations. She also recommended the development of a methodology for field training health workers in nutrition education and action programs. Direct, indirect and population-based evaluation methods are included in the report.

4. Brown, R.E. and R. Beillik. A Proposal for a National Breastfeeding Promotion: HONDURAS (June 13-18, 1982). INCS for AID, 1982. 12 pp.

The purpose of this report was to review and supplement a proposal for the development of a breastfeeding promotion program in Honduras (PROALMA). The program was designed to be a three-year undertaking to then be turned over to local agencies and personnel. In accordance with national priorities, breastfeeding promotion was viewed as preeminently important for its role in the prevention and treatment of diarrhea. Dr. Brown recommended creating counterpart staff for PROALMA staff and producing job descriptions for all staff. He advised coordinating PROALMA's activities with USAID's diarrheal treatment and family planning efforts and cooperation with the breastfeeding promotion programs of El Salvador and Panama. The report calls attention to various hospital, obstetric and maternal beliefs and practices which are not conducive to breastfeeding.

5. Brown, R. E. and M. Neifert. Description of a National Workshop on Maternal and Infant Nutrition: BANGLADESH. (December 19-21, 1983). INCS and AID, 1983.
6. Cameron, M. and E.R. Cerutti. Observations and Recommendations of Consultants to the Second National Symposium for Promotion of Breastfeeding in INDONESIA. (August 27-30, 1980). INCS for AID, 1980.
7. Campbell-Lindzey, S. Development of a Nutrition Education Strategy in Each Country for a Seventh Day Adventist World Service Ministry of Health PL-480 Title II Program: SUDAN/MADAGASCAR. (May 6-30, 1983). INCS for AID, 1983.
8. Congresso Internacional de Dietetica and Congresso Latino Americano de Nutricionistas e Dietistas. Mesa Redonda: Aleitamento Materno e Alimentacao na Primeira Infancia: BRAZIL (August 22-24, 1980). (Portuguese).
9. Cooke, T., E. Cerutti, E. Rapp, and P. Rosso. Highlights of a Maternal and Infant Nutrition Seminar for Health Professionals and Recommendations for Educational Activities to Promote Breastfeeding: PANAMA (November 12-15, 1980). INCS for AID, 1980, 14 pp. and appendices.

The seminar, sponsored by the Panamanian Pediatric Society and USAID/Panama, was largely devoted to ways in which hospital practices in Panama could be improved to promote breastfeeding. Two hundred Panamanian health professionals and a four member INCS consultant team attended. The report highlights the results of the seminar and makes specific recommendations for follow-on investigatory, promotional and educational activities which are needed to capitalize on the momentum for changes in health care practices generated by the seminar.

10. Cooke, T.M., E.F. Patrice Jellife, D.B. Jellife and E. Rapp. Health Professional Seminars in Developing Countries: Consultant Observations (Recommendations for Improving Seminar Formats, Substance, and Effectiveness). INCS for AID, 1981. 19 pp.

In this report the consultants evaluate their experiences in various INCS-assisted health professional seminars and suggested ways of improving them. They concurred that the seminars had been useful for consciousness-raising, reinforcement, and education of the participants, but they further suggested a variety of aspects which had been under-emphasized. Recurring themes in the recommendations are the need for pre-conference planning and goal setting; for the allotment

of time for discussion, resolutions, and the development of action plans; and for an increase in the breadth of the seminar insofar as areas of consultant expertise and participant roles. Specifically, the authors recommended that mass media specialists, curriculum planners, and other specialists participate as consultants and that curriculum planners, health worker trainers, and medical and nursing school teachers be invited to attend the seminars.

11. Griffiths, M. A Strategy for Nutrition Communication Within the PAAMI Improvement of the MSP; ECUADOR. (August 20 - September 28, 1984). INCS for AID, 1984.
12. Haaga, J. Infant Feeding and Nutrition Policy in MALAYSIA. Rand Corporation for AID, June 1984. 206 pp.
13. Hendrata, L. Review and Policy Recommendation on Overall Strategy, Training and Communications Components of the Nutrition/MCH Activities and Management Training Under the Extended Rural Primary Health Care Expansion Project: THAILAND. (January 5-22, 1983). INCS for AID, 1983.
14. Hosie, B.P. Annual Evaluation Program Grant USAID 0263: SOUTH PACIFIC REGIONAL Maternal and Infant Nutrition Program. (April 1, 1981 - March 31, 1982). The Foundation for the People of the South Pacific, Inc. New York, 1982. 43 pp.

This annual self-evaluation was carried out in accordance with the recommendations of Dr. Pyle. The suggested evaluation format was executed using both a qualitative and quantitative methodology. The evaluators found that positive steps toward institutionalized nutrition planning, the goal of FSP's activities, had been taken over the year's time and that the conference on maternal and infant nutrition had already resulted in improved hospital practices. No recommendations were included in the report. The report is an interesting example of a qualitative process evaluation.
15. Israel, R. A Description of a Visit to Assess the National Nutrition and Nutrition Educations Needs: THE GAMBIA. (September 4-5, 1980). INCS for AID, 1980.
16. Israel, R. Recommendations for Consideration at the Liberian National Nutrition Planning Workshop: LIBERIA. (October 20-24, 1980). INCS for AID, 1980.
17. Israel, R. Highlights from a Health Professional Maternal and Infant Nutrition Workshop: KENYA. (March 18-28, 1981). INCS for AID, 1981.

18. Israel, R. Planning Assistance for the Nutrition Activities of the Jamaica Health Management Improvement Project: JAMAICA. (November 1-7, 1981). INCS for AID, 1981.
19. Jelliffe, D.B. and E.F. Patrice Jelliffe. Policy Recommendations for Alleviating National Maternal and Infant Nutrition Problems - Volumes I and II: BURMA. (May 4-9, 1980). INCS for AID, 1980.
20. Jelliffe, D.B. and E.F. Patrice Jelliffe. Further Recommendations for Maternal and Infant Nutrition Technical Assistance, Volume III: BURMA. (September 20-23, 1980). INCS for AID, 1980. 55 pp.
21. Jelliffe, D.B. and E.F. Patrice Jelliffe. Report on Maternal and Young Child Nutrition in NEPAL. (September 16-20, 1980). INCS for AID, 1980. 55 pp.

The Jelliffes visited Nepal to be guest speakers at a Government of Nepal seminar on breastfeeding, to investigate ways to assist in nutrition education, to collect materials, and to investigate the potential appropriateness of a multi-channeled nutrition education demonstration for Nepal. The main nutritional problems found were protein-energy malnutrition (PEM) in young children, goiter, and iron deficiency anemia. The Jelliffes found that many agencies, especially UNICEF, were active in nutrition education and were using effective techniques. They suggested that INCS involvement should be with further field research into the present situation in breastfeeding and maternal nutrition. This report includes the seminar's recommendations to promote and support appropriate maternal/child feeding practices through public education, health worker training, revision of curricula, laws, and research. Also included are detailed health status, service delivery, training and research reviews for Nepal.

22. Jelliffe, D.B. and E.F. Patrice Jelliffe. A Description of a National Workshop on Breastfeeding: COSTA RICA. (April 1-3, 1981). INCS for AID, 1981. 19 pp. plus attachments.

The workshop was Costa Rica's first national conference for the promotion of breast- and child-feeding. Seventy-one health professionals from the sponsoring ministries, institutes, and university, and from other organizations and hospitals, and five consultants participated. Although a great deal of interest and research existed in Costa Rica concerning mother-child bonding, breastmilk banks, legislation, and training, breastfeeding had declined considerably in Costa Rica

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over the past decades. Forty percent of Costa Rican mothers never breastfed. Weaning foods are introduced too early. Health centers frequently help to promote declines in breastfeeding and early supplementation by providing free foods. Positive changes have been introduced recently, but commercial advertisement, formula and infant foods industries representatives, and some standard obstetrical practices continue to have adverse effects. The report includes papers on the promotion of breastfeeding, health, and growth in rural Costa Rica; observations on child malnutrition and deprivation; and a report of various health services practices which affect breastfeeding.

23. Jelliffe, D.B. and E.F. Patrice Jelliffe. A Description of the First SOUTH PACIFIC Regional Mother and Infant Nutrition Seminar. INCS for AID, May, 1981. 17 pp. and 7 appendices.

The conference was convened to promote improved infant feeding practices in the South Pacific Forum countries and to establish cooperation for regional nutritional surveillance and data-gathering. It also initiated the Foundation for the Peoples of the South Pacific (FSP) Maternal and Infant Nutrition Project. Participants included senior government health service officials and resource personnel from various international and national organizations. The conference included a survey of infant feeding practices, presentation of country papers, free discussion plenary sessions, state of knowledge presentations, and workshops for the development of draft country action programs in maternal and infant nutrition. Special features of the countries and existing data and experimental procedures appropriate to three critical topics were also developed. These topics were: 1) data collection; 2) appropriate types of nutrition programs; and 3) coordination measures. The participants resolved to urge the Governments of the Pacific nations 1) to promote and protect breastfeeding both by legislation and appropriate activities, and 2) to adopt the WHO International Code of Marketing of Breast Milk Substitutes as a minimum standard. This document is a useful model for MIN program initiation and initial planning.

24. Jelliffe, D.B. and E.F. Patrice Jelliffe. The Brazilian National Breastfeeding Program: BRAZIL. (March 24-31, 1982) (National Institute of Nutrition of Brazil). INCS for INAN, 1982. 58 pp.

The consultants reviewed the Brazilian National Breast Feeding Program one year after its inception. The Brazilian program defined its target groups as health professionals and both well-to-do and moderately poor women. A baseline survey had been executed to detect the causes of the decline of breastfeeding. Following the analysis of the survey, campaigns were begun to supply information and emotional and social support to mothers, as well as to provide scientific knowledge on management and motivation to health professionals. The consultants concluded that the Brazilian program was the first in the world undertaken on such a logical basis. Despite the program's quality, the consultants' recommendations were many and insightful. They suggested a variety of coordination initiatives in training and education efforts, the use of non-medical "attractants" to health services, and further investigation and trials of reinforcing activities such as lactation centers and counselors. They also suggested that efforts be strengthened in developing breastfeeding support groups, that the 1943 creche law be extended in coverage and better publicized, and that creches be monitored. Research was recommended in a variety of areas. Brazilian researchers were urged to have their work translated and more widely published. For evaluation purposes, the consultants suggested a follow-up of the baseline survey, which could be inexpensively added on to regular activities such as the national census and health surveys, and monitoring of ongoing studies.

25. Jelliffe, D.B. and E.F. Patrice Jelliffe. A Follow-up Visit to Assess the Progress of the National Breastfeeding Promotion Program: BRAZIL. (July 31 - August 14, 1983). INCS for AID, 1983.
26. Jelliffe, D.B., E.F. Patrice Jelliffe and R. Israel. Two Technical Consultancies to Support National Breastfeeding Activities: INDONESIA. (January 19 - 29, February 27 - March 6, 1984). INCS for AID, 1984.
27. Jelliffe, D.B. and E.F. Patrice Jelliffe. Report on a Follow-up Visit to Jakarta and Denpasar Concerning The Promotion of Breastfeeding in INDONESIA. (July 12-22, 1984). INCS for AID, 1984.
28. Latham, M.D., T.C. Elliot, B. Winikoff, J. Kevole, and P. van Esterik. Infant Feeding in Urban Kenya: A Pattern of Early Triple Nipple Feeding: KENYA. The Journal of Tropical Pediatrics, in press. The Population Council, 1986.

29. Pyle, D.F. An Evaluation Methodology for the SOUTH PACIFIC Regional Maternal Nutrition Program. (July, 1981). INCS for AID. 40 pp.

The purpose of this consultancy was to assist the FSP in developing an evaluation methodology for the MIN project it administers in nine countries. The consultant recommended a qualitative evaluation methodology in that FSP's role is more one of advocacy and coordination than actual implementation. The consultant suggested that the evaluation be divided according to "resource" or "action" countries and further adapted to each country's situation. For each activity in the categories of program support services and country specific activities (e.g., coordination and training, respectively), qualitative evaluation subjects and indices were developed. Areas of technical assistance were also suggested. The report is a useful model for developing a qualitative evaluation design for a program which is primarily promotional.

30. Riordan, B.M., ed. SOUTH PACIFIC Regional Maternal and Infant Nutrition Seminar. (May, 1981). The Foundation for the Peoples of the South Pacific, Inc., 1981.
31. Seminario Nacional Sobre Lactancia Materna v Nutricion Materno Infantil: PANAMA. (November 13-15, 1980). Sociedad Panamena de Pediatria and AID. 98 pp. (Spanish).

This seminar of the Pediatric Society of Panama focused on maternal and infant nutrition and promoting breastfeeding. Papers included in this report are the physiology, nutritional and affective aspects, and immunological properties of breastfeeding; milk banks; the effects of commercial media campaigns; the role of prenatal maternal nutrition; socio-cultural and socio-economic factors; legal aspects; and promotion in the clinical setting. The 250 participants recommended policy level initiatives, further education of professionals, dissemination of bibliographies to health services, a review of national standards to birthing practices to facilitate early breastfeeding, improved public education, and appropriate curricula for health schools as well as for adolescents.

32. Solimano, G., C. de Villafuerte, and R. Burke. Recommendations for the Development of a Multi-Media National Breastfeeding Promotion Campaign: PANAMA. (May 25-27, 1982). INCS for AID, 1982. 4 pp. and attachment.

The consultants assisted the Panamanian National Commission for the Promotion of Breastfeeding in completing a program proposal and advised the MOH on the organization and administration of the program. The program's priorities were 1) to train relevant ministry, health service, and community organization staffs at national, regional, and local levels in promoting breastfeeding and 2) to educate the public through mass media campaigns. The consultant stressed the importance of a technical secretariate and advised that an evaluation plan be built into the program. The evaluation plan should include at least a program impact component, measuring changes in the incidence and duration of breastfeeding, and an activities monitoring component, ensuring the execution of critical activities.

33. Taylor-Thomas, J. Tunde, ed. Breast Feeding Nutrition and Maternal and Child Health Seminar: THE GAMBIA. (November 10-13, 1980). The Gambia Family Planning Association, Gambia, 1980. 14 pp. and 6 appendices.
34. Valyasevi, A. and J. Baker, eds. Proceedings of Workshop on Breastfeeding and Supplementary Foods: ASIA. Bangkok, Thailand, December 1980. 76 pp. and one appendix.

The workshop was convened as a prelude to the Third Asian Congress of Pediatrics. Its objectives were 1) to exchange information, ideas, and insights regarding breastfeeding, weaning practices, and methods of promoting proper infant and young child feeding practices in Asian countries and 2) to formulate a basis for strategic plans. The document includes papers presented by Drs. Joe Wray, D.B. Jellife, R.R. Chandra, Fe del Mundo, Ms. E.F. Patrice Jellife, and officials of the eleven participating countries. Small group discussions on action programs and the role of the pediatrician, a panel discussion on supplementary foods, and the workshop's summary and recommendations are also included in this report. The workshop participants concluded that breastfeeding has overwhelming advantages for infant nutrition, protection against infections, and natural child spacing. Emphasis should be given to feeding the mother-young child dyad. The conference recommended that pediatricians give the utmost attention to encouraging breastfeeding and incorporate breastfeeding into training activities and services at all levels. Specific activities were delineated further in the areas of ethics, public education, consciousness-raising, education of health professionals legislation, health services, infant food industry and mass media. The WHO/UNICEF meeting on Infant and Young Child Feeding (October 1979) statement and recommendations are annexed to the report.

35. Zeitlin, M. and R. Israel. Highlights From the Draft Five Year National Nutritional Plan: LIBERIA. Comments on the planning process, and suggestions for follow-up Vol. I. INCS for AID, October, 1980.

Seminars: See also reports 36, 43, 49, 52, 55, 57, 58, 66, 68, 69, 71, 72, 78, 80, 87, 89, 201, 205

Multifaceted Programs: Reports in this section are Nos. 3, 4, 7, 9, 11, 13, 14, 15, 18, 22, 29, 32.

B. SPECIFIC PROJECTS

1. Public Nutrition Education: Mass Media and Other Nonformal Approaches

36. Avila de Hails, P., M. Griffiths and M. Yepes-Baraya. A Description of a Workshop That Developed Messages and Materials on Maternal-Child Feeding for Use by Government Agencies and Private Voluntary Organizations in PERU. (October 20-30, 1980). INCS for AID, 1980. 46 pp. and 3 annexes.

This workshop was to develop a set of priority messages for the Primary Health Care Program in Peru. The participants also designed a basic training outline for community health workers and a procedural guide for the formulation of nutrition education messages and the training of personnel in their transmission. Participants in the workshop included representatives of the Peruvian agriculture, health and education sectors and of private voluntary organizations and three USAID sponsored consultants. The participants noted that the methodology of the workshop was practical allowing for their creativity and sharpening their capacity for similar planning. They further observed that the group dynamic had improved the quality of the educational modules produced, and that field-trials of the modules had been useful in adapting them. The participants recommended that there be a follow-up workshop with the same participants to evaluate their field experiences, and that a similar workshop be developed for health promoters. For future workshops, they suggested that more time be allowed for group work and that AID sponsor the training of Peruvian personnel in the techniques of communication. It was also recommended that the desires and expectations of the participants be polled before such seminars.

37. Barnes-Kalunda, Shirley. Evaluation of the Mass Media Component of AID's Nutrition Planning Project in ZAIRE. (February 23-March 17, 1981). INCS for AID, 1981.
38. Burke, R. Mass Communication and the Promotion of Breastfeeding in the Republic of PANAMA. (May 17-22, 1982). INCS for AID, 1982. 22 pp. and 4 annexes.

The consultant reviewed plans, programs and resources for nutrition education in Panama. Deficiencies and activity gaps were found in the curricula for teacher and health professional training institutions. The Commission on the Promotion of Breastfeeding wanted to

personnel to design, implement, or evaluate such an education component. The consultant urged, first, the enactment of a national policy on breastfeeding. For a mass-media program, he recommended a simple beginning using methods within the current capability of the MOH. These included using flip-charts and slide cassettes in training health professionals and sensitization of the public via posters, billboards, and spot announcements. The objectives and strategies of the public education effort could then be refined through phased technical assistance workshops in mass communication, evaluation, and project management and administration. Immediate staffing was recommended to ensure continuity and capitalize on the enthusiasm already generated.

39. Burke, R., R. Hornik, T. Cooke, R. Manoff. An Evaluation of a Nutrition Education Component of an AID/Government of COSTA RICA Health Care Project. INCS for AID, March, 1980.
40. Cooke, T.M. Evaluation of a Mass Media Nutrition Education Program: CHILE. (June 23 - July 3, 1981). INCS for AID, 1981. 19 pp.

The consultant was requested by the Chilean agency CONPAN to review the plans and materials of a mass media nutrition education campaign in Chile. The campaign's materials principally focus on breastfeeding and improved maternal nutrition. The consultant also participated in planning a related national seminar for health workers in the clinical setting. Dr. Cooke found that the nutrition education campaign had been thoughtfully conceived, had mutually reinforcing components, and had a built-in evaluation scheme. He made specific recommendations about the radio, television and printed messages, on the media plan, and on the evaluation strategy. The report also includes the agenda of the national seminar on breastfeeding.

41. Cooke, T., G. Carrol, P. Avila de Hails, and M. Zeitlin. Report on the Anglophone African Regional Nutrition Education Workshop: SIERRA LEONE. Njala University College, ACRE Project. (April 27 - May 8, 1981). INCS for AID, 1981.
42. Cooke, Thomas W. The Design of a Communications Strategy to Support the Composite Wheat Fortification Program: BOLIVIA. (March 30 - April 7, 1982). INCS for AID, 1982.

43. Dobyms, P. and M. Griffiths. Plans for a Nutrition Education Workshop Stressing Non-Formal, Community Participation Techniques with DINNEFA and Ideas for Continuing Nutrition Education Work with the Division of Nutrition: PANAMA. (July 27-August 7, 1981). INCS for AID, 1981.
44. Gallardo, Leonel D. Documento de Trabajo: Informe Plan de Desavollo de Educacion Pava La Salud en el Ministeno de Salud Publica de EL SALVADOR. INCS for AID, 1980.
45. Griffiths, M. Strategy for Nutrition Education Intervention Component of the Vitamin A Deficiency Control Project; INDONESIA. (February 9 - March 1, 1981). INCS for AID, 1981.
46. Griffiths, M. A Community Nutrition Education Project Implementation Plan: PANAMA. (January 11-24, 1982). INCS for AID, 1982.
47. Griffiths, M. Evaluation of and Recommendations for the "Buena Madre" Project: BOLIVIA. (March 23 - April 6, 1982). New Transcentruy Foundation through Manoff International Inc. for AID, 1982. 61 pp. (Spanish with abbreviated English version).

The consultant evaluated the Bolivian MIN mass media and interpersonal communication pilot project, the "Buena Madre" (Goody Mother) Project. The project coordinated direct education in mothers' clubs with the use of radio spots, sociodrama, and posters. The report analyzes survey evaluation data, summarizes the analysis preliminary to a formal evaluation, reviews the educational materials, and discusses and makes recommendations concerning the institutionalization of the project. The consultant concluded that the pilot project was successful on the basis of its implementation and the mothers' learning. The evaluation, coming after only six months of service delivery, indicated that the participants had modified their diets. The paper proposes that formative development continue to be utilized in expanding the program to new regions and in updating and adapting materials for their audiences. For this expansion the consultant recommended that a core group be maintained to manage campaigns, develop materials, and test and evaluate the program. Essential to expansion were more time for training and supervision of field staff, two components seen as weak in the pilot project. Special attention should be given to materials for low-literacy leaders and program monitoring. Impact assessment was

seen to be only one aspect of evaluation; monitoring should take precedence. Annexes include an outline for the final evaluation of the project, major messages included in the educational series, and the evaluation questionnaire.

48. Griffiths, M. An Operational Plan for the Improvement of the Nutrition Education Component of the Maternal-Child Food Assistance Program of the Ministry of Health: ECUADOR. (October 3 - 15, 1983). INCS for AID, 1983.
49. Griffiths, M. and R. Sawyer. Description of a Workshop that Combined Non-Formal Education Techniques and the Formulation of Didactic Materials to Illustrate the Possibilities for Community Nutrition Education Projects: PANAMA. (January 13-28, 1982). INCS for AID, 1982.
50. Israel, R. ed., R. Burke, M. Griffiths, R. Manoff, M. Zeitlin, L. Srinivasan, N. Terreri. Recommendations for Developing a Nutrition Education Strategy and Capability Within Helen Keller International's Nutritional Blindness Prevention Department. INCS for AID, 1980.
51. Jelliffe, D.B. and E.F. Patrice Jelliffe. An Assessment of the Communications Component of the Brazilian National Breastfeeding Program Vol. II: BRAZIL. (March 21-31, 1982). INCS for AID, 1982. 24 pp. and 2 appendices.
52. Jelliffe, E.F.P., D.B. Jelliffe and A. Naylor. A Summary of a Travelling Seminar on Maternal and Infant Nutrition for Indonesian Health Professionals: INDONESIA. (August 26 - September 7, 1982). INCS for AID, 1982.
53. Jones, M. and R. Israel. A Description of a Nutrition Education Planning Conference Held in Georgetown: GUYANA. (January 29-31, 1980). INCS for AID, 1980.
54. Lenglet, Frans. Recommendations to Improve The Nutrition Education Capabilities of the Nutrition Service in the CAMEROON Ministry of Health. (June 18-29, 1980). INCS for AID, 1980.
55. Lenglet, Frans. Report on the National Seminar-Workshop on Mass Media and Health Held in Yaounde, CAMEROON. (July 27 - August 10, 1983). INCS for AID, 1983.
56. Leslie, J. and R. Parlo. A Plan For The Development of The Mass Media and Health Project: CAMEROON. (August 3-10, 1981). INCS for AID, 1981.

57. Mandelbaum, J. and O. Holmes. Description of a Materials Development Workshop for the Nutrition Education Audio-Visual Unit of the National Institute of Child Health: TUNISIA. (May 23-28, 1983). INCS for AID, 1983.
58. Manoff, R.K., L. Hendrata, and Satoto. Workshop on Development of Nutrition Communications Strategies in Communities Health Care: BURMA. (July 6-17, 1981). INCS for AID, 1981. 38 pp. and 4 attachments.
- This report summarizes a national workshop to design nutrition education messages and strategies. Burma has a strong commitment to primary health care but virtually no experience with the use of mass media for education. The participants recommended that Burma introduce mass media mini-messages, short (e.g., one minute) messages which could be repeated several times a day by radio, television, or film. Mini-messages were seen to be advantageous in that they are inexpensive and simple to develop. Participants further stressed that nutrition communication should be integral to community nutrition activities, both being community-based and action/achievement-oriented. Workshop follow-up strategies were suggested and the government's stand on approving the Code on Marketing Breastmilk Substitutes applauded.
59. Parlato, R. Design for the Nutrition and Health Education Component of USAID/India's Integrated Maternal and Child Nutrition Project: INDIA. (June 16 - July 18, 1982). INCS for AID, 1982.
60. Satoto, Dr. A Description of Message and Materials Pretesting Activities for the Burma Community Health Program: BURMA. (May 13-27, 1981). INCS for AID, 1981.
61. Tessler, M., L. Srinivasan, and R. Israel. Design of a Nutrition Education Campaign: JAMAICA. (November 11-17, 1979). INCS for AID, 1979.
62. Tisa, B. Report on a Consultancy to Help Design Messages and Materials for CARE/Congo Health and Nutrition Project: CONGO. (May 19 - June 15, 1982). INCS for AID, 1982.
63. Tisa, B. and J. Baker. Regional Nutrition Media Message Workshop: SOUTH PACIFIC. (November 2-12, 1982). INCS for AID, 1982.

For other reports including public education information, see reports 9, 32, 164 and Section B.2.

2. Formal Nutrition Education: Curriculum Development, Education, and Training
64. Birker, B. Review of a Course Design and Materials for the Nutrition Education Training of Field Workers in HONDURAS (August 30 - September 11, 1981). INCS for AID, 1981.
65. Burke, Richard S. Background Report for African Nutrition Education Materials Development Workshop: SIERRA LEONE. (April 26-May 9, 1981). INCS for AID, 1981.
66. Cooke, T.M., H. Creed de Kanashiro, S.L. Guillen. Training Program on the Nutrition of Children Zero to Six Years of Age for Preschool Faculty, Coordinators of Non Formal Education, and Promoters of Preschool Education: PERU. (July, 1982). INCS for AID, 1982.
67. Countryman, B.A., E. Rapp, P. Dobyms, C. Mena de Godinez. Summary of CALMA/LLI Breastfeeding Curriculum Project: EL SALVADOR. INCS for AID, 1982. (Spanish)
68. Curlin, P. and B. Pedersen. A Managemment Module for Nutrition Training. Report of Pre-Implementation Phase. CEDPA for AID, 1981. 16 pp. and 3 appendices.

The pre-implementation phase was to assess the need for nutrition training, to review existing nutrition services, to develop a training plan, and to suggest a preliminary list of countries for implementation. These activities and their results are reported in this document. The report discusses a trail of a test module, further development of the module, the tentative objectives, topics and methodology of the module, and a schedule of further work.
69. Curlin, P. J. Rumley and P. Taylor. Community Nutrition Intervention Through Non-Traditional Organizations: An Analysis of Organizational Characteristics. A Monograph Analyzing Inputs of Training, Technical Assistance and Organizational Developing During the Life of the Project. CEDPA for AID, 1986. 27 pp.
70. Dichter, T.W. and S. Cambell-Lindzey. Evaluation of the Nutrition Education Programme Component of the Jamaica Population Project II and Recommendations and Strategy for a Future Nutrition Education Programme Component of Health Management Improvement Project: JAMAICA. (February 5-20, 1984). INCS for AID, 1984.
71. Griffiths, M. A Nutrition Education Strategy for the Applied Nutrition Education Project (ANEP), CRS/Caritas: DOMINICAN REPUBLIC. (February 1984). INCS for AID, 1984.

72. Griffiths, M. and J. Pigott. Training in Community Nutrition Program Planning and Implementation Workshop I: Detection, Prevention, and Treatment of Malnutrition. (February 20-25, 1984). INCS for AID, 1984.
73. Griffiths, M. and P. Avila de Hailes. Training in Community Nutrition Program Planning and Implementation Workshop II: the Department of Nutrition and Health Education Materials: DOMINICAN REPUBLIC. (April 1 - 7, 1984). INCS for AID, 1984.
74. de Hails, P.A. Prueba de Materiales Educativos Para el Programa PAAMI-ECUADOR. (February, 1985). INCS for AID, 1985.
75. Hollis, C. Training of Health Educators in Radio Production and Communications for Department of Public Health and Population: HAITI. (January 20 - February 10, 1985). INCS for AID, 1985.
76. Israel, R. A Proposal to Implement a School-Based Nutrition Education Project in JAMAICA. (September 18-29, 1984). INCS for AID, 1984.
77. Israel, R. Proposal for a Collaborative Maternal Nutrition Education Project with Save the Children/Gambia, INCS, and The Gambia Medical Health Department: The GAMBIA. (January 23 - February 3, 1985). INCS for AID, 1985.
78. Israel, R. and M. Zeitlin. A Workshop on How to Adapt Prototype Nutrition Education Materials: GHANA (September 12-19, 1982). INCS for AID, 1982.
79. Israel, R. and S. Campbell-Lindzey. Recommendations for Incorporating Increased Nutrition Education Activities into Catholic Relief Service Programs: UPPER VOLTA. (November 9-24, 1982). INCS for AID, 1982.
80. Kopel, B. Course Development for Two Regional Nutrition Training Programs: SOUTH PACIFIC. (Papua New Guinea, December 14, 1981). INCS for AID, 1981.
81. Levinger, Beryl. Recommendations for a Formative Evaluation of a Primary School Nutrition Curriculum Design: BOLIVIA. (March 9-17, 1981). INCS for AID, 1981.
82. Mena de Godinez, C. A Nutrition Component for Inclusion in a Guatemalan Ministry of Health Training Manual for Midwives - Volumes I and II: GUATEMALA. INCS for AID, 1980. 19 pp. and 6 annexes. (Spanish).

Traditional midwives were to be trained by Guatemalan MOH nurses in various health and nutrition skills. The INCS consultant assisted the MOH Department of Nursing in developing a nutrition curriculum for the midwives. She developed a course guide, supporting materials, and a prescriptive list of supplies and skills which were necessary for the training and work of the midwives. The report includes the instructor's guide, interview findings of the traditional midwives' perceptions of desirable nutrition facts for mothers, and the nurses' attitudes toward traditional midwifery. It also includes changes to the guide which resulted from a participatory workshop and modules for the instructors' and midwives' guides.

83. Parlato, R. and M. Duffy. Project Evaluation of the CARE/Congo Nutrition Education Development and Training Project: CONGO. (September 20 - 30, 1983). INCS for AID, 1983.
84. Rosso, Del and J. Miller. The Development of Group Nutrition Education Materials for the Applied Nutrition Education Program (ANEP) CRS/Caritas: DOMINICAN REPUBLIC. (November 21 - December 12, 1984). INCS for AID, 1984.
85. Sawyer, R. A Field Visit to Assess the Impact of a January, 1982 Materials Development Workshop: PANAMA. (November 20-27, 1982). INCS for AID, 1982.
86. Srinivasan, L. A Description of an Effort to Assist the International Institute of Rural Reconstruction Develop Participatory Approaches for the Nutrition Component of Its People's School Program: PHILLIPINES. (March 7-21, 1981). INCS for AID, 1981.
87. Srinivasan, L. and R. Sawyer. Description of Two Workshops to Train Trainers in Participatory Approaches to Nutrition Education: GUATEMALA. INCS for AID, October, 1980.
88. Taylor, P. Community Nutrition Action for Child Survival. Field Tested Training Modules. CEDPA for AID, 1986.
89. Tisa, B. The Results of a Workshop to Develop Nutrition Education Materials: CONGO. (November 5 - December 8, 1981). INCS for AID, 1981.

For other reports including training information, also see reports 9, 10, 13, 32, 36, 43, 49, 50, 52 101, 103, 108, 184, 190, 206.

3. Weaning Foods Activities
90. Berggren, G. Weaning Foods: LIBERIA. (July 30, 1981). HOVIPREP for AID, 1981.
91. Berggren, G. and D.R. Abeyakoon. Weaning Foods and the Weaning Food Diet in Kirillapone SRI LANKA. HOVIPREP for AID, 1981. 29 pp. and 10 appendices.
92. Callier, S. Weaning Foods: PARAGUAY. (April 21-25, 1980). Transcentury for AID/USDA RSSA, 1980.
93. Callier, S. Weaning Foods: BOLIVIA. (April 28 - May 2, 1980). Transcentury for AID/USDA RSSA, 1980.
94. Callier, S. Weaning Foods: PANAMA. (May 5-7, 1980). Transcentury for AID/USDA RSSA, 1980.
95. Holmes, O. Improved Weaning Practices Component: Northern Wells and Health Education Project, CAMEROON. Manoff International, Inc. for AID, May 1986.
96. Holmes, O. Volet de Seuvage - Nutrition. Province de l'extreme - Nord Phase Determination de la Situation Recherche Exploratoire de Discussion Dirgie de Groupe Rapport Finale, CAMERCON. Manoff International, Inc. for AID, May, 1986.
97. Lockwood, R.M. Notes on the Potential for a Weaning Foods Intervention in the SUDAN. HOVIPREP for AID, 1983. 8 pp.
- Dr. Lockwood was requested by AID to explore the possibility of developing a weaning and supplementary foods program as part of a nutritional surveillance program. In this report he reviewed infant feeding practices and nutrition and health services in the Sudan and recommended an agency through which to introduce activities. He recommended specific infant feeding inputs which would be required.
98. Pellett, P. Weaning Foods and Weaning Food Analysis in LIBERIA. (January 18-29, 1982). HOVIPREP for AID, 1982. 33 pp. and 6 appendices.

This consultancy proposed to review and discuss 1) laboratory facilities in Liberia critical to weaning foods study and analysis, and 2) various appropriate formulations of home-prepared weaning foods. Dr. Pellett examined a variety of weaning foods constituted of locally available staples and observed that fish was important to their nutrient score. He found in-country facilities

and food tables to be deficient and made recommendations to improve them. His recommendations were to establish a foods analysis laboratory; to initiate a weaning foods program; to publish Liberian food tables and to identify widely used foods which had not been analyzed; to execute studies of food habits, beliefs and preferences related to weaning foods; to analyze village prepared weaning mixtures; and to collect baseline data on young children's pre-program status. The report includes many weaning foods recipes, weaning foods studies and reviews, and a bibliography.

99. Piwoz, E. Trip Report, INDONESIA. (January 13 - February 23, 1986). The Weaning Project. Manoff International, Inc. for AID.

For other reports which include weaning information, also see reports 3, 100, 101, and 192.

4. Primary Health Care

100. Berggren, G.G. The Weaning Diet and Primary Health Care in SENEGAL: Possibilities for the Future. HOVIPREP for AID, June, 1981. 61 pp.

The Since Saloum Rural Health project was initiated in August 1977 with no nutrition components. Dr. Berggren examined the potential for such components, especially weaning foods activities, reviewed related research from The Gambia, and judged the appropriateness of a child nutrition status monitoring device. Dr. Berggren's findings were that 1) high-risk groups, foods, and seasons exist in Senegal; 2) better diets are needed among the vulnerable groups as well as earlier identification and counseling of high-risk people; 3) cereals and legumes are available but are neither fed in adequate amounts nor often enough to 4 - 24 month-old children; 4) foods are prepared in neither a sufficiently hygienic nor digestible manner; 5) gastroenteritis and cultural beliefs and practices associated with its treatment are major causes of malnutrition; 6) traditional practices need to be evaluated and reinforced or corrected as appropriate; and 7) although mothers are quite burdened, where they have formed groups to address health and nutrition problems, they have been successful. The consultant recommended that nutrition activities be incorporated into primary health care services through in-service training. Particular attention should be paid to the development of a full MIN program. Annexes to this extensive, detailed report include an FAO/Senegal report, excerpts from the Catholic Relief Services Program, the Senegalese nutrition planning group's analysis of malnutrition in Senegal, and useful field instruments from Haiti.

101. Berggren, G.G. Home and Village Prepared Weaning Food Project: THE GAMBIA. (August 11, 1981). HOVIPREP for AID, 1981. 29 pp. plus 6 annexes.

The consultant was requested to report on the need for developing a weaning foods project within the area in which USAID/Gambia has been asked to fund a primary health care project. Lack of adequate weaning supplementation, contaminated foods, insufficient maternal diet, and other problems were found to be associated with high maternal and young child mortality and morbidity. From these problems, Dr. Berggren concluded that weaning foods and food supplement programs are needed, but must take into account domestic resource problems such as cooking, fuel shortages, problems with food preservation,

mothers' lack of time, family food distribution inequities, and the need for more calorie-dense weaning foods. Recommendations for the PHC project were that 1) Planning and management be implemented to ensure that the VHWS reach all mother/child dyads and perform completely the specified activities; 2) nutrition monitoring and counseling be consistent; 3) nutrition intervention protocols combine nutrition and infection intervention strategies; 4) nutrition education units be actively incorporated into PHC services; 5) local nutritious weaning foods be tested for acceptability; 6) guidelines for weaning foods in The Gambia, drawing upon extant recommendations, be developed; 7) sample baseline and follow-up impact data be collected from within the PHC area; and 8) nutrition training modules be developed and implemented for higher level health professionals. Annexes for this report include the World Bank's "Basic Needs in The Gambia", a paper on the epidemiology of P.E.M. in children in a West African village, The Gambia Programme in children in a West African village, The Gambia Programme for Training for Village Health Workers, and analyses of bacterial contamination in traditional Gambian weaning foods.

102. Griffiths, M. Growth Monitoring. Primary Health Care Issues I. APHA for AID, 1981. 60 pp. and 2 appendices.
103. Hendrata, L. Operational Strategy of the Nutrition Program in the Framework of Primary Health Care and the People's Health Program; Consultant Report for BURMA. (January 26 February 14, 1981). INCS for AID, 1981. 11 pp.

The purpose of this report was to examine the nutrition component of the Burmese primary health care program. The main nutritional problem which the program addresses is the use of insufficient, inadequate, and delayed weaning foods. The consultant concluded that the correct strategy for addressing such a problem is a behavioral change approach and that the current nutrition education program is insufficiently goal-oriented for the purpose. The consultant recommended thorough strategy development and implementation steps. Dr. Hendrata also recommended that the core of the new strategy be the community-based monthly weighing of under 3's and the use of the weight chart. The activities would be designed principally for communication with the mother rather than recordkeeping for the health workers. The central program message would be to gain weight each month. Nutrition advice should be in response to the results of the weighing program. Dr. Hendrata specified steps to optimize the communication with individual mothers as well as with the community as a whole. The program

implementation steps recommended were the development of a program manual focusing on the nutrition and communications intervention, the development of messages, the training of local health workers, and the implementation of services. Dr. Hendrata focused on the role of community health workers in terms of bottoms-up curriculum development and the question of extension versus participation.

104. Huffman, S. Role of Breastfeeding in Oral Rehydration Programs. APHA for AID, April, 1986.

For other reports which also include primary health care information, see also reports, 4, 13, 38, 45, 47, 50, 58, 116, 118, 124, 131, 145, 164, 167, 192, 194

C. STUDIES, SURVEYS AND OTHER RESEARCH

105. Akin, J., R. Bilsborrow, D. Guilkey, B. Popkin, D. Benoit, P. Cantrelle, M. Garenne, and P. Levi. Breast-Feeding Patterns and Determinants: A Methodological Study Based on SRI LANKA Data. University of North Carolina and OSTROM for AID, December 1980. 37 pp. and technical appendix.
- This paper addresses issues to be considered in developing a model to examine breastfeeding patterns and determinants. Two major methodological problems are discussed. First is the problem of age heaping or digit preference. Techniques which could be used to "smooth" breastfeeding data are shown to be insufficient in analyses of the determinants of breastfeeding. The second problem is that, when the dependent variable is the duration of breastfeeding, estimation problems result because duration data are truncated in a variety of ways. As a solution to both problems, the investigators recommended a probit estimation framework. They applied this method to World Fertility Survey data for Sri Lanka, testing "partial" and "full" models based respectively on the Standard Recode Tape and on raw data tape files. Limitations of partial models resulting from their exclusion of important socio-economic information are noted. The authors also used the WFS data to test for changes in the structural relationships at different durations of breastfeeding. The findings suggest that the factors influencing the continuation of breastfeeding are significantly different at different durations of breastfeeding. Such shifts have been ignored in previous studies, and should be investigated in future investigations of the determinants of breastfeeding.
106. Akin, J., R. Bilsborrow, D. Guilkey, B. Popkin, D. Benoit, P. Cantrelle, M. Garenne, and P. Levi. The Determinants of Breastfeeding in SRI LANKA. (March 6, 1981). Population Council for AID, 1981.
107. Ayalde, L. The Design of a Survey Instrument to Assess Breastfeeding Practices of Low-Income Mothers: EL SALVADOR. (March 10-14, 1981). INCS for AID, 1981.
108. Baer, F.C. Nutritional Survey: CARE-CONGO/BRAZZAVILLE. (April 27 - May 6, 1981). INCS for AID, 1981.
109. Berggren, W.L. and G.F. Murray. The Feeding of Infants in Northern CAMEROON: Guidelines for a Field Study. (March 9-12, 1981). INCS for AID, 1981. 57 pp.

The consultants designed a multi-disciplinary nutrition survey plan for rural areas of Northern Cameroon, which have a particularly high rate of young child malnutrition. They found that a variety of ethnic, economic, ecological, and cultural factors were operative in the area to be investigated. Food beliefs and feeding practices were quite diverse in the region. The team recommended that the host research institution undertake a one-year investigation of the nutritional status of a sample of 300 children from villages in the area. The study was designed to collect information on the sample of children five times throughout the year. The report outlines social, economic and hygienic beliefs and practices and ecological variables for which data should be collected. It further suggests the composition of research team, data analysis methods, and potential programmatic implications of the research.

110. Bertrand, W.E. Analysis of the Results of a Government of Bolivia Study of Breastfeeding Practices in Urban Areas: BOLIVIA. (March 14-28, 1981). 4 pp. plus appendices. (English and Spanish sections).

Dr. Bertrand assisted the Bolivian agency INAN in analyzing the results of a Government of Bolivia study of breastfeeding practices in urban areas. He found that over 90 percent of urban women in all socioeconomic strata breastfeed for some time, a higher rate than in similar Latin American countries. Socioeconomic stratum was the most important predictive variable of the duration of breastfeeding, being inversely related. Dr. Bertrand's report identifies weaknesses in the survey instrument and recommends ways in which greater information can be gathered from the data. The survey instrument and limited analyses in Spanish are attached.

111. Bertrand, W. and L. Ayalde. Breastfeeding Practices Surveys: GUATEMALA and BOLIVIA. (March 13-29, 1981). INCS for AID, 1981.
112. Brems, S. Analysis of Mothers and Children Reader Survey. APHA for AID, April, 1984.
113. Capparelli, E., M. Griffiths and M.R. Horner, Guidelines for a Multivear Plan for the School of Feeding and Maternal Child Health Programs: HONDURAS. INCS for AID, 1982.
114. Carp, C. Report on Nutrition Information Needs and Activities in Dakar, SENEGAL and Bamako, MALI. APHA for AID, June, 1986.

115. Cooke, J. M. and J. Csete. An Ethnographic Investigation into the Validity of the Notion of Contractual Obligation to Participants in the Government of Rwanda/CRS Nutrition Center Program: RWANDA. (February 14 - March 25, 1983). INCS for AID, 1983.
116. DaVanzo, J. and J.-P. Habicht. Infant Mortality Decline in MALAYSIA, 1946-75: The Roles of Changes in Variables and Changes in Structure. Demography in press, 1986, Cornell University.
117. Durongdej, S. and R. Israel. Description of a Forthcoming Bangkok Breastfeeding Promotion Project: THAILAND. (December 10-24, 1983). Mahidol University, The Population Council, Cornell University and Columbia University, 1983.
118. Edmonston, B. and R. Mortorell, R. Mortality and Nutrition: A Review of Selected Micro-Level Relationships. Cornell University, April, 1984. Paper presented at Population Association of America, MN, May, 1984.
119. Elliott, T.C. Updated Report of Kenya Infant Feeding Situation: KENYA. (February 12-22, 1985) INCS for AID, 1985.
120. van Esterik, II, P. Intra-Family Food Distribution: Its Relevance for Maternal and Child Nutrition. IN: Determinants of young child feeding and their implications for nutritional surveillance, pp. 73-149. Cornell International Nutrition Monograph Series, No. 14 Ithaca, NY, 1985.
121. Franklin, D.L. and M.W. Harrell. Nutritional Improvement of Maternal and Infant Diet (PANAMA Data Analysis). Sigma One Corporation for AID, May, 1983.
122. Frerichs, R. and S. Scrimshaw. Study of Infant Feeding Practices in Tecucigalpa, HONDURAS. (September 20-26, 1981). INCS for AID, 1981.
123. Haaga, J. The Choice of Milk Substitute or Supplementary Food for Malaysian Infants: A Conditional Logistic Analysis: MALAYSIA. Rand Corporation for AID, February, 1985.
124. Haaga, J. Health Consequences of Infant Feeding in MALAYSIA: A Review. Rand Corporation for AID, December 1985. 30 pp. (Edited version under same title in Malaysian Journal of Reproductive Health, 1986).

125. Haaga, J. The Accuracy of Retrospective Data From The Malaysian Family Life Survey: MALAYSIA. Rand Corporation for AID, January, 1986.
126. Haaga, J. The Timing of Supplementation and Choice of Supplement for Malaysian Infants: MALAYSIA. March 1986 (submitted for journal publications). The Rand Corporation, March, 1986.
127. Haaga, J. Evidence of a Reversal of the Breastfeeding Decline. American Journal of Public Health, Vol. 76, March 1986, pp 245-251. The Rand Corporation.
128. Haaga, J. Reliability and Digit Preference in Retrospective Survey Data on Infant Feeding, mimeo, April 1986 (submitted for journal publication).
129. Haaga, J. and J. Mason. Intrafamily Food Distribution and Nutritional Surveillance in Developing Countries. Cornell Nutritional Surveillance Program Working Paper Series, No. 44. Ithaca, NY, 1984.
130. Haaga, J. and R. Eden. Supplementary Feeding in Early Infancy: A Policy Brief. The Rand Corporation for AID, 1986. 2 pages.
131. Haas, J. D., H. Balcazar, and L. Caulfield. Variation in Early Neonatal Mortality for Different Types of Fetal Growth Retardation. Submitted for publication to American Journal of Physical Anthropology. Cornell University.
132. Habicht, J.-P. Areas of Agreement and Uncertainty. IN: Maternal Nutrition and Lactational Infertility (J. Dobbing ed.), pp. 139-141. New York: Raven Press, 1985. Cornell University.
133. Habicht, J.-P., J.B. Mason, and R. Martorell. Growth and Socioeconomic Change. Paper presented at the Meeting on Purpose, Use and Interpretation of Anthropometric Indicators of Nutritional Status, Geneva, Switzerland, (October 12-14, 1983). Cornell University for AID, 1983.
134. Habicht, J.-P. and K.M. Rasmussen. Model for Analysis of the Relationship Between Breastfeeding Data and Postpartum Anovulation Data. IN: Maternal Nutrition and Lactational Infertility (J. Dobbing, ed.) p. 119-127. New York: Raven Press, 1985. Cornell University.
135. Habicht, J.-P., J. DaVanzo, and W.P. Butz and L. Meyers. The Contraceptive Role of Breastfeeding. Population Studies 39: 213-232, 1985. Cornell University.

136. Habicht, J.-P., J. DaVanzo, and W.P. Butz. Does Breastfeeding Really Save Lives? -- Or are Apparent Benefits due to Biases? American Journal of Epidemiology, 123: 279-290, 1985. Cornell University.
137. Hamilton, H. Information Needs Assessment for the South PACIFIC. APHA for AID, February, 1986.
138. Hamilton, S., B.M. Popkin, and D. Spicer. Nutrition of Women of Childbearing Age in Low-Income Countries: Significance, Patterns, and Determinants. Carolina Population Center, The University of North Carolina at Chapel Hill, 1981. 157 pp., 570 references.
- This document reviews the state of nutrition knowledge and practices concerning women of reproductive years in Third World countries and suggests areas and topics for research and program and policy development. The multi-disciplinary team of authors cites and includes information from a wide range of sociological, ethnological, economic, family planning, and medical sources. The report surveys literature on the relationship of women's nutritional status to pregnancy, fertility and lactation; program implementation and impact; and means of measuring nutritional status. The authors conclude with recommendations on areas in which further research and program and policy development are needed: the relationship of nutritional status to income and assets, intrahousehold issues, education, and means of targeting services. The report pulls together a large amount of women's nutrition-related literature.
139. Huffman, S. Women's Activities and Child Nutrition: A Review of The Literature. APHA for AID, March, 1986.
140. Huffman, S. Promotion of Breastfeeding: Can it Really Decrease Fertility? APHA for AID, February, 1986.
141. Israel, R. A Progress Report on the INCS/Mahidol University Bangkok Breastfeeding Promotion Project: THAILAND. (June 23-29, 1984). INCS for AID, 1984.
142. Israel, R. Assessment of Bangkok Breastfeeding Promotion Project After Fifteen Months Collaboration: THAILAND. (March 29 - April 6, 1985). INCS for AID, 1985.
143. Kellner, E.K. and B. Winikoff. Infant Feeding Study Site Visit: THAILAND. (May 9, 1980). Columbia University and the Population Council for AID, 1980.
144. Kolasa, K. Review of Infant Feeding Habits Research and Recommendations for Relevant Behavior Change Messages for Project NIROG: BANGLADESH. (May 30 - June 12, 1984). INCS for AID, 1984.

145. Kramer, M.S. K.M. Rasmussen, and J.-P. Habicht. Risk Factors, Low Birth Weight, and Child Health. Manuscript in preparation. Cornell University.
146. Latham, M.C. Visit to India to Give Keynote Address and Participate in the Indian National Seminar on Implementation of Strategies for Promoting Infant Feeding: INDIA. (March 27-31, 1984). INCS for AID, 1984.
147. Latham, M. and E. Kellner. Infant Feeding Study: INDONESIA. (April 27 - May 3, 1980). Population Council and Cornell University for AID, 1980.
148. Latham, M.C. and V. Laukaran. Infant Feeding Study: KENYA. (June 1-6, 1980). Cornell University and Population Council for AID, 1980.
149. Laukaran, V.H., E.K. Kellner, B. Winikoff, G. Solimano, P. Van Esterik, and J. Post. Research on Determinants of Infant Feeding Practices: A Conceptual Framework. International Programs Working Papers: Working Paper No. 15. The Population Council for AID, 1981. 31 pp. plus attachments.

This paper presents an interdisciplinary conceptual model which has served as the framework for development of a study of infant feeding practices among low-income urban women in four developing countries (Columbia, Kenya, Indonesia, and Thailand). The model depicts the hypothesized relationships between determining factors and infant feeding practices. The study explores the impact of biological factors, and infant feeding practices. The study explores the impact of biological factors, health services, women's employment, and the structure and marketing practices of the infant food industry on infant feeding decisions. Dependent variables which will be measured include the following: initiation and duration of breastfeeding; timing of supplementation and introduction of solids; specific milks and/or foods fed to infants; and morbidity history, weight and height of the child. The study design integrates several methodologies drawn from the disciplines of anthropology, epidemiology, and market research. These include participant observation, key informant interviews, cross-sectional survey and secondary data analysis. Attachment A, "Collaborating Institution Progress Reports", consists of detailed first and second progress reports of three of the four countries (Kenya, Columbia, and Thailand).

150. Laukaran, V.H. and B. Winikoff. Amenorrhea, Breastfeeding and Contraceptive Use in Post-partum Women. Studies in Family Planning, vol. 16, no. 6. November/December, 1985. The Population Council.
151. Launer, L.J., J.A. Kusin, and S. Kardjati. The Effects of Maternal Behavior on Growth Velocity of Infants in Madura, INDONESIA. Poster presented at the XIIIth International Congress of Nutrition, Brighton, England August 19-23, 1985. Cornell University.
152. Lockwood, R.M. Evaluation Study of a Pilot Project in Community Based Growth Monitoring and Nutrition Education in South Kordofan Province: SUDAN. (October 31 - November 20, 1983). INCS for AID, 1983.
153. Marquis, G. and M. Griffiths. A Nutritional Program for Maternal/Child Centers and for the Advancement of SENAPS/CRS Women: ECUADOR. (August 22 - September 29, 1984). ICNS for AID, 1984.
154. Martorell, R. Child Growth Retardation: A Discussion of its Causes and its Relationship to Health. Paper presented at the International Symposium on Nutritional Adaptation in Man, Royal Windsor, England. IN: Nutrition Adaptation in Man (K. Blaxter and J.C. Waterlow, eds.), pp. 13-30. London: John Libby, 1985. Cornell University.
156. Martorell, R. and C. O'Gara. Breastfeeding, Infant Health and Socioeconomic Change. Paper presented at the symposium entitled "Biocultural factors affecting infant feeding and growth" at the annual meeting of the American Anthropological Association, Denver, CO. (November 18, 1984) (Draft). Medical Anthropology, in press, 1985. Cornell University for AID, 1984.
157. Martorell, R., J. Mason, K. Rasmussen, T.J. Ho, and J.-P. I. Child Feeding Practices: Knowledge, Research Needs, and Policy Implications. IN: Determinants of young child feeding and their implications for nutritional surveillance, pp. 1-72. Cornell International Nutrition Monograph Series, No. 14. Ithaca, NY. Cornell University for AID, 1985.
158. Martorell, R. and J.-P. Habicht. Growth in Early Childhood in Developing Countries. IN: Human Growth: A Comprehensive Treatise, 2nd edn. (F. Falkner and J. Tanner, eds)., vol. 3, pp. 241-262. New York: Plenum Press, 1986. Cornell University.

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159. Mhenni, H., R. Parlato, and M. Zeitlin. Recommendations for Institution Building and Survey Design: TUNISIA. (March 14-29, 1981). INCS for AID, 1981.
160. Nugent, L. Report on Breastfeeding Activities in Lima, PERU. APHA for AID, April 1986.
161. O'Gara, C. Hot and Dry: Mother's Milk in the City. (Paper presented at the Annual Conference of the Society for Applied Anthropology, March 13, 1982). Study on Infant Feeding in HONDURAS. University of Kentucky for AID and the Government of Honduras, 1982, 9 pp.

This study is an anthropological, anecdotal report of beliefs and practices associated with the decline of breastfeeding in Tegucigalpa, the capital of Honduras. Major factors in the decline were found to be the combination of beliefs, the stresses of life in the city, and the availability of infant formula. Breastfeeding declined despite the fact that the women generally believed it to be the best option for their infants. The author investigated the social and interpersonal meanings of breastfeeding and substitute milks and the stages of weaning. The study exemplifies aspects of breast and substitute milk feeding practices and beliefs worthy of investigation.

162. Pelto, G.H. The Ethnographic Component of a Project to Determine the Effect of Food Availability and Infant Feeding Practices on the Nutritional Status of Children 0-23 Months: CAMEROON. (March 9 - 23, 1983). INCS for AID, 1983.
163. Pelto, G.H. Report and Analysis of an Ethnographic Study Concerning the Effect of Food Availability and Infant Feeding Practices on the Nutritional Status of Children 0-23 Months: CAMEROON. (May, 1983). INCS for AID, 1983.
164. Pelto, G.H. The Effect of Food Availability and Infant Feeding Practices on the Nutritional Status of Children 0-23 Months: A Progress Report, CAMEROON. (August 12-24, 1983). INCS for AID, 1983.
165. Price, T.L. Socio-Economic and Cultural Determinants of Infant Malnutrition in Four Communities in Northern CAMEROON. (March 11, 1983). INCS for AID, 1983.
166. Rasmussen, K.M. The Interrelationships Between Maternal Nutritional Status and Lactational Performance. In: J. Villar, ed. NUTRICION MATERNO INFANTIL (forthcoming after translation into Spanish).

167. Rasmussen, K.M., N.B. Mock, and J.-P. Habicht. The Biological Meaning of Low Birthweight and the Use of Data on Low Birthweight for Nutritional Surveillance. Cornell Nutritional Surveillance Program Working Paper Series, No. 43. Ithaca, NY. Poster presented at the XIIIth International Congress of Nutrition, Brighton, England August 19-23, 1985. Cornell University for AID, 1985.
168. Rivera, J. and R. Martorell. Nutricion, Infeccion y Crecimiento. In: J. Villar, ed. NUTRICION MATERNO INFANTIL (forthcoming).
169. Rubinoff, S.A. Needs Assessment for a Nutrition Education Program: IVORY COAST. (May 13-25, 1984). INCS for AID, 1984.
170. Sanghvi, T. Summary of International Assistance in Breastfeeding Promotion Activities. APHA for AID, June, 1986.
171. Scrimshaw, S.C.M. Report on Technical Assistance to a Study of Infant Practices in Tegucigalapa, HONDURAS. (March 23 April 3, 1982). AID, 1982. 9 pp. plus 3 appendices. (English with Spanish and English appendices).
- The consultant reviewed and made recommendations about data collection techniques and design in an on-going anthropological study of breastfeeding and weaning practices in Honduras. She also made recommendations concerning the design of a follow-up survey. The recommendations focussed on the need for further fieldworker training and supervision; on additional types of information which should be collected; and on the age range of infants to be studied in the follow-up survey. The appendices include recommendations for the fieldworkers, survey findings, and the interview questionnaire, all in Spanish.
172. Shack, K. Development of Needs Assessment/Problem Identification Instrument and a Baseline Survey for the Applied Nutrition Education Program; Caritas and Catholic Relief Services; DOMINICAN REPUBLIC. (August 12-20, 1983). INCS for AID, 1983.
173. Solimano, G. and B. Winikoff. Infant Feeding Practices Study: TUNISIA. (May 19-23, 1980). Population Council for AID, 1980.
174. Solimano, G. and E. Kellner. Infant Feeding Practices Study: COLOMBIA. (February 18-22, 1981). Population Council for AID, 1981.

175. Vermillion, J. Recommendations for a KAP Survey Instrument and Data Analysis System: TUNISIA. (July 11-22, 1982). INCS for AID, 1982.
176. Vermillion, J.E. Analysis of KAP Study and PMI Management Study: A Progress Report: TUNISIA. (April, 1983). INCS for AID, 1983.
177. Walsh, J.A. Recommendations for a Maternal Nutrition Study: INDIA. (April 5-26, 1981). INCS for AID, 1981. 7 pp. and 3 appendices.

The consultant was requested to develop recommendations for research on low birthweight in India. The consultant reviewed the literature, consulted with Indian researchers, and made recommendations of appropriate institutions, study development, and funding levels for studies on low birthweight in India. The report includes priority topics for research, an implementation plan and schedule, suggested technical assistance requirements, and areas for financial assistance. Specific recommendations were made concerning the role of a consultant in the initial development of the project. The annexes contain lists of research institutions and researchers in India and a summary of the Indian literature on low birthweight.

178. Winikoff, B. The Infant Feeding Study: Summary. (January 31, 1985). Population Council for AID.
179. Winikoff, et al. Infant Feeding Study: Bangkok Site Report: THAILAND. (January 31, 1986). Population Council for AID.
180. Winikoff, et. al. Infant Feeding Study: Bogota Site Report: COLOMBIA. (January 31, 1986). Population Council for AID.
181. Winikoff, et. al. Infant Feeding Study: Semarang Site Report: INDONESIA. (January 31, 1986). Population Council for AID.
182. Winikoff, et. al. Infant Feeding Study: Nairobi Site Report: KENYA. (January 31, 1986). Population Council for AID.
183. Winikoff, B. and M. Castle. The Infant Feeding Study: Results and Recommendations. Prepared for the UNICEF/WHO Consultation on Infant and Young Child Nutrition, June 9-11, 1986.

184. Zopf, T., C. Ahissou, P. Matthews, and R. Franklin. Design of a Study to Assess Nutritional Practices and Nutritional Status in the PEOPLES REPUBLIC OF CONGO. INCS for AID, April 1981. 29 pp. and annexes (annexes in French).

The Peoples Republic of Congo and CARE/Congo requested help to design a baseline nutrition survey for a nutrition education and training program. The purpose of the survey was to provide information on nutrition practices, beliefs, and status for project design, information development and worker training of a nutrition education program. The authors surveyed the limited nutrition information for the Congo, supplementing it with that from contiguous, similar parts of Zaire and with anecdotal information. The authors describe their methodology for selecting sites and interviewers and sampling methods within the sites. The authors planned both field and central analysis of the survey data. The report includes a draft of the survey instrument in French.

For other reports including suggestions for studies or study results, also see reports 3, 7, 24, 28, 29, 42, and 50.

D. INFORMATION DISSEMINATION

185. Breastfeeding, Fertility, and Family Planning. Population Reports. J24:525-575, 1981. Population Information program, the Johns Hopkins University for AID. 50 pp. 684 references.
186. Brems, S. Information Dissemination Under the INCAP Regional Breastfeeding Promotion Project. APHA for AID, March, 1983.
187. Brems, S. Follow-up Assignment INCAP Information Project. APHA for AID, June, 1983.
188. Gibbons, G., ed. Mothers and Children. Bulletin on Infant feeding and Maternal Nutrition. American Public Health Association for AID, 1980. (Published in three languages. Three issues per year.)

The newsletter, focusing on maternal and infant nutrition, provides updated information on important LDC topics. In an eight-page format, it documents ample field techniques, gives examples of programs underway throughout the world, provides information on national policies and legislation, suggests appropriate equipment and reference resources, and provides a forum for information exchange. Particularly valuable are its abstracts of books and reports and its listing of sources for such items as weight scales, maternal arm bands, and weight charts. Among the publications its abstracts are many which are available free to LDC health workers and administrators through the APHA Clearinghouse on Infant Feeding and Maternal Nutrition.

189. Guides to the Literature: Maternal and Infant Nutrition Reviews. INCS for AID, 1981-1982.

These reports abstract and present overviews of recent publications and other available information of the following countries: Bangladesh, Bolivia, Burma, Cameroon, Congo, Costa Rica, Dominican Republic, Ecuador, Egypt, Gambia/Senegal, Ghana, Guatemala, Haiti, Honduras, India, Indonesia, Jamaica, Jordan, Kenya, Lesotho, Liberia, Mali, Morocco, Nepal, Pakistan, Panama, Peru, Philippines, Senegal (Gambia/Senegal), South Pacific, Sri Lanka, Sudan, Tanzania, Thailand, Tunisia, Yemen, and Zaire. The reports follow a standard format: an overview of locations studied, highlights, presentation of information by topic, and an annotated bibliography. The major section topics are nutrition and health status, dietary beliefs, dietary practices, correlates of nutritional status, policies and programs, and commentaries. The

sections of the reviews are further subdivided by categories such as pregnant and lactating women and 0-6 month and 6-24 month old infants. Both the format and information in the reviews provide useful introductions to country-specific maternal and infant nutrition literature.

190. Israel, R. and P. Lamptey, eds. Nutrition Training Manual Catalogue. INCS for AID, 1981. 79 pp. and 3 appendices.
191. Miller, R.I. The American Public Health Association Clearinghouse: An Evaluation with Emphasis on the Readership Survey. Community Systems Foundation for AID, 1981. 16 pp. plus questionnaire and tabulations annexes.
192. World Federation of Public Health Association and UNICEF Information for Action Series. APHA for AID.
 - Oral Rehydration Therapy (1983)
 - Maternal Nutrition (1983)
 - Program Activities for Improving Weaning Practices (1984)
 - Improving Maternal Health in Developing Countries (1984)
 - Primary Health Care Bibliography and Resource Directory (1985)
 - Growth Monitoring (1985)
 - Women and Health (1986)
193. UNICEF - Division of Communication and Information. Gibbons, G. and Huffman, S. Breastfeeding Rediscovered: Film Guide. APHA for AID, 1985.
194. UNICEF - Joint Nutrition Support Programme. Brems, S. and Gibbons, G. Information Needs and Resources on Primary Health Care and Nutrition in Selected Countries: Results of A Survey. APHA for AID, February 1986.

E. OTHER ACTIVITIES

195. Autotte, P.A. A Mid-Term Impact Evaluation of Hospital Institutions for the PROALMA Project: HONDURAS. INCS for AID, 1985.
196. Bentley, M.A. Dietary Management of Diarrhea Trip Report: PERU. (July 13 - August 14, 1986). JHU for AID, 1986.
197. Brown, K.H. Dietary Management of Diarrhea Trip Report: NIGERIA. (August 21-30, 1986). JHU for AID, 1986.
198. de Villafuerte, C. Suggestions for PROLACMA on Breastfeeding Programs to be Conducted as a Joint Effort with the National Commission on Breastfeeding: PANAMA. INCS for AID, 1982. 5 pp.

The recommendations in this report concern the small breastfeeding support organization of Panama, PROLACMA. The consultant recommended that PROLACMA get a legal charter and continue efforts to increase its membership. She further recommended that AID approve the organization's proposal to create an information center, fund a trip to El Salvador to learn from its Salvadoran counterparts, and allow for independent funding and action of the organization.

199. Israel, R. and E. Blumenstiel. Background Paper for an International Conference of Community Based Support Groups for Breastfeeding Mothers. (Draft) (Scheduled for November 29 - December 3, 1982). INCS for AID, 1982. 17 pp. and 3 appendices.
200. Israel, R., ed Proceedings: First Asian Household Nutrition Appropriate Technology Conference: Colombo, SRI LANKA. (July 12-17, 1981). INCS for AID, 1981. 248 pp.

The conference was convened to consider appropriate technologies (AT) for improved methods of growing, handling and using food in the home, areas critical for improved nutrition. Home-based AT include methods for small scale food production and for household food storage, processing, preparation, serving, and sanitation. The conference systematically examined the relationship of household nutrition technologies and the lifestyles of the vulnerable groups. Participants in the conference were representatives of community groups from nine Asian countries with projects that develop, promote, or utilize AT in the home to improve nutrition. Also participating were international nutrition specialists. The participants found that household nutrition AT had not been a major area of concern for nutrition policy makers, plan-

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POPULATION COUNCIL: INFANT FEEDING STUDY RESEARCH HYPOTHESES AND
MARKETING RESEARCH QUESTIONS

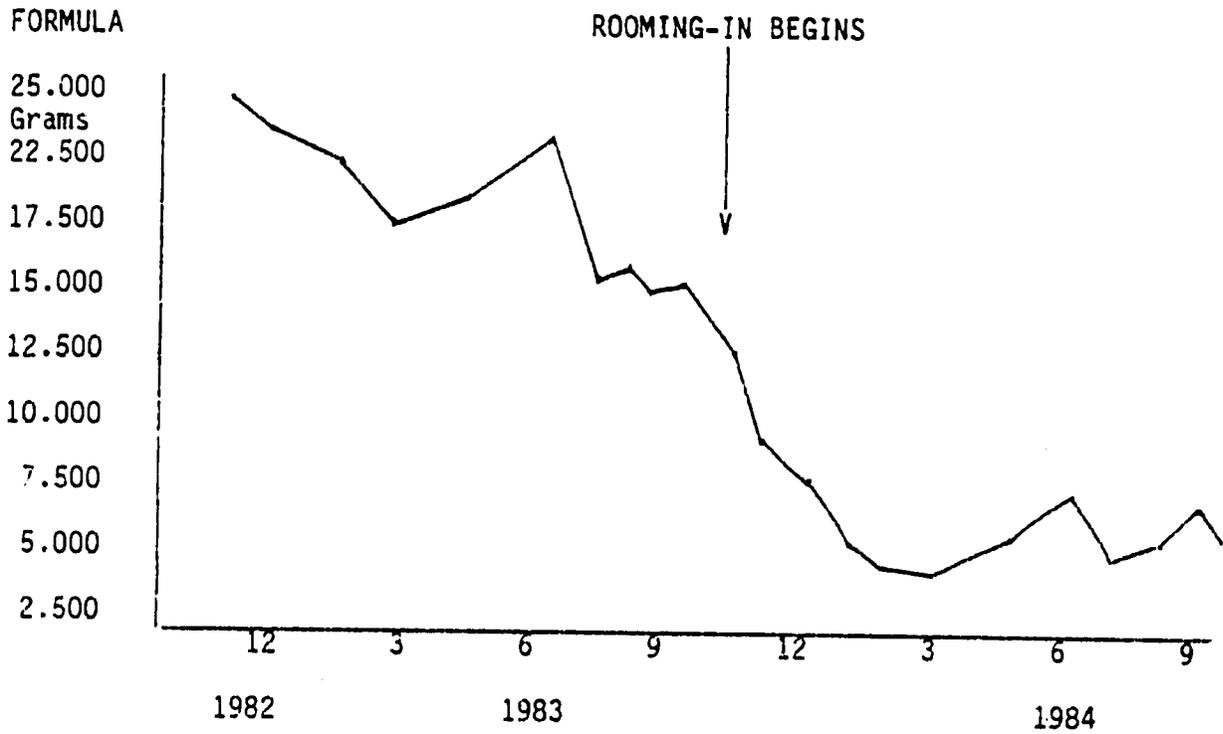
Among the more important hypotheses of the Population Council study were:

- o Women who perceive that they have the support of family, friends or significant others will be more likely to initiate breastfeeding and to breastfeed longer.
- o Women with higher social mobility aspirations will be less likely to initiate breastfeeding and more likely to breastfeed for a shorter time and to introduce supplementary feeding earlier.
- o Mothers who believe they have or have had insufficient milk are likely to introduce breast milk substitutes early.
- o Women who receive prenatal care from physicians and nurses and/or experience labor and delivery in a hospital are less likely to initiate breastfeeding, more likely to terminate breastfeeding early and to use breastmilk substitutes and introduce semisolids during the first 4 months.
- o Mothers who are exposed to health facility practices which provide information and support are more likely to initiate breastfeeding and to breastfeed longer.
- o Mothers who are exposed to health facility practices which separate mothers and infants or promote or distribute breastmilk substitutes will be less likely to initiate breastfeeding and more likely to terminate breastfeeding early and introduce breastmilk substitutes.
- o Prevalence and duration of breastfeeding are less strongly associated with labor force participation outside the home than with other factors such as support from health services, exposure to marketing, and maternal attitudes toward breastfeeding.
- o Paid labor force participation outside the home increases the probability of early use of breastmilk substitutes, early supplementary foods and substitution of convenient but nutritionally inappropriate foods.
- o Among women who do work for pay outside the home, specific attributes of labor force participation are important determinants of infant feeding practices.

Five research questions guided the data collection and analysis of the marketing research component. These were:

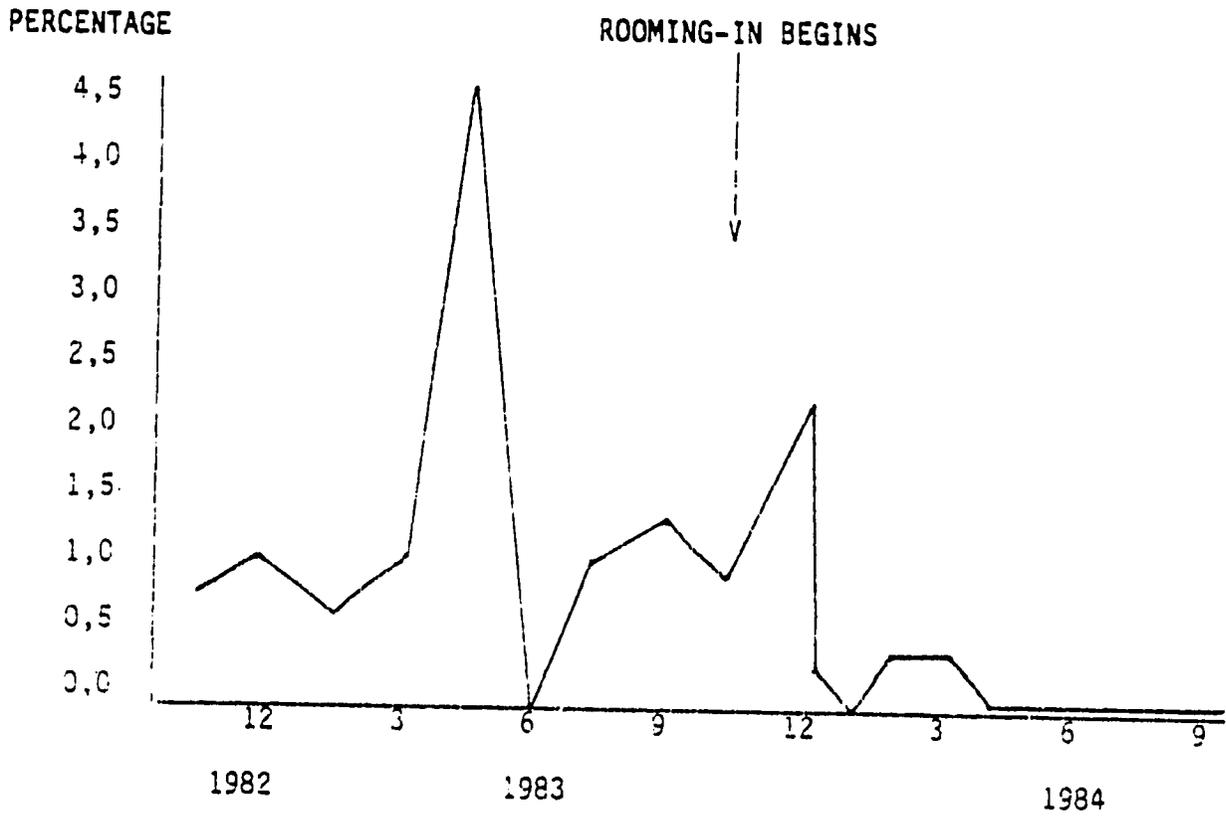
- (1) What current practices and strategies characterize infant food marketing in each nation?
- (2) What factors account, in whole or in part, for the current marketing environment?

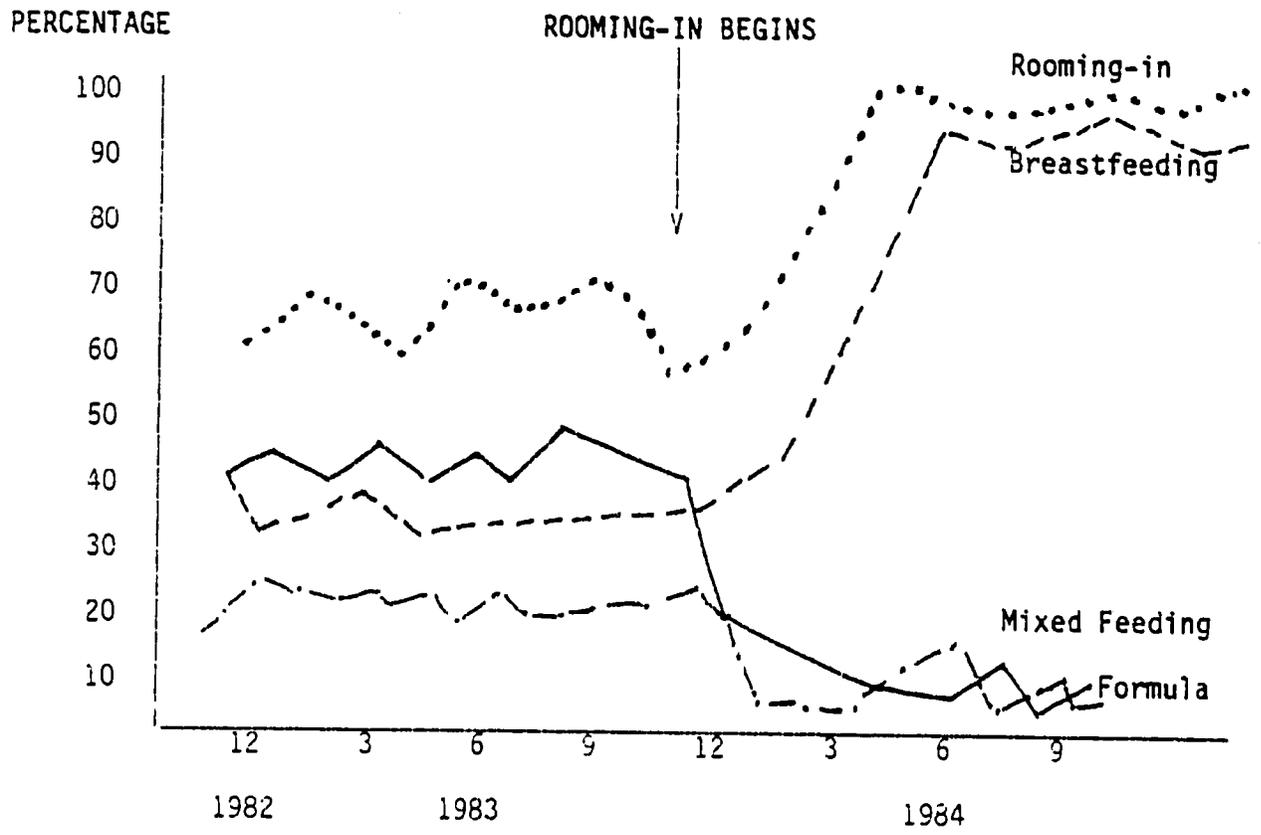
- (3) What is the intensity of current promotional activity by infant food sellers to mothers, health care workers, and others who influence infant feeding choices?
- (4) What effects, if any, do the marketing practices and policies of infant food sellers have on infant feeding behavior of mothers?
- (5) What effects, if any, do the marketing practices and strategies of infant food sellers have on the behavior of health care providers?



Use of infant formula at Kariadi Hospital, Semarang in relation to introduction of rooming-in.

Incidence of neonatal diarrhea related to rooming-in at Kariadi Hospital, Semarang.





Infant feeding patterns related to rooming-in at Kariadi Hospital, Semarang