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PERU
CHILD SURVIVAL ACTION PROJECT

Evaluation Report

NO. PDC-1406-I-00-7114-00
Delivery Order No. 6

Submitted to:

Charles Mantione, HPN Officer
USAID/Lima
APO Miami 34031

Submitted by:

MEDICAL SERVICE CORPORATION INTERNATIONAL
1716 Wilson Boulevard
Arlington, Virginia 22209

October 26, 1990

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September 26, 1990

Mr. Charles Mantione
Health/Population/Nutrition Officer
USAID/Lima
APO Miami 34031

RE: **Delivery Order No. 6,**
Contract No. PDC-1406-I-00-7114-00

Dear Mr. Mantione:

Medical Service Corporation International (MSCI) is pleased to submit 10 copies of the **Peru Child Survival Action Project Evaluation Report**, in English, pursuant to our Statement of Work for the referenced IQC Delivery Order.

Our intent was to be completely responsive to USAID/Lima in incorporating its comments into the final report and, at the same time, to give all members of the MSCI Evaluation Team an opportunity to respond to the comments.

If you desire amplification or clarification of any point, please contact me at (703) 276-3000.

The report is currently being translated into Spanish. The translation will be mailed to you within 30 days.

Thank you for the opportunity to submit this report.

Sincerely,

La Rue K. Seims

La Rue K. Seims
Project Associate

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ACKNOWLEDGEMENTS

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There are many individuals and organizations that were helpful to the Evaluation Team in the preparation of this report. First and foremost, the Evaluation Team would like to express their appreciation to The USAID Mission and its Director, Craig Buck and Deputy Director, Barbara Kennedy, for their overall interest in the Child Survival Action Project. The Team greatly appreciates USAID's staff for logistical and administrative support.

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The Evaluation Team would like to express its appreciation to Alpha Consult and especially, Dr. Julio Casteneda and Dr. Humberto Gamarra. Alpha Consult's National Coordinator accompanied the team on all site visits. The Team would also like to thank the Alpha Consult Regional Coordinators for their courtesies and assistance.

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ABBREVIATIONS AND ACRONYMS

LIST OF ABBREVIATIONS AND ACRONYMS

ADP	Automated Data Processing
AID/W	AID/Washington
ARI	Acute Respiratory Infection
CARE	Cooperative for American Relief Everywhere
CDC	Centers for Disease Control
CS	Child Survival
CSA	Child Survival Action
CSAP	Child Survival Action Program
CSM	Contraceptive Social Marketing
CSS	Child Survival Services
DGE	Dirección General de Epidemiologia
DDC	Diarrheal Disease Control
DMU	Departmental Management Unit
DOL	Department of Logistics
DPSP	Director of Programs, Services and Policy
DTID	Technical Directorate of Informatics and Documentation (Direccion Tecnica de Informatica y Documentacion)
EPI	Expanded Program of Immunization
ESS	Epidemiological Surveillance System
ENDES	1986 National Demographic and Family Health Survey (Encuesta Nacional Demografica y de Salud Familiar)
ENNSA	1984 National Nutritional and Health Survey (Encuesta Nacional de Nutricion y Salud)
EPI	Expanded Program of Immunizations (El Programa Amplio de Inmunizacion)
FETP	Field Epidemiological Training Program
FP	Family Planning
FY	Fiscal Year
GDP	Gross Domestic Product
GNP	Gross National Product
GOP	Government of Peru
GTZ	German Technical Assistance Agency
HIS	Health Information System
IBRD or World Bank	International Bank for Reconstruction and Development
IDB	Interamerican Development Bank
IIN	Nutrition Research Institute
IMR	Infant Mortality Rate
INE	National Institute of Statistics (Instituto Nacional de Estadisticas)
INN	National Institute of Nutrition (Instituto Nacional de Nutricion)
INP	Natinal Planning Institute (Instituto Nacional de Planificacion)

IPSS	Peruvian Institute of Social Security (Instituto Peruano de Seguridad Social)
IQC	Indefinite Quantity Contract
IQM	Information-Based Quality Management
IUD	Intra-Uterine Device
KAP	Knowledge, Attitude and Practices
LC	Local Currency
LUSA	Laboratorios Unidos S.A.
MCH	Maternal and Child Health
MEF	Ministry of Economy and Finance (Ministerio de Economica y Finanzas)
MOH	Ministry of Health (Ministerio de Salud)
NHISP	National HIS Plan
NIH	National Institute of Health
NOG	Non-governmental Organization
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
ORU	Oral Rehydration Units
PAHO (OPS)	Pan American Health Organization (Organizacion Panamericana de Salud)
PASA	Participating Agency Services Agreement
PHC	Primary Health Care
PRISMA	Projects in Informatics, Health, Medicine and Agriculture (Proyectos de Informatica, Salud, Medicina y Agricultura)
PSA	Procurement Services Agent
PSC	Personal Services Contract or Contractor
PSR	Project Status Report
PVO	Private Voluntary Organization
PY	Project Year
RCMA	Regional Computer Management Advisor
RFP	Request for Proposal
SCMS	Senior Computer Management Specialist
UDES	Health Department (Unidad Departamental de Salud)
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Emergency Fund
UPCH	Cayetano Heredia University of Peru] (Universidad Peruana Cayetano Heredia)
URO	Unidad de Rehidratacion Oral
VEA	Active Epidemiological Surveillance System (Vigilancia Epidemiologica Activa)
WFA	Women of Fertile Age
WHO	World Health Organization

1.0 EXECUTIVE SUMMARY

A. Background

Because of A.I.D.'s long-standing commitment to primary health care (PHC) and a priority concern for child survival (CS), the Child Survival Action Project (CSAP) was developed and initiated. The Project (A.I.D. No. 527-0285), seeks to improve the health of Peruvian infants and children and to assist in the complex process of strengthening the capability of the health sector to deliver improved CS health services through an integrated, expanded and sustainable health care system. The five-year CSAP, was designed to work with the Ministry of Health (MOH) and the Peruvian Institute of Social Security (IPSS) and to help integrate Government of Peru (GOP) health policy. The CSAP was also considered to be able to complement efforts of other donors in the health sector.

The principal components of the CSAP, as designed, include: diarrheal disease control (DDC), nutrition, immunization, family planning (FP) and the control of acute respiratory infections (ARIs). Additional components, related to strengthening Peru's health services support system, include training and supervision, logistics, health communications, financial and personnel management, and health information, including an active epidemiological surveillance system (VEA).

Operationally, the CSAP includes discrete activity areas that form the basis for two, multi-year contracts with Peruvian private sector organizations. One of these is with Alpha Consult, for management and administrative support services, and the other with The PRISM Group, for a broad range of activities associated with the development and implementation of an HIS/MIS (Health Information System/Management Information System). A Participating Agency Services Agreement (PASA) was also signed with the U.S. Centers for Disease Control (CDC) to provide long-term technical assistance related to developing a computerized VEA and establishing a Field Epidemiology Training Program (FETP).

B. Evaluation and Methodology

In accordance with A.I.D.'s Project Agreement, an external evaluation of the CSAP was conducted by a four-person team comprised of: a health and management information specialist (team leader), a health planner, a health economist and a logistics specialist. The evaluation took place during the period of August 9 - September 12, 1990. The evaluation approach included a review of all project-related documents, interviews, and discussions with USAID Project and administrative staff, interviews with contracted organization principals and associated technical staff, interviews

with donor organizations and related institutions, field visits to three UDES and health centers in Lima, field visits to MOH and IPSS facilities and discussions with CSAP-related staff in three locations: Piura, Iquitos and Cusco (see also Appendix C: Evaluation Statement of Work; Appendix D: Persons Interviewed and Organizations Consulted; Appendix E: Itinerary and Places Visited; Appendix F: Methodology; and Appendix G: Bibliography and Documents Reviewed).

?Findings? Conclusions?

C. Summary of Principal Recommendations

The CSAP Evaluation Team's main recommendations are presented below in five sections: MOH, IPSS, USAID, Project Support Contractors, and Other Recommendations. Recommendations specific to Project components can be found at the end of each chapter.

1. Ministry of Health

It is recommended that the MOH accelerate the process of decentralization for delivery of CS services. This may be accomplished through greater reliance on the regional structure currently mandated by Peruvian law and/or use of alternative delivery mechanisms at the local level. (An example is the arrangement currently being proposed between PAHO and the MOH, in which PAHO will coordinate with the MOH in support of service delivery at the UDES or sub-UDES level.)

It is specifically proposed that the MOH be open to contracting selected CS services to non-governmental entities, be they profit or non-profit. These entities should be permitted to deliver health care services directly, preferably in conjunction with support from the IPSS, wherever possible. In addition, contracted entities should be used to expedite delivery of consumable materials through a non-governmental logistics system. In other words, with respect to the CSAP, the MOH should move towards a normative or quality-setting role and leave the operational aspects to organizations less encumbered by bureaucracy and tradition. This could well lead to some form of combined responsibility or service delivery at the regional UDES or UTES level.

Within the current structure of service delivery through the MOH, it is recommended that there be a clearly defined person identified as responsible for CS services. This individual should relate directly to the contracted individual (hired by Alpha Consult or some other contractor) named to manage the Regional Consultants affiliated with the CSAP. This individual should also be the contact person for the Project Manager in USAID. It is further recommended that the regional representative of the CSAP be provided offices in the comparable setting at the regional level of the MOH, whatever that may be. This individual should also be

given secretarial support and be fully integrated with the CS Team at the regional level.

The MOH should assure that the "Vigilancia Epidemiologica Aguda" (VEA) program be in full communication with The PRISM Group as the development of the HIS/MIS proceeds. Every effort should be made to assure a coordinated approach and a lasting impact for this part of the CSAP. This involves full commitment in the field of personnel at all levels to the installation and use of the agreed upon computerized information system and the automated data processing network to be established by PRISM in cooperation with VEA and the MOH.

Once the MOH assumes a monitoring and evaluation role over service delivery, it must assure that whatever groups are contracted to deliver services, be they profit or non-profit, comply with all expectations and requirements of their contracts. This includes delivery of services to health posts, as well as health centers, installation and maintenance of a viable cold chain, provision of supplies and equipment on a timely basis throughout the system, prompt and accurate reporting of information to a central source, proper and frequent training of personnel at all levels and in all locations so that they may fulfill their job assignments and, however it is accomplished, increased salaries for health personnel. (Whether this be done with USAID or with other third-party assistance working through a contract mechanism, a way should be found at least to bring MOH project-related salaries up to those of the IPSS.)

2. Peruvian Institute for Social Security

Because the Evaluation Team had less opportunity to work with the IPSS, there is less basis on which to make recommendations here than with the MOH. In reality, this is partly a function of the CSAP working less with IPSS than with the MOH: that is despite a clear bilateral emphasis in the Project Paper (PP) which promised full participation of IPSS in the CSAP. (It should be noted that having chosen to work primarily through the MOH, USAID has found it difficult to implement this part of the PP.)

Nonetheless, several observations and recommendation can be made. First, there is reason to support the integration concept that apparently is only working to a limited degree in Peru. As an example, it is suggested that integration be effected in the Iquitos region, bringing together the little used and relatively modern Amazonas Regional Hospital operated by the MOH and the inadequate and overcrowded facility leased by the IPSS for its enrollees. At least in the CS arena, it is suggested that services be integrated at the regional level and that the regional representative of the CSAP be the catalyst for that integration. It is further suggested that IPSS be a participant in the contracting process for CS activities at the regional and local

level, contracting with the MOH for such services wherever possible.

More than anything, it is suggested that IPSS have a clear participation in the CSAP. This should include the designation of a person who is responsible for the activity and who will be in constant liaison with the National CSAP Coordinator, his or her counterpart in the MOH and the CSAP for USAID.

3. U.S. Agency for International Development

It is suggested that USAID continue the CSAP, although in a sharply modified form. USAID should further encourage movement towards more verifiable output indicators, as recommended in the June 14, 1990 memorandum from Edgar Necochea through Chuck Mantione to Craig Buck. It is further recommended that greater attention be given to monitoring project outputs, once more definitive indicators are agreed upon, and that a more rigorous and thorough evaluation schedule be adhered to for this, the largest project of USAID/Lima. The Evaluation Team supports these recommendations.

A substantial change is recommended in the method of project operation. That is, it is recommended that a contractor be identified to take responsibility both for operation of the Regional Coordinator structure and the logistics portions of the project. (This could be done by one of the existing contractors or another party yet to be identified.) In this sense, it is recommended that USAID staff not continue to maintain operational responsibility for Regional Coordinator activities but assume more of a monitoring and coordinating role for the Project.

It is further recommended that whatever modifications are made in the current CSAP be made with a view toward the future "Strengthening Private Sector Health Institutions" Project (# 527-0319) proposed for 1991-92. This may mean identifying certain profit or non-profit contractors for delivery of services at the regional or local level and implementing these contracts on a pilot basis for the duration of the CSAP.

It is particularly recommended that USAID/Lima use the advent of the new government as a rationale for renegotiating the agreement between the MOH and USAID. This renegotiation should be the basis for all the changes proposed in this evaluation and/or other changes desired by USAID. While the Project should not be halted during these discussions, any significant new directions should be postponed until they have been approved by the MOH and appropriate "ownership" is established by new Ministry representatives for the Project.

A further recommendation for USAID is that, if possible, it follow the strategy being employed by the current MOH and the PAHO representatives in Peru regarding the economic crisis facing the

country. That is, that the crisis be seen as an opportunity for radical reorientation of service delivery and that it be used as a rationale for many of the changes proposed elsewhere in this report. In other words, "crisis" should be equated with "opportunity" and advantage taken of an otherwise difficult situation. (This is based on the presumption that most significant change occurs in times of social and economic stress.)

One urgent modification needed, if the Project is to fulfill its original objectives, is the addition of a nutrition component. It has been difficult for the Evaluation Team to understand why no nutrition component has been introduced at this stage of Project development and one should be formulated post factum. It is further suggested that two excellent resources exist in-country in order to fulfill this objective. They are the Institute of Nutritional Investigation (IIN) and the Nutrition component of the Peruvian University of Cayetano Heredia (UPCH). Finally, it is suggested that operational research activities be incorporated in whatever nutritional component is added to the Project.

To the degree that it is able, it is suggested that USAID serve as a catalyst for the development of a CS Action Coordinating Group in Peru to include representatives from PAHO, UNICEF, UNFPA, the MOH, IPSS, and other governmental and non-governmental groups concerned with CS. In the process, USAID should be sensitive to the possibility that "child survival" may not be the most popular term in Peru, but that a more traditional term like "child health" or "maternal and child health" may be more appropriate.

4. Project Support Contractors

As with the need for the National Coordinating Committee on Child Survival (or something else), there is an urgent need for better coordination among the contractors on this Project. It is essential--and should be required--that PRISM and VEA communicate more directly and resolve whatever differences they may have. It is time "to get on with the show." It is also important that PRISM and Alpha Consult have more regular interaction and better understand what each other is doing. In short, it is suggested that there be a CSAP Coordinating Committee consisting of the chief representative of PRISM, VEA, Alpha Consult and USAID. In addition, this group should include the new contractor suggested for logistics and management of regional CS personnel, as well as the CDC representative (when there is one) in-country.

The CSAP Coordinating Committee needs to meet on a frequent and regular basis until the CSAP is reformulated and new relationships have been established with the Peruvian Government. PRISM needs to explain its work to its Peruvian counterparts as it does to AID/Washington (AID/W) and Peru. It also needs to be more receptive to the expressed interest of the MOH, through VEA, in reorienting its proposed Health Information System (HIS) pilot

MO contractors don't design our PJ's.

instrument. Whatever else, it needs to move ahead on schedule with the training of technicians and operational personnel, as well as the installation of equipment.

With regard to the MIS (Management Information System), PRISM should define those elements that are essential for maintaining interest and use of the HIS by Health System Managers in the field. Once these elements can be agreed upon, whether they have to do with personnel or logistics support, USAID should moderate its "stop work" order on MIS and allow this portion of the Project to proceed. PRISM and USAID need to agree on whether this can be done by PRISM directly or whether a new sub-contractor need be found to replace OTEPSA. It is recommended that PRISM continue to develop certain aspects of the MIS notably, the personnel and logistics areas and that these areas be combined with the HIS. The payroll, accounting and financial management components of the MIS should also be continued but only after such time as it becomes clear what effects the regionalization process will have.

not likely during LOP

Alpha Consult needs to assume one of two roles. One option is for it to continue its role of Accountant and Business Manager for the regional consultant part of the Project and limit its role to those functions (as at present). A second option is that it redefine its role as a true management contractor and take responsibility for the team headed by Dr. Humberto Gamarra. If this is not to be done, it would behoove USAID to select a new contractor, in lieu of Alpha Consult, to assume this responsibility.

CDC should be encouraged to send a replacement representative to Peru who is prepared to have a moderating influence on the dialogue between VEA and PRISM. The kind of misunderstandings which have taken place to date reflect poorly on all parties concerned, including CDC. The Evaluation Team concludes that the representatives of PRISM are sufficiently reasonable that, if encouraged to do so, they will moderate their position and respond to the wishes of VEA and CDC. This is a fire that needs water and not more fuel.

VEA, to the degree that it represents an extension of the CDC PASA agreement, needs to be encouraged to respond more positively to The PRISM Group and to permit PRISM to help them with their own computer network. An effective and rapid intervention by PRISM in solving the computer problems currently faced by VEA might help resolve some of the misunderstanding between the first two groups and create a conciliatory gesture of goodwill. Fundamental to this understanding is the nature of the pilot instrument that is to be used for collecting data in the field, and this issue can only be resolved by the exercise of leadership on the part of USAID and each of the participating parties. This needs to happen immediately.

5. Other Recommendations

Some of the recommendations contained in this report appear to be critical, and they are. The CSAP in Peru has not lived up to its potential. Many of the reasons for this failure are exogenous to the project itself and, therefore, commend the Project to "a new lease on life." There is no way that Project planners could or should have foreseen the problems inherent in the previous Peruvian government, with the severe economic and social consequences that followed, nor the impact of international economic trends.

Somehow the problem of crippling and pervasive strikes within the health delivery system must be overcome. This goes beyond the control and scope of the CSAP Project, but whatever system is found for contracting services within this Project, it should be immunized from future strikes. This is one reason why the Evaluation Team has so consistently and firmly recommended the use of contract services for the service delivery component of the Project. The other reason is the apparent inability of the MOH, in its current form, to manage the logistics component of the Project.

but we're not paying for service delivery...

The other general feature to be encouraged throughout the Project is decentralization. Fortunately, this is fully consistent with directions ordained by Peruvian law and should be encouraged in every way possible. A strong recommendation for the Project is that the number of Regional Coordinators be expanded from eight to twelve and that the regions defined by the Project be brought into accordance with the regions established by Peruvian law. This will require some adjustment in the funding for the Alpha Consult contract.

The Evaluation Team recommends that an outside group be brought back to Peru within the next few months to complete what has only been a preliminary mid-term evaluation of the Project. It is further recommended that when this group is brought in-country that the questions addressed in the log frame (logical framework) and the items addressed in the bi-annual program evaluations be prepared in advance and made available to the Evaluation Team. This team should have more than an evaluation responsibility, but should work with USAID/Lima staff to recommend an end-of-project direction consistent with the general recommendations in this report and the more specific recommendations which will be prepared on a subsequent visit. This visit should also be used as a mechanism for preparing the ground work for the new "Strengthening Private Sector Health Institutions" Project.

that's the work of it... what would team do?

2.0 COUNTRY CONTEXT OF THE CSAP

A. Political Factors

Throughout its history, and particularly during the latest presidential administration, the political situation of Peru has been characterized by a growing feeling of lack of government authority and confidence in political leadership. In a sense, Peruvians have gradually lost hope in their country's future.

Political parties in Peru are divided between progressive and conservatives. The so-called "progressive" or "left wing" positions have, as in many countries, promised a variety of benefits to their constituencies in order to maintain or strengthen their political positions or guarantee their reelection. In contrast, the so called "conservative" or "right wing" politicians promise to promote a free market economy and protect local businessmen.

Presently, as some political observers have noted, the main problem with Peru (and that of many other Latin American and developing countries, for that matter) continues to be the inability to achieve continuous growth, due largely to the inadequacies and inefficiencies of state intervention. In contrast, on the positive side, as a result of state intervention, Peru has developed some of the best and more advanced labor legislation in the world. Yet despite this accomplishment, Peru is still plagued by significant underdevelopment. In some ways, this far-reaching social legislation guarantees a national complacency, an absence of zeal, and lack of productivity, both in the public and private sectors.

As a national structure, the Peruvian state is the prime employer, the largest stockholder of numerous "public" enterprises, the most important client and consumer, the main banker, and, obviously, it is also the largest debtor.

B. Demographic Factors

Peru has experienced a population growth rate of about 2.5% per year. Even though this growth rate has remained the same for nearly five years, the crude birth rate has undergone a decline in this same period from 37.6 to 34.9 births per 1,000 inhabitants.

Estimates for 1990 indicate that the country has a population of 22.5 million, making it the fifth largest population in Latin America. Population projections indicate that Peru will grow to 28.6 million by the year 2000. Based on United Nations (UN) estimates made in 1988, the total number of Peruvians will double in 28 years.

Geographically, Peru has an area of 1,285,216 sq. km. The country's population density averages 17 persons per sq. km. In the past fifty years, there has been a shift in distribution of population brought about by a steady internal migration from rural to urban areas. At present, more than two thirds of the population resides in urban areas. Internal migration to the large cities (i.e. those larger than 100,000) has put great pressure on urban services such as health, education, housing and transportation. The Metropolitan Area of Lima, for example, has currently grown to an estimated population of 5.6 million, or 28% of Peru's total population, making it the fifth largest city in Latin America--behind Mexico City, Sao Paulo, Buenos Aires and Rio de Janeiro. The steady exodus from the rural areas has also had a comparable affect on the availability and quality of rural-based human services. Peru's external migration has been insignificant. (See Appendix A for a Map of Peru.)

As in many developing countries in Latin America, Peru has a young population. Over 40% are under 15 years of age, and more than three fifths (60.8%) of the population is under 25 years. By contrast, 3.6% of the population is age 65 years or over. The working age population, i.e. the total between ages 15-64 years, is 56.2%. In terms of sex ratio, available population data indicate that Peru has 101.5 males for each 100 females. UN estimates prepared in 1988 indicate that life expectancies for males and females are 57 and 60 years, respectively.

C. Economic Factors

1. General Context

At present, income data from national samples is not readily available. The 1984 National Nutrition and Health Survey (Encuesta Nacional de Nutricion, Salud y Alimentacion) shows that approximately 1,000,000 households or 5,000,000 individuals earn less than US$30 a month. According to World Bank indicators, six million Peruvians live in absolute poverty. From the most recent estimates (1989), Peru has a per capita GNP of US$946.

The country is plagued with a severely regressive income distribution. It possesses distinct geographical, climatical and economically diverse regions, as well as large mountainous and desert areas, which contribute to extreme inter- and intra-regional inequalities. The productive land base is small, and in the past five decades, uncontrolled rural to urban migration caused great pressure on the urban labor markets, the need for shelter and basic infrastructural services, as well as the need for access to water, food and general supplies. Approximately one third of the national population is concentrated in Lima and Callao.

2. Developments in the Last Decade

The world recession at the beginning of the 1980s determined sharp price drops in Peru's traditional exports (minerals, fisheries, etc.). Adverse climatic conditions, together with inappropriate monetary and fiscal policies, led to severe distortions of the economic base, uncontrolled inflation, and serious social turmoil. Political turbulence together with growing drug trafficking and a violent terrorist movement added additional complexities and distortions. These factors have progressively obscured the accustomed normal living conditions and have led to great uncertainty and unrest. The rapid deterioration of economic, social and monetary stability has contributed to increasing capital outflows and low savings, and this has resulted in correspondingly negative investment attitudes among the traditionally risk-adverse private sector. Altogether, production has decreased, unemployment increased, real wages decreased, and general living conditions have seriously deteriorated.

In mid-1985, a new democratic administration took office and introduced radical reforms in an attempt to curb the inflation rate and start the country on a process of continued growth. By government action, a price freeze was issued, wages increased, imports reduced, different fixed exchange rates established, and external debt payments limited. Initially, the inflation rate decreased, and real wages increased. However, this highly interventionist strategy was ill-fated since it had serious negative impact on long-term equilibrium and continuous self-sustained growth.

In the last two years, distortions in the price system, together with inefficiencies of the public sector, have led to even greater disequilibrium than observed before. As a result, real Gross Domestic Product (GDP) decreased by 11.2 per capita in 1988 and 14.9 in 1989. As an example of the tasks ahead, it must be mentioned that in 1989, the overall public sector deficit amounted to 7.3% of GDP, and central government financial reports showed that expenditures were double revenues.

3. Present Situation (as of September 1990)

In August 1990, a new Government headed by Alberto Fujimori took office. At this moment in Peru's history, the economic, social and political institutions were in extreme difficulty. Among the conditions which the new Fujimori administration faced was a substantial drain in international reserves, an extreme reduction of exports and of capital inflows, irrational allocation of resources, high unemployment, a climate of uncertainty or latent discontent, and an adverse international financial community. The strategy used to "jump start" Peru again was a shock-treatment ("Fuji-Shock," as it was popularly called), which involved liberalizing prices, wages, and the exchange rate. As a result,

the previously repressed prices skyrocketed, and the increases showed many variations and oscillations.

The price of public utilities, both of commodities and services, showed substantial increases. For example, the price of gasoline and other petroleum-derived products increased about 21 times and set in motion a serious chain reaction affecting the cost of all products. Especially high price rises have occurred for basic foods and household supplies.

This, in turn, will affect the standard of living of lower-income sectors of the population. According to a recent report by the National Institute of Statistics and Information (Instituto Nacional de Estadistica e Informatica), communication and transportation prices rose 571.4% in August of 1990. Other dramatic price increases were: food and beverages (446.2%); household rents, fuel and electricity (421.8%); furniture, household supplies and repairs (340.7%); shoes and clothing (297.9%), other goods and services (253.3%); and other services and education (166.1%). The overall inflation rate for August 1990 has been estimated at 400%! It must also be noted that there is a generalized feeling that the exchange rate is undervalued by about 30% to 40%. The Inti's present value fluctuates around 350,000 to the dollar, and its estimated value should settle between 450,000 and 500,000 Intis.

Of pertinence to this report, it should be noted that in the same month (August 1990) medical products increased 1,335%, and health care and medical services increased 702.7%. The price of drugs suffered such a considerable jump that many pharmacies were reported to have temporarily closed down because of lack of sales.

More time is needed in order for the general price system to reach a new equilibrium and for the economy to recapture a sense of stability leading to more investment, employment, production, exports, savings, and growth. It appears that the "Fuji Shock" measures that were adopted were necessary, however harsh and severe the immediate consequences. There is a generalized feeling, however, that the government did not issue a parallel social-relief program to reduce the adverse impact these measures have on the lower-income population sectors. Recently, a government spokesman indicated that the National Treasury would devote US$50,000,000 to this purpose, especially in the areas of health and nutrition. The Pan American Health Organization (PAHO) has purportedly been asked to assist the Peruvian Government in making these disbursements. According to information that has been provided by PAHO, the government plans to spend circa US$10,000,000 a month during the remainder of fiscal year (FY) 1990 in order to reduce or compensate for the negative consequences of the measures adopted.

According to the PAHO Representative, the MOH not only wants to direct goods and services under this program to the most

affected as an immediate priority but also is considering taking advantage of the social emergency to introduce deeper and long-lasting changes within the overall administration of the MOH. Direct shipment of goods and supplies to the regions and local communities would be used as a means to introduce permanent changes in the current norms, practices, and procedures of the Ministry. The process of decentralization would be accelerated.

Whether these government remedies will actually be effective depends upon the presence of financial, budget, logistic, and other constraints. It remains clear, however, that some type of measures should be taken by the national authorities to counterbalance the drastic impact that the shock policy has had and will continue to have on the poorer sectors of Peruvian society.

It is difficult to forecast how the different actors will react and to what extent inflation rates will decrease, production will grow, and income will slowly start to increase. The impact on the formal sector will be different from that on the informal sector, and it is highly likely that there will be long-standing impact on the most impoverished and marginal population sectors.

D. Health Conditions and Services

At the time the CSAP was conceived, health conditions in Peru were typical of a developing country. Life expectancy at birth was 61.4 years in 1987, and the population growth rate (in 1986) was 2.6%, among the highest in Latin America. The national maternal mortality rate at that time was 30.3 deaths per 100,000 live births, one of the highest anywhere. Presumably, this was related to maternal malnutrition, inadequate pre-natal care, high levels of fertility and inadequate spacing between births.

In June of 1987, at the time the CSAP PP was developed, 44% of all deaths occurred before the age of five, and 65% of these under-five deaths occurred before the age of one. The infant mortality rate (IMR) for Peru was 88.2 per 1,000 live births. This was the third highest in Latin America and nearly 50% higher than the average for all countries in the Continent. Indeed, the situation has been so severe in some areas of the country that the Evaluation Team was told on one visit that children are "not named until after they are one year old" because the IMR is so high.

Surveys taken in the years immediately preceding demonstrate that ARI is a major factor in mortality among Peruvian children over the age of one year, accounting for nearly one third of all child and adolescent deaths. The next most common cause of infant mortality and childhood morbidity/mortality is digestive tract

disease due to poor hygiene, lack of potable water and other environmental factors. Of all infant deaths, diarrheal disease and neonatal tetanus were major factors in 75% of the cases.

While respiratory illness was the leading cause of morbidity among Peruvian children under one year of age at the initiation of the CSAP, dehydration due to diarrhea was the greatest cause of morbidity in children from two to five years. Estimates of the number of episodes of diarrhea per year per child ranged from eight to 11 in rural areas. Half of those reported to have diarrhea were also reported to have respiratory symptoms. Among the conditions found to have high incidence rates in Peru were the five major immuno-preventable illnesses of polio, tetanus, diphtheria, pertussis, and measles, together with tuberculosis, for which vaccines are less effective.

At least part of the problem related to high infant and maternal mortality rates leading to development of this Project, was the relative absence of medical attention. Less than half of all rural women giving birth (39%) received pre-natal care. Although slightly over half (52%) of all births in the country occurred in some kind of health facility, as few as 15% of rural births took place in such facilities. While data are lacking, it is felt that low birth weights contribute to the high susceptibility to respiratory and gastrointestinal infections in Peru.

In short, when the CSAP was conceived, Peru had serious problems with child health as evidenced by data on morbidity mortality and the inadequacy of health service delivery. The CSAP was designed to attack these conditions directly by expanding services in the areas of immunization, of DDC, nutrition, ARIs, and FP. Much of the rest of this evaluation will be devoted to an analysis of these interventions and their relative success.

3.0 FOREIGN ASSISTANCE PROGRAMS VIS-A-VIS THE CSAP

A. USAID

The CS strategy of USAID in Peru has been to assist the GOP, working through the MOH, IPSS, and the private sector, to provide sustainable services throughout the country. Priority is given to the most needy areas, especially to families of children who are at highest risk. This strategy has consisted of, and continues to consist of, a series of coordinated sub-strategies in a number of key service delivery and support system areas.

The history of United States Government health activities in Peru begin in 1942 in connection with the government corporation known as the Institute of Inter-american Affairs (IIAA). This resulted in the creation of the program known as Cooperative Services in Public Health, which operated in Peru for over twenty years. The success of this program is still remembered by older Peruvian health workers and is cited as an example of how a health program could and should be run.

The immediate precursors to the current CSAP project were a US$1.4 million pilot project known as "Sur Medio" and a US$7.1 million Extension of Integrated Primary Health Project. Both began in 1979. These projects were followed by a Rural Water and Sanitation Project in 1980 and a US$10.8 million Integrated Health and Family Planning Project in 1981. This program served as the immediate precursor of the CSAP since it continued until the end of 1987.

The actions covered by the four projects mentioned above included immunization, FP, potable water development, and environmental sanitation. A US$1.1 million Nutrition Amendment to the Integrated Primary Health Project in 1985 added nutrition as a priority for USAID support. Among the objectives stressed by these projects were: improving the management of the PHC system, increasing service coverage in both the private and public sectors, and gathering and analyzing data for improved planning and decision making.

The Rural Water and Sanitation Project continued into the beginning of the current CSAP and had as its goal the construction of 1,200 water systems, as well as the design, construction and promotion of latrines. In addition, the project included related health education and training of villagers in the operation and maintenance of the water systems and latrines.

The previously mentioned 1981 Integrated Health and Family Planning Project was supplemented in 1984 by a US$4.7 million Contraceptive Social Marketing (CSM) Project with a local PVO. In 1986, USAID supported a new US$13 million private sector FP project.

Supported research activities in child health have been carried out since 1985, notably, with grants to the Institute of Nutritional Investigation (IIN), the Peruvian University of Cayetano Heredia (UPCH), and PRISMA, a local private voluntary organization (PVO) funded in 1986. Kinds of research have included the study of diarrheal disease treatment and control, nutrition and dietary management of diarrhea, and family risk assessment.

Of particular value as background to the present study was a Demographic and Health Survey (ENDES), which was funded by AID/W and completed in 1986. The ENDES data verified growth rates and established current FP practices and usage rates in Peru.

Another useful program for data generation was a comprehensive US$1.3 million Health Sector Analysis (ANSSA), which was carried out under a cooperative agreement with the State University of New York at Stony Brook in conjunction with PAHO, the MOH and an array of Peruvian institutions including IPSS. The ANSSA consisted of nine technical, analytical studies which contain research findings and policy recommendations for improving utilization of existing health care facilities and health system organization and management so as to generate cost savings and promote good health.

Various nutrition programs have gained direction from ENDES and ANSSA study results. Among these are a USAID Food and Development Program, which works through the MOH's Complementary Feeding Program, and a program to provide assistance to various international and non-governmental agencies to enhance the impact of their feeding programs. The data have also helped to direct Title I Counterpart Funds that have been used to cover logistical costs related to food distribution.

The CSAP was fortunate to have baseline data from both ENDES and ANSSA on which to build. Various recommendations from the projects mentioned led to development of the current CSAP. These included the need to modify USAID financial procedures to support decentralized operations by the MOH; a requirement for more in-service training for MOH personnel, particularly in their management and administrative goals; development of feedback loops or predesignated mechanisms for operating projects; and development of monitoring committees at the central level.

Previous projects showed that there were serious deficiencies in procurement and logistics procedures within the MOH. This led to shortages and maldistribution of basic supplies, medicines and

equipment in hospitals, health centers and health posts. This was coupled with scarcity and poor maintenance of equipment and inadequate inventory control systems.

There was a feeling that USAID support had helped to develop a HIS capability in Peru. However, what was still needed were continued efforts directed toward development of various parts of the information system, improved analytical capability at all levels and epidemiological capability at the departmental level. An adequate patient registration system was also felt to be lacking.

A key lesson from all projects was that training and supervision were critical to successful project development. The inadequacy of training and supervision, coupled with minimal pay, has contributed to significant deficits in the operational health systems within the MOH.

Some of these problems could be addressed by USAID-initiated projects and some could not. The CSAP was seen as a way of beginning to confront the most serious difficulties associated with high infant morbidity and mortality.

B. Other Donors

USAID has not been the only donor active in the health sector in Peru. Indeed, a summary review of assistance ongoing in 1987-88 from ten selected donors showed USAID to be second (with US$28,450,000) having contributed 16% of the total US$176,305,000 being obligated by donors at that time.

Until recently, the primary donor, in terms of dollars, was the Interamerican Development Bank (IDB). The IDB was shown to be contributing US$84.3 million when USAID was contributing US$28.5 million. IDB assistance typically comes in the form of low-interest loans and is used primarily for training health workers and construction of health facilities in outlying areas. Over the past years, IDB has provided significant loan-funded support for water and sanitation systems, as well as for the implementation of operational support to various existing health facilities. Due to cancelation of debt payments by the GOP, IDB support was suspended during the government of Alan Garcia.

Another major donor impacting health delivery in Peru was the International Bank for Reconstruction and Development (IBRD) or the World Bank. World Bank funds have been channeled to Peru as loans, as were the IDB funds, and have been used primarily to construct, equip, and supply health facilities in outlying areas of the country. Due to a problem with the non-payment of debt by the then Peruvian Government, World Bank disbursements to Peru were suspended effective May 1987. Only with the new policies of the

present government have working relationships been reestablished between the World Bank and Peru.

A third major donor participating in Peruvian health care has been the United Nations Emergency Children's Fund (UNICEF). UNICEF has concentrated its efforts at the local level, using the community organization of women as the basis of its intervention. The focus of UNICEF is on CS, working through and with a variety of public and private sector organizations. It became apparent to the Evaluation Team that UNICEF operates somewhat independently from other donor agencies, even those associated with the United Nations.

According to the UNICEF representative in Cusco, they are working with 12 communities forming "base community organizations." Their major emphases in the Cusco area include CS and the mobilization of women. At the Cusco level, UNICEF staff consists of two pediatricians, one nurse coordinator and two rural coordinators. In addition, UNICEF helps support "volunteer" workers in the communities where it works.

The second largest bilateral donor working in Peru is the German Technical Assistance Agency (GTZ). GTZ has been working in the Departments of Cusco, Madre de Dios and Apurimac, as well as La Libertad. The GTZ's major program areas have been PHC and nutrition.

The Peru-German Agreement providing for GTZ work in Peru is currently in its eighth of nine years--or its third and final three-year cycle. According to the GTZ representative in Cusco, the program is focusing on maternal and child health programs, generally using a methodical planning approach to achieve its objectives.

In Cusco, GTZ is serving 11 health centers and 20 health posts. These are being used to demonstrate the theories and methodology of the program. One hope is that local workers will be able to assume responsibility for at least some of the health posts when the program ends in 1992.

GTZ staff in the Cusco area consists of nine people, three of whom are UDES personnel assigned to GTZ. These individuals are paid by the UDES at the same salary they received previously. This attempts to recognize the reality that the MOH will have to absorb their salaries when the Project ends.

The Italian government has also operated a significant bilateral project in Peru. The focus here has been on a multi-sectorial community-based nutrition project (PROCAN) in the Departments of Puno, Moquegua and Tacna. This program has been directly sponsored by UNICEF and PAHO, working through the MOH. The Evaluation Team had the opportunity to meet with an Italian Aid

worker in connection with the training program that was held in Urubamba (Cusco Region), for young physicians fulfilling their service year obligations (SERUMISTAS) in rural Peru.

Another donor agency making a significant contribution to Peru, particularly in the area of FP, is the United Nations Fund for Population Activities (UNFPA). UNFPA has been operating a maternal and child health program in Peru for the past several years that includes training, FP supplies, education and communications. The program has also supplied oral rehydration salts (ORS) and FP commodities to various areas, including Iquitos and Lima. UNFPA works closely with PAHO and the MOH in implementing its activities. In a conversation with representatives of UNFPA in Lima, the Evaluation Team was told that the three major problems which they see facing the health sector are the difficulties relating to logistics, training and program extension. It is their feeling that organization at the local level helps to surmount some of these difficulties by neutralizing the political process and facilitating change. At the time of the CSAP evaluation, a group of consultants was in the process of evaluating UNFPA activities in Peru with a view towards making recommendations as to how its programs should be changed.

A major player in the Peruvian scene is PAHO. PAHO has been supporting immunization, DDC, FP, feeding and nutrition programs. In addition, PAHO uses its resources to support information systems, epidemiological surveillance and health programs in Peru. PAHO gives the equivalent of at least US$20 million annually in the form of technical advisory staff.

A review of sixteen ongoing PAHO projects reveals that as of August 15, 1990, PAHO has a current commitment of US$4,381,948 to Peru. Nearly half of this goes to a program called "Maternal and Child Health (MCH)," with approximately US$1.67 million of this devoted to growth and development and human reproduction activities.

In the present economic crisis, PAHO is collaborating with the MOH to see how this situation can be used to bring about the restructuring of health delivery in the country. In this regard, PAHO is focusing on nutrition, health and employment as major areas of concern. By agreement with the Ministry, PAHO will administer funds itself and give them directly to local areas. In essence, PAHO will be working directly with health centers, of which over 180 have already been identified.

From this perspective, PAHO and the MOH, see the emergency as a means to "visualize the Ministry of the future." Whereas there is no good way for the MOH to relate to the new regions which are now being formed, in terms of service delivery, the PAHO relationship may provide this mechanism. In so doing, the

experience of working in the emergency may help the Ministry define its role.

In summary, there is a large group of donors to improve CS in Peru. The work of USAID and its CSAP should be seen with that perspective.

C. Non-governmental Organizations

There are many non-governmental organizations (NGOs) working in CS areas in Peru. Each of these NGOs has its own agreement with the MOH. As illustrative of these, the Evaluation Team met with Save the Children. Save the Children in Peru is a branch of the British Save the Children organization and has no relationship with Save the Children in the United States.

Save the Children works in three areas of the country. These are Lima, Cusco and Iquitos. In each area it works with a local group formed for the purpose of carrying out the Save the Children mission in that area.

Save the Children uses a "popular education" methodology, by which it depends on work at the community level and public understanding for implementation of its programs. Work thus far has centered on immunization, growth monitoring and feeding assistance programs. With respect to immunization, great effort is made to maintain accurate records and not to depend on mass immunization campaigns for coverage. Oral rehydration therapy has also been a major part of the Save the Children program activities in Peru.

Many other NGOs could be listed which are contributing to CS activities in Peru. Such a listing goes beyond the immediate data collection capabilities and the information base available to the Evaluation Team.

4.0 PROJECT DESIGN AND DEVELOPMENT

A. Project Background, Objectives and Design

As has been noted, Peru is a poor country, a large country and a country with a low life expectancy and high infant and maternal mortality rates. With respect to all of these indices, conditions are among the worst in Latin America.

In addition, Peru has limited resources and infrastructure to deal with the health problems it faces. With the MOH overwhelmed with responsibility to care for nearly 60% of the population and meeting only half of this goal, available effective medical services are limited. While the IPSS has expanded its mandate to nearly 30% of the population, its resources have been almost totally depleted by government action. The private sector and other resources are totally unequal to the task of making up the difference.

It is in this context of development that USAID has for years sought to improve health conditions in Peru, particularly with regard to women and children. As noted previously, USAID-funded projects have included control of ARI, rural water and sanitation development, control of tuberculosis and other infectious diseases, the development of integrated health communications capability, and food assistance. Lessons learned from previous project experiences relate to over centralization and ineffective integration for regional and local personnel in the planning process, lack of coordination among the various donors and public and private sector agencies involved in PHC strategies, the absence of effective performance evaluations, and unrealistic project and personnel performance targets. This led USAID to conclude that more decentralized operations by the MOH, more in-service training for MOH personnel, and development of a feedback system with a PHC monitoring capability was indicated.

Administrative management in the MOH was found to be cumbersome and inefficient, and simplification with an emphasis on help-oriented financial management seemed indicated. Procurement and logistics issues showed an unwieldy purchasing system in the MOH leading to shortages and maldistribution of basic surplus, medicine and equipment. Better inventory control systems and training for selected logistics personnel were recommended.

Peru's HIS was seen to be lacking. Although some had felt that this had been improved due to previous USAID assistance, a "critical mass" of lasting technical expertise was never created. Further progress in this area, including improved analytic and epidemiological capability at all levels, was indicated.

A basic observation was that training and supervision were found to be critical to all forms of management and service delivery. Limited or absent per diems and other support services have contributed to limited participation in training as well as a low level of service delivery. It is with these observations and lessons from the past that the current project was developed.

Because of a long-standing commitment to PHC and a priority concern for CS, the CSAP evolved. The project was designed to work not only with the MOH, but with the IPSS and, in so doing, to help integrate GOP health policy. A project outcome objective is to assist both the MOH and IPSS to improve and expand delivery of CS services. This should contribute to overall long-term development through improved health and FP program activity. Finally, it was intended that the CSAP would be able to complement efforts of other donors in the health sector and thereby lead to an integrated approach.

The CSAP goal was to improve the health of infants and children in Peru. As indicated, this was to be accomplished by strengthening the capability of the health sector to deliver improved CS services through an integrated, expanded and sustainable health care system. The program was designed to support the CS program being mounted by the MOH. In keeping with these objectives, the project set nine targets. The end-of-project status for each of these targets is:

1. 80% of diahrreal disease cases will be treated with ORT and appropriate dietary management;

2. A functioning MOH/IPSS service delivery system will be in place that achieves and maintains nationwide immunization coverage of 80% of all children of less of five years for a complete series of polio, measles, diphtheria, whooping cough, tetanus and tuberculosis vaccines;

3. Wild polio virus will have been eradicated;

4. The number of FP users served by the MOH and IPSS will have increased by at least 50%;

5. At least one nutritious weaning food will be promoted in each geographic region of the country;

6. The comprehensive HIS will be installed and operational nationwide;

7. An active Epidemiology Surveillance System will be in place, and up to 35 physicians trained in Field Epidemiology will have been assigned at the central and departmental levels;

8. Pharmaceuticals, contraceptives and medical supplies will be made available at all health facilities through a functioning logistics system; and

9. Peru financial resources for delivery of CS services will have increased such that adequate budgetary support for local operating expenditures (local recurrent costs) associated with these programs will have been provided for five years.

The project authorization for the CSAP in Peru (Project # 527-0285) provides that no more than US$19,000,000 in grant funds over a five-year period will be expended in connection with this project. This was with the understanding that local currency contributions of approximately US$25,000,000 would be added by the host country for a total of US$44,000,000 over a 63-month period. As with all United States Government projects of this type, certain covenants and conditions were imposed. These are spelled out in detail in the CSAP PP that was distributed March 8, 1988 (see Appendix H for a listing of these requirements).

The PP notes that the CSAP shall, between the terms of the covenants and major conditions noted, be used to "strengthen the capability of the MOH and the Peruvian Institute of Social Security to deliver improved child survival health services, family planning, immunization, nutrition, diarrheal disease control, and acute respiratory infection control, through an integrated, expandable and sustainable health care system."

B. Implementation Schedule

The schedule originally proposed for the project was to have immunization and FP activities implemented in all 28 UDES simultaneously beginning in the first project year (PY). Other parts of the project were to be phased in within different UDES, over the first three PYs, in the following order:

1. PY 1 - Puno, Cusco, South Lima, Cajamarca, Huanuco, Loreto, Piura, and North Lima;

2. PY 2 - Arequipa, Apurimac, Callao, La Libertad, Ancash, Junin, Tumbes and Huancavelica;

3. PY 3 - Moquegua, Tacna, Madre de Dios, East Lima, Ica, Amazonas, San Martin, Pasco, Ucayali, Lambayeque, West Lima and Ayacucho.

IPSS, on the other hand, was proposed to begin all Project activities simultaneously in the various Departmental Management Units (DMUs) beginning in PY 1, with the exception of FP. FP activities would begin in Lima and Ica in PY 1, expand to Piura, Cusco and Iquitos in PY 2, and to the rest of the country by the

end of the Project. The PP stated that the CSAP would provide additional resources to the IPSS to facilitate the expansion of CS services in all of its 32 DMUs.

Because of the need to coordinate CS activities in the MOH, UDES and IPSS DMUs, the eight Peruvian Regional Coordinators were to be contracted for the life of the Project. Each Regional Coordinator would thus have three or four UDES for which she or he would be responsible. The smaller health units would be phased in over the three-year life of the Project.

By the beginning of the operational Project (January 1988), most conditions precedent for disbursement of A.I.D. funds were to have been met. A Project Coordination Committee was to have held its first meeting by the end of January 1988 and to meet as a group quarterly there after. It was further anticipated that warehouse improvements would begin in the first six months of the Project, both in the MOH and in the IPSS. The plan was to recruit and hire computer system engineers for the first eight UDES to be served so that they would be on board and ready to go with the arrival of computers in August to September 1988.

For the additional PYs, Coordination Committee meetings on a quarterly basis were projected, as were annual regional planning evaluation workshops. The later years of the Project were to be devoted primarily to meeting CS delivery coverage and program targets, as well as institutionalizing HISs, the active VEA program, financial management procedures, personnel management, logistics, and computer information systems.

For a variety of reasons, the Project faced a series of delays. Among the causes of these delays was the economic sanctions imposed against Peru because of its non-participation in the International Monetary System. Further, there were delays in the provision of budgeted and authorized PL 480 funds to the MOH by the Banco de la Nacion and mis-utilization of certain PL 480 funds at the MOH UDES level in some departments. This has included "borrowing" PL 480 funds from Project program activities to cover recurrent administrative expenses.

In addition, there was a delay in the procurement of Project commodities. For example, in September 1989, there was a freeze in procurement of new commodities for the MOH because of losses that occurred at the MOH warehouse. This was corrected in November 1989.

A continuing problem was the frequent strikes in both the MOH and the IPSS. These strikes included health workers, physicians and other professionals. The most recent of these was from late April to early July 1990. Virtually no progress was made in the program at the local level during these strikes.

In addition, there were performance problems with the Alpha Consult supervisory personnel hired under the Project to coordinate activities at the regional level. This included the performance of the Regional National Coordinator, necessitating his replacement. In addition, at least two Regional Coordinators also had to resign and have yet to be replaced.

A further complication has been the lack of the USAID Mission and the MOH to agree upon a nutrition component for the Project. Of five key areas included in the nutrition component development, no project activities have yet been approved as of the date of the current CSAP evaluation. A revised nutrition proposal was submitted by the MOH in mid-1989, but the project was not approved. A general plan was submitted by the MOH to USAID in May 1990. With the receipt of this plan, A.I.D. issued a PIL (No. 33) stating that the Condition Precedent for disbursement of project funds for nutrition activities had been satisfied. This has not yet, however, resulted in any specific nutrition activities.

Highlights of the Project include the signing and placement of personnel under the agreement with Alpha Consult; the development of a Field Epidemiological Training Program (FETP) by CDC under a PASA with USAID, resulting in 10 trained personnel in place throughout Peru as of this evaluation; a signed contract (November 1989) with The PRISM Group to deliver a HIS/MIS. As of the present writing, a basic course has been presented on the HIS/MIS concept, a pilot test is being conducted on a new information form, primarily designed for the HIS; and computers are beginning to be installed in selected UDES. Effective September 1, 1990, it appears that a "stop work" order will be issued for the MIS component of the PRISM contract until greater clarity as to the feasibility of this project can be demonstrated.

On the commodities side, a new VEA office has been completed and become operational for FETP activities; some 335 refrigerators have been sent to the MOH "to fulfill the remaining needs of the cold chain for the immunization system;" technical assistance is being provided to the regions and the UDES level personnel of the MOH in the operation of the computer system and various other CS activities; 10 Regional Computer Management Advisors (RCMAs) have been hired and placed throughout the country; and a large number of vaccines, needles, syringes and various birth control devices have been distributed throughout the system.

In short, the Project is achieving many of its goals, although belatedly. In relation to its original targets, the Project is running one and one half to two years behind schedule, with some elements yet to begin or be permanently deferred (e.g., the nutrition program and the MIS). Other elements are experiencing various degrees of difficulty (e.g., commodity distribution and recruitment/placement of trained and effective Regional Program Coordinators.)

This Project, in sum, is progressing in a halting fashion amid various difficulties. If judged by its projected schedule, it is seriously off target. If evaluated in the context of the many problems facing Peru, it can be said to be moving in the right direction, albeit slowly. In future chapters, the elements of the program will be examined in greater detail and recommendations made for program modifications.

5.0 PROJECT MANAGEMENT

A. USAID Support and Monitoring

According to the PP, USAID would hire under direct A.I.D. Personal Services Contracts (PSCs), "three expatriate consultants with educational backgrounds and experience in nutrition, population or a related field, to improve management capability and implementing a multi-faceted development projects." The plan was to have each of these consultants on board in Peru for the full five-year duration of the project, together with the USAID Project Manager. These four individuals would constitute the USAID Management Team.

The concept articulated in the PP was that the USAID Management Team, under the Project Manager, would monitor and support the Regional Coordinators who would be hired under the Project through a contract mechanism. They would facilitate communication and coordination among USAID, the Central level MOH, and the IPSS. They would also coordinate among USAID, the UDES and the DMUs at the departmental level. In addition, the Management Team was to assist the Project Manager in carrying out responsibilities "with respect to the procurement of commodities and technical assistance services, the conduct of evaluations and audits, the process of participants for overseas training, the monitoring of conditions precedent and covenance, and the monitoring of disbursements and liquidations of USAID and GOP funds under the Project."

Team members assembled by USAID include Edgar Necochea, MD, Acting Head of Health/Population/Nutrition at USAID, and three CSAP coordinators: Edward Scholl, Gerardo Arabe, and Alonzo Wind. Mr. Wind, was recently hired and had arrived in Peru toward the end of the Evaluation Team's visit. The CSAP Management Team reports to Charles Mantione, USAID's Chief of Human Resources and then to Barbara Kennedy, Deputy Mission Director, and Craig Buck, Mission Director. Dr. Necochea and Mr. Mantione assumed their respective positions in May 1990.

One observation of the Evaluation Team, which seemed to be shared by many CSAP contractor staff as well as people in the field, was that there is some perceived ambiguity about who is the USAID Project Manager for the CSAP. The Evaluation Team assumed that the individual directly responsible for the Project was Edgar Necochea, but found Gerardo Arabe effectively functioning in this role. (This might have been due to the fact that Gerardo Arabe filled this role at one time, and Edgar Necochea was out of the country during much of the Evaluation Team's visit, although the lack of clarity felt by the Evaluation Team seemed to be shared by others as well. There was even some question as to whether Ed Scholl was the designated person in this role.)

As a U.S. Government-funded program, the CSAP is subject to ongoing monitoring and evaluation for the U.S. Congress and the Administration. The CSAP has been designated a "second tier" project, meaning that more rigorous monitoring and evaluation is required than for a "first tier" project. Second-tier projects, in addition to input/output information, require effectiveness monitoring with impact indicators. This might include, for example, documentation of immunization coverage rates or the use of ORT in the most recent diarrheal episode.

With respect to CSAP, the Mission is committed to providing:

1. USAID, MOH and Social Security project files, including procurement, training, and financial records to derive input and some output data;

2. Service statistics, including coverage data, disease incidence by age, morbidity, mortality, births, deaths, and similar data routinely collected at the departmental and peripheral levels of the MOH and IPSS;

3. Annual program evaluation activities to be undertaken and financed by the MOH under the guidance of the Technical Director for Programs, Norms and Services at the Central MOH to assess program effectiveness.

Random district-level household knowledge, attitude and practice (KAP) surveys to measure program impact and effectiveness were originally proposed in the PP but have been dropped from the revised evaluation plan.

Table 21 of the PP provides sample evaluation indicators for DDC, immunization and nutrition, sub-components of the Project. Basically, the indicators relate to inputs, outputs, effectiveness and impact in each of these areas. Presumably, such data were to be included in the semi-annual Project Reports.

The most recent Project Status Report (PSR) which could be made available to the Evaluation Team was dated October 1, 1989 to March 31, 1990. This document traces major outputs for each component of the Project and measures accomplishments against planned goals. USAID staff apparently had available to them resources not available to the Evaluation Team regarding national performance measures compared to program targets (e.g. under the immunization component). The PSR dated April 1, 1989 to March 31, 1990 reports an 80% availability of vaccines in public-sector health facilities for DPT, measles, polio, BCG and tetanus toxoid. These data should be compared to the field information gathered by the Evaluation Team on their site visits.

In addition to PSRs, a key component of USAID support and monitoring comes through the Alpha Consult agreement. While this will be dealt with in a separate section, it is clear from the PP and from observations by the Evaluation Team that Alpha Consult personnel work directly for USAID to monitor field activities and do not give the appearance of being employees of an independent corporation. As such, there is an effective chain of command from the USAID Management Team through the Alpha Consult technical assistance staff to the MOH to the regional or UDES level.

B. The Government of Peru

According to the PP, "MOH Project Management and implementation at the departmental level will be facilitated by a cadre of eight project-financed Peruvian Regional Coordinators, each of whom will work intensively with the three to four UDES at the field, and will play a major role at ensuring adequate coordination and communication among the MOH and IPSS at the Central and departmental levels and among these entities and USAID." In short, the PP suggests that the field personnel employed by Alpha Consult will serve to monitor the Project for the MOH: this is despite the fact that the individuals concerned are not employed by the MOH and, in some instances, are not housed in MOH facilities. Although it is not expressly stated, the key element of this relationship is presumably Alpha Consult's responsibility through the Peruvian National Project Coordinator, Dr. Humberto Gamarra. Because of a long history of involvement in the MOH at a senior level (Director General level), Dr. Gamarra enjoys the respect of and is known by many individuals within the MOH. Further, some of the Regional Coordinators who work with Dr. Gamarra have this same advantage, being former MOH employees. It should be noted that this same Alpha Consult staff recognition does not necessarily extend to the IPSS.

With respect to financial management, the PP notes that "financial management procedures have been simplified in that the Minister of Health will administer only about US$1.8 million of the total US$19,000,000 of A.I.D. resources over the five-year life of the Project." In addition to the US$19 million provided directly by USAID, there is an additional US$25 million which represents a combination of Treasury funds and PL 480 money, under the control of the Ministry of Economics and Finance (MEF). A joint arrangement between USAID and the MOH controls the release of funds from the MEF. In essence, this means that Peruvian control over funds of the Project is quite limited with the major role being in disbursement of PL 480 and Peruvian Treasury funds for Project-related activities.

Presumably, overall monitoring and management of the Project would be by the Director of MCH within the MOH. With changing governments, there has been some lack of clarity about to whom within the MOH the Project relates. Responsibility within the

Ministry has moved from the National Director of the Project to the Minister or Vice-Minister and back to the National Project Director. Furthermore, during the first 24 months of the Project, the MOH has had five Ministers of Health, nine Vice-Ministers, five Project Directors and three IPSS Directors.

C. Alpha Consult Coordination

An agreement was signed with Alpha Consult on December 17, 1988 providing that they should furnish necessary personnel and management services required to assist USAID/Lima in support of the implementation of the CSAP. The original contract was cost reimbursable with a fixed management fee. US$1,110,396 was provided over a five-year period to assure contract performance. Nearly one million dollars of this was for wages and benefits of contracted personnel.

The scope of work for the contract calls for support of the CSAP through: a) personnel administration; b) financial services; c) vehicle-related services; d) commercial services; and e) communications services. The contract goes on to specify that there shall be one Supervisory Management Coordinator, one Family Planning Advisor, and eight Regional Management Coordinators. Subsequently, a Project Economist was added, and a second Family Planning Advisor was approved for placement in IPSS. (This individual has not yet been hired.) The contract clearly states that the contractor shall receive guidance and instructions from and report directly to, the Chief, Health/Population/Nutrition Division, Office of Human Resources, USAID/Lima. This individual, or his/her designee(s), is also the USAID Project Manager of the CSAP. Presumably this refers to Dr. Edgar Necochea (or his designee).

In short, Alpha's contract appears to be for administrative management of personnel who report directly to USAID, rather than to either the MOH or to Alpha Consult. It is important to understand this dynamic in evaluating the Project. Dr. Humberto Gamarra reports to USAID/Lima and receives directions from the Management Team for the CSAP Project. Alpha's contract was subsequently revised to provide US$1,930,487 over four and a half years with a management fee of US$324,000. Initially, Alpha Consult was to have been paid in local currency on a fixed reimbursement rate. Although the original contract had indexing features built in, it did not take into account the degree of inflation Peru experienced. The result was that Alpha Consult was experiencing a six-week delay in payment and suffering considerable losses in currency transactions that emanated from the time invoices were submitted and the actual time payments were made. Alpha is now paid in US dollars for its contract invoices.

Although Alpha Consult is one of two major contractors on the CSAP, PRISM being the other, it was clear in conversations with

Alpha Consult personnel that they had little idea of what PRISM was doing. Accordingly, inter-organizational coordination of staff by Alpha Consult appears to be non-existent. It is assumed that since USAID appears to have direct involvement with the Alpha staff, that they would exert more leadership in linking the two groups. Coordination of Alpha Consult with PRISM appears to be limited, at best.

D. The PRISM Group Coordination

The contract with PRISM is for installation of the HIS and the MIS. The objective of the contract is clearly stated "to provide automated data processing (ADP) support services as required by the USAID Mission to Peru (USAID) to support the Peruvian MOH in its efforts to design, implement and institutionalize National HIS/MIS, with particular emphasis on the support of PHC and child survival activities." Specific requirements include linking all 28 UDES in the country to the Central MOH in Lima, provision and installation of necessary hardware, software and related accessories/supplies; maintenance and support services; training; and technical assistance.

As with the Alpha Consult's agreement, The PRISM Group contract states that "the Contractor shall receive guidance and instructions, and report directly to" the Chief, Health/Population/Nutrition, Office of Human Resources, USAID/Lima, who is also the USAID Project Manager for the CSAP, or his/her designee(s).

There is, however, an immediate and obvious difference in the way USAID relates to these two contracting parties. The PRISM agreement, unlike Alpha Consult's agreement, contains a number of highly specific deliverables over a defined period of time. Clearly, these two contracts are similar only in that they are both contracts. Alpha Consult contracts for management services; and PRISM contracts for a highly complex and specific set of deliverables.

A more detailed description of the responsibility of PRISM in the development of HIS/MIS will be provided in Chapter 8. It is sufficient to say, at this point, that the contract stipulates that ADP support will be made available to the target UDES and the Central MOH through a system of interconnected computers which perform both HIS and MIS functions. A key part of the PRISM contract is the training of oversight personnel, including the training and placement of eight Peruvian Regional Computer Management Advisors (RCMA) and one Peruvian Senior Computer Management Specialist (SCMS). Training requirements for MOH and field personnel are specified, as are requirements for ADP management and monitoring.

A key goal of the PRISM contract is to institutionalize the systems being developed. The contract addresses MOH/IPSS integration, although there has been little evidence to date of significant work by PRISM with IPSS. Most of the effort has been focused on meeting Project requirements within the respective UDES in the MOH.

It seems essential for the Alpha Consult and PRISM groups to be coordinated with one another. It is equally obvious that The PRISM Group needs to coordinate with the CDC component of the Project (VEA). Because the HIS is the initial and key component justifying the ADP system, the source of this information is to be found in the VEA component in the MOH. The VEA group, which has been receiving support from CDC, is responsible for collecting and reporting health statistics in Peru.

In the case of Alpha and PRISM, there simply seems to be little coordination or awareness on the part of one party of what the other is doing. In the case of PRISM and the CDC/VEA group, there seems to be awareness and some dislike by the latter concerning what is being done by the former. This is obviously a serious lack of project coordination and a matter of concern to eventual project success and institutionalization.

E. CDC Coordination

As part of the overall CSAP, the CDC in Atlanta was brought into the CSAP through a Participating Agency Services Agreement (PASA). The major purpose of CDC involvement was to train a cadre of medical epidemiologists located in each of the UDES using the two-year, FETP that includes classroom and field-based course work for medical epidemiologists in developing countries. Under the PASA, CDC was to provide long-term and short-term consultants to adapt the FETP to Peru's environment, train four classes of up to nine field epidemiologists each over the life of the Project, and institutionalize the FETP in Peru.

As part of its commitment to the Project, CDC was to provide training materials, computerized epidemiological statistical packages and access to the CDC worldwide network for Epidemiological Surveillance Systems (ESS) based in Atlanta. The FETP was seen as supporting the development of the VEA system in the MOH.

As its contribution to this effort, A.I.D. agreed to finance CDC technical assistance, training supplies and materials, computer equipment and software packages, and overseas local training costs.

The MOH was to provide appropriate classroom facilities, select FETP candidates and establish and upgrade the epidemiologist position for FETP graduates upon completion of their course work in each UDES.

Key to the CDC coordination was to be its relationship with the VEA component of the MOH and, by extension, PRISM computer-based HIS activities. The task of the newly designated Epidemiological Division in the MOH was to develop an ESS for the country that would provide information to program planners on patterns that relate to high morbidity and mortality in specific population groups and geographic areas of the country. The concept was to have a rational basis for systematic planning, design, monitoring, and evaluation of the MOH Disease Control and Prevention Programs, all of which was seen as critical to improving CS.

As mentioned above, the coordination between VEA and PRISM for the development of the national HIS is virtually non-existent. CDC/VEA staff appear to have difficulty with some of the health indicators selected for use in the HIS, as well as with the methods by which it has developed the prototype form for use in the initial HIS. VEA representatives have apparently stopped attending the HIS coordinating meetings. The result has been a near complete breakdown in communications between the potential user agency (VEA) and the developing agency (PRISM) as the HIS is being finalized.

It would appear logical to draw upon the expertise of PRISM to repair and maintain the computers operated by VEA. It would appear equally logical to draw more heavily upon the needs and expertise of VEA in designing the HIS protocols for use in providing HIS data. This fundamental lack of coordination must be corrected for the Project to succeed, and this will constitute a significant part of the Evaluation Team's conclusions and recommendations.

F. Conclusions and Recommendations

As should be clear from the foregoing, the Evaluation Team found many discrepancies in the various elements contributing to Project management. Specifically lacking was adequate coordination between the component parts of the Project, each of which seems to be progressing with variable degrees of success, but independently of the other parts. The only apparent unifying force is the Project management team in USAID/Lima, although the Evaluation Team remained unclear concerning the leadership of this team.

A clear early observation of the Evaluation Team is that the Alpha Consult agreement is strictly a financial or bookkeeping arrangement, whereby a technical team has been placed in the field under direct USAID management. Relationship between USAID and

PRISM is different with PRISM serving as a semi-independent contractor, providing a set of deliverables to the government. The CDC agreement with USAID has been implemented very much like the agreement it was--with considerable CDC autonomy and with a resulting unit in the MOH, not only ignorant of, but in opposition to, work being carried out by the HIS/MIS contractor.

Potential difficulties which the USAID Management Team may have been facing include one unfilled position (until August 1990) and multiple responsibilities for other members of the Project team.

In view of the foregoing, the Evaluation Team makes the following recommendations concerning Project management:

1. The USAID Management Team should more clearly define expectations for each of the contractors/participants in the Project, obtain agreement regarding these responsibilities, then assume more of a monitoring and less of a managerial role in the Project;

2. The GOP, which is essentially outside the management loop in this Project, needs to be brought in through a renegotiation of the CSAP, particularly in view of the fact that there is a new government and that virtually all of the key MOH players are new;

3. Alpha Consult needs to either take true management responsibility for the Regional Coordinators, or this responsibility needs to be transferred to another contractor. This would be compatible with Alpha remaining the "Business Manager" for the Project;

4. The PRISM Group needs to find a way to involve VEA more fully in its planning and development and must concentrate on institutionalizing its efforts in the MOH, if not the IPSS;

5. The VEA group and its CDC counterparts need to be more open to the PRISM/HIS process and participate fully in planning meetings, realizing that compromise is essential for the development of any new system;

6. Finally, if Alpha Consult is not providing management for the system through the Regional Coordinators, a new contractor needs to be hired with this responsibility. That contractor should also be given the responsibility for management of the logistics system, which is currently failing within the MOH.

Each of the foregoing recommendations will be discussed more fully in the context of a subsequent chapter. It should be noted that Project management is a key factor in the CSAP, and immediate attention must be taken to improving the management structure if the Project is to succeed. The Evaluation Team strongly encourages active attention to management and coordination issues at this time.

6.0 PROJECT FINANCIAL RESOURCES ANALYSIS

A. Total Costs and Initial Outlays

The CSAP was originally scheduled to begin in 1988 but was delayed to 1989. The total cost of the CSAP is budgeted to be $44,015,000, of which US$19,000,000 is to be funded by A.I.D. (43%) and US$25,015,000 by the GOP (57%) (See Table 1). Planned expenditures (greatest for PY 2 and 3) correspond to the phased implementation strategy which should result in all Project activities having been phased into all UDES by the end of PY 3.

Of the $25,015,000 to be funded by the GOP, 17% is to be disbursed in PY 1; this increases to 18% in PY 2, 23% in PY 3, 20% for PY 4 and 22% in the fifth PY. The GOP contribution is higher than that of A.I.D. for the last three PYs.

Planned expenditures by donor and year are as follows:

TABLE 1:
Funds to Be Disbursed by Donor and by Year, CSAP, Peru, 1989-1993

	A.I.D.		GOP		Total	
Year	No.	%	No.	%	No.	%
1	4,732	25	4,159	17	8,891	20
2	4,895	26	4,613	18	9,508	22
3	3,817	20	5,805	23	9,622	22
4	3,176	17	4,978	20	8,154	19
5	2,379	13	5,461	22	7,840	18
Total	19,000	100	25,015	100	44,015	100

The two sources of GOP funds to be used for the CSAP are PL 480 and the public Treasury. As illustrated in Table 2, the proportion of the GOP contribution to come from the public Treasury gradually increases from 27% for the first PY to 73% for the fifth.

Table 2:
Sources of GOP Funds to Be Used for the CSAP, Peru, 1989-1993

Year	% PL 480	% Treasury	Total (US$ 000)
1	73	27	4,125
2	64	46	4,638
3	43	57	5,802
4	40	60	5,004
5	27	73	5,446
Total	48	52	25,015

B. Project Cost by Project Component and Inputs

The Project can be divided into four components:

- o Expansion of CS Services by the MOH
- o Expansion of CS Services by the IPSS
- o Systems Strengthening
- o General Project Support

Table 3 presents total project costs by project component and funding source. As shown in Table 3, 36% of A.I.D. funds allocated to the CSAP are budgeted for the expansion of CS Services by the MOH, 9% to services by IPSS, 33% to systems strengthening and 16% to general project support.

Both foreign exchange and local currency costs are shown in the table. The local currency costs were calculated by the MOH based on prevailing market prices during the period March to June 1987 and converted at the exchange rate of Inti .20 = US$1. Therefore, local currency estimates should be considered unrealistic under present economic conditions. This should be taken into consideration if the CSAP is revised.

Of the total A.I.D. contribution of US$19 million, approximately $14 million (74%) has been budgeted for foreign exchange costs, primarily consisting of medical and laboratory equipment and supplies, vehicles, contraceptives and data processing equipment in addition to overseas training, evaluation, USAID management staff and expatriate technical assistance. The remaining US$5 million is to finance local currency costs related primarily to Project monitoring and support activities and the MOH's integrated training program. The GOP counterpart contribution finances local currency costs exclusively, out of which US$17.4 million (70%) has been budgeted for operating expenses and Project monitoring and support activities, while the remaining 30% has been budgeted to in-country training, local office equipment, medical and laboratory supplies and contingency.

TABLE 3. TOTAL PROJECT COSTS BY PROJECT COMPONENTS, FUNDING SOURCE AND BY FOREIGN EXCHANGE (FX) AND LOCAL CURRENCY (LC) COSTS - INITIAL OUTLAYS (US$000)

PROJECT COMPONENT	FX	LC	TOTAL	%	GOP TOTAL	GOP %	GRAND TOTAL	GRAND TOTAL %
A. Expansion of CS Services by MOH								
1. Diarrheal Disease Control	117	56	173	.91	819	3.27	992	2.25
2. Nutrition	216	114	330	1.74	40	0.16	370	0.84
3. Immunizations	2,590	114	2,704	14.23	0	0.00	2,704	6.14
4. Family Planning	3,012	321	3,333	17.54	0	0.00	3,333	7.57
5. Acute Respiratory Infections	211	0	211	1.11	1,943	7.77	2,154	4.89
Sub-Total	6,146	605	6,751	35.53	2,802	11.2	9,553	21.69
B. Expansion of CS Services by IPSS								
1. Family Planning	1,106	52	1,158	6.09	154	.62	1,312	2.98
2. Other Child Survival	583	0	583	3.07	355	1.42	938	2.13
Sub-Total	1,689	52	1,741	9.16	509	2.04	2,250	5.11
C. Systems Strengthening								
1. Field Epid. Trng. Programs	1,431	442	1,872	9.85	44	0.18	1,916	4.35
2. VEA Laboratories	752	4	756	3.98	0	0.00	756	1.72
3. Epidemiolog. Surveillance	0	346	346	1.82	0	0.00	346	.79
4. Health Information System	831	501	1,332	7.01	0	0.00	1,332	3.03
5. Integrated Trng. Program	132	523	655	3.45	2,861	11.44	3,516	7.99
6. Integrated Supervision Program	0	0	0	0.00	1,549	6.19	1,549	3.52
7. Transportation	939	0	939	4.94	374	1.50	1,313	2.98
8. Health Communications	0	323	323	1.70	974	3.89	1,297	2.95
Sub-Total	4,085	2,139	6,223	32.75	5,802	23.2	12,025	27.33
D. General Project Support								
1. USAID Management Staff	826	274	1,100	5.79	0	0.00	1,100	2.50
2. Audits & Evaluations	230	305	535	2.82	0	0.00	535	1.22
3. Operating Expenses	0	0	0	0.00	13,652	54.58	13,652	31.02
4. Monitoring & Support	0	1,326	1,326	6.98	1,717	6.86	3,043	6.91
5. Other (FP Survey)	0	0	0	0.00	104	0.42	104	0.24
Sub-Total	1,056	1,905	2,961	15.59	15,473	61.86	18,434	41.89
E. Contingency	996	328	1,324	6.97	429	1.71	1,753	3.98
GRAND TOTAL	13,972	5,029	19,000	100.00	25,015	100.01	44,015	100.00

A breakdown of budgeted CSAP funds by CS intervention is shown in Table 4 for the total project and by donor.

Table 4:
Budgeted CSAP Funds by CS Intervention to which Funds are Allocated and Donor, Peru, 1989-1993

	Donor		
Intervention	A.I.D. (%)	GOP (%)	Total (%)
DDC	1.1	4.0	2.6
Nutrition	2.0	.3	1.0
EPI	16.7	.5	7.1
FP	23.6	.6	10.6
ARI	1.3	7.9	5.6
Total	44.7	13.2	26.8

Note: Includes both MOH and IPSS CS services.

As indicated, a large proportion of A.I.D. funds allocated to CSAP have been budgeted to CS activities (44.7%) compared to only 13.2% for the GOP. About a quarter of total project funds have been allocated to CS activities with FP receiving a larger proportion of the total funding than other interventions.

Table 5 shows the nature of A.I.D. Project inputs as the CSAP was originally designed.

Table 5:
A.I.D. CSAP Inputs Originally Budgeted, Peru, 1989-1993

Inputs		Amount Budgeted (US$ 000)	%
A.	Training	1,880	9.9
	1. Overseas	518	2.7
	2. In-Country	1,361	7.2
B.	Technical Assistance	1,557	8.2
	1. Expatriate Advisors	1,105	5.8
	2. National Advisors	452	2.4
C.	Commodities	10,737	56.5
	1. Vehicles	939	4.9
	2. Medical Lab & Other Equip.	2,861	15.1
	3. Office Equipment	61	.3
	4. Computers	936	4.9
	5. Supplies	1,738	9.1
	6. Contraceptives	3,933	20.7
	7. Others	268	1.4
D.	Other Costs	3,504	18.4
	1. USAID Management Staff	1,100	5.8
	2. Audits and Evaluations	631	3.3
	3. Operating Expenses	50	.3
	4. Monitoring and Support	1,326	7.0
	5. Other	397	2.1
	Sub-Total	17,676	93.0
E.	Contingency	1,324	7.0
	Total Project Costs	19,000	100.0

Commodities constituted the largest input with US$10,737,000 consisting of vehicles; medical, laboratory and other equipment; computers; supplies; contraceptives; and other.

Table 6 shows that the amount currently budgeted for commodities has decreased only slightly to US$9,433,000, nearly half the total A.I.D. contribution. The majority of commodity procurements are budgeted in the first three PYs.

TABLE 6

STATUS OF A.I.D. and GOP Contributions to CSAP, July 31, 1990

EXPENSE CATEGORY	A.I.D. LOP Budget No.	%	Oblig. No.	%	Earn. No.	%	Comm. No.	%	Exp. No.	%	GOP LOP Budget No.	%	Total Budget No.	%
Overseas Training	518	2.7	80	.7	54	.7	54	.9	34	.9	0	0	518	1.2
In-Country Training	1,362	7.2	568	5.2	568	7.7	568	9.0	46	1.2	3,285	13.1	4,647	10.6
Technical Assistance	4,500	23.7	2,283	20.8	1,157	15.6	1,074	17.0	529	14.2	0	0	4,500	10.2
Vehicles	500	2.6	159	1.5	159	2.1	158	2.5	158	4.2	0	0	500	1.1
Equipment and Supplies	7,000	36.8	4,900	44.6	3,595	48.4	2,850	45.2	2,063	55.2	3,905	15.6	10,905	24.8
Contraceptives	1,933	10.2	850	7.7	0	0.00	0	0.0	0	0.0	0	0	1,933	4.4
Evaluations and Audits	300	1.6	246	2.4	245	3.3	0	0.0	0	0.0	0	0	300	0.7
Monitoring and Support	1,773	9.3	797	7.3	686	9.24	686	10.9	404	10.8	17,396	69.6	19,169	43.6
Other Support Costs	1,100	5.8	1,100	10.0	959	12.9	913	14.5	505	13.5	0	0	1,100	2.5
Contingency	14	.1	0	0.00	0	0.00	0	0.0	0	0.0	429	1.7	443	1.0

As can be seen, a substantial amount of funds budgeted for training and commodities has not yet been obligated.

Recurrent costs during the life of the Project are approximately US$6.4 million per year. This level of recurrent costs must be financed after the Project ends in order to sustain the accomplishments under the Project, to continue the service delivery programs, and to maintain all the decentralized support systems. Several of the recurrent cost items, namely contraceptives, vaccines, needles and syringes, must be imported. To the extent that the GOP is unable to finance these costs, together with budget constraints arising out of the economic repercussions of the shock-policy of the new Administration, it appears clear that a redesign of the project must include components of community and private-sector involvement in order to guarantee the continuity and sustainability of the activities involved.

C. Present Status and Expenditures

Although there have been some delays in various components of the CSAP, the overall expenditure rate of A.I.D. funds can be considered normal and timely given the conditions prevailing in Peru. As of July 31, 1990, 20% of total budgeted funds had been expended (US$3,739,000), out of which, 59% was for commodities (vehicles, equipment, and supplies). As shown in Table 7, 58% of A.I.D. funds have been obligated, 39% earmarked, and 33% committed. Table 7 expresses A.I.D. funds for the CSAP which have been obligated, earmarked, committed and expended as a percentage of what is currently budgeted.

Table 7:
Pipeline Analysis, A.I.D. Funding of CSAP, July 31, 1990

In US$ 000

Expense Category	LOP Budgeted	Obli-gated	Ear-marked	Committed	Expended
Overseas Training	100	15.4	10.4	10.4	6.6
In-Country Trng.	100	41.7	71.7	41.7	3.4
Technical Assistance	100	50.7	25.7	23.9	11.8
Vehicles	100	31.8	31.8	31.6	31.6
Equipment and Sup.	100	70.0	51.4	40.7	29.5
Contraceptives	100	44.0	0.0	0.0	0.0
Evaluations & Audits	100	82.0	81.7	0.0	0.0
Monitoring & Support	100	45.0	38.7	38.7	22.8
Other Support Costs	100	100.0	87.2	83.0	45.9
Contingency	100	0.0	0.0	0.0	0.0
Total	100	57.8	39.1	33.2	19.7

Disbursements by the GOP from PL 480 funds have been low, as can be seen in Table 8. As of September 1990, only 8% had been disbursed out of the amounts programmed for the entire year. The hyperinflation rate also accounts for these reduced figures, since GOP expenditures are paid in current Intis, and considerable time lags are involved.

Table 8:
GOP PROGRAMMED 1990 PL 480 DISBURSEMENTS AND EXPENDITURES

	MATERNAL CHILD CARE		MCC SUPPORT		TOTAL	
	$	%	$	%	$	%
Programmed 1990	2,717	100	3,487	100	6,204	100
Expended 1990	224	8	294	8	518	8

D. Conclusions and Recommendations

The Project has not met expectations because of the chaotic situation of the MOH. As such, fault is not attributed to the Project per se but to the operating conditions within which the Project had to function. Hyperinflation supposes a high loss in purchasing power when time lags in the use of funds are commonplace. The reductions in the value of money can be significant, seriously affecting the normal functioning of services.

There is overall inefficiency in the GOP bureaucracy. Funds have often not reached their appropriate destinations on time. In addition, the extreme centralization of GOP disbursement procedures is rigid and does not allow for local adjustments according to local needs. The Evaluation Team has received numerous verbal comments that counterpart funds (GOP) in many occasions have not been allocated to their assigned purposes, but instead, are being diverted to other expenditures.

The MOH has undergone recurrent political and labor conflicts, i.e. extended physicians' and nurses' strikes, affecting all MOH activities, including the CSAP. There has been discontinuity and high turnover in senior MOH positions that has affected the decision process and MOH authority lines at all levels. The staffing levels at the MOH are not uniform in strength and technical skills. Salary levels do not ensure a minimum level of proficiency, permanency or dedication.

1. In the long run and as a final solution for the multiple problems involved, efforts should be directed toward strengthening community and private sector involvement

in the actual delivery of PHC services. This could include community self-financing in a variety of ways which do not exclude State subsidies. There are many successful experiences in different countries, both for ambulatory as well as hospital care. (A recent example is PROSALUD in Santa Cruz, Bolivia, an A.I.D.-funded, PHC Project.)

2. Regionalization should not be a new form of statism and inefficiency that is extended to the local level, multiplying the often ineffectual structure of the MOH throughout the country.

3. CS actions are directly related to PHC, and there is a wide range of opportunity for private and community involvement, as has been shown in other developing countries. Involvement can include organization, administration, programming, evaluation, monitoring, financing, etc., by the community and private sectors. In these schemes, the public sector still retains an active, and often necessary, role in setting up guidelines, norms, controls, and assistance.

4. In the medium and short run, stress should be placed on improving the public delivery of services, but only as a temporary effort until the private sector can take over the bulk of the responsibilities. Among the considerations in the strengthening of the public sector, are:

   a. Stress on local programming of activities, from ground level upwards, taking into account real demographic conditions and data. The local providers and personnel involved in the actual delivery of services must participate in this process, since they know the community's needs, etc. and because their roles are crucial in securing their support and participation.

   b. A balance must be maintained between local autonomy, and acceptance of common and shared norms and procedures. Each UDES, for example, has to use the same information system, forms, indicators, etc.

   c. Prompt transference of funds to the local level, and flexibility in their allocation according to local priorities should be considered. The central or regional MOH should exert after-the-fact controls. Effort should be placed on demand response (consumer behavior and satisfaction and improvement in real health). Less emphasis should be given to the measurement of supply-side deliveries.

d. Timely programming of activities providing feedback on past real performance should be considered. The design, budget, and the actual execution of activities has to be met in accordance with specific dates.

e. Continuous programming and evaluation corrections, by health personnel involved in the delivery of services, as well as monitoring, coordination, and supervision from the UDES level is suggested.

f. There must be flexibility in the use of funds, yet higher level personnel should be held accountable for the use of funds. There should be community involvement in the process of evaluating the proper use of money i.e. if the community finances the services (e.g. through the general tax system, fee-for-service) they should be involved with what happens with the funds.

g. The HIS/MIS must be integrated to measure the maximum impact of the activities involved. MIS indicators, especially those concerned with the financial aspects of the program, should eventually be linked with results and treatment outcomes.

h. Program funds should not be classified analytically by programs, but assigned according to an integrated health problem-solving approach.

5. Both IPSS and the MOH should gradually disengage from the delivery of services. IPSS should evolve to a financing agency and a controlling agency in harmony with the norm-setting and norm-controlling MOH. Physicians should be permitted to organize by themselves (with community involvement, etc.), under the norms, surveillance and control of the public sector.

6. The CSAP should not be considered autonomous and/or isolated from other projects, funds, funding agencies, and activities connected with CS and MCH. A broad approach is necessary, both in the design of national as well as regional guidelines and activities.

7.0 EXPANSION OF IMMUNIZATION SERVICES

A. Activity Area in Focus

According to the PP, USAID is working under a mandate of the U.S. Congress and with the World Health Organization's (WHO) Expanded Program of Immunization (EPI) to reach and maintain the target of 80% national coverage by 1991 of children under age five for six vaccines: polio, measles, diphtheria, pertussis, tetanus and tuberculosis. USAID is also joining with PAHO, Rotary International and others who have taken the lead in interrupting the transmission of wild polio virus in the Americas by 1990. In Peru, it is planned that the MOH and the IPSS will join in a joint strategy with donor agencies to meet immunization goals.

It has been noted that immuno-preventable diseases constitute the fourth largest cause of death in Peruvian children less than one year of age. In the mid-1980s, Peru carried out vaccination campaigns that moved the vaccination rate for children under five from a level of less than 30% to a purported level of almost 80%. (Note: results obtained by the Evaluation Team in its site visits to Piura, Iquitos and Cusco cast doubts as to the veracity of this claim). Even MOH estimates that complete coverage in rural areas approaching 50%, seems highly optimistic.

B. Objectives and Strategies Used

The overall plan calls for universal coverage for children under one year of age by 1991 through a combination of public campaigns, improvements in the cold chain, and increased capacity for delivery of services. USAID is committed to strengthening the service delivery component of the MOH and the IPSS in order to achieve these ends. USAID has supported groups to purchase, install, and maintain cold chain equipment; the establishment of a VEA system; and appropriate evaluation activities.

The CSAP was designed to work closely with the MOH in support of the national EPI. The overall MOH plan anticipated significant participation by PAHO, UNICEF, Rotary International, and USAID. The Project component of the CSAP relating to immunization is USAID's contribution to the overall EPI National Plan of Action that is being carried out in conjunction with other donor agencies.

Strategies to be employed included targeting mini-campaigns organized at the UDES level and strengthening MOH EPI logistics services to ensure that a functioning cold chain and vaccines are available at all service delivery points on a continuous basis. It was anticipated that the Project would help increase public demand for available services through community participation and the use of social marketing techniques.

The objectives of the plan were sufficiently ambitious, and called for participation of all elements of the health sector, including IPSS, the armed forces and private institutions, all working with the MOH. Furthermore, other GOP agencies, including non-health related agencies, were to join in this process.

The specific activities of USAID under the immunization program for the CSAP project were: 1) purchasing needles and syringes and related equipment to enhance the cold chain; 2) providing short-term training outside of Peru; and 3) offering related technical assistance through the ESS and other related programs. The MOH was to: 1) purchase vaccines; 2) provide vaccination cards; 3) support in-country training at all levels of service delivery; 4) pay for all recurrent operational costs; and 5) finance local costs associated with community education and mass media promotion campaigns. Other donors were to assist in various other components of these activities.

C. Results to Date

1. Services

A simple summary regarding services realized to date in relation to the objectives stated, is that the CSAP immunization program has fallen far short of its goal. Numerous anecdotal and written reports received on the Evaluation Team's site visits indicate that immunization levels for children under five seldom exceed 30% and are often much lower. It was not unusual to have vaccination figures for single immunization rates reported at a level in the single digits.

There are many and varied reasons for this very limited performance. Reports from a purposive sample in the field indicate that they center around three major shortcomings in the system notably: 1) chronic and debilitating strikes; 2) inadequate logistics support; and 3), an inability to extend services to the most remote and needy areas.

With respect to strikes, the strike of health workers from late April until early July 1990 paralyzed virtually all aspects of the health delivery system. Essentially, no immunizations were given, and progress in the campaign came to a halt. According to at least two knowledgeable informants, the first three months of 1990 were "lost" as a result of either bad weather or the inability of the GOP to get the budget together in order to support services. The next three months were lost due to the strike. Only now is serious attention being given to an active immunization campaign, including two mass campaigns in (October and November) 1990. Given that over one-half year has effectively been lost, the immunization of children under one year has to be severely compromised. With regard to logistics support, the situation could hardly be worse.

2. Logistics

Since the Evaluation Team was not able to meet directly with the National Immunization Coordinator, the following comments are based on the Evaluation Team's field visits to three regions: Piura, Iquitos and Cusco as well as "extra-MOH" observations and discussions in Lima.

a. Piura

The Regional Immunization Coordinator observed that, in coordination with the CSAP Regional Coordinator, a health survey was carried out indicating scarcities of medicines in pharmacies. Also, syringes were unavailable in the warehouse because too many tubes had been broken. In one case, the CSAP Coordinator was able to facilitate the arrival of a shipment of overdue syringes.

The UDES Logistics Director expressed concern about a request from the immunization program director for vehicle-related items, i.e. concern was rooted in the probability that the director would never receive items needed due to the difficulties of the legally-required, time-consuming bidding process and also in view of escalating prices on the commercial market. In all likelihood, the Director's request will be affected by the realities of Peru's economic situation.

b. Iquitos

Information on the immunization program was obtained from visits to three hospitals, but not from the Centros de Salud. Information provided to the Evaluation Team indicated that no health post in the Iquitos Region possesses a refrigerator. According to the CSAP National Coordinator who accompanied the Evaluation Team, this deficiency is rooted in a study performed by PAHO which overlooked all of the Centros de Salud (CS). The only effective way to bring in supplies from Lima is by sending a person to collect them. The central MOH in Lima doesn't pay the freight costs, even though PL 480 money is budgeted for the purpose in the CSAP. A recommendation has been made by Alpha Consult (the National Coordinator) recommending a project amendment to A.I.D. to include outboard motors and water distillation units in the CSAP. According to the Director of Programs, Services and Policy (DPSP) in the MOH, all of the UTES are in need of refrigerators. The quantity of refrigerator spare parts purchased under the project is apparently insufficient also.

The MOH Immunization Program (PAI) Coordinator has been on the job for only one year, and no statistical data were available when she started. PAI logistics system information appears to be incomplete, i.e. only part of the 1st quarter's shipments have arrived and only three of 14 refrigerators are working. Only 8,000 syringes were sent by Lima when 10,300 were programmed as needed

for the immunization program. Brazil is helping with vaccination missions along the Peru-Brazil border, and a Canadian group is helping along the Ecuador-Peru border. Since supplies (syringes and needles) aren't arriving, and field transportation (motorboats) is needed, the MOH Immunization Coordinator indicated that she is "embarrassed" for Peru, when working alongside the Brazilians and Canadians. Because of the lack of appropriate transportation and funding, program supervision is suffering.

In the IPSS, the CS Director is in charge of preventative medicine. IPSS works with Serumistas, and MOH personnel help with Serumistas's training. However, no MOH refrigeration is available. Accordingly, IPSS/Serumistas must work with the MOH vaccination teams, using IPSS refrigeration units. The Regional Coordinator has helped the IPSS to develop quarterly budgets and plans to further IPSS' CS activities.

c. Cusco

PL 480-funded syringes, needles and serum are chronically in short supply.

Refrigerators are donated by GTZ, but there is no kerosene available, and solar refrigerators are still considered to be experimental. While the MOH Hospital Regional de Cusco has been able to provide assistance to the PAI, gasoline is unavailable, and inflation is taking a toll on programming.

d. Lima Ciudad

According to the MOH Immunization Coordinator, private physicians distribute excessive amounts of antibiotics. Also pharmacies sell antibiotics without prescriptions and in inappropriate doses. (Note that these are sold by retail assistants, not pharmacists.) In addition, there is a serious problem with expired antibiotics, and the supply of syrups that are used to mix with the antibiotics for pediatric administration are constantly out of stock. More training of public health workers is needed. There is a need for more equipment, particularly stethoscopes. Currently, only 20 stethoscopes exist for the Lima Ciudad catchment area.

D. Conclusions and Recommendations

1. Iquitos

a. Refrigerators:

1. A study performed by PAHO excluded the Centros de Salud, resulting in a report that no health post possessed a refrigerator;

2. All of the UTES are in need of refrigerators - of 14 extant, only three are working and the quantity of refrigerator spare parts purchased under the project is insufficient for the need;

3. Since no MOH refrigeration is available, IPSS Serumistas work with the MOH vaccination teams, using IPSS refrigeration units;

4. Approximately 200 thermal units are located at the Almacen de Venezuela, awaiting disposition. Reportedly, action by the MOH's central Department of Immunization with regard to the thermal units is pending;

It is recommended that the CSAP National Coordinator and the Regional Coordinator work together to resolve the above deficiencies as soon as possible.

b. The central MOH does not pay the transportation costs for sending PAI and other supplies, nor costs associated with travel and per diems for regional staff to go to Lima and obtain them, even though PL 480 funds are allocated for this purpose. It is recommended that the CSAP National Coordinator and the Regional Coordinator explore this matter to ascertain that PL 480 monies be paid accordingly. This should not be retroactive and should be limited to future trips.

c. Because of the lack of appropriate river transportation, program supervision is suffering. The CSAP National Coordinator's recommendation for a project amendment to A.I.D. to include outboard motors and water distillation units for program use in the CSAP should be supported.

d. Since only part of the 1st quarter's shipments have arrived, the CSAP National Coordinator and the Regional Coordinator should follow up with the central MOH to ensure the completion of the remainder of the shipment.

e. The discrepancy in the shipment of syringes (only 8,000 were sent by Lima when 10,300 were required) should be investigated and corrected.

2. <u>Cusco</u>

a. Because PL 480-funded syringes, needles and serums have generally and chronically been in short supply, the CSAP National Coordinator and the Regional Coordinator should investigate and resolve the matter.

3. Lima-Ciudad

a. In regard to the UDES Immunization Coordinator's allegation that private physicians dispense excessive amounts of antibiotics, the CSAP National Coordinator should work with the UDES Director and the UDES CSAP Immunization Coordinator to urge that this practice be curtailed. This could be approached through educational and perhaps legal channels.

b. The serious problem of expired antibiotics is a matter that requires an investigation by the appropriate responsible MOH authorities. The CSAP National Coordinator could assist in facilitating this inquiry by coordinating the relevant groups within the MOH.

c. More training of public health workers relative to the PAI is needed. The CSAP National Coordinator, together with USAID, should explore possibilities of addressing this need.

d. There is a need for more equipment, particularly stethoscopes, in MOH facilities; currently, only 20 exist for the Lima Cuidad region. The CSAP National Coordinator should assist in this matter.

8.0 EXPANSION OF DIARRHEAL DISEASE CONTROL SERVICES

A. Activity Area and Focus

Next to ARIs, diarrheal diseases constitute the second major cause of morbidity and mortality of infants in Peru. Data at the time the Project was being planned indicated that about 22% of all infant deaths in the country were due to diarrheal diseases. When diarrheal diseases and malnutrition occur simultaneously, as is often the case, this complicates both the patient's condition and the treatment modality. What happens, in effect, is a downward spiral, which too frequently results in the death of the patient unless there is appropriate intervention.

Intervention practices include basic nutritional support for children during their weaning and post-weaning period, proper management of diarrhea when it occurs, and the appropriate avoidance of both malnutrition and diarrhea. It is in this regard that USAID and other donor agencies have, over the years, put great emphasis on both food supplementation and water/sewage projects.

Perhaps the two most significant interventions that have been recommended over the last decade to influence diarrheal disease rates are: the international attention given to breast feeding, as opposed to bottle feeding, and the use of ORT. A study of diarrhea in Costa Rica found that infants who were bottle fed in the first six months of life, contracted diarrhea at four times the rate of partially breast fed infants and at almost seven times the rate of exclusively breast fed infants. In other words, promoting breast feeding during the period when most infant mortality occurs has a substantial impact on the diarrheal death rate.

ORT represents what is probably the most significant therapy ever devised for treatment of a debilitating and deadly disease. Part of the reason is its simplicity which consists of a solution of sugar and salts administered orally. The great advantage of ORT is that the salt solutions can be prepared locally and administered at minimal cost.

Importation of ORS was a major part of the USAID CS strategy until March 1986 when four infants who were being treated in the Cayetano Heredia Hospital Rehydration Unit, died as a result of hyperkalemia. This led to the recall of all ORS salts imported into the country from the United States and an exhaustive investigation of the incident.

While no proof was ever obtained that the USAID-provided ORS were to blame, a check of 3,000 samples of salts provided by the same manufacturer produced one with excess of potassium and another with too little potassium. This evidence was convincing enough

that only one month before the Evaluation Team arrived in Peru, 1.4 million packages of ORS that were imported from the United States and in storage were destroyed. Also, as a result of this incident, some two million packages of salts in Ecuador were recalled and destroyed.

As a result of the 1986 ORS incident and negative publicity for USAID and the United States Government, a decision was taken to import no more ORS into the country. Rather, the new plan was to assist the MOH and Peru to produce their own ORS by providing training, supervision, logistics support, operations research and evaluation assistance in this project.

B. Objectives and Strategies Used

As with immunization, there is an integrated plan of action for control of diarrheal diseases in the region of the Americas. Much of the coordination for this effort is coming from PAHO and the Inter-Agency Coordinating Committee for the Control of Diarrheal Diseases (consisting of PAHO, UNICEF and USAID). A newly published product of this committee's work has just been made available and provides a plan of action for DDC throughout the Americas. This document calls for three broad strategies to achieve reductions in morbidity and mortality due to diarrheal diseases. They are as follows:

1. Promotion of family and community-level self-reliance in correct case management of diarrheal diseases in children;

2. Promotion of self-reliance in the planning, organization and delivery of Chronic DDC activities within the context of PHC with the participation of all sectors; and

3. Promotion of national and regional self-reliance in the production of ORS, including the establishment of effective quality control procedures.

A number of specific strategies are then suggested relating to case management; communication; ORS production, supply and distribution; monitoring, supervision and evaluation; and research.

USAID strategy for the present project was basically consistent with the recommendations of the Inter-agency Coordinating Committee for the Control of Diarrheal Diseases of PAHO. Basically, the CSAP strategy involves emphasizing adequate training, supervision, logistics, operations research and evaluation to promote increased effective use of ORT both in health facilities and at home. Because of the problems attendant with the previous imported ORS, the project has proposed to assist Peru to develop its own ORT capacity.

In addition, the CSAP was designed to support establishment of five hospital-based rehydration units in five different health departments to complement four already established centers. Further, the Project was designed to increase community awareness of diarrheal diseases and their appropriate prevention, diagnoses and management. This was to be supported through in-service training programs for health workers. Operations research in DDC was also to be supported through AID/W centrally-funded projects.

Specifically, in the CSAP, USAID proposed to:

1. Finance purchase of equipment and supplies for the five hospital-based regional training centers for DDC;

2. Provide short-term training outside of Peru;

3. Train health workers in DDC; and;

4. Provide related technical assistance under the integrated health communications ESS and Statistical Reporting programs.

The MOH was to carry out companion programs relating in-country training, actual treatment of diarrheal diseases with ORS, and community education/mass media promotion of preventive strategies. Mainly, AID/W was to provide quality control and packaging to Laboratorios Unidos S.A. (LUSA), the local manufacturer of ORS. (This support was over and above that provided specifically through the CSAP.)

C. Results to Date

1. Services

The Evaluation Team has found it somewhat difficult to assess the results of DDC services provided under this Project. As with immunization services, there are many actors involved in ORT and DDC. As mentioned, this is a prime program of the Coordinating Committee which includes PAHO and UNICEF, as well as USAID.

According to the April 1, 1989 to March 31, 1990 PSR, some 1.5 million packets of ORS were produced by LUSA in the cumulative period up to March 31, 1989. In addition, LUSA has purchased a mixer, dosifier and a package sealer for local ORS production. It was anticipated that the new ORS production line would be operational by May 1990. In the meantime, LUSA has been buying additional ORS packets from a local firm. According to the PSR, five new regional training centers for DDC were equipped and functioning through the CSAP.

Several informants on site visits reported that they were missing, or unable to obtain, stoves (for boiling water) in order to prepare demonstration solutions for patients obtaining their ORS. General nutrition demonstrations for the public were also limited by the unavailability of either the stoves or the fuel to operate them. Presumably, this is an issue of some importance at the health center and the health post level.

While there were sporadic instances of complaints regarding unavailability of ORS, this did not seem to be a major problem. Compared to immunization equipment and FP supplies, ORS were usually the last to be mentioned as a matter of concern.

In the Loreto area of the Amazon Region, 1990 figures reveal that three hospitals, 14 health centers and 183 health posts require ORT capability and that only 50 locations have this capability. This leaves 133 to be installed and 20 of the 50 to be strengthened. This would seem to suggest that, at least in this region, there is some distance to go before all project goals are met. Data from Cusco suggest a shortage of various medications and supplies needed to treat diarrheal disease. Nonetheless, a substantial number of cases are reported as having been seen and treated in those areas.

A notable feature of the CSAP is that a relatively small percentage of USAID funds is directed toward acute DDC. By far, the greatest percentage of resources is dedicated to either immunization or FP supplies. Presumably, USAID is making a contribution through PL 480 and Peruvian Treasury funds to this program, but the amount has thus far been difficult to determine (see financial analysis following). In summary, in the absence of any national data from the MOH, data from the most recent PSR by USAID, or direct information from the field, it is difficult to evaluate the degree of service delivery by the Diarrheal Disease component (CEDA) of the Project.

2. Logistics

The four ORS products administered by the CSAP are:

- Salvadora produced by LUSA. It is the only product on the Peruvian market that conforms to the formula recommended by WHO and is registered with CONAMAD as an over-the-counter medicine.
- Electoral
- Lytren
- Frutti-Flex

a. Piura

The Unidad de Rehidratacion Oral (URO) Comunales is functioning well, and personnel levels are described as being satisfactory. The unavailability of gasoline has halted the program. As with the immunization program, inflation has been a detriment to program planning.

Catacaos Centro de Salud

The greatest impediment is a general lack of medicines, particularly sulfa and Bencetacil. While parasitical diarrhea requires medications, they aren't in stock, nor are there any funds available to buy them. Since MOH units are prohibited by law from competing with pharmacies, health centers such as Catacaos are forced to purchase from commercial pharmacies at highly inflated prices, even after discounts.

The logistics system vis-a-vis the URO is well developed: a health worker takes medicines and ORS along for distribution when visiting health posts.

b. Iquitos

The CSAP Diarrheal Program Coordinator needs training in program administration. No one works with CEDA at the UTES level. The problems of the CEDA program are similar to those of the PAI program: of 185,000 units of ORS ordered, only 20,000 have arrived.

Centro de Salud Morona Cocha

There was no distilled water available in the pharmacy.

D. Conclusions and Recommendations

1. The greatest impediment at Piura's Catacaos CS is a general lack of medicines, including antiparisitical medications, penicillin, sulfa and Bencetacil. The CSAP National Coordinator and the Regional Coordinator should explore satisfactory resolution of these deficiencies;

2. The CSAP CEDA Program Coordinator in Iquitos should be given training in program administration. The CSAP National Coordinator and the Regional Coordinator should make arrangements for training to be provided;

3. Only 20,000 units of ORS have arrived to date in Iquitos of 185,000 units ordered. The CSAP National Coordinator and the Regional Coordinator should investigate this deficit at once and ensure delivery of the required number of units.

9.0 EXPANSION OF NUTRITION SERVICES

A. Activity Area and Focus

As noted, the 1984 ENNSA Study provided useful baseline information guiding the current project's development. It was noted in that study that 37.8% of the 0 to five year old children surveyed were chronically malnourished. More than 50% of children under six, and over 70% of four and five year olds living in the rural Sierra were chronically malnourished, while over 60% of children under six and nearly 70% of children 18 to 23 months from the jungle regions of Peru suffer chronic malnutrition. In Lima, the ENNSA Study showed a malnutrition rate of 15.8% for children under six years of age with the higher percentage among the three and four year olds. It was observed that infectious diseases contributed to this burden of malnourishment and growth retardation.

In Peru acute malnutrition is not nearly so prevalent as is chronic malnutrition. For example, there is little evidence of kwashiorkor or marasmus. Less than one percent of children under six were more than two standard deviations below the mean weight for their height. This is increased in certain areas and at certain ages, such as the rural jungle regions from 18 to 23 months of age.

The previous focus of USAID in nutrition has been on supervision and training activities, purchase of portable weighing scales, printing of growth charts and teaching materials, research studies of weaning and foods, and assistance in development of diffusion techniques for information pertaining to dietary management of diarrhea. In addition, USAID has targeted supplemental foods for the most malnourished populations in the rural Sierra, as well as farmers in the Sierra, Jungle and Northern Coast (among others). An interesting finding from a study reported in 1987 was that the risk of malnutrition was almost four times greater for a child living in the Sierra relative to a child living in Metropolitan Lima.

B. Objectives and the Strategies Used

For reasons that are not completely clear to the Evaluation Team, there were no clear objectives or strategies put in place for the Nutrition component. Apparently, project proposals were requested and several received, although none found acceptable in sufficient time to be incorporated in the Project. Among the proposers was the International Institute of Nutrition (IIN), an independent and well regarded research institution located in the outskirts of Lima.

According to the PP, "the exact nature of Nutrition activities. . . will be defined in the plan which will be prepared by the MOH and submitted for approval prior to the disbursement of A.I.D. funds for this purpose." The paper went on to note that Nutrition activities are likely to include growth monitoring, promotion of breast feeding practices for infants, research and promotion of nutritious weaning foods, proper dietary management of diarrhea, and improved targeting of beneficiaries for supplemental feeding programs. It was further anticipated that training in the supervision of MOH personnel in these activities would be complemented by community education and promotion of nutrition messages to the communities and, especially, to mothers of infant children.

The PP went on to note that A.I.D. is likely to finance: 1) purchase of equipment; 2) operational research studies on weaning foods; 3) short-term training outside of Peru; and 4) related technical assistance under the Integrated Health Communications, ESS and Statistical Reporting Programs. It was anticipated, that the MOH, would pick up in-country training, recurrent costs related to growth monitoring activities, and local costs related to community education and mass media promotion.

C. Results to Date

No nutrition component has yet been approved for the CSAP. USAID found that the MOH had met their obligation, as spelled out in the Project Agreement, to provide a concrete nutrition plan and budget to USAID in May 1990. This plan was acceptable to USAID for the purpose of removing the Condition Precedent concerning disbursement of funds for nutrition. USAID and the MOH are currently discussing which specific activities presented in the plan will be financed with project funds. Accordingly, anything that is being done in this area is being financed through other components of USAID, other donors, or by the GOP. The CSAP has no nutrition component at this time. Therefore, there can be no analysis of its effectiveness.

10.0 EXPANSION OF ARI SERVICES

A. Activity Area and Focus

ARIs are said to constitute the major cause of death for children under age five in Peru. Indeed, some 30% of all deaths in this age group are due to ARI, with half of these occurring to children under one year of age. ARIs are also the major cause of morbidity among children through age four. Some 80% of all visits to health facilities in Peru are estimated to be related to ARIs.

As with diarrhea, ARIs are caused by a wide variety of disease agents. More than 300 bacterial and viral sources have been identified, making vaccine development difficult, if not impossible. ARIs may be located in the upper or lower respiratory tracks. Upper respiratory infections range from the common cold to bacterial pneumonia, with its attendant high mortality rate.

Bacterial infection in the lower respiratory track tends to be the most dangerous and difficult to treat. Unfortunately, it is frequently confused with other respiratory infections and not treated with sufficient anticipation or vigor. The result is often fatal.

Four of the most important respiratory infections--measles, diphtheria, pertussis, and tuberculosis-- have been targeted by the Expanded Program on Immunization (EPI) and can be prevented, at least to some degree. Other viral and bacterial infections are more difficult to prevent and often must be approached through treatment. The focus here must be on prompt treatment with appropriate drugs and proper care of the patient. This kind of treatment is often difficult to achieve in developing countries, including Peru.

One way to prevent ARIs is through a better environment, good nutrition, adequate housing, and health education. An alert mother can do more to prevent unnecessary morbidity and mortality than health professionals. Accordingly, many efforts toward control of respiratory diseases are directed at the mothers of the children being targeted.

B. Objectives and Strategies Used

Working in conjunction with the GOP and international donors, USAID has the goal of reducing the death rate due to ARIs in children under five and reducing morbidity through the promotion of prevention and early treatment. Part of the resultant strategy is to improve early detection and home treatment capabilities of families and communities, while providing assistance for investigations of the causes of ARI and cost/effective prevention and treatment strategies. As a component focus, USAID proposes to

strengthen MOH capabilities to deliver services as well as increase public knowledge and demand for these services.

The CSAP project was designed to support the implementation of the MOH's National Plan to control ARIs which was designed in early 1987. This plan emphasizes training and supervision activities for all levels of MOH personnel in the early detection and treatment of moderate and severe cases of ARIs that can benefit from antibiotic therapy. Also included in the plan are community education activities aimed at increasing community participation in the control of ARIs and in preventive activities such as immunization, improvements in sanitation and hygiene, and prolonged breast feeding. In addition, a key to this strategy is recognition and home treatment of the early stages of ARIs.

It was proposed that in the CSAP that A.I.D. would finance:

- Procurement of equipment, including needles, syringes and related equipment (stethoscopes, ophthalmoscopes, and laboratory supplies);
- Short-term training outside of Peru; and
- Related technical assistance under the integrated Health Communications and ESS developed with the MOH.

The MOH, on the other hand, would finance medicines, in-country training and related supervision of service delivery for ARI programs, and all recurrent costs related to ARI activities, including local costs associated with community education and mass media promotion.

C. Results to Date

1. Services

The distinctive role of USAID in impacting ARIs in Peru is less than completely clear. Since the Evaluation Team was not able to meet directly with the National ARI Coordinator, the following comments are based on the team's field visits to three regions: Piura, Iquitos and Cusco as well as "extra-MOH" observations and discussions which took place in Lima.

2. Logistics

a. Piura

The CSAP ARI Coordinator recommends syrup over pills for ease of consumption by children, but there are no funds in the budget to purchase it. Another area of concern for the ARI program is the relatively easy availability of medications on the commercial

market, especially in pharmacies, where medications can be purchased without a prescription.

Little supervision is possible since there are few vehicles in the UDES and no gasoline available. The CSAP National Coordinator has ordered that CSAP vehicles be used to a greater extent for supervisory and monitoring purposes.

b. Iquitos

ARI is the number one problem in the Amazon region. Reportedly, the problem is being ignored by the medical community. Additionally, supplies are insufficient, including antiparisitical medications and penicillin. Limited syringes and sera are currently on hand.

According to the UDES Director of Logistics, the ARI program is experiencing management difficulties: a shipment received during the strike lacked unit-price valuation. Nevertheless, the UDES Technical Director distributed the supplies to meet program needs. The Logistics Department has only recently been able to account for the shipment. An additional shipment was recently received from a trucking firm; however, it lacked a PECOSA or consignee information (see Section 14.0).

c. Cusco

The only specific logistics problem noted is the lack of receipt of sand timers requested in 1989.

D. Conclusions and Recommendations

1. Since ARI is apparently being given low attention by the medical community in Cusco, the CSAP National Coordinator and the Regional Coordinator should develop a training program for physicians to update them as to the importance of ARIs to CS activities.

2. The CSAP ARI Coordinator in Piura recommended the use of syrup over pills for ease of consumption by children. Efforts should be made to obtain syrup to have in stock for use in the UDES and Regional Hospital pharmacies.

3. In Lima Ciudad, the CSAP Immunization Coordinator recommends using pills instead of syrups and indicated that syrups are difficult to keep in stock.

4. The CSAP National Coordinator should follow up on why the sand timers that were ordered in 1989 have not been received as of August 1990.

11.0 EXPANSION OF FAMILY PLANNING SERVICES

A. Activity Area and Focus

In the context of what is a worldwide emergency - the population explosion - the demographic experience in Peru is no less emergent. The Population Reference Bureau's World Population Data Sheets for the years 1985, 1987 and 1990 estimate Peru's population to be 19.5 million, 21.7 million and 21.9 million, respectively. The Peruvian FP experience has been long and varied, involving many private, non-profit organizations for more than 25 years. The CSAP was designed to support the implementation of the MOH's National Family Planning Five-Year Plan, which was developed and approved in 1987, subsequent to announcement by the President of Peru in December 1986 that FP was to be recognized as a high national priority.

B. Objectives and Strategies Used

The objective of the FP component of the CSAP is to contribute to Peru's national goal to reduce maternal and infant mortality and morbidity rates by reducing the Total Fertility Rate (TFR) from 4.2 children per woman in 1986 to 3.7 by 1991 for the entire country. The MOH will contribute toward achieving this goal by increasing the coverage of FP services to women of fertile age (WFA) from 28% in 1986 to 32% by 1991. The special emphasis of the program is the provision of FP services to women of high reproductive risk, with the target of 75% coverage of this group by 1991. Approximately 26% of WFA in Peru are over 30 years old and have more than four children, which places them at higher risk for both maternal and infant mortality.

C. Results to Date

1. Services

Family planning services in the CSAP are delivered through MOH and IPSS activities. In each locale visited by the Evaluation Team, FP services were coordinated by qualified personnel. The services were linked to the other components of the CSAP to facilitate integrated programming at the local level. In one location that was visited by the team (Piura), UNFPA activities were strong; and, therefore, a decision was made locally to exclude FP from the CSAP budget. Family planning funds in Piura-Tumbes were re-allocated to immunization, diarrhea, and other components. An apparent drawback to UNFPA's FP activities in this region is that there has been poor communication with the UDES; and, consequently, the UDES is uninformed about the extent of FP participation and effectiveness in the region.

Linkages with IPSS, UNFPA, the Peruvian International Planned Parenthood Federation (IPPF) affiliate, INPPARES, and other PVO's such as PLANIFAM, PROFAMILIA, APROSAMI, and ATLF, appear to be strongest where the local CSAP Regional Coordinator has been active in working with these organizations and programs.

The CSAP expects to increase services at health centers and posts, especially in rural and marginal urban areas.

2. Logistics

The CSAP planned to provide contraceptive supplies to all health establishments at all levels of service through an improved warehousing infrastructure and logistics system. A FP service delivery system is only as good as its logistics support system; however, and at present, the logistics system is unable to support the FP program. The CSAP's FP program has a high probability for failure unless the distribution of contraceptive methods to all service delivery points in the system is improved.

FP coordinators at the peripheral levels are stymied in their work due to the non-receipt of commodities. FP users are dropping out due to non-availability of product. Product (method) loyalty is being lost. Because of the lack of available contraceptive supplies, there are many who feel the number of pregnancies in many areas will increase in the next few months and that an increase in the birth rate will take place in the period from late 1990 to early 1991.

Examples of the problems that have taken place in the FP program were noted from patient histories that were briefly reviewed during the Evaluation Team's field visits. In Iquitos, one woman who had been using Lo-Femenal until March 1990 (when the supply of Lo-Femenal was exhausted in Loreto), was "lost" to the system for over two months because of the MOH strike. After the strike, she returned to seek FP services and was given Depo provera. She later switched to a natural method and reportedly hasn't returned to the clinic since.

In Lima, at UDES Lima Norte, the CSAP Family Planning Coordinator had requested 10,000 units of Copper T IUDs. When only 6,000 were received, an agreement was made with INPPARES to lend 3,000 units to the UDES. While 1989s supply of contraceptive commodities was sufficient, in 1990, only one shipment of Lo-Femenal pills has been received and distributed.

In Loreto, 5,000 cycles of Lo-Femenal were received on January 13, 1990; this was the last shipment received. The normal monthly usage in Iquitos is 3,000 cycles (IPSS and INPPARES excluded).

In Cusco, 15,000 cycles of Lo-Femenal were received in December 1989. The last shipment received was in March 1990; an expected later shipment has not yet been received. Currently, no Lo-Femenal supplies are available in the MOH system. All oral contraceptive (OC) pills have been out of stock since early August 1990. However, PROFAMILIA and PLANIFAM (private programs) have been able to assist in providing some FP supplies. At present, there are only 100 CuT's (Copper T - IUDs) in stock.

At the IPSS Hospital Regional de Cusco, about 280 CuT's have been distributed this year; none are currently available in stock.

The situations in Loreto, where there has been no Lo-Femenal since March 1990, and in Cusco, where all supplies of Lo-Femenal are expected to run out by mid-September 1990, highlight the difficulty of maintaining a successful FP program when relying on the public sector to keep the logistics cycle in operation. According to present arrangements, shipments of internationally donated commodities must go to the MOH. The need for available FP commodities in Peru is immediate.

A critical situation exists around a large emergency air shipment of Lo-Femenal birth control pills that arrived in March 1990; the shipment remains at Customs pending the payment of US $10,000, or more, in Customs, storage and drayage fees. The longer the shipment remains at the Customs shed, the greater the expense will be. Storage alone is estimated to be between $50.00 and $100.00 per day. This shipment, valued at $20,748 (product cost), plus about $5,000 in shipping and handling from the United States, was processed by the MOH with a "Resolucion Viceministerial" within two weeks of its arrival in-country. Since then, there has been no money to move the shipment out of Customs.

3. Training

The CSAP Family Planning Coordinator in Iquitos has received no training in administration, logistics, supervision, management, or reporting. It appears that no one (outside Lima) has been offered international FP training through USAID Invitational Travel mechanisms.

4. Finances

The salient financial matter facing the CSAP FP component is that of logistics costs. While PL 480 funds are budgeted for shipping and handling expenses, the message from the MOH is that there is no money. In many UDES, this is a problem from the point of view of maintenance of those activities covered by PL 480. Nationally, it is a problem from many different activity viewpoints, most specifically with regard to the liberation of the Lo-Femanol shipment currently mired in Customs.

D. Conclusions and Recommendations

1. The CSAP National Coordinator is urged to work with USAID to arrange individualized subscriptions to Population Reports in Spanish. There should be a subscription set up for each CSAP Family Planning Coordinator.

2. There is a line item in the CSAP budget for training in administration, logistics, supervision, management, and reporting. The CSAP National Coordinator should work with USAID to insure that all CSAP Family Planning Coordinators be offered Invitational Travel to appropriate training programs.

3. The CSAP National Coordinator should oversee the liberation of the emergency shipment of OC Pills currently held in Customs. In addition he should coordinate with all responsible MOH departments, particularly with regard to PL 480 monies, to insure satisfactory release, temporary storage at the Almacende Venezuela, and immediate distribution to all health centers and FP service points.

12.0 HEALTH AND MANAGEMENT INFORMATION SYSTEMS

A. Activity Area and Focus

One of the principal components of the CSAP is the expansion and support of both the HIS and MIS. Within the MOH, the HIS has been the responsibility of the Technical Directorate of Information and Documentation (DTID); and the MIS has been the concern of other MOH departments notably, finance, personnel and logistics. Operationally, the DTID has been concerned with planning and oversight of all MOH information and management systems. Technical support in the form of computer expertise and Automated Data Processing (ADP) equipment and services are the DTID's main activities.

The HIS in the MOH has been a wide-ranging data system and has supported and included information on health statistics and epidemiology, MOH budgets, financial management, personnel and logistics. USAID provided some limited prior assistance to the MOH in redesigning and computerizing the HIS and worked with other international donor organizations to assist the MOH in developing a National HIS Plan (NHISP). The objective of the NHISP was to establish a decentralized system of microcomputers in each UDES that would be linked to a central mainframe computer located at the MOH in Lima. While there have been some microcomputer systems distributed to several UDES, several useful software packages installed, and some MOH personnel trained to use these systems, the overall results of the NHISP have been incomplete.

In the further development of the HIS, the CSAP provided for a significant technical assistance effort to assist the MOH in supporting the expansion of the HIS. The CSAP's focus in regard to the HIS was to expand the HIS to all 28 UDES throughout Peru and to provide equipment and supplies, the development of software packages, technical assistance and training. USAID believed the CSAP could also contract with local computer expertise to install the computer systems and to train personnel to operate the systems in each UDES. It was also the CSAP's intent to help the MOH to strengthen the computer system infrastructure of each UDES by hiring and supervising UDES computer personnel and to ensure that adequate technical expertise (e.g. computer systems engineer assistance) was available.

B. Objectives and Strategies Used

USAID envisioned that the CSAP could provide funds for obtaining the necessary technical expertise to enable the MOH to expand and support HIS and MIS activities. It was felt that computer expertise could be obtained in Peru and that a single HIS

advisor would be contracted for the length of the Project (i.e. 5 years) to work with the DTID and other offices and units within the MOH at the central level involved with the computer-based and epidemiological surveillance system.

In addition to the HIS advisor, the CSAP original design provided for obtaining the services of Peruvian systems engineers who would work at the UDES level under guidance and support from the central-level HIS advisor. The design called for one systems engineer at each UDES who would be hired for a one-year period to help install the microcomputers that were to be purchased with A.I.D. funds. The role of the systems engineers was to operate and maintain the microcomputers and other equipment and to train the UDES staff in the use and maintenance of the equipment and software related to the HIS and MIS, especially in those areas of the MIS for which software had already been developed. It was also believed that after the computer systems engineers had been working in the UDES for approximately one year, the MOH would establish the positions as permanent UDES staff. The CSAP design suggested that the MOH would phase-in full-time computer systems engineers in all 28 UDES by the end of FY 3 of the Project.

To accomplish the HIS/MIS objectives of the CSAP, USAID believed that the HIS advisor and computer systems engineers could be hired by a Peruvian administrative support contractor whose services and efforts would be paid through Project funds. It was anticipated that the Peruvian contractor would hire the computer systems engineers over a three-year period and that these individuals would be assigned to work in a different UDES in the years following their original one-year UDES experience. In order to select a Peruvian contractor, A.I.D. issued a Request for Proposals (RFP). Several U.S. and Peruvian firms responded with technical and cost proposals and one firm, The PRISM Group (Projects in Agriculture, Rural Industry, Science and Medicine), a non-profit corporation based in Columbia, Maryland, U.S.A., with offices in Lima, was selected to be the contractor for the HIS and MIS part of the CSAP. PRISM is officially registered in Peru as an International Non-Profit Organization.

1. PRISM HIS/MIS Contract

PRISM's 39-month Contract (No. 521-0285-C-00-0004-00) was signed with A.I.D. on November 14, 1989. The contract's objective was to provide ADP support services as required by USAID/Lima and to support the MOH in designing, implementing and institutionalizing a national HIS/MIS that gives particular emphasis to the support of PHC and CS activities. As quoted directly from PRISM's contract with A.I.D., the following general services were expected to be provided:

- o design, development, pretesting and implementation of an appropriate, cost-effective and efficient HIS involving standard health statistics, performance assessment, and an active epidemiological surveillance system.

- o modification, as necessary, and implementation of an MIS that includes personnel management and payroll, financial management/accounting and logistics; and

- o development and institutionalization of an ADP system for both the HIS and MIS which links all UDES and the central MOH in Lima and includes the provision and installation of hardware, software and related accessories/supplies; maintenance and support services; training; and technical assistance.

USAID believed that through PRISM's contract, further assistance could be provided to the MOH's MIS activities which had been receiving financial support from USAID since 1986. A Peruvian contractor, OTEPSA Services, had been under contract with the MOH to develop an MIS that included personnel/payroll, logistics/inventory and an updated financial management and accounting package. Provisions were made to continue OTEPSA Services' MIS development at the MOH, and OTEPSA was included as a designated component and potential subcontractor in PRISM's HIS contract.

a. Relationship to MOH Data System

Since its beginnings, the MOH has lacked a national automated HIS from which to obtain information on disease patterns and for use in program planning, targeting, management and evaluation. Prior to the CSAP, the MOH's HIS was a manual system that contained more than 150 different forms, many of which were never actively used. The sheer volume of these forms made it practically impossible for the MOH to generate timely and accurate reports and to provide them to the UDES. In 1988, prior to PRISM's contract, the MOH and IPSS agreed to a unified basic transactions reporting system that could be utilized at the health center level. Through this experience, the MOH developed a reduced number of forms that were to be used as routine reporting for certain health programs. However, it was the consensus that the "reduced" number of forms was still excessive and that further reduction was necessary.

In addition to the HIS's collection of basic health statistics, PRISM's contract also included structuring the HIS in such a way that it includes data from the MOH's Active Epidemiological Research Program (VEA).

In 1987, prior to the CSAP, PRISM was a subcontractor to the AID/W funded PRICOR II Project (Primary Health Care Operations Research II) which supported the development of a systems assessment methodology that could be used to monitor CS programs in the MOH. The assessment was carried out in April and May of 1989 and initially involved a pilot study of the ORT/Diarrhea Control program in 14 health centers in Lima Cono Sur. There was also a systems assessment of the service delivery indicators of the 1988 MOH's EPI campaign that took place in July of 1988. The study was later expanded to include a sample of additional UDES.

b. Scope of Work

There are four main components to the scope of work in PRISM's CSAP contract: 1) ADP Support that includes management and monitoring, 2) HIS System, 3) MIS System and 4), Training and Oversight. As abstracted from the contract, these components are as follows:

1. ADP Support

Through their contract, PRISM will supply:

- ADP hardware equipment procurement and installation;
- ADP supplies procurement and equipment maintenance;
- ADP training to central MOH and UDES personnel;
- ADP technical assistance, software development and other support services to the MOH and UDES operations.

ADP system implementation includes specifying the configuration, procuring, transporting, installing and maintaining hardware for all ADP needs at the UDES and MOH central level.

Hardware includes capacity for the HIS/MIS as outlined in the HIS System section, as well as other ADP needs which PRISM is to identify with the UDES and the MOH. The hardware system is based on microcomputers and includes a network for telecommunications with the central level. Additionally, the hardware includes all commodities required for the ADP system, including power source regulation and long-term storage needs. Software (proprietary) is also to be included. PRISM was not responsible for the maintenance, operation or repair of equipment that existed in MOH facilities prior to the CSAP contract.

For the duration of the contract, recurrent expenditure items, (e.g. paper, printer ribbons and other supplies) were to be procured and provided at each UDES by PRISM and financed under the

contract to ensure the implementation of the HIS/MIS. At the end of the PRISM contract,the UDES are to assume these costs from their own budgets.

2. Health Information System (HIS)

As outlined in PRISM's contract, the intent of the overall HIS was to:

- o identify, define and prioritize PHC/CS needs at the health center, UDES and MOH central levels;
- o assess the performance of the health services delivery system in meeting these needs;
- o establish specific and measurable outcomes as well as interim and final objectives and benchmarks for the health system;
- o design, target and implement interventions based on these objectives; and
- o evaluate these interventions.

The design called for two modules, performance assessment and epidemiologic surveillance, to be used for data collection for non-routine data. These modules were to be integrated with the routine data collection module. PRISM's role was to design the appropriate linkages between these modules.

A component activity of the HIS included a review of the FETP and the development of effective relationships with the MOH's Directorate of Epidemiology and the long-term CDC advisor and other FETP staff. It was also envisioned that the HIS would be the mechanism for integrating the MOH's Active Epidemiological Surveillance program or Vigilancia Epidemiológica Activa, referred to as (VEA).

Data from all 600 health centers and from the outpatient departments of 126 hospitals were also planned to be included in the HIS. The health centers and hospitals would use a simplified manual HIS. At the UDES level, the HIS would be computerized. These data were considered to be essential for supervision and management of health services. The overall expectation of the computerized HIS was to enable the central MOH to combine the UDES data for comparisons and to develop national health information profiles. In regard to the CSAP, it was of particular interest to have a data system that would permit identification and follow up of high-risk groups for infant and child morbidity and mortality.

3. Management Information System (MIS)

Prior to the CSAP, the MOH had engaged OTEPSA Services to assist in the development of selected MIS components. The MIS part of the PRISM contract was directed to modifying the earlier OTEPSA software and providing the MOH with an effective MIS. PRISM's original proposal and contract identified OTEPSA as a potential subcontractor to whom the bulk of the MIS development and implementation responsibilities would be delegated. The MIS contained three elements: 1) personnel and payroll, 2) financial management and accounting, and 3) logistics. The CSAP strategy included implementing the MIS at all 28 UDES, at the MOH central level and eventually at all 600 health centers. Since hospital outpatient clinics are included in each hospital's internal administrative system, they were not included in the MIS.

It was hoped that the MIS part of the CSAP would be linked to the HIS and thereby provide the MOH and the UDES with management data that would improve efficiency and optimize the current and future use of human, technical and financial resources. The MIS's objectives also included providing information on staff productivity in the delivery of health services, as well as program and associated costs that would assist the MOH in operational and strategic planning.

4. Training and Oversight of HIS/MIS

In order to effectively implement the HIS/MIS, PRISM was expected to develop a training system that included approaches to inculcate MOH personnel on the use of forms, proprietary software, hardware and related equipment. The contract refers to PRISM furnishing a team of Peruvians comprised of eight technical supervisors referred to as Regional Computer Management Advisors (RCMA) who are supervised by one Senior Computer Management Specialist (SCMS). PRISM also expected to use other short and long-term consultants in the HIS/MIS during the life of their contract. It was envisioned that the RCMAs and the SCMS would work directly with counterparts in the MOH and UDES.

According to their contract, PRISM's training activities were directed to MOH and UDES personnel and focused on the use and maintenance of ADP systems. Training of personnel below the UDES level (i.e. in health centers and hospital outpatient departments) is the responsibility of the MOH. Training given at the UDES level could accommodate other level personnel (e.g. health center) provided that their travel and per diem expenses are subsidized by the MOH.

C. Results to Date

Although PRISM signed its contract with A.I.D. on November 14, 1989, it had an effective date of November 1, 1989. The first incremental funding for the contract was received through a Letter of Credit that was opened nearly two months later on December 27, 1989. Based on the availability of funds with which to begin their CSAP contract activities, PRISM has had a total of eight months of effort (January through August 1990). The results that have been reported are based on this eight-month period.

1. Staffing

PRISM has a total complement of 42 employees, 35 of which are currently working on the contract. Five teams concerned with discrete technical and administrative areas (i.e. ADP, HIS, MIS, Training and Contracts Management) have been created and fully staffed with experienced and technically capable personnel. With the exception of PRISM's ex-patriate Vice President, who has lived and worked in Peru for more than six years, all remaining staff are Peruvian nationals.

PRISM's staffing patterns conform to the teams and positions stipulated in the contract. These include:

ADP - 1 SCMA, 8 RCMAs, 1 ADP Equipment Specialist (10)

MIS - 1 MIS Specialist, 3 Systems Analysts, 1 Programmer (5)

HIS - 1 Sr. HIS Specialist, 4 Health Professionals (1 nurse, 2 physicians, 1 epidemiologist), 1 Systems Analyst, 1 Computer Programmer (7)

Training - 1 Training Coordinator, 1 Software Specialist, 1 English/Spanish Translator, 2 Secretaries (5)

Contract Mgmt - 1 HIS/MIS Technical Director, 1 Contracts Administrator, 1 Accountant, 1 Admin. Asst, 2 Secretaries, 1 Computer Clerk (7)

In addition to these teams, PRISM has contracted with a cadre of short-term consultants, including some former MOH senior staff to assist in the development of various aspects of the HIS.

2. Equipment

In accordance with the equipment procurement aspects of the HIS/MIS contract, PRISM entered into a subcontract with the Dell Computer Corporation of Texas, U.S.A., to purchase 260 (including 27 spares) Dell Model 210 microcomputers over an eighteen-month

period. During the first quarter of 1990, 130 (including 10 spares) of the Dell units were delivered in Peru. The Dell Model 210 is considered a robust unit that has a surface mounted, single mother board, which permits easy access and maintenance. The unit has AT compatibility and features a 286 microprocessor, a 40 mg hard disk, an additional 40 mg tape back up and a 1.44 mg floppy drive. The printers are Dell model 800 and the modems are Telebit T-1000, which are capable of transmitting at a 9600 Baud rate, even over "dirty" (i.e. non-dedicated) telephone lines. All Dell units are covered by a 12-month, internationally valid warranty. Computer technicians at PRISM tested each unit. Each unit receives a 24-hour "burn in" to ensure that it is fully operational and is also "rotated" through PRISM before being sent to the field. All CSAP purchased equipment is received and stored at PRISM's central facility under strictly controlled and secure conditions.

All computer equipment was shipped via air freight. As a registered NGO, PRISM is able to get customs clearance within 24 hours. To date, there have been no losses due to theft. Two Dell units that were damaged in shipping have been replaced.

PRISM has established a fully functioning computer maintenance facility referred to as the RAM program (Repair and Maintenance) that is capable of servicing the Dell microcomputers, printers and other equipment purchased and used in the CSAP. In fact, through an arrangement with Dell, PRISM has been designated as an approved Dell Computer Service Center. PRISM also received some voluntary assistance from technical staff of the Hewlett-Packard Computer Corporation which enabled them to design their computer maintenance facility. The establishment of the RAM program will result in a report contract savings of approximately 10%.

Prior to installation of the Dell microcomputers in each UDES, PRISM's computer-engineer specialists survey the physical facilities where the unit(s) will be located. A protocol has been developed to facilitate the assessment process. This includes an assessment of office location, room security, furniture, environmental conditions, electrical and communication facilities. Among the changes that have been required are modifications in wiring, ventilation and climate control, lighting and security. PRISM's contract requires them to do site studies and make recommendations for each UDES computer center. It is the MOH's responsibility to do the refurbishing of each center. The reported lack of available PL 480 funds has halted the MOH's efforts in site readiness. There are presently 18 UDES that require PL 480 funds in order to be refurbished for microcomputer installations.

PRISM has already installed microcomputers and printers in 8 UDES (Lima-Norte, Callao, Ica, Tacna, Ayacucho, Tarapoto and Cusco). Some sites have two microcomputers and one printer. Three other UDES (Huancavelica, Trujillo, Huanuco) are currently

undergoing installation. A total of 10 will be completely equipped by the end of September 1990. PRISM's contract calls for all of the 28 UDES to have complete computer systems (i.e. 3 units) installed by the end of 18 months. PRISM expects to have at least one microcomputer installed in all of the UDES by the end of 1990. However, the apparent lack of available MOH funds to refurbish the remaining UDES casts doubt on PRISM's being able to proceed with further installations.

PRISM's contract also called for an ADP assessment of the MOH central computer system. The PRISM team completed this exercise during the November 1, 1989 to January 15, 1990 contract period. The assessment recommended the acquisition of a new Wang unit that would be capable of supporting the data bases of the HIS and MIS.

3. Training

PRISM prepared a series of training manuals in Spanish related to proprietary microcomputer software that was purchased for use in the CSAP. The manuals appear to be concisely written and practical for use in training potential computer operators who have had little experience. Those with previous experience with the software packages would find the manuals too basic.

PRISM's computer training is carried out in their central office in a dedicated training area that is adequately equipped. Each trainee has exclusive use of the same Dell units that will installed in each UDES. A module concerned with simple preventive maintenance has also been developed and is included with the software training. RCMA's have already received training in the computer software and in basic maintenance and are capable of replacing damaged components if needed. With this capability, damaged units can be replaced within one or two days.

The first computer training session was held in Lima from June 3 - July 17, 1990. According to Prism's reports, 75 individuals have received basic computer training that included modules on DOS 3.3 (Operating System), Quattro (Spread Sheet), Q&A (Data Base), Q&A Write(Word Processing), preventive maintenance, and norms and procedures for computer center operations. Two computer systems administrators have been trained from each of the 28 UDES (N=56), and 19 individuals have been trained from the central MOH. A second training session is scheduled for November 1990.

4. The HIS

For several years, Peru's HIS has been considered to be unable to furnish accurate data. In 1987, prior to the CSAP, the MOH was capable of producing 186 different reports from its reporting forms. At the UDES level, 50 reports are produced and sent to the central MOH in Lima. Yet despite the volume that the UDES send to Lima, the MOH has managed to reproduce and distribute only 5

reports. In the past, many MOH reports have been prepared because of the special interests of a limited number of individuals within the MOH. Many observers have indicated that the interest, number, and kinds of reports varies according to changes in the Ministerial staff.

The HIS component of the CSAP represents a significant departure from the previous multi-form system that existed in the MOH insofar as it combined and reduced the forms to a single form. Given the previous volume of forms, PRISM efforts represent a significant undertaking. But the streamlining process has not been without obstacles. PRISM's original HIS development strategy envisioned a MOH-PRISM collaborative effort to review forms, data types, procedures, flows, indicators and reports. The PRISM HIS team initially met with representatives of the appropriate MOH departments and with the Data and Information Division which also included staff from the Directorate of Epidemiology and the CDC Resident Advisor. Communication problems as well as residual political issues complicated a continuing and otherwise harmonious working relationship. The net result was that PRISM proceeded with their work plan with adequate, but apparently less than complete, MOH participation.

PRISM's PRICOR II system development experience in Lima Cono Sur as well as the MOH and IPSS discussions to strive for a common health information base was helpful to the HIS development. The synthesis revealed three necessary HIS components: 1) routine statistics on patient visits, 2) monitoring and training and 3), epidemiological surveillance at the community level. The epidemiologic data component involved a significant contribution by the MOH's Directorate of Epidemiology and VEA Program.

The monitoring and training components are presently being developed by PRISM and consist of 120 indicators evaluating the quality of services provided. According to PRISM documents, the first step in the HIS involves developing the patient visits (encounters) and routine statistics components. These have involved the following steps:

- A definition of the information to be collected;
- Standardization of information and defining principal indicators (operational and impact) that result from this standardization;
- Design of a basis data collection sheet for information on preventive, curative and promotional activities;

- o Development of an information coding system and a flow chart for this system that traces the flow from health posts and health centers to the UTES, UDES and Central MOH level, and returns the information according to the needs of each level;

5. Development of a Computerized Data Processing Program

The implementation of the system involves training of users and information processors as well as guides to fill in the forms and manuals.

Another element of the project is to develop a network of laboratories to improve the diagnostic process and the training of epidemiologists. This is being developed by the MOH's Directorate of Epidemiology. This network will eventually be combined with the HIS and will be beneficial and complementary to the overall effort.

A review of the indicators selected by PRISM for use in the HIS indicates a thorough understanding of the content of health data systems. It must be emphasized that the development of any data collection instrument or indicator involves a process of elimination and consensual validation. Often the teams that embark on these tasks develop divergent points of view and display apparent biases. It is only through perseverance and negotiation that consensus can be reached. Although there were some reported minor conflicts between the MOH and PRISM task forces that were responsible for selecting the health indicators, it is evident that a comprehensive representation has been achieved by the PRISM team.

As of June 1990, PRISM has produced three HIS manuals.

Manual HIS No. 1	- a summary of indicators and definitions utilized for registering information that is required by the MOH.
Manual HIS No. 2	- material for filling out basic data collection instruments.
Manual HIS No. 3	- coding system used to classify illnesses and geographic codes.

The manuals appear to be clearly written and concise. The effective use of these manuals requires thorough training and close supervision. This is especially necessary when non-medically trained clerical personnel are given the responsibility to determine which illness category should be entered on the form. Experience has shown that several training and re-training sessions are often necessary in order to achieve an optimum tolerable error level. It appears that the 240 hours of training that PRISM will

provide for those responsible for data entry and management at the UDES are sufficient. PRISM plans to implement a system of quality controls via Information-Based Quality Management (IQM). When fully operational, the IQM will ensure adherence to procedures and reduce data entry errors.

6. The MIS

The progress of activities related to the MIS component have been partly affected by the defection of OTEPSA as a principal PRISM subcontractor. It will be recalled that PRISM's proposal to USAID reflected OTEPSA Services as possessing the specialized expertise to develop and implement the MIS. It has been stated that OTEPSA's presence strengthened PRISM's proposal and that significant weight was given to select PRISM for the CSAP on this basis. Information provided to the Evaluation Team indicates that OTEPSA's abscission from the PRISM contract may have been in the best interests of the CSAP and A.I.D. While OTEPSA was indicated in the PRISM proposal as a potential member of the HIS/MIS team, their final acceptance was contingent on the negotiation of an acceptable subcontract that contained provisions for OTEPSA to accept periodic financial audits. Additional considerations concerned control over RCMAs and differences over computer maintenance. Since the subcontract could not be successfully concluded to the review and satisfaction of PRISM and A.I.D. despite nearly seven months of negotiating effort, OTEPSA Services was dropped from the HIS/MIS.

The inability of PRISM to consummate an acceptable sub-contract with OTEPSA has negatively impacted on the development of the MIS. Moreover, the subcontract situation with OTEPSA continues to be problematic. During the last two weeks of the Evaluation Team's visit, OTEPSA initiated a lawsuit in the Peruvian Courts to seek damages from PRISM pertaining to the MIS. While the team did not have access to the precise content of OTEPSA's claims, it is reasonable to assume that litigation could contribute to further delays in developing the MIS and perhaps curtail some of PRISM's operations.

Despite the termination of OTEPSA's role, some MIS activities have continued by PRISM. These have mostly included preliminary discussions and planning with the administrative, financial and human resources areas of the MOH. PRISM has a designated MIS specialist and team that is responsible for assisting in the development of a MIS that will be eventually linked to the HIS.

An obstacle to progress that affected many areas of the CSAP, including the HIS/MIS, was the MOH workers' strike which lasted from April to July 1990. Another delay was due to the change in national political leadership and the election of a new President (Alberto Fujimori) which resulted in a complete change of MOH staff in August 1990.

According to available Project documents and information obtained through discussions with PRISM staff, the MIS's introduction is planned for the end of 1991. However, at this point, it is felt that the MIS component lacks significant development. It is not clear whether PRISM has the current capability to design and implement the entire MIS as it was originally envisioned. It is likely that PRISM will need supplementary MIS staff to complete this effort or that they will need a replacement subcontractor for some part of the tasks. It is apparent that the MIS is an essential activity for the CSAP and the MOH.

D. The PRISM Group Performance

The overall performance of The PRISM Group relative to the CSAP has been impressive to date. The review of contract files indicates that three comprehensive progress reports have been submitted. The first covering contract activities for the period, November 1, 1989 to January 15, 1990; the second for the period, January 15 to 28 February 1990; and the third for the period March 1 to May 30, 1990. Each report details the progress achieved in the work plan from an operational, contractual and cost perspective. A section concerned with "project concerns" or "potential problem areas" could be added. In specific areas, The regular use of Gantt charts is considered helpful. PRISM has provided USAID with a wealth of project management information that can be summarized as follows:

1. Project Staffing and Management

Senior management participation in project review and operations appears to be effective. PRISM's Vice President and Senior Technical Director appear to be skilled managers and expert in data systems management. Both appear to exert effective controls. Staff supervision ratios are satisfactory and internal controls (quality focused) have been given uniform, high operational priority. All staff positions have been filled, and little staff turnover has been reported since the beginning of the CSAP.

2. Training

A number of skilled trainers have been retained, and their performance appears to be satisfactory. Several basic computing course participants were interviewed during the Evaluation Team's field visits, and those interviewed reported being satisfied with overall competence of the trainers as well as the content of the course. The numbers of UDES and central MOH personnel that have been trained conforms to the work plan. There is some concern however, in the lag time between when

some of the participants receive their training and when the microcomputers are installed in their locations and are available for use.

3. System and Site Survey Reports

The initial survey of the MOH's ADP system and the UDES Site Reports are satisfactory. The Site Reports contain sufficient information to enable microcomputers to be installed, once the recommended site modifications are made.

4. Equipment Storage and Controls

All contract purchased equipment and supplies appears to be securely stored and under close controls.

5. Financial and Contracts Management

PRISM's accounting system and financial reporting is satisfactory. Budgets are kept current and available financial reports are clearly presented. Contract management is also considered satisfactory. PRISM's regular meeting minutes, "Actas", is considered a useful way to memorialize gross content, participation, and to track contract and operations management related issues.

6. Technical Reports and Manuals

The HIS Reports (Nos. 1, 2 and 3) appear to be well prepared. The proprietary training manuals are well designed and condensed to enable the first-time user to have essential technical information. Software manuals do not acknowledge U.S.A. software developers and copyrighted trade names. The Final Report of the Management Evaluation of MOH Peripheral Services could benefit from a brief summary of key findings. Overall, PRISM's technical reports make good use of graphics, charts and tables and are well written. The technical reports prepared for PRICOR II are very well presented.

7. Communications with USAID

Written and spoken communications with USAID CSAP Project Monitors appears to be satisfactory. All contract deliverables appear to have been submitted in accordance with contract requirements. PRISM has been considered responsive to USAID inquiries for information and clarifications.

8. Communication with the MOH

Significant communication difficulties exist between PRISM and the Director of the Epidemiology Division at the MOH. Despite PRISM's early attempts to achieve a positive working relationship with this MOH Division, there continues to be reported communication problems that if unresolved, could affect CSAP program success, especially in the HIS area. PRISM appears to have some considerable insight into the situation and has indicated a sincere interest in exerting greater efforts to strive for an overall better communication level and working relationship (see recommendations section below).

9. Communication with Alpha Consult

PRISM could make greater efforts to keep Alpha Consult informed of the HIS/MIS and other activities that occur in the regions and UDES where the RCMAs and Alpha Coordinators are located. It does not appear that PRISM has fully exploited the communications opportunity with Alpha Consult.

E. Conclusions and Recommendations

1. Early resolution of communication problems between PRISM and the Directorate of Epidemiology and the VEA Program is suggested. It is recommended that a renewed attempt be made to convene a general HIS/MIS, VEA meeting to be co-chaired by USAID and the Vice Minister of Health (Institutional) to address the status of project activities to date, and to re-open lines of communication and cooperation. Concerted efforts must be made to seek the amelioration of obstacles that currently plague effective working relationships. Regular contacts and communication between all parties is strongly encouraged. It may be perceived as "helpful" and conciliatory if PRISM "place" one or two of the Dell microcomputers in the MOH Epidemiology Division and perhaps utilize PRISM's RAM capabilities to help the VEA unit repair its two Compaq microcomputers. While this recommendation may appear to be unilateral from PRISM's perspective, the quid pro quo could yield positive accruals to the CSAP.
2. An early and complete appraisal of the status of the MIS should be sought. Since a "Stop Work Order" on this activity is in process, USAID, PRISM and the MOH should discuss current and future options at the earliest opportunity. It is strongly recommended that the MIS be continued as a viable CSAP component but that modifications in some of its content be made. The following are suggested:

- o PRISM should continue with developing selected components of the MIS notably, personnel and logistics which should be linked with the HIS. The personnel aspect should be geared to link performance and productivity information by health worker category.

- o The payroll component should be combined with the accounting and financial management aspects of the MIS. However, the development of these components should be delayed until it is clear what effect the regionalization process will have. In addition, caution is suggested with the payroll component, since several field visit conversations suggest the likely existence of the politically sensitive phenomenon referred to as "phantom employees."

- o PRISM should increase its MIS team expertise to include logistics and personnel. Additional staff or consultants with the requisite skills should be identified.

- o Consideration should also be given to selecting another MIS subcontractor. Preference should be given to a Peruvian organization which has expertise in accounting and financial management.

3. Consideration should be given to modifying the HIS and MIS implementation. Both are predicated on the notion that it may not be necessary to embark on a national HIS/MIS program from the beginning. Two options are suggested for consideration. The first involves a concentrated regional approach in a single, easily accessible and populous geographical area (e.g. Greater Lima). The second involves a limited national approach directed to prioritized target areas of up to five regions (e.g. Lima, Grau, Arequipa, Cusco and Iquitos). The intent of both of these approaches is to offer lower cost, easier controlled options with which the CSAP system can be tested and implemented. Closer controls in a concentrated area, for example, permits the opportunity for debugging and redesign, and could imply potential reductions in administrative and field costs. On the other hand, a less than national but more than a single regional approach would offer cross-regional options that would permit the opportunity to test different data collection systems on diverse patient populations and perhaps slightly different health delivery systems.

4. The promotion of the HIS/MIS throughout Peru could be enhanced through the addition of additional inputs from the Alpha Consult Regional Coordinators. It is suggested that PRISM provide the Alpha Consult Regional Coordinators with a comprehensive overview of the HIS/MIS and that Alpha's coordinators support the RCMAs in promotion activities.

5. PRISM should experiment with a HIS form in a pilot area that includes an integrated logistics component and an integrated personnel component to test the way in which these two areas can be linked to health visit (encounter) data. Testing both of these HIS form modifications could provide some operational insights of how the HIS/MIS might adopt an integrated format.

6. Efforts should be undertaken to offer computer system training to UDES and central MOH personnel immediately preceding the installation of microcomputer systems in their regions or areas. Some UDES staff have expressed their concern over the time interval between the date training was received and the microcomputer systems were installed.

7. Serious consideration should be given to the integration of the HIS with hospital data. Pilot areas could be identified in which PRISM could test the use of the HIS in hospital in-patient and in ambulatory hospital clinic settings. The volume of hospital visits by UDES, URTES, Health Center and Health Post patients suggests that the HIS be able to accommodate the merger of these important data. CSAP variables should be given first priority for inclusion in any expanded hospital-focused HIS data collection effort. It may help provide a mechanism for patient follow up.

8. If the MOH data processing system infrastructure is not fully developed by the end of the CSAP, USAID should give consideration to providing continued, but limited, assistance to help sustain the microcomputer system. A private sector organization, such as PRISM, could be contracted by USAID to provide this assistance at a limited cost.

13.0 EPIDEMIOLOGICAL SURVEILLANCE SYSTEM

A. Activity Area and Focus

The design of the CSAP included the development of a comprehensive epidemiological surveillance system and the development of a cadre of trained Peruvian epidemiologists to strengthen the MOH and assist CS activities in the country. USAID considered it vital to have data on disease patterns as they affect morbidity and mortality levels of various population groups. These kinds of data were considered to be essential for the MOH's national and regional planning efforts. As such, the CSAP included the development and implementation of an active ESS, or Vigilancia Epidemiologica Activa (VEA) within the MOH. There were three components to this program:

1. an in-country intensive Field FETP (also referred to as Programa de Capacitación en Epidemiologia de Campo or PREC);

2. the installation of a national computerized VEA system, including the training of personnel in the 28 UDES;

3. strengthening of the national laboratory system to support VEA and CS activities.

B. Objectives and Strategies Used

Through a PASA with A.I.D., CDC has been responsible for the overall FETP and for assisting the MOH technically in VEA and laboratory systems.

The objective of the FETP was to develop a group of well-trained epidemiologists that would be located in each UDES and be able to strengthen the VEA system. The FETP was designed by CDC and is based on a two-year training program that involves classroom and field course work for medical epidemiologists. CDC has successfully used the FETP model in a number of developing countries. A CDC long-term consultant advisor and several short-term consultants provide the training that focuses on Peru's health situation. Over the life of the CSAP, the FETP was designed to include four classes, each made up of approximately nine students. Among the physician epidemiologists to be trained, 30 will be from the MOH and 5 from IPSS and other Peruvian agencies.

The CSAP funds CDC's technical assistance, training supplies and materials, computer equipment and software packages and overseas and local training costs. The MOH selects the FETP candidates from each UDES and assists with providing the training facilities.

The development of a national VEA system is also supported by the CSAP. The objectives of the VEA component are to establish 15 sentinel surveillance sites and an obligatory reporting system, to train auxiliary personnel in surveillance, and to notify and control selected diseases, most related to the CSAP, that cause high morbidity and mortality, for example, immuno-preventable diseases, diarrheal diseases, and ARIs that affect infants and children. The intent of the national computerized VEA system is to permit the MOH to monitor CSAP outputs and the way the program impacts on CS rates.

CSAP project funds support the installation of computer equipment, sentinel surveillance system development costs, and all training costs associated with the VEA. The MOH's contribution includes facilities and personnel and subsidizes local surveillance activities.

The objectives of the national laboratory component are to strengthen the central laboratories of the National Institutes of Health (NIH), five regional referral laboratories located in five UDES, and the laboratories in the remaining 23 UDES. CSAP funds will provide equipment, training, and supplies. Training of laboratory personnel focus on clinical and epidemiological aspects of diseases, procedures for the collection and transportation of specimens, and special laboratory techniques. Training will take place in Peru and in the USA.

C. Results to Date

The FETP and VEA activities are located in the MOH's Dirección General de Epidemiologia (DGE). Initial activities have included developing a work plan and implementation schedule for the FETP, VEA, and laboratory components. In late 1988, the MOH announced the FETP program and solicited candidates through the DGE. In January of 1989, expressions of interest were received from 43 candidates. A total of 21 participants were selected in February and given the basic FETP course. After the completion of the basic course, 10 participants were selected to proceed with field training. The final participant selection was based on the participant's desire to work in rural areas, their experience and number of post-graduate courses completed, and their work habits and punctuality. Among the 10 FETP participants selected, six were male and four were females between the ages of 30-35 years. Nine of the participants were physicians and one was a microbiologist.

To provide additional technical support to the FETP, the MOH signed an agreement with the Medical Faculty of the Universidad Peruana Cayetano Heredia (UPCH) in Lima. UPCH's role is to assist in training 6-12 participants and to provide teaching and supervisory staff over a two-year period.

The DGE's field placement map indicates that the geographic distribution of FETP participants is in five regions of the country (Cusco, Arequipa, Grau, Tacna and Mariñon). According to the DGE Director, MOH epidemiology field workers have access to all areas of Peru, including those identified as conflict areas.

Structurally, the VEA system is basically a component of the HIS system and, as such, it should be functionally linked to the data collection instruments. In the initial development activities of the HIS, focus groups, made up of PRISM, DGE and other MOH representatives, were used to discuss and select the HIS indicators. VEA participation was considered to be essential to the HIS. While early meetings were considered to be well attended and representative, a communication hiatus developed between senior PRISM staff, the DGE Director and CDC. As a result, "complete" MOH participation in the design of the HIS was not experienced. Nevertheless, many observers feel that the MOH did participate in the development of the first HIS instrument. This instrument is currently being field tested, and results were not available at the time of the Evaluation Team's visit.

MOH labor problems (strikes), frequent changes in key MOH personnel, and the change in the national government, have also had some effect on the progress of the FETP, VEA and laboratory development activities of the CSAP. DGE staff have expressed a degree of optimism on the progress that is expected for the remainder of FY 89 and FY 90.

D. CDC Performance

In 1986, prior to the CSAP, CDC contacted the MOH about Peru's interest in participating in the FETP. In 1987, CDC representatives visited Peru to discuss the program. By July of 1988, a letter of understanding had been signed between CDC and the MOH. The PASA between A.I.D. and CDC was signed on October 1, 1988, one year after the CSAP started. CDC's long-term physician advisor moved to Peru in January 1989.

With regard to the laboratory project, NIH was used to develop laboratories in two regions (Grau and Inca) in Piura (part of the Grau region). The regional laboratory is currently in the MOH hospital clinic but is scheduled to go to a reference laboratory outside of the hospital premises. In Cusco, the plan is to put the laboratory between the hospital and the medical school.

It would appear that with the goal of establishing five regional and 23 UDES-level laboratories, this project is moving along slowly, but has some distance yet to go. It, however, is an important component relating to the work of the field epidemiologists.

Regarding the third component of CDC/VEA activities--developing a computerized National Surveillance Program--there is much yet to be done. First, of the seven computers installed with CDC assistance at VEA, only two are fully working at present. Others are suffering from graphic card and hard disk problems.

Prior to the Evaluation Team's visit to Peru, the CDC long-term physician advisor had been medically evacuated from Lima to the USA. Information provided to the team indicates that this individual will not return to Peru. Since his departure, CDC has sent a temporary replacement physician-epidemiologist consultant to Peru. Arrangements were made to meet with this CDC consultant prior to the completion of her TDY and return to the USA. Unfortunately, due to a 12-hour delay in the team's return flight to Lima from a field visit to Iquitos, the team was unable to meet with the CDC consultant for a scheduled interview before she departed the country. Because of these factors, the team was unable to obtain direct information pertaining to CDC's perception of the project and CSAP progress to date.

E. Conclusions and Recommendations

1. Communication problems with the Director of DGE and senior PRISM management and technical staff concerning the development of the HIS and the VEA components must be resolved at the earliest opportunity. Differences must be mediated, and the MOH and USAID can play a direct role.

2. Regionalization plans may affect the locations of the referral laboratories that will be developed through CDC's PASA. It is recommended that decisions concerning their exact location be delayed until such time as the regionalization process has been completed. Efforts to assist in strengthening the national level and UDES laboratories should proceed as scheduled.

3. To avoid not having laboratory services during a MOH labor stoppage, consideration should be given to contracting epidemiological-related laboratory services with one or more private laboratories.

4. The DGE staff report several microcomputers that need repairs. Efforts should be made to repair these units. It may be possible to utilize some of the RAM capabilities that are being developed for the CSAP by The PRISM Group.

14.0 LOGISTICS SUPPORT SERVICES

A. Activity Area and Focus: The Distribution Cycle

The MOH distribution cycle includes all of the activities required to receive CSAP commodities from suppliers and to, theoretically, move them safely, securely, and expeditiously to CSAP service points.

Storage points were determined by considerations of distribution efficiency within the MOH's already established logistics system. Record-keeping and inventory control procedures fall within the MOH's general guidelines, although they vary across locations due to local differences. Within the MOH, there is an unevenness in program planning at central and local levels due to training, supervision, management, and coordination deficiencies. Because of these variations, it is difficult to collect consistent information with which to forecast MOH drug and commodity needs. Within the CSAP, most commodity needs are adequately forecast according to the Project Agreement.

B. Pharmaceutical Supply System

The MOH uses a form called "PECOSA," ("Pedido Comprobante de Salida") which is an instrument used to order, approve, ship and receive all supplies and equipment to be used at the central level, UDES, UTES, hospitals, and smaller health service points. Presumably, the PECOSA is a requisition and transmittal form representative of national policies that the MOH may not supersede.

Following is descriptive information, obtained largely through site visits, to illustrate the logistics system and the areas in most need of improvement.

1. Piura

When products arrive, their documentation nearly always indicates only the program name, e.g. "National Diarrhea Program," "National Plan," etc., and not the project number, donor, or consignee. Many PECOSAs lack unit cost information ("valorizacion") in terms of products, shipping, or handling.

A spot-audit was made of PECOSA #191-89, Salida #1381, dated May 30, 1989. The total value of the PECOSA was stated to be I/422,137.50, but no detailed unit pricing was provided by Almacen de Venezuela. Some PECOSAs may be unit-valuated and some not. Other spot checks showed varying degrees of incompleteness, i.e. no indication as who the donor was, e.g. A.I.D., PAHO, UNICEF, etc. and no specifications as to unit price, to mention but a few.

In regard to logistics and finances, the PAHO system is referred to as "agile" and direct, while the MOH's system that requires PL 480 monies sent through the MFE is "not agile." An example of this can be seen in the Department of Logistic's (DOL's) purchasing process. The DOL issues RFPs for all items (including paper clips); bids are received; an award is made, but during the interim, the price has increased. The awards are then annulled, and the process must be repeated. Under this system it is difficult at the UDES level to purchase anything. To make matters worse, purchases are made on a unit basis rather through the required system. Worse, for example, they must issue RFPs on a piecemeal basis, not in bulk quantities (e.g. as is customary in the case of vehicular spare parts and spares).

2. Cusco

The situation was found to be the same as elsewhere, i.e. no unit-price valuating, program donor identification, or designation of consignees. In addition, transportation funds have been depleted due to the national devaluation of the Intis. Freight costs have tripled during the national crisis (viz. the 3001% increase in the price of gasoline).

3. Lima Norte

According to the CSAP Family Planning Coordinator, PECOSAs and delays at the national level are not regarded as major problems. However, PECOSAs are a bottleneck insofar as the central level does not organize them with detailed unit pricing, by donating organization, or by consignee. In addition, the central level violates policy by accepting PECOSAs from the UTES, bypassing the UDES; however, the MOH follows the system to the UDES level in terms of contraceptive supplies. It was believed that the PL 480 budget for shipping and handling should be used.

4. Lima Ciudad

The Chief of Almacen, along with the Regional Program Coordinator, go directly to Almacen de Venezuela to pick up goods and then distribute them directly to the smaller health centers, which usually do not have transportation. Usually, the technical staff, e.g. Family Planning Coordinator, prepares the request for supplies, but the DOL prepares the PECOSA. Because of high costs, there has been a problem in obtaining parihuelas (pallets).

C. Transportation System

Transport of commodities from MOH central facilities to peripheral dispensing points is sometimes difficult because of the limited availability of vehicles and the condition of roads in the mountainous regions of the country. These limitations are

magnified when most available transportation resources are used for "emergency" deliveries necessitated by stockouts that have resulted from inadequate inventory planning and poor delivery scheduling. Because of the economic crisis, the transportation of commodities from the central MOH is extremely difficult. Field interviews with persons responsible for logistics at the UDES level in Piura, Iquitos, Lima, and Cusco indicate that there are no funds available for transportation due to the devaluation of the Inti and its concomitant effect on the PL 480 budget item for freight transportation. When they are able, the CSAP Regional Coordinators use their project vehicles to support various health sector transportation needs.

Lima Norte lacks vehicles for product delivery at the UTES level, particularly in the Sierra. Most MOH vehicles cannot operate properly at higher elevations and in mountainous regions.

D. Warehouse Findings

The Chief of Warehouse in Piura expressed concern for the lack of shelf-life information for CSAP products. Other concerns noted included: broken boxes that were sprawled on the floor, and Copper T stocks in disorder, i.e., expiration-dated boxes were stacked in no particular order.

CSAP immunization materials were satisfactorily stored on pallets. Also, condoms were stacked satisfactorily on shelves.

At the Catacaos Centro de Salud in Piura, the CSAP commodities were found to be in fair order in the pharmacy, but in a state of general disorder in the storage room. There is no Kardex system and "Tarjetas Visibles de Control" in either location.

In Iquitos, the UDES warehouse is kept in excellent order in terms of appearance, cleanliness, order of products, FIFO (first in, first out) maintenance, "Tarjetas Visibles de Control," and current Kardex files. The CSAP Regional Coordinator monitors the system regularly and also maintains a parallel Kardex system.

In Cusco, the Regional Hospital's warehouse is overcrowded, and FP commodities are in disorder on the floor rather than on pallets. The UDES warehouse is small and needs improvement. The Evaluation Team was told that no improvements could be made until the central MOH sends in an evaluator (fiscal) to perform a needs assessment (diagnostico). There has not been a MOH evaluation of the Cusco facility in the past five years. Funds for warehouse improvements are available in the CSAP budget, but action must be taken by the central MOH.

There is no periodic MOH bulletin on products and prices, such as exists in other ministries of Peru.

At Lima Ciudad's warehouse at Comedor No. 3, all contraceptives and immunization commodities are placed on pallets, and in FIFO order. The Warehouse Chief attended a 30-day PRISM training program; he is eager to computerize all of the warehouse data using The PRISM Group's MIS-Logistics software.

The Almacen de Venezuela in Lima is the MOH's central depository and transfer point for locally-procured and internationally-provided medical supplies. The following are findings from evaluation of the CSAP Logistics:

1. Often, no shipping notice or Aviso de Embarque is received from international donors. A primary reason for this is postal strikes of which there were three during 1989: March-May, October, and December.

2. One of the biggest bottlenecks is the "Resolucion Vice-minesterial," a legal requirement for all shipments destined for the MOH. Five days are required for the resolution to be prepared and another ten days for the document to be signed.

3. A shipment weighing between 3-9 tons was sent by CTT piggy-back container which is an inefficient and costly use of a container that can hold 60 tons of supplies.

4. Three charges are incurred at the Port of Callao and at Jorge Chavez Airport: freight forwarders, CORPAC and laborers. Also, there is a cash availability problem, and most workers and truckers refuse to accept MOH checks. The MOH accounting system will not allow petty cash to be used for these purposes.

   In regard to payment of freight forwarding, the Almacen de Venezuela currently has no funds; and therefore, all PECOSAs are being delayed. There is a budget for freight; but due to the economic crisis, it has been consumed by inflation. In addition, domestic freight costs have risen over 300% (cf. the 3001% increase in fuel costs). It has been reported to the Evaluation Team that the MOH Accounting Department has been holding PL 480 checks for almost five months.

5. The process of releasing goods from Customs (assuming the charges are paid) takes anywhere from 20 days to an unspecified number of months.

6. The legal requirements the Almacen de Venezuela must observe include: an Acta de Recepcion, during which weight + quantity are verified by three persons (a notary, a representative of the MOH, Dept. of Logistics (Customs), and a representative of the MOH Program involved). The packing list is then compared to the

Aviso de Embarque and the shipment's contents to verify agreement. An "Hoja de Observacion" is then completed for insurance purposes which notes either the shipment's completeness or discrepancies. Often it is difficult, if not impossible, to verify completeness in an order received. Sample counting of lots is often used.

7. The Acta de Recepcion is then sent to the particular Program Office.

8. There is some sensitivity concerning theft, and many shipments arrive incomplete, missing any number of units or products. The system is subject to a number of weaknesses in control. For example, a shipment intended for Chachapoy, Amazonas must be aboard the weekly Monday morning 0800 flight, which means it must be delivered to the airport by 1700 hours of the Sunday before. The delay in receipt of the shipment until it is aboard the flight "breaks" the control of the Warehouse Chief.

9. The Chief of Warehouse believes it would be possible to "clean out" the warehouse within fifteen days by sending all of the bills directly to USAID. This is done with UNICEF, but otherwise not permissible under current MOH policy.

E. Alpha Consult Performance

The Evaluation Team's sample of sites within the parameters of Selva-Sierra-Costa put us in close proximity with 70% of Alpha Consult's employees: Dr. Rudolfo Sota Zapata (Piura), Dr. Fernando Pina (Iquitos), Dr. Leoncio Susuki Lopez (Cusco), Lic. Gladys Mojica (Lima Norte, Callao), Dr. Julio Castaneda (Alpha Consult Administrator), Lic. Maria Pilar Cifuentes (Economist), and Dr. Humberto Gamarra (National Coordinator). All of these individuals appear knowledgeable about logistics, administration, program commodities, procurement and forecasting.

The Regional Coordinator in Piura has been instrumental in ensuring good stocks of CSAP supplies throughout the region.

In Iquitos, the Regional Coordinator has been less successful in ensuring adequate supplies of stocks because of two obstacles: the central MOH and the current UDES Director. In regard to logistics, the Regional Coordinator closely reviews the warehouse, staff and commodities.

In Cusco, the Regional Coordinator is a highly regarded individual working in a well-organized health sector. The quality of health sector personnel in Cusco seems to be exceptional. This

individual appears attentive to all aspects of the CSAP, including logistics. He has strongly requested that FP supplies be sent to Cusco immediately. He anticipates no stocks by mid-September.

The Regional Coordinator in Lima is an intelligent, capable CS professional and is knowledgeable about her region and in particular, its health resources and needs. Because of the proximity of the Lima UDES to central MOH level and the Almacen de Venezuela, the supply issue is not as intense as in the more-distant regions.

Alpha's economist, assigned to the CSAP has strongly supported the amelioration of logistics problems and has urged MOH action on PL 480 funding issues, especially in regard to commodities transportation.

The Alpha Consult Administrator is a strong supporter of systems management in the health sector. He is cognizant of the problems and bottlenecks in the logistics areas of the MOH and has voiced strong opinions concerning the Customs delay issue.

F. Conclusions and Recommendations

The MOH's logistics system suffers from many problems, all of which directly impact on the CSAP. At one level, examples are:

1. Long delays in receipt of commodities from international institutions;

2. Delays in Peruvian Customs storage areas due to a lack of appropriate documentation required of institutional donors;

3. Shortages of funds for releasing shipments or delays in PL 480 and/or National Treasury draw downs;

4. A shortage of logistical support at the health post level.

At another level, the PECOSA process is burdened with numerous steps. Some examples of problems associated with these steps are:

1. Incorrectly completed PECOSAs at the UDES level;

2. PECOSAs returned by the central-level Ministry lacking:

   a. unit pricing of products (for UDES and UTES program accounting purposes);

   b. donor identification;

   c. specific program consignee identification.

3. Failure by the Ministry to return completed PECOSAs to the UDES as required;

4. Shipments received at UDES, along with the freight forwarder's bills of lading but lacking corresponding PECOSAs, often lack any indication as to consignee within the UDES, requiring the UDES DOL to determine the proper destination.

During two meetings with the MOH's Director of DOL, the Evaluation Team's logistics specialist discussed many of the CSAP logistical situations that were encountered in the field visits to UDES, Regional Offices, Hospitals, UTES, and health centers.

Unfortunately, the Evaluation Team's findings in the area of logistics demonstrates a long trail of negatives. There is, however, a certain consistency in these negatives. At peripheral warehouses, as well as at the central warehouse (Almacen de Venezuela), there is excessive turnover of MOH personnel, leaving large vacuums in programming and delivery of services. A lack of appropriately-trained warehouse personnel is severely hampering operations and is having a negative impact on the CSAP.
The volume of complaints about the PECOSA system at the UDES level indicates a strong need for adjustments within the MOH's logistics system, particularly at Almacen de Venezuela.

Since some PL 480 funds are intended for payment of customs and freight charges, they should be used for that purpose. The need is immediate for the release of a large emergency air shipment of Lo-Femenal OC pills that arrived in Peru in March 1990. The shipment remains in Customs pending the payment of Customs, storage and drayage fees that are accruing daily. This matter was brought to the attention of the MOH and USAID during various meetings. This problem has negative consequences for other FP service providers, including IPSS and INPPARES. Loreto has been without OC pills since March 1990; and in the Inca Region, it is estimated that there will be no pills in Cusco/Madre de Dios/Apurimac by mid-September 1990.

Poor programming at the UDES or UTES levels or the transfer of products from the warehouse to a shipper, is not a logistics problem but a matter of management. It is hoped that the MOH's newly-appointed Director of Logistics can help resolve these problems. Indications are that a series of planning meetings with the CSAP National Coordinator and others concerned with CSAP will be helpful in seeking immediate as well as permanent solutions.
It must also be noted that USAID has been responsive to requests for commodities, particularly to emergency requests. Accusations from the field that USAID is solely responsible for shipment delays appear to be misplaced.

One important recommendation of the Evaluation Team concerns private sector involvement in the management of the CSAP, especially in the area of logistics. Further discussion of the expanded role of the private sector appears in Section 18.

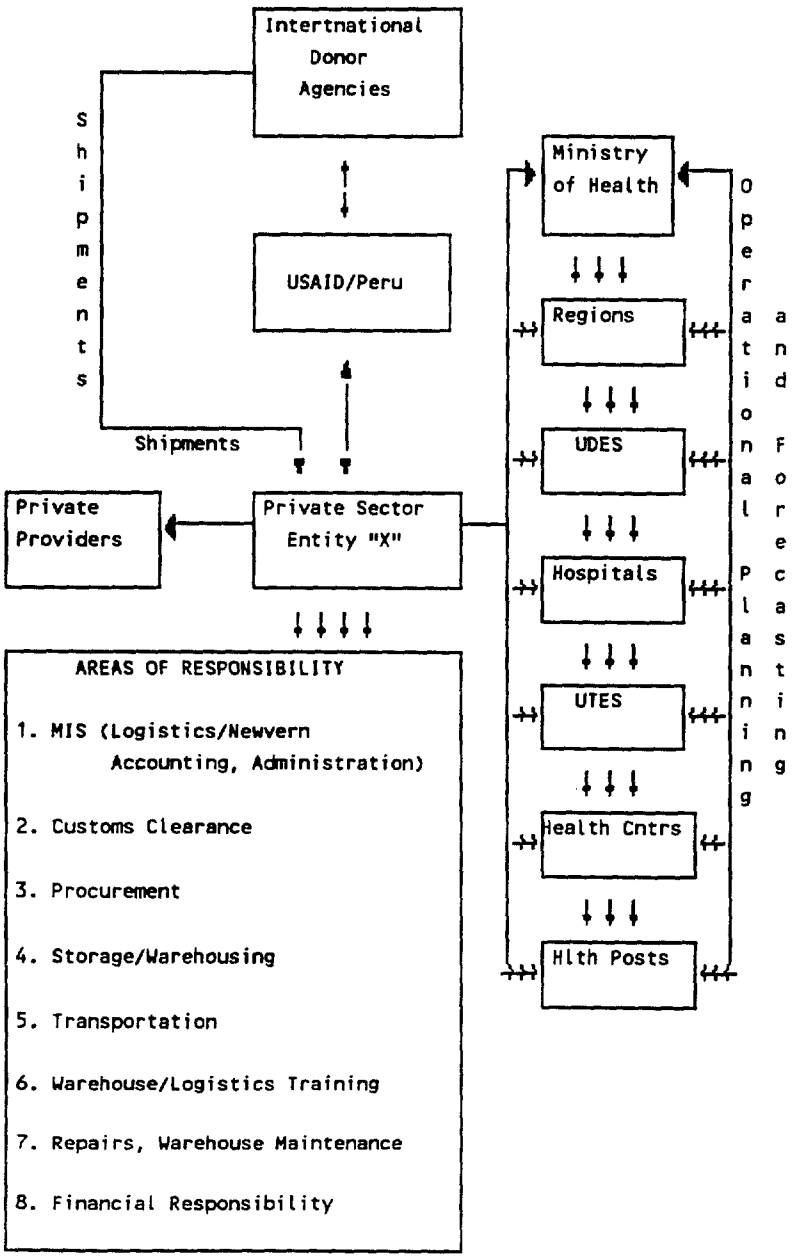
For the immediate present, USAID should seek to obtain approximately 1,000 copies of the Spanish-language version of the Management Sciences for Health manual, Managing Drug Supply: The Selection, Procurement, Distribution, and Use of Pharmaceuticals in Primary Health Care, for distribution to all appropriate personnel in the MOH, IPSS, and private-sector logistics systems.

The UDES Cusco warehouse needs improvement, particularly enlargement. The CSAP National Coordinator should endeavor to ensure that the central MOH level sends an evaluator to perform a needs assessment.

There is no periodic MOH bulletin on products and prices. Since the national mechanism already exists for this type of periodical, the CSAP National Coordinator should assist the DOL in promoting and developing such a guideline for general MOH use. A bulletin of this nature would be helpful in resolve the problem of non-valuation of PECOSA's.

The following chart shows a suggested revised model for CSAP logistics:

SUGGESTED REVISED MODEL FOR CHILD SURVIVAL ACTION PROJECT LOGISTICS



15.0 HEALTH COMMUNICATIONS

Health communications of the CSAP were reviewed in June 16 or 30, 1990 by a three-person team from the Academy for Educational Development's HealthCom Project. The group produced an assessment report that has been found useful. The report appears in Appendix B.

The Evaluation Team is supportive of the recommendations that have been made to USAID, in particular, the recommendation that USAID pursue technical assistance through a "buy in" to the HealthCom Project.

16.0 ECONOMIC ANALYSIS

A. Trends in MOH Financing

In August 1990, immediately prior to the visit of the Evaluation Team, a new National Government took office. The MOH was also new and was unable to provide readily available economic information that was necessary for the CSAP evaluation. In essence, existing sources of data were insufficient and not reliable. For example, in a MOH program summary prepared by the previous administration to list its accomplishments in the health area, financial data are presented in nominal terms. Comparisons are made between approved funds at the beginning of the FY and the funds used at the end of the year, as well as for other years, irrespective of the hyperinflation process experienced by the country. Most of the financial data, such as the indicators presented, are useless and suspect. In addition, the MOH has not had complete inventories since 1985. FY 1989 has also not been closed out.

Table 1 shows reductions in the government availability of funds. Although the chart compares the approved budgets at the beginning of each FY, and not the funds finally used, the proportion of the GOP budget received by the MOH has remained relatively constant.

TABLE 1. APPROVED YEARLY BUDGET - CENTRAL GOVERNMENT AND MOH
(INTIS$000)

CURRENT INTIS

YEAR	CENTRAL GOVERNM.	TOTAL EXPENSES MOH	CURRENT EXPENSES MOH	CAPITAL EXPENSES MOH	AVG CPI	
1987	70,400	4,102	3,470	632	0.37	
1988	159,908	13,567	10,268	3,299	2.86	
1989	1,504,762	138,040	88,076	49,964	100.00	
1990	31,520,000	2,331,200	1,856,581	474,619	264.28	*

CONSTANT 1979 INTIS (DEFLATED BY CPI)

1987	190,270	11,086	9,378	1,708	
1988	55,912	4,744	3,590	1,153	
1989	15,048	1,380	881	500	
1990	119,267	8,821	7,025	1,796	*

INDICATORS

1987	100.00	5.83	4.93	0.90	
1988	100.00	8.48	6.42	2.06	
1989	100.00	9.17	5.85	3.32	
1990	100.00	7.40	5.89	1.51	*
1987	100.00	100.00	100.00	100.00	
1988	29.39	42.79	38.28	67.53	
1989	7.91	12.45	9.39	29.25	
1990	n/a	n/a	n/a	n/a	*

SOURCE: MOH AND AID-PERU
* July 30th, 1990; CPI for August alone is estimated in 400%

There is general consensus that the MOH is under-funded and cannot provide adequate levels of service to its target population (i.e. 58% of the country's inhabitants). The response to this problem could be to increase MOH funding or to reduce the size of the target groups by encouraging broader community participation, a growing private-sector role, or perhaps both. As has been mentioned, no expectations should be placed on an increased MOH budget, or on budget increases in the event of a successful regionalization. The real expectation should be placed on the development of the private sector, not as an extension of the existing private-sector delivery of services, but more as the expansion of self-sustaining community-based, autonomous health organizations. These entities could be organized under the principles, policies and regulation of the MOH, IPSS, and regional governments. The charter of these new entities should be cost-effectiveness, PHC delivery, and satisfaction of basic health needs.

The situation of the IPSS somewhat differs from the MOH, and national authorities should not lose sight of the fact that a progressively aging population, however slow the process now appears, will have strong and lasting impact on the actuarial relationships between the retirement funds of active and retired beneficiaries. The growing requirements to satisfy pensions, together with growing health expenditures associated with the increasing age of the beneficiaries, will affect the finances of IPSS funds and are likely to introduce a growing deficit. From this additional point of view (and not only because of efficiency and efficacy reasons), IPSS should not further involve itself in health service delivery, but should instead gradually disengage from delivery of health care and transfer the activity to private, non-governmental organizations. Although the MOH-IPSS integration process is rational from the point of view of resources and services, it may not be a viable approach to consolidate public sector involvement in an area not inherent or "natural" to government activity.

The overall and proven State impotence to act efficiently and effectively and the preference of the public to seek private health service providers regardless of personal income levels (as shown in many health demand studies carried out in different countries) has, as a necessary consequence, the assurance that the path to follow goes away from the State and in the direction of broader private-sector and community involvement. In the case of Peru, a survey undertaken in Arequipa under this CSAP tends to support this statement.

Clearly, the CSAP, as well as any other initiative that aims to be successful, has to include the mechanism through which services will be provided. The "verbal" approach given to institutional improvements made by the State has a long history, and continually reflects poor performance. It is imperative that these notions be discussed with the new Administration while it may be possible to readjust the CSAP to the new national circumstances.

B. External Donor Projections

This Evaluation Team was unable to obtain an overall description of external donor funds complementing the government MOH budget, nor could it obtain data on the totality of funds (domestic and external) devoted to Maternal Health Care. Narrative accounts made by several sources indicated that other international agencies may be more efficient than A.I.D. in disbursing funds to GOP programs. In particular, PAHO and UNICEF were mentioned as examples of higher-impact agencies due to their more direct and locally-geared approaches. Since A.I.D. is a Government-to-Government technical assistance organization, it has different requirements and constraints as compared with other international agencies. However, further consideration should be given on finding ways to increase the efficiency of delivering financial resources connected with technical assistance.

The CSAP National Coordinator and the economist, should prepare, in coordination with MOH technical personnel (Budget Dept., Planning Dept., etc.), data describing national and international funds used by the MOH, by region, by program, by input, and by component. This exercise, together with the results of local programming activities, could provide information to reallocate resources according to known technical and political priorities. It is essential if there is to be a redefinition of the CSAP in the future. The present collaboration among donor agencies is an excellent opportunity to identify the extent of funds channelled to the health sector. Special attention should be given to a complete revision of strategies, including those that are directed to shifting attention to non-governmental ways of delivering health care.

C. CSAP Resource Projections

It would not be appropriate to describe the current resource projections of the CSAP, since one of the main recommendations of this report is to change, redefine and adapt the Project to a new national situation. This task also exceeds the Scope of Work and the time allotted to the evaluation.

D. Economic Impact

As stated in the PP, "from an economic perspective, the principal objective of the Project is to improve human capital through the provision of health and FP services." In other words, the economic approach not only looks into inputs, trying to minimize its usage to attain procured goals, and to results, trying to maximize goals, but also compares costs with effects and costs with benefits. Essential to this approach is a good information system that allows for adequate accounting and knowledge of the cost of each Project subcomponent (DDC, EPI, ARI, nutrition, FP), by activity performed and by region, and of the results obtained. In turn, these results have economic effects; for each individual served, there is a stream of net contributions to Peruvian society, which has to be weighted against explicit and implicit costs associated with the CSAP. It must be emphasized that the totality of funds and of activities assigned to Maternal Care have to be considered, in order to single out the contribution that corresponds to the CSAP and to be better able to evaluate the Project's impact.

Indicators should be developed to measure whether the design of the Project is the best one, in the sense of evaluating the causality relationships between means and ends. Goals such as number of immunization, IUDs, persons trained, mothers assessed, class-room hours, and so on, have to be quantified. Also, these numbers must have a monetary expression, but always in constant Intis referenced to the same base period. In addition, the relevant price indices have to be given from the central level, especially now, in the face of high inflation rates and while the process of decentralization and regionalization is taking place.

Tables 2 and 3 show an example of the information required to perform these studies. The National and Regional Project Coordinators and, in particular, the Project economist as well as the local MOH regional planning departments would have to collect, systematize and analyze the relevant data for this purpose. The HIS and MIS components of the Project should also include information capable of complementing economic-impact studies.

TABLE 2. PERU. CHILD SURVIVAL ACTION - IMPACT EVALUATION

CHILD SURVIVAL INTERVENTION: 1. Diarrheal Disease Control — Quantitative Targets

CONCEPT	BEFORE PROJECT (1987)	FINAL TARGET 1992	1989 TARGET	1989 ACCOMPL.	1989 DIFF	1990-AS OF ------ TARGET	1990-AS OF ------ ACCOMPL.	1990-AS OF ------ DIFF	TOTAL TARGET	TOTAL ACCOMPL.	TOTAL DIFF
A. REDUCTION OF INFANT MORTALITY RATE	88.2/1000	72/1000									
B. RED. OF CHILD MORT. RATE (AGE 1-4)	14/1000	10/1000									
UDES: XXX	Cases D.	Cases D.									
Children -1 year 1987: 1992:											
Childr. -5 years 1987: 1992:											
Births 1987: 1992:											
Women in F. Age 1987: 1992:											
Activities											
-Production of publicity materials..											
-Studies in consumer behavior.....											
-Quality and price regulations.....											
-Design of comprehensive strategies.											
-Workshops.....											
A. Training of Health Professionals											
-Doctors.....											
-Nurses.....											
-Auxiliaries.....											
-Community Leaders.....											
-Midwifes.....											
-Others.....											
B. Training of Other Personnell											
-Pharmacists.....											
-Pharmacy-employees.....											
-Elementary School Teachers.....											
-Secondary School Teachers.....											
-Others.....											
C. Social Marketing											
-Distribution of Pamphlets & guides.											
-Posters.....											
-Radio announcements.....											
-TV advertisements.....											
-Newspaper adds.....											
-Newspaper articles.....											
-Other publications.....											
D. Special campaigns											
-Elementary School teaching.....											
-Secondary School teaching.....											
-Health Services											
E. Distribution of Oral Reh. Products											
-Salvadora (Manuf. by LUSA).....											
-Electroral.....											
-Lytren.....											
-Frutti-Flex.....											

TABLE 3. PERU. CHILD SURVIVAL ACTION - IMPACT EVALUATION

CHILD SURVIVAL INTERVENTION: 1. Diarrheal Disease Control (IN CONSTANT INTIS OF XX) or (IN US$)

CONCEPT	BEFORE PROJECT (1987)	FINAL TARGET 1992	1989 TARGET	1989 ACCOMPL.	1989 DIFF	1990-AS OF ------ TARGET	1990-AS OF ------ ACCOMPL.	1990-AS OF ------ DIFF	TOTAL TARGET	TOTAL ACCOMPL.	TOTAL DIFF
A. REDUCTION OF INFANT MORTALITY RATE	88.2/1000	72/1000									
B. RED. OF CHILD MORT. RATE (AGE 1-4)	14/1000	10/1000									
UDES: XXX	Cases D.	Cases D.									
Children -1 year 1987: 1992:											
Childr. -5 years 1987: 1992:											
Births 1987: 1992:											
Women in F. Age 1987: 1992:											
Activities											
-Production of publicity materials..											
-Studies in consumer behavior.....											
-Quality and price regulations.....											
-Design of comprehensive strategies.											
-Workshops.....											
A. Training of Health Professionals											
-Doctors.....											
-Nurses.....											
-Auxiliaries.....											
-Community Leaders.....											
-Midwifes.....											
-Others.....											
B. Training of Other Personnell											
-Pharmacists.....											
-Pharmacy-employees.....											
-Elementary School Teachers.....											
-Secondary School Teachers.....											
-Others.....											
C. Social Marketing											
-Distribution of Pamphlets & guides.											
-Posters.....											
-Radio announcements.....											
-TV advertisements.....											
-Newspaper adds.....											
-Newspaper articles.....											
-Other publications.....											
D. Special campaigns											
-Elementary School teaching.....											
-Secondary School teaching.....											
-Health Services											
E. Distribution of Oral Reh. Products											
-Salvadora (Manuf. by LUSA).....											
-Electroral.....											
-Lytren.....											
-Frutti-Flex.....											

E. Conclusions and Recommendations

Economic analysis is an additional level of measuring the overall performance of the Project as visualized through a monetary expression. In this regard, an economic evaluation should focus on the goals to be attained by CSAP (final impact), on the activities which are anticipated to have the effect of achieving those goals, and on the resource mix involved to carry out the activities. There is need to know the cost involved in each program and in each activity, the individualized impacts, and the benefits associated. In other words, there is need to analyze the allocation of resources and to judge this allocation in terms of cost effectiveness and efficiency. Cost-benefit analysis should be carried out analyzing the overall social impact of the program. The information system should be geared at providing means and indicators of project accomplishments.

Recommendations:

1. Centrally designed norms should be uniformly applied in each region, but actions should follow local programming and inter-institutional coordinating activities. HIS and MIS should be the foundations for informed monitoring and decision making at each level.

2. Local programming should be done by local people, deriving programs in accordance with national norms, guidelines, goals, and priorities, but adapting to local circumstances. Basic data to be included are: demographic variables, census information, and past experience.

3. The cause and effect relationships that are required to reach the proposed goals have to analyzed. Those with the highest potential impact (e.g. social marketing, communications, on-site training, etc.) should be selected. Additionally, these should be adapted by locals to fit local needs and resources.

4. Local needs should be budgeted in relationship to actions to be performed in order to attain the predetermined goals. A comparison between programmed goals and obtained results should be carried out on a weekly basis, with regular feedback between staff and supervisors.

5. Non-government approaches for the provision of services should be stressed and developed.

6. Local and central technicians should be trained in the skills that are required to determine costs, interpret information, and apply economic analysis to contribute to the decision-making process.

7. Funds should be directed to the local level with no intervention by central authorities or with the least possible intervention required for timely and proper use for programmed activities.

8. The logistics of the CSAP should be organized to become efficient. Given the state of the system, private-sector involvement is essential.

9. The present "accounting-administrative outlook" of the public sector has to be changed into a managerial approach and be objective oriented.

10. It is essential to have good links with MOH planning authorities, both at the central and the local level. A commitment by the MOH to shift to the private delivery of services as a general and long-run strategy is considered to be high priority. It is doubtful that without this commitment lasting effect can be achieved.

17.0 THE REGIONALIZATION PROCESS

A. Government of Peru's Plan

In accordance with political decisions taken during the tenure of President Alan Garcia, Peru is undergoing a process of regionalization and decentralization of its political structure. The regionalization plan seeks to divide the country into 12 areas of varying geographic and population size. It is planned that each region will have a Secretary of Social Affairs (Secretaria de Asuntos Sociales), under which will be four Sub-secretariats, of Education, Labor, Housing, and Health.

B. Objectives and Strategies

The configuration of the regions is planned thus:

1. Grau: Departments of Piura and Tumbes
2. Nororiental del Maranon: Departments of Cajamarca, Lambayeque and Amazonas
3. La Libertad-San Martin: Departments of La Libertad and San Martin
4. Chavin: Department of Ancash
5. Wari-Libertadores: Departments of Ayacucho, Huancavelica, and Ica
6. Arequipa: Department of Arequipa
7. Jose Carlos Mariategui: Departments of Puno, Tacna and Moquegua
8. Inca: Departments of Cusco, Madre de Dios and Apurimac
9. Del Amazonas: Department of Loreto
10. Ucayali: Department of Ucayali
11. Andres Avelino Caceres: Departments of Cerro de Pasco, Huanuco, Junin

(NOTE: Lima has not yet been defined in regional terms.)

C. Regionalization of the CSAP

Following is the current distribution of Alpha Consult Regional Coordinators (* indicates current location):

1. Rudolfo Soto Zapata, M.D. (Public Health Specialist, Epidemiology)
   Tumbes, Piura*, Lambayeque and Amazonas

2. Segundo Gutierrez, (Odontologist)

   La Libertad*, Ancash, Cajamarca

3. Vicente Sanz, M.D. (Public Health Spec., Administration)

   Arequipa*, Moquegua, Tacna, Puno

4. Leoncio Susuki, M.D. (Public Health Spec., Admin)

   Cusco*, Madre de Dios, Apurimac

5. Gladys Mojica, Lic. (Public Health Nurse)

   Callao*, Lima Norte, Huanuco

6. Fernando Pina, M.D. (Public Health Spec., Admin)

   Loreto*, Ucayali, San Martin

7. Vacant Position

   Lima Este*, Cerro de Pasco, Junin, Ayacucho

8. Vacant Position

   Lima Sur*, Lima Ciudad, Ica, Huancavelica

D. Conclusions and Recommendations

1. Based on several conversations and observations in the field, it is suggested that Alpha Consult and USAID give consideration to the possibility of rotating selected Regional Coordinators based on their assessment of:

   a. Coordinator effectiveness;

   b. Satisfaction of the Coordinator with his/her current assignment.

2. It is recommended that there be reorganization of the CSAP regions in concert with the Peruvian national regionalization process.

18.0 ROLE OF THE PRIVATE SECTOR

A. Involvement in Service Delivery

The role of the private sector in the CSAP and future related projects must be seen in terms of the overall policies of the GOP during the past several years and the impact of these policies on the capacity of the public sector to deliver services. In general, these policies have been static in nature, stressing a high degree of government controls in all parts of the private sector. During the previous administration, this was accompanied by a decision to postpone payment on international debts, resulting in the economic isolation of Peru by international monetary agencies.

Macroeconomic policies have had the effect of fueling hyperinflation, deepening recession, and sharply reducing real wage levels. This has effectively depreciated Inti -denominated programs, be they USAID or other, and negatively impacted on program goals of established government and foreign assistance efforts in the country.

The public service sector has paid a particularly high price for these policies with the result that service delivery goals have become impossible to meet.

As frequently occurs in these situations, those affected more drastically with lowered per capita incomes and decreased service availability are the poor and near poor. The MOH for example, has not received its allocated resources, and those which it has received have diminished sharply in value. Frequent strikes and staff changes within the public sector, notably the MOH, have led to a service and staffing instability of enormous proportions. Normally expected functions of the MOH, such as logistics support and extension of services, have deteriorated significantly.

With the current administration, there is an apparent commitment to economic stabilization. This has led to an initial step at economic reform, referred to earlier as "Fuji-shock," and steps towards rapprochement with international financial institutions, including the International Monetary Fund/World Bank. Somehow the new government must successfully renegotiate a debt burden of approximating US$17 billion.

All of these observations infringe upon the potential role of the public and private sectors in affecting change within the health sector. As indicated, the public sector has been significantly weakened and the private sector restrained by previous government policies. New policies appear to be shifting towards providing greater opportunity for the private sector and,

ultimately, offering room for public sector stabilization. Given the tendencies of the present government and the relative capacity of the two sectors to respond to changing circumstances, USAID would better be advised to place its immediate concentration on the private sector, as opposed to public-sector investment.

Previous parts of this report indicate the current weakness of the public sector role in implementing the current CSAP. Serious deficiencies have been identified with respect to personnel instability, logistics malfunctions, and basic infrastructure support. The isolated strength of the public-sector performance is associated with new directions in the MOH, notably a changed relationship with PAHO as a means of promoting service delivery at the local level. In addition, there is reason to hope that the regionalization process will produce more local participation and responsiveness to community needs.

The CSAP has opened the potential for greater use of the private sector, although only in a very tentative way. As noted, the Alpha Consult agreement is primarily an accounting and payment mechanism by which USAID has added Peruvian employees to its management team in order to supervise Project delivery. Doubts have been expressed elsewhere in this report about the wisdom of this arrangement. Nonetheless, the involvement of Alpha Consult, on however limited a basis, is seen as a positive step.

The one true private sector commitment of any significant proportion made by the existing CSAP is the contract with PRISM. Also, as has been noted elsewhere in this report, this is the most clearly articulated part of the CSAP with the highest profile. It also is the highest-risk portion of the Project, involving a substantial commitment of resources to infrastructure reform within the public sector. It basically rests on the presumption that a prolonged (4 1/2 year) private-public sector collaborative venture can result in lasting system change within the public sector.

This leads the Evaluation Team to make the following observation. USAID/Peru may wish to consider some continuing legacy of support by the private sector in this major public-sector investment. In other words, to terminate the CSAP at the end of four and a half years with no commitment to ongoing monitoring and assistance of system performance by the private sector contractor may place the original investment at unnecessary risk. Any new CS private-sector project probably should include some continued participation of PRISM or another private sector contractor to maintain the HIS/MIS system and perhaps assist in maintaining the network of microcomputers established under the present CSAP.

It is significant that USAID/Peru is seriously considering strengthening private-sector health institutions with a follow-up project to the existing CSAP. A new project is proposed which will

experiment with broadening coverage and improving quality of health care services in selected areas through private service delivery to low-income consumers. Existing MOH facilities will be operated through private health care contractors that have been selected on a competitive basis. This program is designed to coincide with the GOP's efforts to decentralize government functions and provide regional authorities with greater responsibility for resource management in accordance with local needs.

Accordingly, USAID Peru is anticipating the development of a US$13 million (grant-funded) CS Project which will be entitled "Strengthening Private Sector Health Institutions." The project grant approval is estimated to come in the fourth quarter of FY 1991. Over half of the anticipated funds will be directed at service delivery with the objective of reaching children up to age five and their mothers.

The anticipated method of obligation will be a cooperative agreement with a Peruvian private-sector contractor. The project will encompass water and sanitation, as well as nutrition and maternal health, none of which is being effectively addressed by the current CSAP at the present time. Target areas such as FP, ARI Control, and DDC will continue to be a part of the proposed project. Moreover, the project will permit research, training, and technical assistance activities to take place. The key to the success of the new project will be the development of a privatization pilot acceptable to the GOP, such that the National Government or the Regional Governments would contract for primary care services with the private sector contractor(s) named under the agreement. The objective will be to assure that the poor and near poor, formally dependent upon the public sector for whatever services they obtained, would be covered under the new private-sector arrangement. Presumably, other USAID models in Latin America (e.g. Bolivia) and elsewhere will be drawn upon in the design of this project.

Lessons learned from the current CSAP project indicate the validity of this approach in the new project design. USAID may wish to concentrate on certain regions of the country and not try to carry out such an ambitious agenda as was undertaken in the CSAP. Further, firm understandings need to occur between the government agencies involved (e.g. VEA) and the private-sector contractor (e.g. PRISM or its successor, assuming a continuing private sector involvement in the HIS/MIS.

B. Potential for Modification and Program Design

1. Management

Much of the foregoing discussion has related to a generic discussion of private-sector performance in health services

delivery with a view towards future project development. The role of the present evaluation, however, is to focus on changes in the current CSAP to bring it more into compliance with its stated objectives. This discussion will draw upon previous observations regarding past, present, and future private-sector involvement in Peru and make suggestions for private-sector changes in relation to the CSAP. These recommendations will relate to the Conclusions and Recommendations Section of Chapter 5.0 on Project Management.

In Chapter 5.0, the need was stressed for improved coordination among the various sectors, both public and private, involved in the CSAP. This needs to be reinforced at every opportunity. Improved public-private sector collaboration is an essential ingredient in the more effective management of this Project. In addition, there should be greater private-sector involvement in the overall Project management. This means that USAID should relinquish day-to-day operational management and identify a private-sector manager to take this responsibility, whether it be Alpha Consult or some other contractor. USAID should concentrate on its monitoring and oversight role, leaving supervisory responsibilities to others.

In other words, it is suggested that the private sector concept being promoted for Peru be internalized to the CSAP and USAID. Again, as noted in Chapter 5.0, this expanded private sector role will most likely include logistics, as well as supervision and management of the staff currently working through Alpha Consult. The goal should be at least the same degree of USAID operational separation from the staff coordinated by Dr. Humberto Gamarra as has been established between USAID and PRISM.

USAID could then focus on dealing with problems such as the difficult relationship between PRISM and VEA or regional representatives of the Alpha Consult team and regional directors for the MOH. USAID staff might also focus on the much needed enhancement of the relationship between the MOH and IPSS, as they relate to this Project and on the Project and IPSS generally.

In essence, if the CSAP is continued, it is suggested that significant management responsibilities be transferred from the USAID staff to a private contractor and that this be a precursor to the proposed CS Project on "Strengthening Private Sector Health Institutions." It is possible that in the process of transferring certain current responsibilities to a new private sector contractor, that valuable information may be gained on how to design and manage the follow up Project.

2. Logistics

AID's consideration of an alternative logistics model must, of course, not eliminate the bilateral nature of the United States-Peru relationship. By contracting with a well selected private-

sector entity, the bureaucratic logistics processes of the MOH could be legally bypassed while still keeping the MOH involved at the program planning and policy levels. Efficiency and

effectiveness in the logistics system are needed vitally. A private-sector entity that operates by mutual agreement of the MOH and USAID would eliminate the need for a Resolucion Vice-Minesterial.

Modification of the CSAP appears to be necessary, especially in the logistics area. Throughout the course of the CSAP evaluation, dozens of meetings have taken place which support the conclusion to remove the logistics responsibility from the MOH and turn it over to a private-sector entity.

Concurrent with establishment of a modified logistics system is the need for strong involvement by USAID in obtaining GOP waivers on importation duties for donated goods. The system must be made agile to deal with a national emergency---Peru's runaway population growth rate. The Direccion General del Programa Nacional de Planificacion Familiar should take the lead in securing duty-free status for FP commodities, especially if the nation is to achieve the objectives set out in the National Family Planning Five-Year Plan. If the demand for FP services is as great as the MOH says and if the government is concerned about population growth as it has stated, then the GOP should eliminate the barriers it has erected with regard to importation of donated goods. The private sector may have part of the solution.

3. Training

It is suggested that USAID give more attention to utilizing private-sector contractors for training, as well as Project Management and logistics support. For example, there exist in Peru excellent private-sector training institutions (e.g., Cayetano Heredia University) that would be willing and able to provide support for training in the public sector, if contracted to do so. Other Peruvian universities which are facing severe economic cutbacks at the present time would undoubtedly welcome the opportunity to participate in training activities. For whatever reason, universities tend to be overlooked by USAID and other U.S. Government institutions as they solicit private-sector contractors for work in public-sector training.

The issue inevitably arises as to the proper role of the Human Resources Division of the MOH and its equivalent in other public-sector institutions. Designed originally to provide training through in-service programs, these entities are always in need of outside support for their work. Typically, however, they suffer from the same crippling deficiencies which plague the service

delivery component of their respective Ministries: that is, lack of sufficient per diem and travel support, both for the trainers and the trainees.

An additional handicap facing Human Resources Divisions of Ministries, such as the MOH, is that they frequently do not have trainers with the skills needed to mount sustained training programs throughout their agency. By drawing upon private-sector universities (or, if indicated, public-sector universities) for technical assistance and support, it is possible that the Human Resources Division of the MOH, for example, could be strengthened. Moreover, it could assure that a trained cadre of individuals would be available to carry out project goals.)

At this writing, the Evaluation Team has found it extremely difficult to know to what extent training goals have been met within the MOH or, for that matter, in IPSS. Were there a private sector contract designated for this purpose, outcomes would be much more verifiable and objective. This may be complicated by the fact that PL 480 and Treasury fund contributions are frequently designated as the source of support for in-service training. This may, in fact, be a significant problem which will need to be addressed in any new project design.

Given the apparent success of the CDC/VEA relationship in the present CSAP, a suggested model is to establish a similar Cayetano Heredia/Human Resources Division/MOH or other relationship in either a continuation of the CSAP or some future project. Perhaps a viable Training Division could be established with ongoing ties to an academic institution whose mission is training and education. It should be remembered that the current mission of the MOH is basically service and monitoring and not education. Indeed, there is some question whether the future mission of the MOH will involve service. Perhaps the appropriate role of the MOH at the national level, at least, is to restrict itself to monitoring logistics training and service delivery and not attempt directly to manage any of the foregoing.

4. Service Delivery

It has been suggested that perhaps a new CS Project would interject private-sector involvement in service delivery on behalf of the MOH. Models for this exist in the United States through community health centers, on the one hand, and contracted Medicaid services, on the other. Perhaps some of these models would work in Peru.

Much of the discussion of private sector involvement rests upon the assumption that it will be for profit and business-oriented. Equal, if not greater emphasis, should be given to non-profit, private-sector models in service delivery. Save the Children has developed three non-profit corporations for

implementation of its program objectives in three different regions of Peru. It has also been noted that UNICEF has relied heavily on local organizations which it initiates and funds directly. While heavily criticized by many international donor organizations for its direct support of community-level involvement, UNICEF has advocates among those who feel it is bypassing bureaucracy and moving directly to serving people in need.

Current movements in the MOH in relation to PAHO and direct delivery of services through a relationship between MOH and PAHO at the local level, suggest that there is openness in the MOH to new models of service delivery. By extending services directly to the UDES level and below through some yet-to-be defined PAHO relationship, the MOH is making a commitment to extending service through third parties, if not the private sector. It would not take a great leap to move from a PAHO delivery system at a local level to a non-profit, community-based model.

Perhaps lessons can be drawn from the community health center and migrant health center movements in the United States. Here the federal government chose to fund local non-profit organizations that operated outside the traditional health system in order to offer service delivery. By empowering the local community, a new force was developed that now has significant impact on national legislation policy. Similarly, contracted services through Medicaid organizations, particularly through prepaid private-sector groups, have diverted a significant number of patients from public-sector delivery to single-source delivery within the private sector. Perhaps similar payment mechanisms could be arranged in Peru and private-sector contracting used to eliminate inefficient and ineffective public-sector delivery structures.

Whether the delivery system at the local level be private or public sector, USAID should give serious consideration to strengthening any participation in the process. The Evaluation Team's experience indicates that community participation is absent to a significant degree within current MOH programs at the UDES and UTES levels. Presumably, such participation would also be missing in a for-profit, private-sector contractor role. Utilization of the Community Health Center/UNICEF/Save the Children model is a preferable alternative at the local level, encouraging local participation for delivery of services to public-sector beneficiaries. A key element in the public/private-sector service delivery question must be the role of the IPSS. IPSS is a quasi-governmental organization which aspires to private-sector performance, but is limited by public-sector regulations and bureaucracy. In many Latin American countries, the Social Security system enjoys a greater degree of freedom than it appears to enjoy in Peru. The previous GOP effectively depleted the resources of IPSS to the point that it is, in some instances, remarkably like the MOH in the quality of service which it can deliver.

Any discussion of service delivery and private-sector involvement must take into account IPSS. The presumed integration philosophy of the GOP would indicate that IPSS and MOH facilities are to be combined into a unified functioning structure. Various informants told the Evaluation Team that this is not likely to occur. (Theoretically, IPSS will take over all hospitals, and the MOH will take over all ambulatory care facilities.) Whatever the ultimate alignment, there are clear examples where IPSS and MOH facilities should and could be combined for the benefit of the consuming public.

One suggested model is that resources available for service delivery in both the MOH and IPSS be channeled to a third party contractor which would deliver services on behalf of both entities. This is most likely to occur in isolated settings where vested interests on behalf of either party are less strong than in the major metropolitan areas. Any new project mounted by USAID should look closely at the possibility of involving both MOH and IPSS resources in a private-sector service delivery model. In a radical restructuring of the CSAP, it is possible to imagine that such a modification could occur in at least one selected region during the life of the present project. Such an arrangement will be explored in Chapter 19.0--Suggestions for Model Scenario.

19.0 SUGGESTIONS FOR A MODEL SCENARIO FOR CHILD SURVIVAL

In this report, a number of deficiencies in the present CSAP have been noted. These include:

1. A lack of capability in existing government agencies to implement the program effectively;

2. A lack of coordination among these agencies--particularly between the MOH and the IPSS--needed to achieve program objectives;

3. Inadequate wages to sustain a family, much less enjoy any standard of living, particularly among MOH employees;

4. The crippling reality of frequent and prolonged strikes which deplete the resources of the sponsoring government agencies and critically delay program implementation;

5. The lack of meaningful private-sector participation, with the exception of PRISM and Alpha Consult;

6. Little to no community participation in project design and implementation; and

7. Inadequate recognition of participation in the program (i.e. ownership) by the new GOP representatives.

What can be done to correct all these deficiencies within the context of the present Project? The answer is "probably nothing" given the advanced stage of program planning and funding commitments. However, it may be useful to speculate upon a model which might have worked better had it been in place at the time the CSAP was initiated and which could conceivably still work as a modification in the program's direction.

The model for this program suggestion may be found in the previous "Servicio Cooperativo Interamericano de Salud Publica" (SCISP) program located in three departments of Peru. This program apparently addressed most, if not all, of the foregoing problems simultaneously while providing a high degree of service delivery to the target population.

The SCIS program brought together various agencies concerned with public health in its geographic region and used their resources to hire a non-governmental contractor to implement programs. This contractor was able to pay higher wages than was permitted by the MOH for its employees while avoiding problems

such as strikes which affect public workers. Furthermore, the contractor was free to sub-contract with non-governmental entities and others to provide services in outlying or other hard to reach areas. Finally, the contractor was able to maintain a set of priorities dedicated to health promotion and disease prevention.

At the present time, several small areas of the Amazon under MOH jurisdiction are served by NGOs working under agreement with the MOH. These NGOs are given full responsibility and whatever budgetary support can be made available (minimal, at best) to provide health service delivery in their defined geographic areas. These may be religious or non-religious groups. It was noted that where such arrangements exist, services are at the highest level in the context of the present delivery system.

Another feature which characterized the SCISP was its commitment to community participation. This is minimally sought by current MOH and IPSS. By asking its health workers, including physicians, to spend time with the community and solicit their input into health center activities, SCISP health programs were greatly strengthened. At the present time, there is little participation solicited either by the MOH or the IPSS system in health center design or program implementation.

What is proposed is a regionalized system in which the CSAP is closely related to the new regional government structure involving "Asuntos Sociales." This means participation by the MOH, the Ministry of Education and Housing, as well as IPSS in the project. It also means taking seriously the regionalization concept by transferring certain centralized functions to the regions.

A representative for the project would be assigned to work in conjunction with the regional office of the government, much as is now being done by Alpha Consult with the regional offices of the MOH. The terms of this individual's physical location and responsibilities would be renegotiated and redefined with the new government to assure acceptance of both program personnel and program objectives. In order for this innovation to be effective, it would be necessary for the regional offices to have veto power over the staff assigned to their regions by Alpha Consult.

In addition to redefining the role of regional office staff, the physical locations would be redefined as well. CS regions would be made coterminous with government regions and increased in number from eight to twelve. Particular attention would be paid to filling the new positions with individuals highly acceptable to the regional staff where they would be assigned, particularly representatives of the MOH and IPSS in those areas.

A basic revision would be at the heart of all change. This revision would acknowledge the presence of a new government with new actors and would seek a "moral renewal" of the project. It would do so with the knowledge that written agreements are already in place. It is essential that agreement be sought in advance from whoever needs to approve this amendment to the program, be it labor unions or Ministry officials, so that no strikes would be permitted by CSAP employees during the remainder of the life of this contract. (There have been periods of many months when no immunizations were given or other services provided because a strike was underway).

A clear expectation for the project would be that each of its facilities would meet internationally acceptable standards. That is to say, offices would be properly equipped and supplied; walls would be painted, and bathrooms would function. Portions of buildings currently available within the MOH or the IPSS system would be made available to the project or other facilities would be provided by the GOP. Even if the CSAP were part of a larger facility, such as a regional hospital, emphasis would be placed in maintaining the CS portion of that facility at the highest possible level. This would be the responsibility of the contract administrator.

In addition, fixed goals would be set for the contract administrator which would require an extensive outreach effort. Unless these goals were met, the contract administrator would be financially penalized, or the contract would be terminated. Periodic evaluations would be required to assure that terms of the contract were enforced.

In order to ensure outreach to the most remote settings, particularly the health posts, sub-contracts would be authorized in advance with NGOs, including religious groups, who wished to provide services in these areas. The participation of such NGOs would be aggressively solicited through international advertising. Every effort would be made to have different countries and programs represented in the resulting mix of service providers.

While little money would be made available to the "sub-contractors," their adherence to program goals would require that they meet standards if they were to retain their "franchise" to operate the health post(s) or medical centers in question. Ideally, each sub-contractor would assume responsibility for one medical center and its surrounding health posts. The sub-contractor would supply all of the necessary personnel and equipment to assure that program goals were met in its area.

An essential component of this proposal is that sub-contractors be required to use Peruvian employees wherever possible and direct efforts more toward local control and administration in

their areas. Community action councils or other representative groups would be an integral part of program design. Both, the MOH and IPSS would commit to work with these community groups and their representatives at the end of the program.

Because CS activities require international cooperation in order to be effective, the contractor for this project would be required to work closely with PAHO, UNICEF, UNFPA and other groups dedicated to CS. Lack of participation in a coordinated effort would be reason for contract termination. Alternatively, incentives could be built in for maximizing inter-agency cooperation.

Other forms of contracting should be considered as part of this model. They include logistic support. Instead of using government operated transport systems for the delivery of commodities, consideration should be given to contracting for this service as well. Basic CS commodities could be delivered through another entity, presumably one involved in bringing supplies on a regular basis to the areas to be served. Most likely, the sub-contractor in this case would be a for-profit corporation delivering consumables to outlying areas of the country.

A key methodological requirement for the system to work is that any governmental input required after the initial contract was signed should be provided at a regional level. Central decision making should be minimized and the use of the government's regional coordinators maximized. A mechanism should be established to assure that funding decisions made regionally would be endorsed centrally. This includes release of PL 480 funds, as well as any other contract funds which would flow from USAID or other sources participating in this project.

In short, what is proposed is a non-governmental, community-based contractual model for implementation of the USAID/GOP CSAP, working in close cooperation with the new regional structure being established by the GOP. Emphasis is placed on inter-agency cooperation, particularly with those international agencies most concerned with CS (PAHO and UNICEF). Strict and efficient administration of the program is anticipated, with a combination of fiscal incentives and disincentives surrounding any resultant contracts.

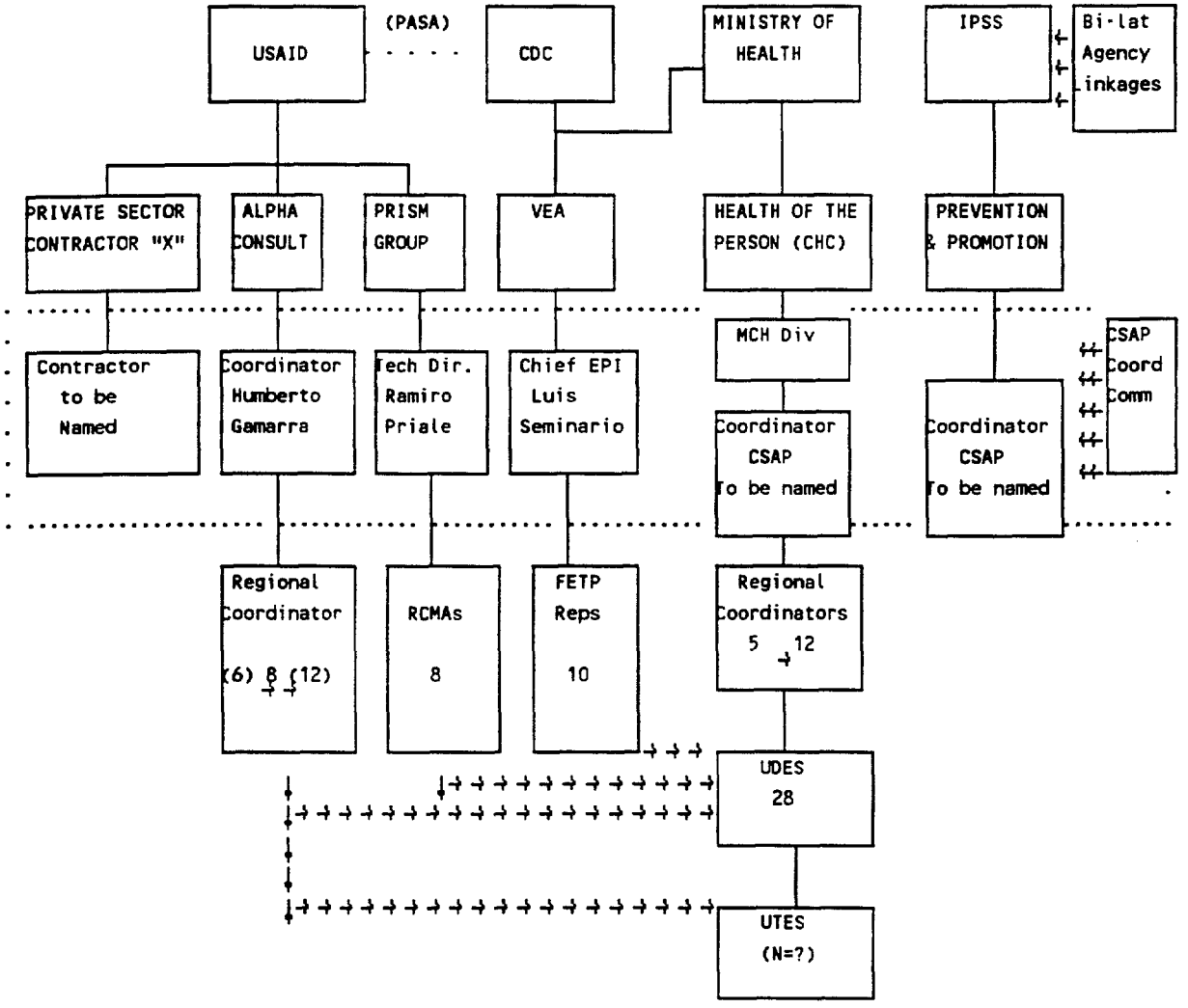
A key part of making the proposed program work is the use of sub-contracts with NGOs willing to work in difficult locations. Every effort would be made to assure their participation through an active marketing campaign both in Peru and abroad. This would require an openness to allowing both Peruvian and foreign workers to fill positions not currently being filled by official government agencies.

Whether such a model program can be introduced in the life of the present project is unclear. One argument in favor of so substantial a change occurring in CSAP now is the change in the GOP. The Evaluation Team believes that this provides an excellent and short-term opportunity to review all major project activities agreed upon by USAID and the former government. It also provides an opportunity for the current government to "buy-in" to these projects and to put its own identity on them.

As an alternative to restructuring the present CSAP, a second alternative is to consider a follow-up project which meets the specifications in question. In order for this to be achieved, a PP would have to be written. If this were to be done, it is suggested that it be built upon some elements of the present CSAP and possibly extend beyond it to include the entire health program in one or more region of the country. In so doing, an effort should be made to study the previous SCISP model in order to ascertain its successes and failures. Particular attention should be given to why this project was discontinued and what could be done to assure continuation of a future project of a similar nature.

Following is a chart which shows a suggested revised model of the Peru CSAP:

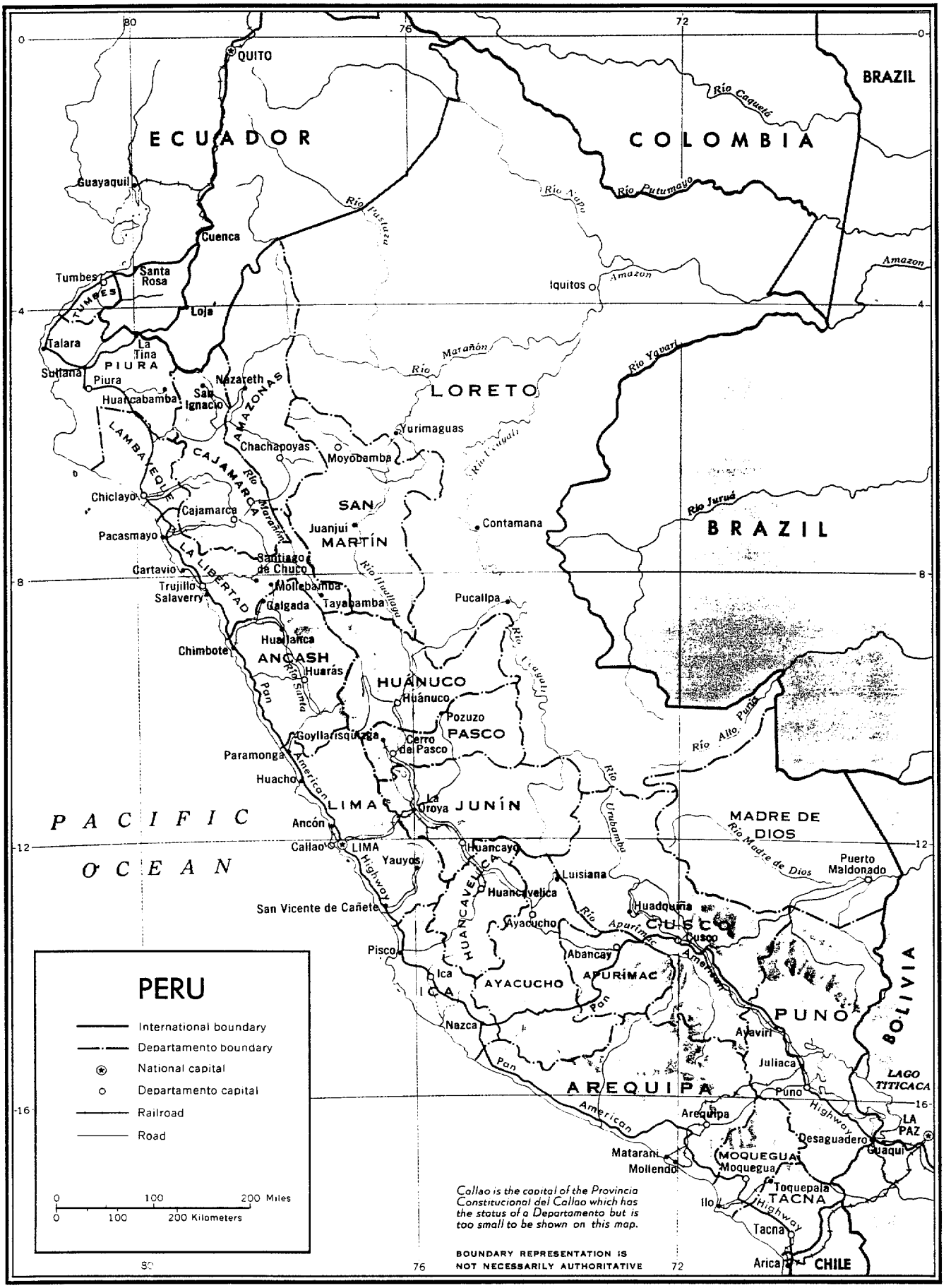
SUGGESTED REVISED MODEL - PERU CHILD SURVIVAL ACTION PROJECT



Appendices

APPENDIX A: MAP OF THE REPUBLIC OF PERU

Appendix A



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APPENDIX B: HEALTHCOM ASSESSMENT REPORT

Sponsored by the
Office of Health and Office of Education
Bureau for Science and Technology
United States Agency for International Development

Academy for Educational Development

University of Pennsylvania, Applied Communications Technology, Needham Porter Novelli, and PATH

HEALTH COMMUNICATION ASSESSMENT FOR CHILD SURVIVAL ACTION PROJECT

USAID/Peru

June 16-30, 1990
Lima, Peru

Academy for Educational Development
HEALTHCOM PROJECT

William A. Smith
Susan Saunders
Eduardo Contreras-Budge

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I. SCOPE OF WORK

HEALTHCOM was requested by USAID/Peru to send a team of communication consultants to perform an assessment of the health communication opportunities for Child Survival under the Child Survival Action Project (CSAP) with a special focus on identifying opportunities in the private sector.

II. STATUS IN PERU

A. New Government

On June 10, Peruvians elected Alberto Fujimori as President. The new administration will be instated on July 29. Meanwhile, economic and social uncertainties prevail. Everything is in transition.

B. Financial Crisis

Peru is facing extraordinary rates of hyper-inflation, deepening recession and currency instability. The impact on consumers, government, commercial operations and foreign investment is profound. Real wage levels have decreased substantially. Several subsidiaries of international companies are curtailing operations or closing down in-country efforts, nine of which are in the pharmaceutical industry. Production and inventory levels are being reduced as a survival strategy. Daily operations and basic services are hampered by electrical and water cut-offs which are increasing in frequency and duration.

In general, the MOH is under-funded and cannot provide adequate levels of health services to its target population. The MOH accounts for approximately 27% of the health sector expenditures, its target group (12.02 million) accounts for almost 58% of the population including an estimated 32% not covered at all. Additionally, the recession of the early 1980s forced reductions in public expenditures. Expenditures on goods and services were reduced to minimize reduction of MOH personnel. Financial resources within the MOH focus on curative as opposed to primary health care services which accounts for about one-fourth of the budget. Fee for services in hospitals encourages over utilization of expensive hospital based care.

The situation with Instituto Peruano Seguridad Social (IPSS) - covering 18% of the population - is somewhat different with less than ten percent of the budget coming from the GOP as a direct budget outlay. However, IPSS' fiscal status has been hampered by the large debt owed to it from public and private employers. Debt collection initiatives are underway. It was reported that IPSS is negotiating with the GOP to reduce the debt by transferring Laboratorios Unidos S.A. (LUSA) from the MOH to IPSS.

C. Chaotic Public Health System

The public health sector at present is in a state of chaos. The Ministry of Health (MOH) is currently on strike (now over 60 days) with no immediate expectations that it will end. In 1989, the Ministry was on strike for 5 months. The IPSS is on strike along with LUSA. While the public health service delivery system is on strike, the need for services is not reduced proportionately. Also, high rates of turnover in personnel are reported to occur in times when the public health system is functioning. One person reported it was as high as 40%. An additional compounding factor is the process underway that would regionalize health and other public services, with complex operational and administrative issues not fully solved.

D. Oral Rehydration Salts

LUSA is the only manufacturer of oral rehydration salt, Salvadora, with the WHO recommended formula. Production problems prevail along with marketing and distribution difficulties at LUSA. Unless production, marketing and distribution problems are addressed, promotion and demand creation efforts are inappropriate. Several donor agencies supply donated product to the MOH, none of which can be sold in pharmacies. It was reported to us that LUSA despite the support it has had has been unable to meet the minimum demand for ORS in the MOH while LUSA contends it could export product.

Some health providers working in Pueblos Jovenes have expressed disappointment at the levels of misinformation and lack of awareness of ORT in general, dehydration risks and ORS in particular by mothers. Available data shows very low user rates for ORS: actual ORT usage rates cannot be correctly determined from available data.

E. Health Communication

There is no master strategy for Diarrheal Disease Control (DDC)related to Child Survival (CS). Therefore an accompanying Health Communication strategy is nonexistent. An effective Health Communication strategy can only be developed and made effective when it feeds into an overall program strategy. Indeed, more modest and traditional plans for health education seem absent too. Activities and resources are limited as well. Recent communication and education efforts in DDC have been piecemeal, sporadic and not very consistent. No unified program approach regarding the principal messages to be conveyed to health providers and mothers or the appropriate media mix seems to be in-place. A flipchart and some pamphlets show the home sugar and salt preparation, experiences with popular theatre and puppets while interesting have not been too focussed or widespread and the sustainability of local popular communication methods on their own is questionable.

Concomitantly, the present structure at the MOH for health education, communication and participation do not lend themselves

to effectively designing, coordinating and managing an effective health communication program. Two attempts have been made to meet the Conditions Precedent for Health Communications, neither has been satisfactory to USAID. Within the present MOH structure, two entities exist which have some communication functions: The Communication and Public Relations and the Office of Community Participation. The first one is primarily responsible for managing the public image of the MOH, liaison with and production of print and broadcast media, and monitoring public opinion. The Community Participation Office has the dual function of some health education action and direct support for community mobilization on health action. It is reported to be politicized.

Efforts for IPSS to undertake a child survival program are new and as a result of the inclusion of family members in its target population. To date, most of its communication efforts have been centered around family planning. The Preventive-Promotional Unit at IPSS seems to be just beginning. Except for the family planning experience, little planning and activities in health communication have happened. Few if any resources and materials are available.

Under the Child Survival Action Project (CSAP), there is a very modest communication component for a broad spectrum of health issues ranging from diarrheal disease, nutrition, acute respiratory infection, immunization, to family planning. Of the 19.1 million dollars, $330,000 were planned for health communications.

F. Donor Activity

USAID's overall objectives in Peru are focused on economic stabilization, structural reforms for economic growth, support for reforms that lead to a wider share of benefits of economic growth and prevent further increase in absolute poverty, and drug control efforts. During the past year, USAID removed project personnel from the Central Selva, Upper Huallaga, and Yurimaguas areas. Staff travel has been reduced for security reasons. Brooke/Alexander sanctions continue to impact on timely obligations of project funding.

USAID is currently the largest donor in the health sector. USAID is increasingly emphasizing a shift to private sector provided health care for those with ability to pay and focusing MOH services delivery for those unable to secure services with their own resources. Plans for a major project to strengthen the private sector health delivery are underway.

PAHO, UNICEF, UNFPA, bilateral donors and others such as Rotary International, provide varying levels of support primarily to public sector institutions in primary health care, emphasizing child survival activities.

UNICEF is sustaining a substantial CS initiative in Peru. Under the Women's Mobilization Program for CS (1987-1992), the program aims at reaching about 2,000,000 women nationwide. UNICEF

focuses on service delivery for immunization, respiratory infection and diarrheal disease. Women's health, rights and productivity are included but are yet modest efforts. The program works with over 100 organizations of various types. It combines mass media (with an advertising agency) and local grassroots communication. However, the project has created a system somewhat parallel to the MOH and has an unusually large communication component of $3-4 million per annum. UNICEF is funding eight studies evaluating their training and education activities. Last year UNICEF produced 4,900,000 posters, 5,000 flipcharts and guides, 400,000 folletos, and 50,000 cucharas for measuring "suero casero". The project has a technical secretariat of 15 people and 18 Departmental delegates, all funded by the Convenio Peruano-UNICEF (involving MOH, MOE, INP, and UNICEF). Such program has experienced some difficulties with MOH at department and local levels.

PAHO has a significant CS initiative in Peru. In November 1989, PAHO held a scientific meeting on Medicamentos Inappropriados en Diarrhea: La Magnitud del Problema. PAHO has a large training program planned for CS in diarrheal disease control (DDC) including supervising skills, norms, case management, clinical training, and training for non-governmental organizations and community groups. They also have a social communication and community participation set of activities that might lead to new activities.

PAHO's manager for DDC is interested in organizing an Interagency Coordinating Committee, such as the EPI one. Discussions among USAID, PAHO, and UNICEF are underway. EPI at PAHO has focused on Campaigns (VANS) and is now moving to routine vaccination. EPI has worked with mass media and advertising agencies.

An overall PAHO Office for Communication has recently been instated. It aims to go beyond Public Relations and liaison with the media.

III. Overview of Health Communications

The goal of health communications strategies is to bring about changes in health-related practices and, in turn, in actual health status. It has made a significant contribution to improved child health when the methodology has been applied conscientiously. It has been effective largely because of its emphasis on the consumer, through preliminary research and field testing of products and practices. Although individual countries have unique cultures, special problems and varying constraints, the general strategy has proved to be adoptable worldwide.

The U.S. Agency for International Development has tested this strategy as applied to Child Survival over the past 10 years. U.S. A.I.D. sponsored programs have assisted national child survival programs on a range of health areas including oral rehydration therapy, immunizations, nutrition, breastfeeding, growth monitoring and others.

Health communications cannot compensate for poor products or inadequate supplies or distribution. It cannot compensate for an inadequate understanding of behavior. It cannot solve all health problems. What it can do, when systematically applied, is increase demand for products and services and teach correct use of those products and services, facilitate health related behavior change, and contribute to improved health.

Having evolved from piece-meal strategies, health communications now relies on comprehensive research and planning focused on the consumer. Four disciplines have contributed significantly to these programs: social marketing, behavior analysis, instructional design, and anthropology. Social marketing provides a framework for selecting and segmenting audiences and for promoting products and services. Behavior analysis supplies tools for investigating current practices, defining and teaching new practices, and motivating change. Anthropology reveals perceptions and values which underlie existing practices and which can help sanction new ones.

Health communications provides a strategy for planning and conducting long term programs to provide specific, sustained behavior change in large populations. The basic individual steps of the health communication process include:

- PLANNING

  Health problem analysis
  Developmental research
  Strategy development
  Testing materials and strategies
  Writing an operational plan

- o INTERVENTION

  Production
  Training
  Distribution

- o MONITORING AND EVALUATION

Each stage involves a number of steps. The strategy, however, is not linear, but cyclical. Health communications is an iterative process in which the results of experience feedback into and shape subsequent action: planning leads to interventions; monitoring of interventions leads to subsequent changes in planning. Research into consumer needs and responses shapes every stage of the communication process.

A few illustrations from results obtained during the recent past demonstrate the possibility of such success.

o In Egypt, an aggressive social marketing campaign and face to face educational efforts by health personnel and pharmacies increase the reported use of ORT from 1 percent to 69 percent in less than a year. After two years, 90 percent of all physicians reported routinely prescribing ORS, and a study of death registration in Alexandria suggested that during the diarrheal season, overall mortality in children under one year old dropped by about 30 percent between 1982 and 1984.

o In Indonesia, the Nutrition Communication and Behavior Change Project used communication to strengthen mothers' roles in child feeding. An evaluation showed that by 24 months of age, 40 percent of the project infants were better nourished than infants in the comparison group.

o In Honduras, mothers were taught to use a new oral rehydration solution called Litrosol. After two years of promotional radio broadcasting, 60 percent of rural women interviewed reported using the government's new ORS product; 35 percent of all cases were reported to have been treated with oral therapy. Mortality associated with diarrhea in children under five dropped from 40 percent to 24 percent in the target region during the two-year period.

IV. OPPORTUNITIES

A. Overview

Despite the present difficulties with Ministry of Health, two points of optimism are visible on the horizon. First a new government will be in place within 30 days and while the transition period to an effective MOH may take several months (6-12), the opportunity to collect, analyze and package consumer behavior (communication) research needed to shape an effective long term child survival communication program policy for the MOH is now. Also, USAID is undertaking a mid project evaluation for the Child Survival Action project which may lead to reprogramming and the development of a health communication strategy and component. Secondly, there are a number of excellent private, non-governmental organizations which are capable of both useful consumer research and direct service delivery which would readily benefit from a thoughtful communications component now.

In terms of program components, the greatest opportunity for USAID to make a contribution appears to be in the area of diarrheal disease and related nutrition behaviors. UNICEF and PAHO have a major commitment to support the MOH VAN immunization program and until the MOH is operating again, vaccine delivery will be problematic. Certainly a major USAID commitment to an EPI communication component without adequate assurance that EPI service delivery is in place would be a serious mistake. The materials already developed with UNICEF assistance are more than adequate to meet the anticipated needs once the program begins again. The MOH reported that while the next VAN effort will have to be considerable, present support from UNICEF on communication is sufficient for the time being. (J.W. Thompson advertizing agency has developed television, radio and print materials for mobilizing the VANs. Under the auspices of PAHO, the same agency is being used to develop television spots for polio surveillance.)

Similarly, the family planning program appears to have adequate communication resources available, and while more could be done, it does not represent an area of immediate priority. HEALTHCOM assistance at this point might diffuse the impact of on-going activities.

Diarrheal disease and maternal/child nutrition; however, are in a somewhat different condition. UNICEF is apparently reassessing its policy of pushing "suero casero" in favor of more emphasis on "liquidos caseros" and possibly ORS (Nueva Salvadora). Certainly this should be a shift that USAID would want to support and several opportunities, building on the Agency's competitive advantage, present themselves. First, availability of Salvadora would have to be improved. Of the more practical alternatives is an emphasis on pharmaceutical detailing - reaching not only pharmacists but pharmacists' helpers - in an effort to create a niche for ORT, to improve the brand image of the LUSA product and to help pharmacists to discriminate between the relative benefits of other commercial products.

This strategy of working directly with the private commercial sector is in line with USAID's exploration of new opportunities which include support and development of private insurance as a means of service delivery, cost recovery and saving of public sector funds for the lowest economic strata. Also, the operational transfer of MOH posts to private physicians for efficient management, cost recovery and service delivery is under consideration. Since many consumers often seek health services from the 3,500 pharmacies and boticas, ensuring that pharmacists and their assistants provide accurate and important information about DDC, danger signs for dehydration and continued feeding practices is important.

Four products in the Peruvian marketplace are positioned as ORT related products. Salvadora, produced by LUSA, is the only product on the Peruvian market which conforms to the formula recommended by the World Health Organization and registered with CONAMAD as an over the counter (OTC) medicine. The other three products (Electroral, Lytren and flavored Frutti-Flex) have varying formulations with higher concentrations of sugar, lower salt, and in the case of Lytren, nutrients (of minute proportions) are also included. The manufacturer of Lyntren is registering a new formulation which is reportedly moving towards the World Health Organization's recommended formula. All three are registered as ethical products and detailed to physicians in private practice and sold to pharmacies and boticas (licensed medical shops) by private distribution companies.

Since the promotional materials for Salvadora are warehoused at the request of a contractor, Frutti-Flex is the only product with some promotional material for the consumer in the pharmacy. Frutti-flex is also being promoted as a sports drink to prevent dehydration. Lytren is presented as "alimento especial (electrolitos para uso oral)". Lytren is the only product in which the package presentation makes no mention of oral rehydration salts. It should be noted that its dispenser box containing multiple packets clearly labels Lytren as an oral rehydration product.

Salvadora and Lytren are powdered presentations to be mixed with 1 liter equivalents. Electroral and Frutti Flex are liquid presentations in 1 liter, 1/2 ltr. and 1/4 ltr. presentations of glass and plastic containers respectively. Frutti Flex, introduced in 1989, is the most expensive with 1 ltr. equivalent retailing at about US $3.50/4.70 (I/70,000 for 250cc by 6/22/90), with Electroral selling for around US $2.50-3.40 (I/205,000) per ltr., Lytren for US $0.55 (I/33,000), and Salvadora for US $0.16 (I/10,000).

Secondly, critical consumer research is needed on brand awareness and preferences across the ORS spectrum - including "suero casero". The history of ORS in Peru has been one of the most difficult and controversial in the world. Understanding the impact of that history on brand image and assessing the impact of economic pressures on ORS purchasing behavior are critical pieces

of the planning puzzle now missing.

Finally, Peru is in a unique position to move ahead rapidly in the area of maternal-child nutrition. Excellent completed and on-going field studies on weaning-foods, feeding behaviors, dietary management of diarrhea and intervention studies at the Institute of Nutrition Research (IIN) plus the excellent work underway on breastfeeding at Cayetano Heredia University present significant opportunities to add state-of-the-art communication programs to expand their program reach and improve their adoption and impact. This investment will have a dual pay-off. First, effective programs will be improved and more Peruvians will be served and secondly, lessons learned from their experiences will benefit the new government's need for proven health care delivery models, materials, and strategies.

The specific opportunities for communication strengthening include:

B. Universidad Peruana Cayetano Heredia (UPCH)

1. Lactation Study

Using communication planning, develop a set of materials and teaching procedures to support Phase 2 of the Lactation study. This support will help hospital personnel teach mothers to increase the period of exclusive breastfeeding, delaying the introduction of water, milk and other commonly introduced foods. The communication effort would include qualitative research on perceived benefits of delayed supplementation, pre-tests of materials and teaching tactics and monitoring system to detect problems.

2. ORS Training of MOH Physicians and Nurses

Building on lessons learned from earlier (AID-Funded) formal training of 100 medical professionals (physicians and nurses), off-site training of two-week duration focusing on scientific data, observational trials and in-hospital treatment of cases with ORS with return to worksite planning can be an effective means of reaching mothers. Communication and behavior research support can be used to enhance the training impact and support sustained behavior change with development of materials for improved interpersonal communication with mothers at the worksite.

C. Instituto de Investigacion Nutricional (IIN)

1. Weaning Food Programs in URO's of Pueblos Jovenes

An adaptation of the rural Sanquito program to the Pueblos Jovenes of Lima is being planned. A communication component could dramatically expand the impact of this program. Ideas include clear packaging of messages (soap, teatro, etc.), mass incentives through a recipe lottery or contest, plus local radio support to face-to-face cooking demonstrations. This program presents a rich

opportunity to significantly expand the demand and adoption aspects of the proposed program.

2. "La Mejor Compra" Program

A program to analyze and then publicize "La Mejor Compra" (The Best Buy) from an economic/nutritional perspective has been underway for several months. The diffusion or communication component consists principally of radio and press announcements. There is a feeling that more systematic and perhaps more creative publicity could improve the program reach and impact.

3. Economic Crisis Study

A detailed study of the impact of Peru's continuing economic crisis and run away inflation on family purchasing behavior is planned. Adding consumer attitude variables to that study to determine not only what people are doing but how their values are changing, particularly in terms of what constitutes "benefits" for them could be a powerful communication research supplement.

4. Community Intervention on Infant Feeding Practices

This study is a community intervention (in a Lima shanty town) for promoting exclusive breastfeeding and improved infant feeding practices. Beyond a qualitative research component on current behaviors and beliefs, the project plans to pretest possible intervention strategies and end with an education/communication program. The opportunities for designing a meaningful health communication from the project's start-up need not be underscored.

5. DDC Behavior Intervention Study

This multidisciplinary study is at the stage of developing the education/communication intervention for modifying identified behaviors related to diarrhea risks. The opportunity lies in assisting with state-of-the-art strategies for behavior change and supporting educational materials.

D. Prisma

1. Revista: Ninos

The magazine Ninos, for health professionals, has been produced by Prisma under contract to USAID. Since 1987, eleven single topic issues have been published on topics such as diarrheal disease, immunization, acute respiratory infection, breastfeeding, growth and development, family planning, prenatal and postnatal care, perinatal mortality, rational use of medicines and nutrition. A large percentage of the production (10,000 press run) is given gratis to the MOH and the like. They are commonly used by the rural medical intern in their one year service commitment. A sizeable number are distributed gratis to pediatricians by Ciba Geigy. Others are sold at a relatively modest cost ($1.00). Updating a few of the earlier publications and reproducing them

(individually or collectively) will enhance the paucity of resources currently available for health professionals in Peru.

2. Mines: Health Education and Services Delivery

Prisma is working with three mining companies on health education and service delivery for the families of the workers and the surrounding community. An initial two week intensive training course is held for medical personnel. Follow up is given at three-month intervals to each of the health professionals. In addition to improved health services and health status, the company has been able to realize savings with a preventive approach and reduction of medicines for symptoms. The field testing and adapting materials to be used by UPCH for training physicians in communicating with mothers would likely strengthen the impact currently being observed in the mines.

3. Health Promoters in Pueblos Jovenes

Three hundred health promoters have been trained in health prevention practices, including the signs of dehydration, use of oral rehydration salts, nutrition, immunizations and family planning. The promoters work closely with mothers (each was selected by their neighbors), and with the local health post in the Pueblos Jovenes. A regular supervision system is in place with visits every 2 weeks. Communication research and materials development for this program will enhance the quality of health advice and reinforce behavioral change through interpersonal contacts.

4. Salvadora Promotional Materials

Point of purchase materials (5,000 posters, dispensers, and one million plastic sacks) and professional detailing material were for Salvadora, the ORS produced by LUSA. They are currently being stored until arrangements can be satisfied by LUSA for its outstanding loan payments to Path/Project Support for the ORS equipment. These materials can be used as part of the brand strengthening process for Salvadora. Although unable to meet with LUSA at the present, it is reported that marketing and distribution plans are needed for Salvadora at LUSA.

E. Private Pharmaceutical Sector

Peru has approximately 3,250 pharmacies and boticas (licensed medical outlets) which sell an ethical and popular over the counter medicine (OTC). After home based care, consumers often seek information (at no cost) and treatment recommendations from pharmacies. Pharmacies offer several unique benefits: being open for extended hours compared with MOH clinics, credibility of information and service which is important for serving repeat customers who reside nearby, general accessibility in urban areas, and an ongoing system of product delivery, ordering, and information.

Educating pharmacists and the pharmacy sales staff, who often

have more direct contact with the customer, about oral rehydration therapy, the role of oral rehydration salts, along with the relative advantages of the Salvadora product compared with others currently in the market will have an impact on demand creation for ORS, correct information flow on risk assessment for severity of diarrhea and strengthening the position of Salvadora in the market. It may also provide a shift of clientele from public sector services for those with an ability to pay. (Salvadora retails for about a US $0.17 equivalent.)

Experience in other countries shows that the support of professional medical societies is critical to success. Launching this process through scientific symposia, one for physicians and one for pharmacists in Lima, the North and the South, with the collaboration of the Colegio de Medicos and Colegio de Quimicos Farmaceuticos is a viable way to begin.

Contracting with a private firm for detailing services and training of their staff is an effective way to build on the existing commercial infrastructure. Selecting a firm who currently has a detailing infrastructure of personnel, management, administrative and supervision systems and who reaches both physicians and pharmacies/boticas is suggested.

Some additional specific aspects in developing a longer term collaboration with the private pharmaceutical sector also include items such as:

o pharmacists and sales person knowledge, attitude and practice study (KAP) and qualitative (observational) studies focusing on DDC, treatments, remedies, and ORS products which explore their own beliefs and practices.

o strengthening the correct information flows between consumer and service providers, particularly focusing on reduction of antibiotics and antidiarrheals, increased recommendations for ORS, accompanying home treatments including liquids and dietary management during diarrheal episodes, danger signs for dehydration, and referral to health institutions.

o continued education and motivational meetings through the Colegio de Quimicos-Farmacueticos focusing on ORT (and DMD) topics.

o follow up and reinforcement of training through local "charlas" to sales force, visitadores/promotores for pediatricians, and detailers in general.

o developing materials for pharmacists themselves; special materials and training events would be appropriate for pharmacies and their employees.

o low-cost handouts for clients seeking advice for children's diarrhea.

F. Ministry of Health

Clearly the MOH is in a stage of transition now. It is truly impossible to suggest concrete activities. However, it did appear clear that the new government will reorganize the health education/communication and possibly public relations functions within the Ministry. Certainly communication assistance could be useful to help shape the configuration of that new structure.

USAID may want to consider offering the new government a Policy Planning Workshop on Health Communication. At such a workshop various organizing models could be presented and discussed giving the new government hard data on experience from other countries. HEALTHCOM is in a unique situation to offer such assistance. The workshop might last for 2 days, include MOH top level personnel and the world's top communication practitioners, including health education, social marketing and community participation professionals. Special emphasis might be placed on public/private partnership and cost issues critical to establishment of an effective long-term health communication strategy.

A similar though reduced strategy would apply to IPSS, to the extent that it is appropriate. Conditions in the public health sector vary. The workshop will have to be responsive to criteria such as regionalization, local health initiatives, integrated sectoral approaches and conditions with on-going efforts of other donor agencies.

G. Participant Training

All of the non-governmental organizations identified above have clearly expressed needs for communication expertise. Some needs can be initially addressed with on site on-the-job training and technology transfer through pertinent technical assistance. While some activities are apparently similar across institutions and projects, e.g. materials development, they are in fact unique to each project and would only partially benefit from an in-country training seminar. Some communication research skills seem equally absent from all institutions and may be initially covered by in-country workshops. Topics include developmental investigation; concept, message, and materials testing and validation; and an emphasis on qualitative techniques such as focus groups, in-depth interviewing, intercept and observational behavior studies. Follow up would have to be tailored to institutional and project specific requirements.

While the above activities address urgent needs, they are only a piece-meal approach to the broader issue which is the lack of expertise in health communications. The longer term strategy is to build in-house institutional capabilities where investment in qualified human resources are needed. One or more of the institutions could benefit from long term training.

H. Conclusion

In summary, opportunities can be categorized into four areas:

- learning more about key consumer issues such as communication research on consumer behavior;
- strengthening of service delivery through private non-governmental organizations such as the Instito de Investigacion de Nutrition (IIN), University of Peru Cayetano Hereria (UPCH), and Prisma;
- building on existing commercially driven delivery systems such as pharmacies with educational detailing programs; and
- sponsoring participant training in communications to several institutions.

V. Operational Recommendations

A. Criteria

This health communication assessment under the CSAP is using the following criteria for recommending short-term, small-scale education and communication efforts in the public and private sectors. The recommended health sector focus is diarrheal disease control and related nutritional interventions. The results communication interventions will lead to are:

- initiation of health communication activities for CSAP which are relatively modest in terms of investment and duration;

- strengthening of on-going activities in the private sector which will impact on target populations;

- development of health communication strategy which feeds into an overall diarrheal disease control strategy for CS; and

- assimilation of lessons learned which may feed into the design of the new health project and new government

B. Programmatic Recommendations

We recommend:

- o Compiling synthesized existing research on DDC and related nutrition practices;

- o Using the data from the above search, developing a DDC draft strategy with an Inter Agency Coordinating Committee;

- o Developing basic health communication for DDC and communication research plan; and

- o In the interim, funding the described communication and education interventions.

C. Institutional and Programmatic Recommendations

Each recommended communication activity is listed below with requisite level of effort for technical assistance, U.S. dollar costs and proposed in-country expenditures.

Program	LOE	US $	In-country	Total
UPCH				
-Lactation Study	1.5	22,500	45,000	67,500
-ORS Physician Training	1.0	15,000	15,000	30,000
IIN				
-Weaning Food	2.0	30,000	25,000	55,000
-La Mejor Compra	1.5	22,500	10,000	32,500
-Economic Crisis Study	.25	3,750	-	3,750
-Infant Feeding Practices	1.5	22,500	15,000	37,500
-DDC Risk Behaviors	.5	7,500	10,000	17,500
Prisma				
-Ninos		-	30,000	30,000
-Mines		-	3,000	3,000
-Health Promoters	1.5	22,500	12,000	34,500
Pharmacy Industry				
-Scientific Symposium	.5	7,500	10,000	17,500
-Training & Detailing	2.0	30,000	60,000	90,000
-Educational Materials	1.5	22,500	40,000	62,500
-KAP	1.5	22,500	10,000	32,500
MOH				
-Policy Workshop	.5	7,500	15,000	22,500
Total	15.75	236,250	300,00	536,250

VI. Action Steps

1. Request HEALTHCOM participation in the forthcoming mid project evaluation for CSAP.

2. Reprogram CSAP funds for Health Communications.

3. Buy in to HEALTHCOM Project for short-term health communication assistance.

4. Buy in to HEALTHCOM Project with a central contribution.

Appendix 1

PRODUCTS FOR ORAL REHYDRATION THERAPY

MARKET SHARE IN LITERS AND SALES FOR ORT PRODUCTS

June 1988 - June 1989

Producto	Cantidades Vendidas Litros	%	Valores de Ventas US $	%
Electroral	284,000	30.3	457,000	80.5
Lytren	205,000	21.8	90,000	15.8
Salvadora	449,000	47.8	11,000	1.9
Frutti-Flex	973	0.1	10,000	1.8

COMPARISON OF SALES

	1986/1987 US$	%	1988/1989 US$	%	%
Electroral	793,000	85.6	457,000	80.5	(-42.4)
Lytren	120,000	13.0	90,000	15.8	(-25.3)
Salvadora	13,000	1.4	11,000	1.9	(-15.4)
Frutti Flex	-	-	10,000	1.8	
	927,000		568,000		(-38.7)

ORT PRODUCT PRESENTATIONS AND PRICING

Electroral	glass bottle, 1 ltr,	I/210,000
Lytren	packaging, powder for 1 ltr.	I/35,000
Salvadora	packaging, powder for 1 ltr.	I/10,000
Frutti-Flex	plastic bottle with cap, 1/4 ltr.	I/70,000

(by mid June the rate was $1.00 = I/60,000)

ORT PRODUCT FORMULATIONS

Product	Formula	
Lytren	Citrato de Sodio	1.84 %
	Cloruro de Potasio	2.33 %
	B fosfato de sodio	0.86 %
	Lactato de Calcio	0.77
	Cloruro de Sodio	0.37
	Acido Citirco	1.50
	Sufato de Magnesio	0.30
	Dextro-Malto	10.00
	Dextrosa	82.03
Salvadora	Cloruro de Sodio	3.5g
	Citrato trisodico dihidratado	2.9g
	Cloruro de Postasio	1.5g
	Glucosa Anhidra	20.0g
Fruiti-Flex	Sodio Cloruro USP	0.300g
	Postasio Cloruro USP	0.375g
	Sodio Citrato Dehydratado	0.725g
	Sacarosa	10,000g
	Esencia Fresia	c.s.
	Agua Destilada USP c.s.p.	250 ml

PRODUCT POSITIONING

Ethical (with detailing to private practicing physicians, no brand specific advertising permitted)

Electoral Lytren Frutti-Flex

Popular (with promotion to pharmacies and boticas, point of sales materials, and mass media promotion)

Salvadora/Nueva Salvadora

GENERAL OBSERVATIONS

o There has been 38% decline in overall sales of ORT products between 1986/87 and 1988/89.

o Recently 9 pharmaceutical companies closed their operations here and two oral contraceptives manufactured in Peru under license have ceased production reportedly due to escalating costs and difficulties with importing.

o Individual packets of Lytren (has been in the market for 14 years) have no information regarding oral rehydration therapy, but the dispenser box sold to retailers containing multiple packets is clearly and simply labeled as "sales de rehydration oral".

o Although Electroral, Lytren and Frutti-flex are registered as ethical products with prescription requirements and detailed exclusively to physicians, each is available at the request of the consumer or suggestion of a pharmacist without prescription (demonstrating the formal and informal systems in Peru).

o Only one product, Nueva Salvadora conforms with the World Health Organizations recommended formula. A second formulation of Frutti-flex similar to that recommended by WHO is reportedly lagging in sales. Lytren is introducing a new formula reportedly with a more "modern" composition that is approaching the WHO ORS formulation.

o In times with skyrocketing inflation, hard currency for purchasing necessary raw materials and packaging supplies is hard to come by. Product and inventories drop and a delicate balance is maintained between production, supply and demand. Consumer purchasing patterns shift along with their priorities.

NUEVA

SALVADORA LUSA

Sales para prevenir y tratar la deshidratación

Cada sobre contiene: Cloruro de Sodio (3.5 g), Citrato trisódico Dihidratado (2.9 g.), Cloruro de Potasio (1.5 g), Glucosa Anhidra (20.0 g.).

Q.F. Fanny Vásquez R.
Director Técnico
Aut. M.S. Nº 13400-N

LABORATORIOS UNIDOS S.A.
R.I. 1160 - Producto Peruano

LUSA

Prepare un litro de agua limpia.

Eche todo el contenido del sobre en el litro de agua y mezcle bien.

Dele el suero al niño poco a poco con una cucharadita o una taza después de cada diarrea

Siga dándole pecho y la comida durante la diarr
Bote el suero que sobre después de un día.

SALUD PARA TODOS

Sales para Rehidratación Oral

Cada sobre contiene:

Cloruro de Sodio	3.5 g.
Citrato trisódico Dihidratado	2.9 g.
Cloruro de Potasio	1.5 g.
Glucosa Anhidra	20.0 g.

Para prevenir y tratar la deshidratación causada por diárreas.

LABORATORIOS UNIDOS S.A.
R.I. 1160—Producto Peruano

LUSA

INSTRUCCIONES:

Disolver el contenido del sobre en un litro de agua potable hervida, fría. La solución una vez preparada, no debe hervirse y deberá utilizarse en un día, descartando todo sobrante después de 24 horas.

Tomar por vía oral:

Niños hasta 2 años: 1 a 1 1/2 onzas cada hora para dar aproximadamente de 3/4 a 1 litro en 24 horas.

Niños de más de 2 años: de 2 onzas (1/4 taza), a 4 onzas (1/2 taza) cada hora, para dar aproximadamente 1 litro en 8 a 18 horas, de acuerdo a la edad y a las indicaciones médicas.

Q.F. Dr. Nicolás Kukurelo R.
Director Técnico
Aut. M.S. No. 13400—N
R.I. 1160—Lote:

Peso 80 g.

POLVO

LYTREN

A[illegible]MENTO ESPECIAL

* MARCA REGISTRADA

LISTA 9404-16

ELECTROLITOS PARA USO ORAL

MeadJohnson

LYTREN* POLVO

INDICACIONES: LYTREN suministra todos los electrolitos fisiológicamente importantes, en una forma inocua y bien tolerada, por Vía Oral, además del aporte calórico.

En cirugía — ayuda a efectuar la transición de la terapia parenteral a la alimentación completa. Por Vía Oral provee soporte calórico parcial. Es de utilidad en la alcalosis y en la acidosis post-operatorias.

En diarreas restituye los fluidos y los electrolitos perdidos y satisface los requerimientos para el *mantenimiento normal*.

En el vómito — mejor tolerado por el paciente que rechaza otros líquidos comúnmente usados. Puede administrarse en cubitos de hielo.

En quemaduras y en otras situaciones — luego de que los requerimientos terapéuticos urgentes hayan sido suministrados por Vía Parenteral, LYTREN provee el agua y los electrolitos necesarios. Es también de utilidad en infecciones, diaforesis, fiebre, exposición al calor excesivo e hiperactividad.

ADMINISTRACION Y POSOLOGIA: La solución de LYTREN es para administración por Vía Oral DILUCION NORMAL: 1 sobre (80 gr.) de LYTREN polvo en 960 ml. de agua, para hacer un litro de la dilución normal.

Hasta 1 año : de 125 a 150 ml. por Kg. al día.
De 1 á 4 años: 1,000 á 1,500 *ml. al día.*
Niños de 5 á 10 años: 1 Litro en 24 horas.
Adolescentes y adultos: 2 Litros en 24 horas.

Estas cantidades pueden modificarse a juicio del médico.

Concentración de electrolitos en dilución normal:

Composición:		Electrolito	m Eq. litro
Citrato de sodio	1.84o/o	Sodio (Na)	25
Cloruro de potasio	2.33	Potasio (K)	25
Bifosfato de sodio	0.86	Calcio (Ca)	4
Lactato de calcio	0.77	Magnesio (Mg)	4
Cloruro de sodio	0.37	Citrato	32*
Acido cítrico	1.50	Sulfato	4
Sulfato de magnesio	0.30	Cloruro	30
Dextro-Malto	10.00	Fosfato	5
Dextrosa	82.03	Lactato	4

Un litro de esta solución provee: 280 calorías

*Esta cifra incluye el citrato derivado de 1.2 g. de ácido cítrico por litro de la solución de LYTREN, a dilución normal.

Emplee de acuerdo con las instrucciones del Médico

Preparación.- Vierta en un recipiente de mezclar hondo 1 litro de agua caliente previamente hervida 3 minutos. Agregue el contenido de un sobre de LYTREN. *Mezcle con un batidor o tenedor* hasta que el LYTREN haya sido disuelto. Para lactantes divida entre el número especificado de biberones debidamente esterilizados. Para niños y adultos vierta en un recipiente apropiado. Conserve en refrigeración.

Advertencia: No se debe dar LYTREN con leche, la fórmula del lactante o jugos de frutas. No usar más de un sobre (80 g.) de LYTREN por litro de líquido.

Aut. N.–10824
Director Técnico
R. Valenzuela Z.
Químico Farmacéutico
R.I. 12353-3 Prod. Peruano
R.P.I.N. 31 87 24

MeadJohnson

FARQUISA
Av. O. R. Benavides 1560 - Lima

frutti flex

LA MEJOR MANERA DE EFECTUAR UN TRATAMIENTO PREVENTIVO DE LA DESHIDRATACION EN EL HOGAR.

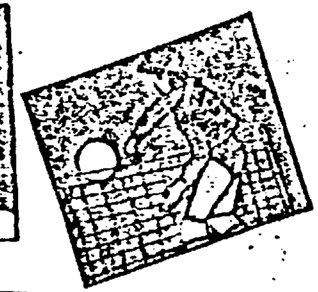
- Listo para usar.
- Cómodo envase plástico.
- Solución estéril.
- Agradable sabor a fresa.

MODO DE EMPLEO:
Abrir el frasco y verter el contenido en un vaso o tomar directamente del envase.
En los niños se recomienda administrar la solución con cucharaditas en forma fraccionada.

DOSIS: En niños tomar 100 mL (3 onzas), después de cada deposición líquida y continúe la alimentación normal.
En adultos tomar 250 mL (8 onzas), después de cada deposición líquida y continúe la alimentación normal.

FRUTTI FLEX EN LOS DEPORTES:

Actúa como un reconstituyente, ideal para tomarlo durante nuestros ejercicios.



LABORATORIOS
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¡CALIDAD AL SERVICIO DE LA SALUD!

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Appendix 2

Contact List

USAID/Peru

Director
Barbara Kennedy, Deputy Director
Charles Mantione, HPN Chief
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John Burdick, HPN

PAHO

Marta Lopez de Montero, DDC
Rosa Maria Cardoza, EPI
Jenny Vasquez, Communication

UNICEF

Mario Tavera, Acting Representative

MOH

Carolos Bocanegra, Human resources
Filipe Paredez, Community Participation
Edgar Ramirez, Public Relations
Fermin Avila, Training
Ruben Espinosa, EPI

Cambio 90 (transition team)

Victor Orihuela
F. Molero

IPSS

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Rosa Merino, preventive promotion office

Other
Walter Torres, FP Advisory to MOH
Hipolito Cruz, DDC Advissor to MOH
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Drokasa

Rina Alarcon

Ciba Geigy

Raol Garcia

Colegio de Quimicos Farmacueticos Y
Propriatarios de Farmacias

Rosa Kanashiro

J.W. Thompson

Fernando Otero
Nora Mendoza

Appendix 3

Documents Referenced

USAID Peru Action Plan 1990

Child Survival Action Project Paper 1987

Encuesta Nacional de Nutricion y Salud 1984

Private Healthcare Financing Alternatives, 1987

Modelo Quipus,

MOH Communication Plan, 1989

Current Research Projects of IIN, 1990

Por La Vida y La Salud, Plan de Salud Commission Cambio 90

Medicamentos Inappropriados en Diarrhea, PAHO, 1989

Listado de Investigaciones, IIN, 1989

Viewed Print and Television materials related to CS programs with UNICEF, J.W. Thompson, PAHO, Apropo, Prisma, IIN, UPCH

Appendix 4

HEALTHCOM

HEALTHCOM PROJECT

TRIP REPORT

EXECUTIVE SUMMARY

7/15/90.

1. **Consultant's Name:** EDUARDO CONTRERAS-BUDGE

2. **Funding Organization:** AED

3. **Dates in Country:** **To:** JUNE 30, 1990 **From:** JUNE 16, 1990

4. **Distribution:** LYNDA BARDFIELD, AED MONITOR; others as deemed appropriate at AED

5. **Brief Description of Scope of Work:**

As part of a team with Susan SAUNDERS and leaded by William SMITH, assessed health communication situation and opportunities under USAID/PERU's Child Survival Action Plan, and proposed specific activities conducive to broader consideration of an eventual health communication strategy for Child Survival.

* A full Trip Report, jointly submitted by team, is already at AED as a DRAFT-Not for Quotation Document. Copy also left at USAID/Perú.

6. **Major Findings/Activities:**

1. Present status in Perú is uncertain, due to change of Government 7/28 and very severe economic crisis with hyperinflation. 2. Public Health Sector in crisis, MOH in strike for 60 days. 3. No strategy for health communication; very limited health educ/comm actions at MOH; some private NGO efforts. 4. A number of donor activities to support Child Survival; substantial UNICEF effort in health communication. 5. Team activities included: i) review of current USAID/PERU CSAP & communications; expectations for same; ii) assessment of health comm. at MOH, IPSS, some relevant NGOs, donor agencies PAHO, UNICEF; iii) review of pharmaceutical industry potential for ORS-related actions; iv) debriefings with Director & D.D., HPN officers, recommendations, reports.

APPENDIX C: EVALUATION STATEMENT OF WORK

APPENDIX C: EVALUATION STATEMENT OF WORK

ARTICLE III - STATEMENT OF WORK

BACKGROUND

The Child Survival Action Project (A.I.D. No. 527-0285) was signed between the Ministry of Health (MOH) and USAID on September 29, 1987. The purpose of this five-year, $19 million Grant is to strengthen the capability of the public health sector (MOH and the Peruvian Institute of Social Security, IPSS) to deliver child survival (CS) health services through an integrated, cost-effective and sustainable care system.

The CSAP consists of two major components: (1) the expansion of CS services; and (2) the strengthening of decentralized support systems for sustainable CS services at the Departmental Health Unit (UDES) level. Activities under the expansion of CS services component include assistance to the MOH and limited assistance to IPSS for five major health interventions: diarrheal disease control, nutrition, immunizations, family planning, and control of acute respiratory infections. Health services support systems to be strengthened through project assistance at a decentralized level include: training and supervision; health communications; financial and personnel management; logistics; and health information, including active epidemiological surveillance (VEA).

On September 30, 1988, a PASA with the Centers for Disease Control (CDC) was signed for the provision of a long-term Epidemiologist and other short-term technical assistance to support the development and implementation of the MOH Active Epidemiological Surveillance Program (VEA). Four major VEA activities were identified to be carried out with CDC support: (1) the establishment of an intensive, in-country Field Epidemiology Training Program (FETP); (2) the development and installation of a national, computerized VEA system; (3) the training of key personnel in the Departmental Health Units (UDES) in the principles and methods of epidemiological surveillance; and (4) the strengthening of the MOH national laboratory system to support VEA and Child Survival activities. For activity (2), the CDC long-term Epidemiologist was charged with the responsibility to assist the MOH and personnel hired under the contract with The PRISM Group to develop the VEA component of the computerized Health Information System (HIS) and coordinate, if necessary, the provision of additional short-term technical assistance from CDC.

On November 11, 1989, a 39-month, $4.7 million contract was signed with The PRISM Group for the design, development, pretesting and implementation of a national computerized Health and Management Information Systems (HIS/MIS) for the MOH. The HIS should involve standard health statistics, performance assessment, and an active epidemiological surveillance system; the MIS should include personnel management and payroll, financial management/accounting and logistics. In addition, the contract called for the development and institutionalization of an automated data processing system (ADP) for both the HIS and the MIS which links all 28 UDES and the central MOH in Lima and includes the provision and installation of hardware, software and related accessories/supplies; maintenance and support services; training; and technical assistance.

On December 17, 1988, a four-year, $1.9 million contract was signed with a local firm, Alpha Consult S.A., for the provision of management and personnel services to assist the MOH, IPSS and USAID in the implementation of the CSAP throughout Peru. Specifically, the contract called for the recruiting and hiring of ten Peruvian professionals (eight Regional Management Coordinators, RMAC; one National Management Supervisor, and one Family Planning Advisor) and provide them with the required management, financial and logistical support. In addition, the contract required that Alpha administer a fleet of seven vehicles and one motorcycle for the use of the RMAC. On April 13, 1989, the contract was amended to add two additional professional positions - one Project Economist and a second Family Planning Advisor - and three more vehicles. To date, a total of eleven Peruvian professionals have been contracted by Alpha, all of whom are presently supporting the MOH and IPSS in the implementation of the CSAP throughout Peru. USAID has purchased ten vehicles which are being assigned to the RMAC under the administration and supervision of Alpha.

On January 1, 1990, Peru began regionalization of health care as part of a process to decentralize all public services according to a National Regionalization Plan regulated by Public Law No. 23878. By the end of CY 1990, all public services will be provided through 12 new established Regions with partial funding from the central government and also local taxes. Each Region will have considerable administrative autonomy over their programs, including the responsibility to allocate funds among the various public local service organizations. To complement the regionalization laws, additional ministerial legislation was passed by the MOH clarifying the specific steps to be followed in transferring the MOH regional health programs and facilities to the Regional Governments. To date, authorities of at least five Regional Governments have been elected and are currently in their organization process, while the transfer of the MOH health programs and facilities has been completed in at least two Regions.

SCOPE OF WORK

The purpose of this mid-term project evaluation is to assess the performance of (1) the Ministry of Health (MOH) and the Peruvian Institute of Social Security (IPSS) as project implementing agencies; (2) Alphas Consult, the PRISM Group and the Centers for Disease Control (CDC), as project support contractors; and (3) USAID, as funding agency, in the implementation and monitoring of project activities since its inception in September 1987.

The contractor shall evaluate the progress achieved to date in carrying out planned implementation activities under each project-supported MOH and IPSS health programs and support systems, as stipulated in the Project Agreement and Annual Operational Plans; document the current status of each project component/activity; and provide recommendations to improve their implementation and add or delete specific components/activities, if necessary.

The specific health programs and support systems to be evaluated under each project component are as follows:

1. Expansion of child survival services:

   - Immunizations
   - Diarrheal Disease Control
   - Nutrition
   - Acute Respiratory Infections
   - Family Planning

2. Strengthening of decentralized support system:

   - Integrated Training and Supervision
   - Transportation
   - Health Communications
   - Health Information Systems:
     - performance assessment;
     - health statistics, and
     - epidemiological surveillance system.

   - Management Information System
     - personnel management and payroll,
     - financial management and accounting, and
     - logistics.

   - Active Epidemiological Surveillance:
     - Epidemiological surveillance system,
     - Field Epidemiological Training Program, and
     - Strengthening of MOH laboratory capabilities.

Also the contractor shall conduct a thorough assessment of MOH, IPSS and THE PRISM Group performances in fulfilling their project implementation responsibilities. MOH and IPSS shall be specifically evaluated regarding the accomplishments and progress achieved to date in meeting the Conditions Precedent (CP) for disbursing project funds, organizing the project implementation committees, and expanding and improving the quality of CS services being offered through the project-supported health programs and the integrated training and supervision activities. The PRISM Group shall be evaluated regarding its responsibility to design, test and implement the MOH nationwide computerized health and management informacion systems, as stipulated in the corresponding USAID-PRISM contract.

Additionally, the contractor shall evaluate USAID performance regarding its overall project monitoring responsibility, including specific assessments of Alpha Consult and CDC as USAID's project implementation support contractors. The review of USAID performance should include, but not be limited to, the timely approval of CP, annual operational plans and other documents; the timely issuance of funds and commodities to carry out project activities; and the overall monitoring role of the project Management Team, which includes the project manager and three coordinators.

Alphas Consult shall be evaluated regarding its responsibility to provide personnel management and logistical support to the RMAC and administrating the fleet of vehicles purchased by USAID. The performance of all Peruvian professionals contracted by Alphas should also be evaluated with respect to their role of providing technical and administrative support to MOH and IPSS project staff in the implementation of the CSAP.

The Center for Disease Control (CDC) performance shall be assessed with respect to its role of providing technical and administrative support to design and implement the MOH Active Epidemiological Surveillance Program, as stipulated in the PASA Agreement. Specifically, the contractor shall evaluate CDC support to the MOH Field Epidemiological Training Program (FETP); the epidemiological surveillance system, and its support to strengthening the MOH laboratory capabilities.

Finally, the contractor shall analyze and assess the current and potential effects of the Regionalization Process and transference of the project-supported MOH health programs to the newly created Regional Government in the implementation of the CSAP. Furthermore, the contractor shall provide specific recommendation regarding the need, if any, to modify the current technical, financial and administrative implementation arrangements of the CSAP to conform with the regionalization process.

APPENDIX D: PERSONS INTERVIEWED AND ORGANIZATIONS CONSULTED

Appendix D: Persons Interviewed and Organizations Consulted

Angulo Johnson, Dr. Alberto
VEA Program
Lima

Arabe, Gerardo
USAID/Peru

Arevalo, Nair
HIS/MIS Program

Arredondo, Enf. Felipa
Coordinator for CEDA, CIRA and PAI
Social Security System
Cuzco

Belagatia, Dr. Jose
Director
Regional Hospital
Amazonas Region

Benavides, Bruno
Instituto de Investigacion Nutricional (IIN)
Lima

Bettini, Dra. Ana Maria
Cuzco Coordinator
Convenio Peru-Italia

Casanova, Alberto

Castaneda, Dr. Julio
Administrator for the
Child Survival Action Program
Alpha Consult
Lima

Castillo Gallardo, Dr. Hildebrando
Director of Preventive Health Services for
the Social Security System
Loreto

Castro, Dr. Hugo
Director of Family Planning
IPSS
Cuzco

Castro, Enf. Maritza
Coordinator of Family Planning
UDES Cuzco

Dr. Contreras
Director,
UDES Lima Centro

Creed, Hillary

Cuba, Dr. Raul
Director
G.T.Z. Program
Peru-German agreement
Cuzco

Cubas Perez, Luz
Family Planning representive
Iquitos

Cuneo, Ing. Carlos
Representative of the
Pan American Health Organization (PAHO)
in Peru
Lima

Cusa, Braulio
Representative of the G.T.Z.
Convenio del Peru con Alemania
Cuzco

Diaz Diaz, Elia
PIE Program
UDES
Loreto

Farfan, Dr. Ramiro
Dean
Faculty of Medicine
University of Cuzco

Fe, Maria
Director,
Human Resources
UDES Lima Centro

Figueroa, Lic. Luz Marina
Coordinator
UNICEF
Cuzco

Flores, Enrique
Instituto de Investigacion Nutricional (IIN)
Lima

Gamarra, Dr. Humberto
CSAP Coordinator
Alpha Consults

Gutierrez Flores, Euelia
CEDA Program
UDES Loreto

Guzman, Alfredo
Representative of the
United Nations Fund for Population Activities
(UNFPA)

Hidalgo, Dr. Felix
Assistant Epidemiologist
UDES Cuzco

Enf. Imaura
UTES Cuzco

Kennedy, Barbara
USAID Deputy Mission Director
USAID/Peru

Landers, Elsa
Executive Director
"Save the Children"
Peru

Lopez de Romana, Dr. Guillermo
Instituto de Investigacion Nutricional (IIN)
Lima

Mantione, Chuck
USAID/Peru

Martinez, Enf. Frida
Directora de Normas, Programas y Servicios
Regional UDES,
Iquitos

Mazola, Dr. Giuseppe
Lima Coordinator
Convenio Peru-Italia

Mujica Bances, Gladys
UDES Callao

Nagahata Susnaidar, Dr. John
Director,
Programa Medico de Planificacion Familiar
Callao

Ochoa, Dr. Julio Ricardo
Director
Human Resources and Training
UDES Cuzco

Pontoni, Dr. Alberto
Population Consultant
United Nations Fund for Population Activities
(UNFPA)

Portocarrero, Jose
Director,
IPSS Hospital
Iquitos

Priale, Ing. Ramiro
Technical Director
HIS/MIS Project
The PRISM Group
Lima

Pro, Dr. Luis Dr
Director,
UDES Lima Norte

Reyes, Dr. Jorge
Director Technical Supplies
Iquitos

Enf. Robles Meza,
Former IRA Director
UDES Cuzco

Seminario, Dr. Luis
Director
VEA Program
Lima

Spira, Dr. William
President
The PRISM Group
HIS/MIS Project
Lima

Susuki Lopez, Dr. Leoncio
Regional Administrative Coordinator for the
Child Survival Project
Cuzco

Valdivia, Dr. Dante
Epidemiology Director
UDES Cuzco

Velasco Cabala, Dr. Tomas
Director of Technical Support
UDES Cuzco

Velasco, Dr. Jorge
Director
UTES Cuzco

Zapata C., Enf. Magdalena
Immunization programs
UDES Cuzco

APPENDIX E: PLACES VISITED AND ITINERARY

APPENDIX E: PLACES VISITED AND ITINERARY

The sites selected by region as well as field visit team members are as follows:

Region	Site	Field Team
Costa	Piura and Catacaos	Smith, Orr, Meeroff, Gamarra*
Selva	Iquitos	Smith, Orr, Nichols Gamarra
Sierra	Cusco	Smith, Orr, Nichols Gamarra, Scholl** Contreras***

* Alpha Consult National Coordinator
** USAID/HPN Project Officer
*** Communications Consultant

Field visits in Greater Lima were made to three Health Departments or Unidad Departmental de Salud (UDES) located in Lima Norte, Lima Ciudad and Callao. The Health Center (Centro de Salud Max Arias Schreiber) attached to the UDES in Lima Ciudad was also visited. Field visits included conversations with UDES Directors and senior administrative and departmental staff, clinical and support staff. Field visits to the three regions included meetings and observations at: UDES, Territorial Health Units or Unidad Territorial de Salud (UTES), large Regional hospitals operated by the MOH and the Peruvian Institute for Social Security (Instituto Peruano de Seguro Social or IPSS), Health Centers, and small health service delivery units referred to as Health Posts (Puestos de Salud) in the MOH and Puestos Médicos by IPSS.

Dates of local travel were:

Site	Arrived	Departed
Piura	8/15/90	8/17/90
Iquitos	8/22/90	8/24/90
Cusco	8/26/90	8/29/90

APPENDIX F: METHODOLOGY

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FORWARD

EVALUATION PURPOSE

The Project Agreement (PROAG) for the Child Survival Action Project (CSAP),[A.I.D. Project No. 527-0825], references three types of evaluation activities in Article 5: Special Covenants, Sections 5.1., 5.2., and 5.3. In these Sections, reference is made to monitoring and periodic external evaluations that are expected to take place during the life of the Project. The purpose of these efforts is to assist AID in assessing the progress toward the attainment of Project objectives and the identification of problem areas and constraints related to the overall implementation of the Project. The CSAP evaluation reported here was undertaken as in accordance with the PROAG dated September 29, 1987. Although the CSAP evaluation has been referred to as a mid-term evaluation, it is actually the first comprehensive evaluation that has been undertaken since the Project began.

EVALUATION DATE AND LOCATIONS

The CSAP evaluation was undertaken during the period of August 9 to September 12, 1990. The primary emphasis was on Lima and in adjacent areas (e.g. Callao). In addition to Lima, field visits of approximately three days each were made to sites selected from Peru's three principal regions.

COMPOSITION OF EVALUATION TEAM

Medical Service Corporation International (MSCI), of Arlington, Virginia was selected by USAID/Lima, through MSCI's Indefinite Quantity Contract (IQC) with AID, to furnish a four person evaluation team. The team was comprised of a health planner, a management information system (MIS) specialist, a logistics specialist and a health economist. Due to delays in approval of the IQC work order and in processing the contract, the health planner that was originally selected and designated as the Team Leader, was unable to travel to Peru prior to the departure of the other team members. The MIS specialist was named Team Leader and an experienced replacement health planner was identified and substituted. Three team members (MIS Specialist and Team Leader, Logistics Specialist and Health Economist) arrived in Peru on August 9th, and the Health Planner arrived on August 17th.

METHODOLOGICAL APPROACHES

The CSAP evaluation team received several formal and informal briefings from USAID project administrative and technical staff. These briefings provided the team with useful background information. Other initial activities that involved USAID included a review of CSAP Project files and available documents. USAID assisted the team in arranging and scheduling some of the early meetings and in planning field travel. A USAID representative accompanied the team on one field visit.

Preliminary meetings were held with the Ministry of Health (MOH) and with representatives of the principal organizations that comprise the CSAP Project's contractual and operational components. The evaluation team utilized focused individual and group interviews, observations and site visits to augment the written materials and briefings obtained at USAID and elsewhere.

Limitations

1. The CSAP evaluation was conducted by a team of four experienced professionals who worked in a systematic manner to address the objectives stated in the scope of work. However, there were several factors that were considered by the team members to have had either a direct or an indirect effect on the realization of their best efforts.

    a. MSCI identified a qualified evaluation team in late June, and team members were available to travel to Peru to conform to USAID's July 5, 1990 start date. However, delays in A.I.D. and USAID's Contracts Office in processing the IQC necessitated MSCI to restructure the team. Contract processing delays placed a burden on some team members' schedules notably, the health economist and replacement health planner. These delays affected the original staffing plan and the work dates. It was necessary for MSCI to select a replacement candidate for the originally proposed health planner, but, because of prior commitments, this individual could not join the team until one week after the evaluation had already started. The health economist's work effort in Peru was similarly affected by scheduled prior commitments that could not be modified. These necessitated two trips out of Peru during the height of the evaluation.

b. Due to the recent change in Peru's government and perhaps because of other unknown factors, meetings with key individuals in the MOH could not be scheduled in a timely manner. As a result, it was necessary for the team to modify its work effort and rely on secondary sources of information.

c. Travel delays and strikes complicated field travel and affected the team's productivity. The team attempted to utilize these sometimes lengthy voids in the schedule for discussions and additional visits.

d. Due to the abbreviated work hours in some regions, many facilities closed early and personnel were often unavailable after 1 or 2 pm.

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Appendix G: BIBLIOGRAPHY

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APPENDIX H: COVENANTS AND CONDITIONS FOR THE CSAP

APPENDIX H: COVENANTS AND CONDITIONS FOR THE CSAP

1. Source and origin of commodities and nationality of services;
2. Conditions precedent to initial disbursement for the MOH;
3. Conditions precedent to disbursement for health departments in current year 1988;
4. Conditions precedent to subsequent disbursements for the health departments after calendar year 1988;
5. Conditions precedent to initial disbursement for the Peruvian Institute of Social Security (IPSS);
6. Conditions precedent to disbursement for FP activities in the Peruvian Institute of Social Security (IPSS);
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16. Covenance as to funding;
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18. Covenance as to other equipment and commodities;
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20. Covenance as to warehouse facilities;

21. Covenant as to personnel;

22. Covenant as to training;