

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

I. TRANSACTION CODE

A = Add  
 C = Change  
 D = Delete

Amendment Number  
 3

DOCUMENT CODE  
 3

COUNTRY/ENTITY  
 HONDURAS

2. PROJECT NUMBER  
 522-0153

3. BUREAU/OFFICE  
 LAC

3. PROJECT TITLE (maximum 40 characters)

HEALTH SECTOR I

E. PROJECT ASSISTANCE COMPLETION DATE (PACD)

MM DD YY  
 11 2 87

7. ESTIMATED DATE OF OBLIGATION  
 (Under "3." below, enter 1, 2, 3, or 4)

A. Initial FY 810 B. Quarter 2 C. Final FY 817

8. COSTS (\$000 OR EQUIVALENT \$1 = )

| A. FUNDING SOURCE      | FIRST FY 80  |              |              | LIFE OF PROJECT |               |               |
|------------------------|--------------|--------------|--------------|-----------------|---------------|---------------|
|                        | B. FY        | C. L/C       | D. Total     | E. FY           | F. L/C        | G. Total      |
| AID Appropriated Total | 1,573        | 1,767        | 3,340        | 20,052          | 6,654         | 26,706        |
| (Grant)                | 396          | 444          | 840          | 10,169          | 885           | 11,054        |
| (Loan)                 | 1,177        | 1,323        | 2,500        | 9,883           | 5,769         | 15,652        |
| Other L                |              |              |              |                 |               |               |
| U.S. 2                 |              |              |              |                 |               |               |
| Host Country           |              | 306          | 306          |                 | 13,727        | 13,727        |
| Other Donors)          |              |              |              |                 |               |               |
| <b>TOTALS</b>          | <b>1,573</b> | <b>2,073</b> | <b>3,646</b> | <b>20,052</b>   | <b>20,381</b> | <b>40,433</b> |

9. SCHEDULE OF AID FUNDING (\$000)

| A. APPROPRIATION/PURPOSE CODE | B. PRIMARY TECH CODE | C. PRIMARY TECH CODE |         | D. OBLIGATIONS TO DATE |               | E. AMOUNT APPROVED THIS ACTION |              | F. LIFE OF PROJECT |               |
|-------------------------------|----------------------|----------------------|---------|------------------------|---------------|--------------------------------|--------------|--------------------|---------------|
|                               |                      | 1. Grant             | 2. Loan | 1. Grant               | 2. Loan       | 1. Grant                       | 2. Loan      | 1. Grant           | 2. Loan       |
| (1) HEA                       | 500                  | 510                  | 510     | 4,646.5                | 10,965        | 3,927.5                        | 4,687        | 8,574              | 15,652        |
| (2) POP                       | 440                  | 440                  |         | 767.5                  |               | 175.5                          |              | 2,480              |               |
| (3)                           |                      |                      |         |                        |               |                                |              |                    |               |
| (4)                           |                      |                      |         |                        |               |                                |              |                    |               |
| <b>TOTALS</b>                 |                      |                      |         | <b>5,414</b>           | <b>10,965</b> | <b>4,103</b>                   | <b>4,687</b> | <b>11,054</b>      | <b>15,052</b> |

10. SECONDARY TECHNICAL CODES (maximum 5 codes of 3 positions each)  
 520 540 562 563 530

11. SECONDARY PURPOSE CODE  
 520, 530, 540

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code BRW DEL  
 B. Amount

13. PROJECT PURPOSE (maximum 480 characters)

To increase the effectiveness, efficiency, coverage and use of the health care system.

14. SCHEDULED EVALUATIONS

Interim MM YY 01 7 87 Final MM YY 01 1 88

15. SOURCE/ORIGIN OF GOODS AND SERVICES

000  941  Local  Other (Specify) 935

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a \_\_\_\_\_ page PP Amendment.)

To build upon previous project achievement and consolidate gains made to date.

17. APPROVED BY

Signature  
 Anthony J. Cauterucci  
 Title  
 Mission Director

Date Signed  
 MM DD YY  
 11 2 87

18. DATE DOCUMENT RECEIVED BY AID/W. OR FOR AID/W. DOCUMENTS, DATE OF DISTRIBUTION

MM DD YY

**HEALTH SECTOR I PP AMENDMENT**

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ATTACHMENTS TO THE PROJECT PAPER SUPPLEMENT

- A. Logical Framework
- B. Borrower/Grantee Letter of Application
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- D. 611(e) Certification
- E. Description of the Organization of the Ministry of Health
  
- F. Implementation Plan (Tables)
  
- G. Procurement Plan (Tables)
  
- H. Health Sector I Social Analysis, prepared by Orlando Hernandez Alcerro,, Ph.D., USAID/Honduras, Office of Development Finance.
  
- I. Health Sector I Economic Analysis (Tables), prepared by Luis Arreaga-Rodas, Ph.D., USAID/Honduras, Office of Economic and Program Analysis.
  
- J. Central Government Expenditures for Health Sector
  
- K. Health Sector I Financial Analysis (Tables), prepared by Marco A. Zavala, USAID/Honduras, Office of the Controller.
  
- L. Projected Liquidation of Current Loan Funds

## I. SUMMARY AND RECOMMENDATIONS.

### A. Recommendations.

USAID/Honduras recommends authorization of a life-of-Project increase of \$4,687,000 in Development Loan funds and \$4,103,000 in Development Grant funds for the Health Sector I Project. This increase authorizes total Project financing of \$26,106,000\*, of which \$15,652,000 is Development Loan and \$10,454,000\* is Development Grant. The loan would be repaid to the United States Government in U.S. Dollars within forty years from the date of first disbursement, including a grace period of not to exceed ten years, at a rate of interest of 2% during the grace period and 3% thereafter.

### B. Borrower/Grantee.

The Borrower/Grantee will remain the Government of Honduras (GOH). The Ministry of Health (MOH) will be responsible for all aspects of Project implementation which will be managed through the appropriate line divisions of the MOH.

### C. Project Summary.

The purpose of this Project Amendment is to increase the effectiveness, efficiency, coverage and use of the primary health care system of the MOH, primarily in rural areas. Current estimates are that 40% of Honduras' 4.4 million population is largely without access to any type of formal health care. There are a variety of reasons for this, but the two most important are inadequate, clinic-based infrastructure to reach the remainder of the population and the highly dispersed and isolated nature of rural settlement patterns which make improving access through a clinic based system highly expensive. Therefore, in order to reach the majority of its citizens with basic curative and preventive health care, the MOH recognizes the need to improve delivery through less expensive, non-clinic based outreach programs. Such a system is based on people, not buildings and, therefore, requires that technologies, systems and procedures be developed and implemented for the adequate training, supervising, equipping and supplying of the existing regional and rural clinics through to health care paratechnicians working at the village level.

The MOH is organized in the classic pyramid fashion. Centralized Ministry level functions support regional health centers which support municipal health centers which, in turn, support village health workers. However, many, but not all, of the foundations and blocks of this pyramid are weak. In order to accomplish the basic purpose of this Project and to reach the village health worker with the right amount of support at the right time, it is necessary to diagnose the constraints and develop and implement appropriate interventions at different points in the entire health care pyramid. As such, the Project represents a major institution-building effort, but focussed only on those specific systems, procedures, and departments where weakness has been diagnosed and prescriptions for improvement have been developed.

\* Exclusive of \$600,000 included in the original Project Authorization for population commodities.

Constraints to implementation of a rural based, primary health care system are present throughout the MOH organization. The Project will address these constraints through four major types of interventions: institutionalization of a health and management operations related diagnostic capability within the MOH, development and dissemination of appropriate health care technologies, development and implementation of appropriate health care support systems, and training and supervision of health care professionals and paraprofessionals. Specific Project activities, then, relate to each of these four areas:

1. Institutionalization of a Health and Management Operations Related Diagnostic Capability within the Ministry of Health. In order to strengthen the capacity within the Ministry of Health to identify, analyze and diagnose the health pathology of the nation, and the MOH's effectiveness and efficiency in dealing with them a management information system will be developed. In addition, the Ministry's recently created operations investigation unit will be supported to allow the MOH to test alternatives and select the best for improving the operations of its priority programs. To assist in this process, \$142,000 of loan and \$200,000 of grant funds will be utilized to finance technical assistance, training, equipment, and salary support costs associated with specific investigations and management information activities (Project Budget Activities No. 12 and No. 19). Without this capacity, the MOH would remain dependent upon the outbreak of disease, or catastrophe to identify high priority programs. It is expected that during the Project implementation period the operations research unit will focus investigations on priority programs (malaria, diarrhea control, immunizations, tuberculosis, family planning, nutrition, and acute respiratory diseases) in addition to keeping abreast of the general health status of the populace.

2. Development and Dissemination of Appropriate Health Care Technologies. Once specific health problems are identified, appropriate technologies must be developed or adapted and dissemination strategies must be designed in order to impact on the lives of rural people. In order to facilitate this process, \$4,397,000 of loan funds and \$3,112,000 of grant funds have been or will be utilized to adapt and disseminate technologies in the following areas: malaria (budget activity No. 1); rabies (budget activity No. 2); immunizations (budget activity No. 3); diarrhea (budget activity No. 4); tuberculosis (budget activity No. 5); sexually transmitted diseases (budget activity No. 6); maternal and child health and family planning (budget activity No. 7); epidemiology (budget activity No. 8); acute respiratory infections (budget activity No. 18); and nutrition (budget activity No. 20). Project funds will finance technical assistance, training, vehicles, equipment and other commodities, and salary support in these areas.

3. Development and Implementation of Appropriate Health Care Support Systems. In order to implement the technologies identified for priority action above, and in order to institute the capacity within the MOH to implement those which will be identified and developed in the future, the health care support system of the GOH must be significantly upgraded. In fact, the management, logistics and maintenance constraints throughout the MOH organizational pyramid are the most serious of all the constraints, and they

have the most deleterious effect on the establishment, implementation, and institutionalization of a cost effective primary health care delivery system in Honduras. The Project will directly attack these constraints through activities designed to improve the MOH's ability to identify and procure basic medicines on a timely basis (budget activity No. 9); to improve the outreach of the maintenance and logistics system ( budget activities No. 10 and No. 11); and to improve the ability of the Ministry at the central level to manage and plan all the component parts of a functioning rural health care delivery network (Budget Activity No. 12). In order to accomplish this, \$7,391,000 of development loan and \$5,842,000 of development grant will be utilized to finance construction, equipment, technical assistance, training, and MOH salary support.

4. Institutionalization of Training and Supervision Systems for Health Care Professionals and Paraprofessionals. In order to successfully institutionalize a primary health care delivery system which is capable of responding to new priorities and implementing at the lowest levels of the pyramid new technologies as they are identified, systems must be developed and implemented which can continuously upgrade the medical identification and treatment skills of all professional and paraprofessional staff. The Project will seek to institutionalize this capacity through regularly scheduled training activities for professional and paraprofessional staff (budget activities Nos. 14, 16, and 17), institutionalizing a permanent supervisory capacity throughout the MOH system (budget activity No. 15), and by introducing a mass media approach to the continuous skill building needs of rural based paraprofessionals (budget activity No. 13). \$3,721,000 of development loan funds and \$1,301,000 of grant funds will be utilized to finance technical assistance, training activities, supervisory visits, vehicles and equipment, other commodities and materials, production of radio programs, and salary support for these activities.

However this Supplement to the Project Paper alters significantly the design of the original Project in terms of two variables, the goals and objectives of the Project remain essentially the same. Given the significant change in the economic situation of Honduras and the administrative environment in which the Project is to be implemented, which was not taken into consideration in the design of the Project, the time that it will take to effect the significant institutional changes originally proposed and the level of technical assistance which will be required to design the new operational systems and train employees in their use at all levels within the MOH will be increased significantly.

Government of Honduras counterpart for the Project will be provided in-kind. Many of the additional personnel increment required to establish and implement a primary health care delivery system already have been converted into permanent employees by the MOH. In addition to the new personnel, the only other major counterpart contribution required from the GOH will be the land upon which regional warehouses, regional maintenance workshops, and malaria warehouses are to be constructed. Given the severe financial constraints that the GOH is, and has been facing for the past several years, GOH counterpart

requirements have been reduced to the minimum required for successful project implementation. The total counterpart does total 30% of total Project costs.

The Project Amendment herein presented responds directly to all six recommendations contained in the Health Section of the report of the National Bipartisan Commission on Central America (Kissinger Commission).

The report recommends that AID supported technical assistance which improves management and planning for the effective use of scarce resources be expanded. The amended Project builds upon the significant achievements fostered by the technical assistance provided to date in the areas of management, planning, supervision, logistics, maintenance and information so that gains can be consolidated and further management improvements made.

The report recommends resumption of AID-sponsored programs to eradicate vector-borne disease. This Amendment adds some \$2.5 million dollars of assistance to the vector control program.

The report also suggests expansion of oral rehydration and immunization programs. The Project has enabled the Ministry of Health of Honduras to achieve international reknown through its diarrhea control program and to achieve some of the highest levels of immunization in Latin America. That support continues in this amended Project. The report calls for the continuation of population and family planning programs. Such programs play a more prominent role in the proposed amendment than in the original Project.

The report calls for educational institutes to concentrate on the training of primary health care workers. A heavy component of the Project continues to be the skills upgrading of the MOH's primary health care and support personnel.

Finally, the report recommends that the Central American Governments be urged to develop methods which would integrate public and private financing of health services. The Operations Research component of the Project has generated political decisions to develop ways to share costs of care with patients. In addition, a PD&S funded companion Project is assisting the GOH to look at ways of integrating its social security and public health systems.

In sum, USAID believes that this amendment accurately reflects the concerns of the Commission and provides for appropriate inputs to address these concerns.

## II. PROJECT BACKGROUND

### A. The Health Sector: Pathology

Sixty five percent of Honduras' population lives in rural areas. Of these 445,000 rural families, approximately 342,000 live below the poverty line, earning less than \$230 per capita per year. Only 40% of these families have access to potable water and only 26% have access to adequate waste disposal facilities. Forty percent of the total population are completely illiterate by any standard, and functional illiteracy is much higher.

Health problems in Honduras are typical of most developing countries. Infectious diseases are the primary cause of morbidity and mortality. Sixty to eighty percent of the population is malnourished to some degree, and both infant mortality rates (87/1,000 live births), and population growth rates (3.5% per year) are high.

Among the infectious diseases, the most prevalent is diarrhea related disease. In 1980, there were approximately 2,200,000 cases of diarrhea among children under age five; an average of about three episodes per child. Twenty-eight percent of all death in children under five are due to diarrhea per se, and, in addition, diarrhea is a major contributor to the general weakening of a child who, in fact, dies of another disease. High levels of malnutrition, early weaning due to closely spaced children, unsanitary living conditions, little access to indoor plumbing, and poor maternal education are all elements which create an environment conducive to gastrointestinal diseases.

The second leading cause of death among children under five years of age is acute respiratory infections. These accounted for almost 20% of hospitalizations in 1981 and 16% of the recorded deaths.

The other major health problems are malnutrition (60-80% of the population), malaria (40,000 cases reported in 1982) and tuberculosis (an estimated 6,500 cases in 1984).

### B. The Health Sector: Institutional Constraints

The GOH first embarked upon an expansion of coverage program in 1974. The backbone of this program was the training and supervision of large numbers of community health workers, who would bring effective, low cost, basic health service to the estimated 50% of the Honduran population which did not have access to such services.

A.I.D. supported this primary health care program during the 1970s. Evaluations indicated that the program was plagued by serious infrastructure and organizational problems which affected the MOH's ability to adequately

plan, manage, supervise, and provide maintenance and logistics support to this human resources development strategy. The USAID's Health Sector Assessment, published in 1980, yielded the following analyses of the problems plaguing the health sector at that time:

1. The effectiveness and efficiency of the health structure were handicapped by decision-making, programming, and implementation procedures that were not attuned to policy priorities.
2. MOH administrative and management practices were often inappropriate given objectives.
3. The overall structure of the MOH, originally set up to manage vertical programs, did not permit the Ministry to effectively manage horizontal, integrated, decentralized activities.
4. Technical norms and standards were non-existent or poorly implemented.
5. For all practical purposes, the patient referral system didn't function.
6. Medical laboratories were poorly equipped, inadequately staffed, and insufficient in number.
7. Incomplete, untimely, and geographically spotty collection of vital health and health service data made it nearly impossible to plan and manage the facilities and personnel.
8. Lack of trained personnel resulted in poor quality and quantity of service care delivered.
9. Most programs suffered from weak supervision, which was weakest at the lowest levels of the health system where it is most needed; i.e., where the auxiliaries and volunteers worked.
10. Most health workers did not understand the primary health care system.
11. The logistics and maintenance systems performed poorly; auxiliaries and volunteers lacked the supplies they needed.
12. Despite the primary health care policy, politicians and physicians have had difficulty resisting the temptation to build, equip, staff, and operate hospitals.

A.I.D.'s analysis of the sector identified a series of constraints to increasing primary health care coverage which were largely responsible for the failures of the MOH's program during the 1970's. The principal constraint to expanded coverage of primary health care was, and still is the logistics,

management and support systems of the MOH. For the MOH to attempt to expand coverage without first strengthening its management and support services at the national and regional levels would be premature.

C. Relationship of the Project to the GOH Development Plan

The current policy of the GOH is to deliver effective, low-cost, comprehensive health coverage to its citizens, especially to the poor who have not had access to such services and who must depend on the Government for them. The priority programs of the GOH reflect an awareness of the constraints described above. The GOH also recognizes that if it is to provide health services to up to 80% of a rapidly growing population, budgetary and fiscal constraints demand that such services be provided at the lowest possible cost.

The 1982-1986 National Health Plan recognizes the essential features of the health problems of the population to be served and identifies direct approaches for confronting those problems. The principal goal of the plan is to improve the level of health of the population, particularly the rural and marginal urban population.

The strategies for achieving the overall goal of the plan are expressed in terms of objectives; each having its own set of policies and programs. The first of these objectives is to improve the quality of services provided by public sector health care institutions. This is to be accomplished through institutional development in the areas of personnel, logistics, finance, management, human resources and planning; through improved supervision; through improvement in the process of programming, controlling, monitoring and evaluating programs and projects; and by improving and expanding physical resources.

A second objective is to achieve a broader health care coverage in the rural and marginal urban areas. Specific actions to achieve this objective are fortifying community participation, including health components in all rural development projects; providing staffing, supplying and financing health centers for those populations that currently have no access to health services; fortifying the referral system between levels of the health care system; adjusting services to be responsive to the needs of the population; and expanding the social security system to new areas.

A third objective is to give highest priority to decreasing morbidity and mortality from those diseases declared priority problems. These include malaria, diarrhea, immuno-preventible diseases, malnutrition, tuberculosis and acute respiratory infections. Although not a disease, family planning is another of the high priority programs. Activities to be carried out include health education, expansion of water supplies and sanitation facilities in rural and urban areas, expansion of the oral rehydration therapy program, support to the expanded program of immunizations, fortifying vector control programs (including preventive actions), giving high priority to detecting and treating children with acute respiratory infections, treating the severely malnourished while attempting to expand supplementary feeding and growth monitoring programs, and finally, increasing breastfeeding.

A fourth objective is to improve the health of the maternal-infant population, principally in the rural and marginal urban areas. Specific activities contemplated are improving the pediatric and obstetric services in the health facilities: focussing on high risk patients; improving the training, control, and treatment of the pre-schooler, especially in regard to malnutrition; fortifying programs of prenatal, delivery and post-natal care, including breastfeeding and family planning.

A fifth objective is to expand the social security system outside of the two major metropolitan areas and to include campesino groups in its coverage.

The sixth objective is to improve self-sufficiency in basic drug production. The primary action planned is to expand the GOH's drug production laboratory located within the National Patronato for Children (PANI). More recently, however, and given the severe budgetary and fiscal constraints faced by the GOH, the subject of the GOH's investing in and operating a productive enterprise has come under debate within the GOH. Certain sectors believe that the best way to increase drug production is to ensure the market for domestic private sector drug companies (Ministry of the Economy). Others believe that the best way to guarantee that the Ministry of Health (the largest purchaser of basic medicines) has an adequate supply of essential drugs is to expand the PANI laboratories, and administratively remove the laboratories from the Patronato, thereby allowing it to operate as efficiently economically as it can (some officials within the Ministries of Health and Finance). Still others believe that the laboratories must be expanded, but that they should remain under the management direction of the Patronato. We may assume that this is the recommendation of the Patronato. The AID financed study carried out by Development Associates (See Annex E3) in March, 1984 suggests the second option and the Mission will be pursuing this through the recommended feasibility studies.

In order to implement this Plan, the amount of budgetary allocations destined for expansion and support of the primary health care system has increased steadily since 1975: to nearly \$15 million in 1983 (21% of the total MOH budget). This is about one half the amount spent for inpatient health care. To date, the Health Sector I Project has directly supported the first four of these six GOH objectives. Opportunities for assisting the GOH in the remaining two areas are being explored.

#### D. Relationship of the Project to A.I.D. Policy and Country Strategy.

The Project and this proposed Amendment relate well to A.I.D.'s Health Policy and Strategy, to the LAC Health Strategy, and to USAID/Honduras' strategy as expressed in the health and population sector strategies as presented in the 1986-1990 CDSS.

The A.I.D. Health Policy Paper indicates that priority areas for health programming will include improvements in the cost-effectiveness of health programs through improved program design, management, and implementation; promotion of self-financing health programs; and increased biomedical research

and field testing in LDC settings. The Health Sector I Project focusses on quality improvements in system-wide support functions (supervision, training, management and planning, logistics, and maintenance) which will have a direct and positive impact on improving the economic efficiency of the MOH system to deliver health care.

This Project directly supports A.I.D. health sector strategy, which suggests using primary health care programs as the delivery mechanism for improved and expanded use of health technologies. The primary health care system being developed and expanded under this Project delivers the following technologies: vaccination, ORT, family planning, pre-and post-natal and delivery care, nutrition interventions (growth monitoring, breastfeeding promotion, and nutrition education), malaria control, and infectious disease control.

The A.I.D. health sector strategy suggests promotion of improved mechanisms for service delivery by means of operations research. The Project, as amended, will include an operations research component as a means of improving management of the various primary health care programs.

Placing primary focus on developing adequate and efficient support functions as a means of increasing primary health care coverage and efficiency as proposed by the Project is consistent with the A.I.D. health sector strategy. That strategy suggests that policy reform, manpower development, management improvement, institutional development, and promotion of private sector financing and service delivery are appropriate strategies for strengthening human resources and institutional capabilities. Continuing policy dialogue with the GOH emphasizing the expansion and efficiency improvements of the primary health care system countrywide, rather than hospital-based tertiary care in urban areas, will continue to occur.

The Mission's 1986-90 Country Development Strategy Statement (CDSS) states clearly the Mission's assistance strategy in the health sector.

"AID supports (the GOH's primary health care policy) as the most cost-effective way for a government with limited financial resources to provide health care for the country's poor. Our strategy is to strengthen the institutional capacity of the MOH to enable it to provide more effective primary health care to the people it is now serving and then to expand the base of the health pyramid to serve a greater percentage of the country's population."

The Health Sector I Project is the Mission's primary institution-building assistance vehicle in the health sector; as such, it is the Mission's primary means of implementing the strategy outlined above.

The other important element of the Mission's primary/preventive health care delivery strategy is the \$20 million Rural Water and Sanitation Program (522-0166), which is having significant impact throughout rural Honduras in increasing the access of poor rural people to technologically appropriate water and waste disposal systems, and in providing related health information.

With regard to family planning, the Mission has good statistical and descriptive material which indicates that there exists a large unmet demand for family planning services, especially in the rural areas of Honduras. The Mission's assistance strategy is to attack the supply side problems of contraceptive commodity delivery. One of the ways the Mission is implementing this strategy is through the maternal and child health activities of the Health Sector I Project.

E. Relationship of the Project to Other Donor Activities.

Other donor activities in the health sector can be broken out into three basic areas: technical assistance, rural water and sanitation activities, and infrastructure expansion and equipment.

1. Technical Assistance Activities: PAHO has long been associated with the the health sector in Honduras. Its support has been mainly through long and short term technical assistance. Long term advisors are currently being provided in the areas of epidemiology, project design and management, the engineering aspects of malaria control, environmental sanitation, maternal and child health, and long term training. It has also established a rotating fund for the purchase of vaccines which allows member countries to pay in their own currencies.

2. Rural Water and Sanitation Activities: In addition to A.I.D., CARE is a major donor of small rural water and sanitation facilities. Its \$1.4 million project has been underway for four years and is having significant success in working with very small towns to construct small systems. The European Economic Community (EEC) is also constructing such systems in the Department of Olancho under its \$4 million rural water and sanitation project.

3. Infrastructure Expansion and Equipment. Three major programs have contributed to the expansion and equipping of health care infrastructure in Honduras in recent years. The National Teaching Hospital was completed in 1979 with a \$4.7 million loan from the Interamerican Development Bank (IDB). Under another IDB loan of \$14 million authorized in 1976, the GOH has constructed 243 rural health posts (CESAR), and one area hospital. Seven additional area hospitals and two regional hospitals are partially constructed, and the GOH is negotiating a new loan for their completion.

The United Nations Development Program (UNDP) has recently completed replacing and upgrading the medical equipment available at 28 CESARs. The same \$1.1 million program provided an additional 443 CESARs with initial, basic standard medical equipment.

The Government of Japan has been very active since 1983 in the fight against malaria when it authorized a \$5 million grant to the vector control program for the purchase of insecticides, vehicles and equipment.

### III. DETAILED PROJECT DESCRIPTION

#### A. Rationale and Project Purpose

The poor health status of the majority of the population continues to plague economic development efforts in Honduras. In agriculture, the poor health status of the farmer limits his productivity and efficiency. In industry, it translates into a high ratio of days absent from the workplace. It lessens the income earning potential of the poor, affects the ability of children to achieve full benefits from educational programs, and generally downgrades the physical and social welfare of the majority of Honduran families.

To realize significant improvements in the health status of the population, health services have to be accessible to the majority of the people. It is equally important that the cost of delivery be what the individual or the society can afford. Given the socio-economic conditions and geographic location of the majority of Hondurans, the GOH has determined that only through the development of nationwide primary health care delivery systems can costs be lowered to the point of affordability. Only the Ministry of Health has such a nationwide delivery system. The GOH has also determined that, through emphasis on preventive health care, social costs can be lowered to the point of affordability. A.I.D. supports these conclusions and focusses its assistance strategy on efficient and effective delivery of primary health care.

The purpose of this Project, therefore, is to increase the effectiveness, efficiency, coverage and use of the primary health care system of the Ministry of Health, primarily in rural areas.

#### B. Target Group

In addition to, and more important than the immediate personnel of the Ministry of Health who will benefit from institutional improvements and training provided under the Project, the target group for this Project consists of the estimated 2.9 million people who are poor and have no access to even basic medical attention and an additional 650,000 people who must depend on the public health system in Honduras for medical services because of their location and the absence of other health services. They are without access to private, social security, or military health facilities or services and are subject to the most serious health hazards because of their crowded living conditions and nutritional status. About 2.4 million of the poor live in rural areas, while the remaining 550,000 are in marginal urban areas. While the rural poor generally tend to be worse off economically in absolute terms than the urban poor, the urban poor have some additional environmental risk factors, such as crowded housing and concentration of human wastes, which further threaten their precarious health status. However, their proximity to services provides an offsetting advantage. However, both rural and urban poor share two health characteristics which set them apart: extremely high rates of morbidity and mortality.

Another factor which distinguishes the rural target group is that it is geographically widely dispersed. Because Honduras is still primarily a rural country, the target group population is widely scattered throughout its mountainous terrain and isolated valleys, further complicating service delivery.

### C. Project Strategy

The Project strategy is based on: (1) the clear commitment of the GOH to improving the health status of Hondurans in general and that of the target group in particular; (2) the need to improve the MOH's institutional capacity to manage and support the primary health care system; and (c) the need to establish rational health sector priorities within human resource and financial limitations.

The Project strategy focusses on addressing and eliminating the institutional constraints to achieving efficient and effective delivery of primary health care technologies to the majority of Hondurans. These constraints fall into four major areas. The first is the limited ability of the MOH to keep one step ahead of the health pathology of the nation; i.e., to identify, and develop cost-efficient methodologies and technologies for addressing health problems before they become chronic or epidemic. The second is the ability of the MOH to develop and adapt appropriate priority health technologies for dissemination. The third is to efficiently deliver health services through effective logistics, maintenance and planning systems. The fourth constraint is the lack of well-qualified health practitioners at the lower levels of the system; i.e., the immediate service delivery point.

The Project focusses on support function activities. The majority of these activities (development of logistics, maintenance and planning support systems) are carried out at the central level of the MOH, with some functions (supervision) extending all the way down the system. This focus is consistent with the original Project, and arises from the Mission's conviction that the support services, while greatly improved since Project inception, remain the most critical constraint within the MOH. Together, the logistics and maintenance systems determine, to a great degree, the effectiveness of the MOH at all levels from the Village Health Worker (VHW) to the national hospital. The Mission is greatly encouraged by a recent re-organization of the MOH central offices, with a resulting clear chain of command and intermediate supervision. The support functions to be assisted by the Project are those necessary to develop and extend primary health care in Honduras.

### D. Detailed Activity Descriptions

This Project is divided into 20 activities. Although this Amendment to the Project Paper primarily attempts to redesign and focus the existing activities, it also adds three activities and proposes to close out five activities presented in the original Project Paper, the objectives of which have been achieved or are no longer considered a high priority or feasible.

1. Subcomponent No. 1: Malaria. Malaria was one of the original health problems targeted by the MOH as a priority. When the Project began in 1980 the malaria program was in the state of disarray discussed in the Project Paper. The program was in the midst of changing from a vertical to an integrated program. As a result, the number of community volunteers had declined leading to a decline in the number of reported cases of malaria, at a time when the actual number of cases probably had increased. Urban transmission was occurring and the percentage of the more lethal falciparum malaria was increasing. From 1979 to 1982, the number of reported cases increased from 25,297 to 57,482 in the ten most malaria prevalent departments of the country. In response the MOH, with the financial support of both A.I.D. and the Government of Japan, launched a three pronged attack on malaria: wall spraying, mass medication, and vector control. The ability of the MOH to mount this attack was enhanced by strengthening the volunteer network, which increased from less than a thousand to over five thousand between 1981 and 1983. These volunteers improved the malaria prevalence information base. Once the MOH knew where the problem was, it began wall spraying and mass medication programs. The medication was oriented toward the communities where the prevalence was highest, where urban transmission was occurring, and where the percentage of cases from falciparum was the highest. Wall spraying, done on a more geographically dispersed basis was, nevertheless, also oriented towards communities with the highest prevalence of malaria. A true vector control program is just beginning. It can be counted on for greater impact in the long term. The result of the three pronged attack has been a decrease of over 20,000 in the number of reported cases in 1983, despite a vastly improved reporting system.

The overall objective of this activity is to reduce the incidence of malaria cases detected from over 43,000 in 1980 to less than 20,000 in 1984 and succeeding years. Six activities are planned which will achieve this: (1) treatment of all cases, (2) larval vector control, (3) adult vector control, (4) wall spraying, (5) mass medication in selected areas, and (6) improved vector analysis. The Project will assist the MOH in all of these activities by providing the following inputs:-

a. Technical Assistance. Malaria control depends heavily on vector control, which requires careful and complete characterization of the malaria vector and its environment through the changing seasons of the year. Collection and analysis of this information leads to decisions as to which combinations of control efforts would be most cost-effective. Assistance in training MOH personnel in this area will continue to be provided by a long term contract entomologist. In addition to assisting with research and analysis, the contract entomologist will be a principal resource for training, for the evaluation of the impact of various combinations of control activities, and will contribute to the development of the Vector Control Division's (VCD) norms and regulations.

b. Training. Training will continue and be expanded. Overseas training (both long and short courses) will be initiated in 1984. Specialized, long-term training abroad will occur for the VCD's entomologist

who will receive an 18 month course beginning in 1984. A short course in vector control methodology will be offered to the head of the VCD and the chief of the malaria program, also in 1984. In-service training for all line personnel will continue to be supported. On an annual basis, training will be provided to 250 spraymen, 50 brigade chiefs, 34 area inspectors, 7 regional inspectors, 115 medicators, 35 evaluators, and 40 larval control personnel. Field training in vector control also will be continued. 6,000 VCD voluntary collaborators will be retrained on an annual basis. 1,080 additional volunteers will be identified and trained.

These trained personnel will enable the VCD to treat 75% of positive cases within 21 days of entry into the health system. The VCD seeks to reduce from 60 to 21 days the turn around time from when a blood smear is taken to when treatment begins, thereby reducing the period in which the human reservoir is available for transmitting the parasite to another vector.

c. Vehicles and Equipment. To carry out spraying, mass medication, and rapid case treatment activities, the Project will provide motorcycles to collect and deliver blood samples and to supply medicines, vector control equipment (shovels, picks, rakes, etc. and two 4WD pick-up trucks), and 330,000 pounds of BTI (a predator of mosquito larvae). Additional commodity inputs are basic safety equipment for medicators and evaluators, sprayer spare parts and precision balances for calibrating the sprayers. The sprayers, insecticides, and already have been provided.

d. Construction. Financial resources for the construction of insecticide and equipment storage warehouses in each region already have been provided.

Malaria control activities will be the responsibility of the Vector Control Division which will be supported by the Project Coordination Unit.

2. Sub-component No. 2: Rabies. Rabies is endemic in Honduras. The MOH strategy is to vaccinate domestic animals, to find and to eliminate ownerless and non-vaccinated domestic animals, to catch and observe animals suspected of having rabies, and to conduct laboratory diagnoses of suspected cases. Project inputs have consisted of in-country training in rabies control and equipment (cages, transport containers, and refrigerators). Results have been positive. Mortality due to rabies dropped from 14 deaths in 1982 to 3 in 1983. No further AID resources will be provided for this activity.

3. Sub-component No. 3: Immunization. One of the Ministry of Health's greatest successes is immunization coverage. In 1980 when the Project began, vaccination levels of children under two years of age were below 50%, and possibly as low as 30%. During the period 1980-1983, overall vaccination levels (percentage of children under two years having received three doses of oral polio vaccine, three DPT shots, measles vaccine and BCG) have risen to approximately 78%. As a result, from 1982 to 1983, the number of cases of measles dropped 53%; whooping cough, 52%, and, tetanus, 20%. Diphtheria has been eliminated and polio is at less than 10 cases.

The MOH has declared immunizations to be one of its priority programs. To implement the program, two strategies are employed. The first is to continue using facility-based immunizations, making sure that all health workers are providing immunizations on a routine basis. The second is to hold semi-annual national vaccine campaigns during which all MOH resources are focussed on immunizations for a week. The national campaigns are designed to supplement routine immunization services.

Mass media support has been and will continue to be crucial to the success of the semi-annual vaccination weeks. Intensive messages will be broadcasted at least two weeks prior to and during the campaign, followed by maintenance messages for several weeks afterwards. This complementary activity is managed by the Ministry's Health Education Division, and is funded under the Mass Media for Village Health Workers subcomponent.

The objective of this activity is to extend immunization coverage so that by 1987, 80% of children under two years of age will be receiving a complete series of immunizations against the commonly occurring childhood communicable diseases. In order to accomplish this, A.I.D. resources will be used to finance the following inputs:

a. Technical Assistance. Short term technical assistance has been provided in order to assure the proper functioning of the cold chain system. No long term technical assistance is planned for the future, but occasional short term assistance may be provided for the effective management of the system. As needed, such assistance would be financed under the Management and Planning activity..

b. Training. Significant amounts of in-service training have been completed. All primary health care personnel have been trained in proper immunization and cold chain techniques. Subject areas have included vaccine transportation, storage and preparation, vaccine administration procedures, contra-indications and complications. In addition over 1,000 persons, including all the auxiliary nurses stationed in health centers, have been trained in basic repair and maintenance of refrigerators (kerosene, gas, and electric).

At least two short term overseas training activities are anticipated: one course at the CDC in Atlanta, and the other a visit to a highly successful vaccination program elsewhere in the region, such as Costa Rica. This training will be funded under the Continuing Education sub-component.

c. Vehicles and Equipment. Refrigerators, freezers, ice chests, thermos bottles, ice packs and thermometers have been purchased. Vehicles have been purchased for use by central level programs in supervision.

d. Construction. Cold rooms will be built into the regional and central level warehouses with financing provided under the Logistics activity.

Implementation of this activity is the responsibility of the Epidemiology Division, in collaboration with the Human Resources and Health Education Divisions. Administrative support is provided by the Project Coordination Unit. Continued coordination with the Pan American Health Organization (PAHO) is planned, particularly in the areas of training and vaccine procurement.

4. Sub-component No. 4: Diarrhea Control. Diarrheal diseases continue to be the leading cause of morbidity in all age groups and the leading cause of death of children under the age of five. Control of diarrheal diseases is another of the MOH's priority programs. The accepted strategy is to promote the use of oral rehydration salts through the mass media campaigns.

Although a faulty information system makes an impact evaluation of this program less than definitive, a careful evaluation of the AID/W funded Mass Media and Health Practices Project (Project No. 931-1018) in one region of the country showed that there was a 40% decline in deaths from diarrhea in that region. Other studies conducted in other regions showed that 97% of the mothers knew about Litrosol (the local oral rehydration salt), and 100% knew at least one of the signs of dehydration and that Litrosol was the way to treat it. These same activities now have been incorporated into a country-wide program.

The objective of this activity is to reduce diarrhea-caused morbidity and mortality in children under five years of age by 67% by 1987, and to increase the percent of treated cases from 9% to 80% within the same time period. In order to accomplish this, A.I.D. and the GOH will finance the following inputs:

a. Technical Assistance. Technical assistance will be provided under the Science and Technology activity to assist in the design and implementation of a study to assess the impact of the diarrhea control program. In addition, technical assistance will be funded under the Mass Media activity of the Project.

b. Training. All the MOH auxiliary nurses have been trained in diarrhea disease control. Regular in-service training will be provided for all levels of health personnel through the health technologies training module, under the Continuing Education subcomponent.

c. Vehicles and Equipment. Production or procurement and distribution of oral rehydration salts is another element of the MOH strategy. The Project has assisted in the purchase and production of almost three million oral rehydration packets, and these packets are one of the four pharmaceutical products almost universally available in Honduras. More will be provided under this continuing activity. Oral rehydration tablets, two burner kerosene stoves, aluminium pots, plastic cups and spoons will be provided so that health workers can assure the solutions prepared at the health center are prepared with clean water as well as to educate mothers on the proper preparation of the solution.

d. Local Costs. Funds will be provided to finance per diem costs in order to carry out two innovative efforts in support of the program. One will be a series of interregional workshops where personnel from regions with highly effective ORT programs will work to improve the programs of regions with less effective programs. The other is to train community leaders in oral rehydration therapy.

The Division of Epidemiology will execute this sub-component, with assistance from the Human Resources, Health Education and Science and Technology Divisions. The Project Coordination Unit will provide overall administrative assistance.

5. Sub-component No. 5: Tuberculosis. Tuberculosis continues to be a significant health problem in Honduras, although the true level is unknown. The objective of this activity is to reduce the prevalence rate of TB and to increase the rate of registered, treated cases. Although data on the actual number of cases is not reliable, the MOH estimates that by 1987, 5,720 cases representing 80% all tuberculosis in the country will be diagnosed and treated. The program strategy is to strengthen and expand the training of health personnel at all levels in the control of tuberculosis. Mass media, both graphics and radio messages, will support the training and health education activities as they did in 1983 with the first three month intensive media campaign.

a. Training. One overseas training course and one observational study tour for central level personnel are planned as part of the Continuing Education sub-component. A second seminar for medical school faculty will be held in 1984 or 1985. A regional workshop and evaluation was held in February 1984 and will be expanded upon by training at the regional level. TB diagnosis, treatment, and control will be incorporated into the health technologies training module, under the Continuing Education subcomponent.

b. Vehicles and Equipment. Microscopes and laboratory reagents have been financed and delivered. Additional support will be provided for expendable materials such as sputum cups, slide covers, slide transporters, and stick applicators.

The Division of Epidemiology will implement this sub-component, with assistance from the Human Resources and Health Education Divisions and the Science and Technology Unit. The Project Coordination Unit will provide administrative assistance.

6. Sub-component No. 6: Sexually Transmitted Diseases. While sexually transmitted diseases continue to be a health problem in Honduras, they have been given a secondary level priority and, therefore, will not be included in the Project as an activity in the future. To date, A.I.D. financing has been provided for the training of regional team personnel. Future training will be provided as part of the epidemiology training module, the development of which will be part of the Continuing Education activity.

7. Sub-component No. 7: Family Planning. Dramatic changes have occurred in the Ministry's approach to family planning since the beginning of the Project. Consequently, a complete revision of the original design is required.

The Contraceptive Prevalence Survey conducted in 1981 demonstrated that there were about 500,000 women of fertile age in union in Honduras. Of these 27% were actually contracepting, while 68% of those interviewed did not wish to have more children at that time. The estimated unmet demand for contraceptives in 1981 is composed of women in union ages 15-49 who want no more children or who want no more children in the next two years, but are not now using family planning services. By this definition, according to the survey results, unmet demand is 47% of women in union ages 15-59, or 235,000 women.

The Ministry has predicated its family planning program on the concept of reproductive risk. Certain risk factors such as age, women with parity of four or more, with a child under two years of age, with a history of hypertension, diabetes, etc., can predict an unfavorable outcome. The Ministry's program, while open to all women who desire to contracept, is specifically oriented to the high risk woman. The MOH strategy is to expand the delivery of family planning services in order to reach this target group, and thereby address a health problem. As long as the MOH does not discriminate with respect to who receives family planning services, A.I.D. supports this strategy.

The specific objective of this activity is to increase the number of active users from 23,000 to 60,000 through the MOH system by 1987. In order to accomplish this, A.I.D. and the GOH will provide the following inputs:

a. Technical Assistance. A long term advisor with expertise in family planning program design and management will continue to be provided. The advisor will provide assistance in program design, implementation, and evaluation. The Science and Technology Unit will assist in investigating and evaluating interventions on a small scale before launching nation-wide programs. Among the subjects to be investigated are: family planning knowledge, attitudes, and practices of Ministry personnel; bottlenecks in the contraceptive supply system; the range of family planning services to be provided at different levels in the health system and their cost-effectiveness; the length and content of family planning training; the frequency and duration of supervision; and the continuation rates of family planning acceptors.

b. Training. Training in family planning service delivery and contraceptive techniques will be provided throughout the MOH system. 80 physicians will be trained in surgical sterilization techniques, with the collaboration of the local family planning organization. 320 permanent MOH employees, both doctors and professional nurses, will be trained in temporary contraceptive techniques. 500 auxiliary nurses will be trained in barrier methods and prescription of oral contraceptives. 10,000 traditional midwives

will be trained in the identification and referral of high risk post partum women. Two people from each of the eight regions, one nurse from each of the thirty-four areas, and five central level personnel will be trained in family planning program administration. One nurse from each of the thirty-four areas will also be trained in IUD insertions. In addition, 65 person months of short-term overseas training and ten person weeks of observational trips are planned.

c. Vehicles and Equipment. Laproscopes, laparotomy kits, cervical cytology supplies, contraceptives, and other supplies and equipment will be financed to provide adequate support for the expanded program.

d. Personnel Costs. The services of a family planning program director will be provided during the life of the Project. In addition, the Project will finance two people to work in the Health Education Division where family planning promotion will consist of the production of graphic materials and radio announcements on family planning in the context of responsible parenthood and high risk. Intensive campaigns will be conducted on an annual basis. Funds also will be provided for central level supervision of region level family planning activities.

The Maternal and Child Health Division, with support from the Human Resources Division, the Health Education Division, and the Science and Technology Unit, will be responsible for implementation of this activity. The Project Coordination Unit will provide administrative support.

8. Sub-component No. 8: Epidemiology Training. A.I.D. support of this activity is being phased out. The Ministry is now able to accomplish upgrading of its epidemiology system on its own.

Activities described under the management and planning activity, however, will continue to support epidemiological surveillance. In the course of Project implementation, the following inputs have been provided:

9. Sub-component No. 9: Basic Medicine List. The basic medicine list has been developed and is being utilized. Any future activity related to the implementation of the basic medicine list will be under the logistics activity. In support of the development of the basic medicine list, the following inputs were provided:

10. Sub-component No. 10: Logistics. The logistics system of the Ministry of Health has been one of the major constraints to the expansion of health care coverage in Honduras. There are a variety of reasons for this. For example, it has lacked clear operational guidelines. The various component parts of the system work in isolation from one another. In 1982 the MOH named the Comision Nacional de Medicamentos (CONAME) and charged it with developing a coherent logistics system for drugs. Since that time, CONAME has coordinated and stimulated other advances in logistics. Among these have been the design of a logistics system which includes the following aspects: planning, procurement, storage, distribution, use, information flow, and

evaluation. Norms, procedures and manuals have been developed and 1,000 MOH personnel have been trained at all levels in the use of the manuals. The National Drug Supply System Manual was published in 1983 and has been utilized at all levels of the health system since that time.

One of the major constraints discussed in the 1980 Project Paper to improving the logistics system was that no single office had comprehensive responsibility for policies, procedures, implementation or management of the system. At least in terms of drug distribution, this problem has been resolved by the creation of CONAME, which has representatives from each of the offices involved in one way or another in the logistics system. CONAME itself, however, needs better supervision.

Storage and distribution of supplies continue to be handicapped by inadequate and inappropriate warehousing facilities, as discussed in the Project Paper. Initial reorganization has begun of the central and some regional warehouses to allow for better control and organization of medications and supplies on hand and to better manage inventory flow. Construction of eight regional warehouses is expected to begin in mid-1984. Finally, the advisor has worked with CONAME in developing strategies and mechanisms for selling basic medicines through popular pharmacies and through MOH establishments.

The lack of supply system vehicles was a constraint to improving the system in 1980. Under the Project, four additional 10 ton trucks have been purchased, and a new division of transportation has been created in The Directorate of Administration. It will improve transportation scheduling so that vehicles are most rationally utilized, thereby lowering the per unit cost of transporting drugs and supplies. For example, within the regions Project technical advisors have assisted in the development of a vehicle routing system in two regions which incorporates supervision, supply, maintenance and other functions into a single visit.

In 1980, the Project Paper identified the quality of logistics system personnel as a constraint. Specifically, the supply system personnel had no specific training or qualifications for their work. Since that time, national and regional warehouse personnel have received the necessary training. The lack of adequate facilities still hinders their ability to function adequately.

In sum, the constraints to developing, improving and rationalizing the logistics system of the Ministry of Health have been, and continue to be numerous. Progress, however, is being made, and basic systems and operating procedures are now in place. In the meantime, the Ministry has had to face spot shortages of basic medicines in rural areas, and this has led Project advisors to assist the MOH to design systems for preventing such shortages when they are due primarily to logistics constraints. During the extended Project life, assistance will continue to be provided aimed at expanding the availability of basic drugs at the local level through sales at popular pharmacies and other authorized retail outlets. This will take two forms. The first is the creation of popular pharmacies connected with a chain of government operated basic foodstuff outlets (BANASUPRO) located throughout the

country. The legal and administrative steps necessary to carry this out are being analyzed by the Ministry's legal department. The second form of broadening the availability of drugs and, at the same time generating additional revenues, will be the sale of drugs at the health center level. A study is being conducted in two health regions comparing the effects on demand and the problems generated by such sales. The results will be used to expand the drug sales program nationwide.

The lack of a cheap source of basic medicines continues to plague the Ministry of Health and complicates procurement and distribution procedures. At present, the Ministry is procuring drugs from a variety of sources both domestic and international. The Project has provided technical assistance to the MOH and the PANI drug laboratory to examine options for the expansion of domestic production of basic drugs. To date this has focussed primarily on PANI as it currently produces approximately 20% of the MOH's drugs. Expanding the availability of domestically produced drugs is important to the success of the expanded drug sale program discussed above.

What is required for these programs is a source that can produce a sufficient quantity of high quality basic drugs at a reasonable cost. An A.I.D. funded pre-feasibility study indicated that PANI would be the best source of such drugs if three conditions could be met: that the improvements shown so far in the MOH's logistic system continue, that the PANI laboratory be removed from the administrative control of the PANI Patronato, the larger PANI organization and model itself on a private enterprise, and that a full scale feasibility study be completed. The Project will support the completion of such a study and, if the proposal proves feasible and the other conditions are met, the Mission may seek additional financing at some later date to assist with the expansion.

The logistics component of the Project is designed to assist the MOH to organize more effective support systems for its direct health program at all levels, emphasizing the primary health care level. Among the major indicators of achievement of project purpose will be that 100% of health centers have priority medications, 80% of health centers program their drug needs by the June preceding the year the drugs are required, 80% of medications purchased are part of large global purchases and 80% of all medications are delivered by the first month of the year they are needed.

The component has a series of specific objectives in the areas of administrative reorganization, establishment of policies and procedures, human resource development, warehouse and workshop renovation and construction, and complementary activities in the area of drug sales and production. In order to accomplish these objectives, the Project will finance the following inputs:

a. Technical Assistance. Twenty seven months of technical assistance have been provided in logistics. An additional 31 months of long-term technical assistance will be provided to consolidate achievements to date and build upon them. This assistance will focus on three principal areas: continued design, implementation and refinement of the logistics

system; improved linkages between domestic production of basic drugs and MOH needs; and, the expansion of basic medicine sales program.

Technical assistance will be provided to assist in assuring continued implementation of the drug supply system. This will include supervision, evaluation and organization of the regional warehouses.

b. Training. Personnel will be trained in the use of the system, and its procedures, manuals, and policies. Training will be provided through a combination of short-term technical assistance and institutional resources from within CONAME and through formal courses in coordination with the Human Resources Division. In addition to the 1,600 persons who will be trained in the national drug supply system by the end of 1984, the 150 administrators and warehousemen directly responsible for storage, distribution and record keeping will be trained and retrained on an annual basis.

c. Construction and Equipment. Improved storage and distribution will also result from the construction of a new central warehouse, a central vehicle maintenance facility and six smaller warehouses/workshops throughout the country. By the end of the Project, each of the warehouses will have cold storage rooms or refrigerators, storerooms for spare parts for medical equipment and vehicles, warehouse equipment, an office for a regional supply manager, and, in the regional warehouses, small workshops for vehicle and medical equipment repair. Delivery of parts and transportation of medical personnel will be done by trucks to be provided for each of the warehouses. Basic equipment needed to organize and use the warehouses such as shelving, kardex and office equipment will be provided. Each warehouse also will be equipped with a shortwave radio which will facilitate communication between the central office and the warehouse for the transmission of orders by the regional facilities at any given time. Storage of perishable materials and supplies will be improved by the provision of 10 air conditioners, 32 freezers, 80 small refrigerators, 96 ice chests, and accessories to CESAMOs (Health Posts with Doctors) and CESARs (Health Posts with auxiliary nurses) not so equipped at present. The general medical equipment originally budgeted under this Project for the CESAR's was supplied under a UNDP Project financed by the Government of Holland. The project also provided laboratory equipment to upgrade 72 CESAMOs as well as equipment and reagents to upgrade the central laboratory's support to the regional laboratories.

The activities contemplated under this subcomponent cut across several MOH divisions, but CONAME has overall implementation responsibility. It will, of course, be assisted administratively by the Project Coordination Unit.

11. Sub-component No. 11: Maintenance System. The lack of a comprehensive, efficient vehicle, equipment and facility maintenance network inhibits the ability of the MOH to expand services to more rural areas. In 1980, the two existing MOH maintenance workshops that had an adequate number of trained personnel in Tegucigalpa were in disrepair, and lacked tools and parts needed to provide services to any level of the health system. Other

maintenance constraints include the lack of maintenance guidelines, both in the area of overall policy and in the more technical areas such as scheduling preventive maintenance, control of supplies and equipment, projections of supply needs, and procedures for responding to immediate needs.

Progress has been made in certain of these areas since the Project began in 1980, particularly in the area of scheduling preventive maintenance for cold chain equipment and in projecting supply needs for vehicles and cold chain equipment. The MOH is currently analyzing options for overall policy guidelines and, during 1984, overall policy guidelines should be established.

The Maintenance Division has undergone a complete reorganization with the creation of specific departments (e.g. engineering, biomedical equipment and vehicles) and functions and tasks for each department have been developed. Three priority areas were identified: medical equipment (including cold chain equipment), vehicles and facility maintenance. Workplans for each area were developed as were plans for decentralizing many operations. In the medical equipment area, cold chain maintenance was chosen as the highest priority and activities were accelerated in this area. During a period of about four months, 1,000 MOH personnel were trained in refrigerator maintenance. In addition, central and regional maintenance personnel participated in specialized training courses, and norms and procedures were developed. In vehicle maintenance, the Maintenance Division has been assisted in, and has participated in the design of a newly created transport division which will include vehicle maintenance. In all three areas, selection and training of regional maintenance personnel has occurred and the beginnings of the creation of vastly improved regional maintenance capabilities are in place.

Tools have been purchased, but are not fully distributed because of inadequate facilities. A new vehicle maintenance facility will be completed in 1985. Remodeling of the medical equipment maintenance facility will begin in 1984. Spare part purchases continue to be troublesome because of awkward government purchasing mechanisms, a problem that the the Mission's Development Administration Project (522-0174) is attempting to resolve.

By the end of the Project, the maintenance system will be operating with a complete new set of policies, procedures, and manuals which will allow the Maintenance Department to do preventive maintenance and general repair duties more efficiently and on a much broader scale. In order to accomplish this, the following inputs have been, and will be required:

a. Technical Assistance. Twenty five months of long-term technical assistance has been provided in maintenance. An additional 12 months of long-term assistance will assist the MOH to develop the policies and procedures mentioned above, especially those necessary to ensure efficient operation of the regional maintenance facilities to be built during 1984.

b. Training. Training courses currently being given to Department of Maintenance personnel also will have been expanded by the end of the Project to ensure that all personnel within the Department receive

in-service training. Training also will be given to selected employees outside the Department in preventive maintenance programs for vehicles, simple medical equipment, and office machinery. Small outreach teams will travel to the regions to train regional maintenance and other personnel. Courses will be given on a monthly basis with about 20 persons attending each course. Eight people are expected to travel abroad each year to receive one to three months of training in the more esoteric aspects of equipment maintenance, such as refrigeration and X-ray machine maintenance.

c. Construction and Equipment. As noted above, regional maintenance workshops will to be constructed within the regional warehouses. In addition, a central vehicle maintenance facility will be built and the central medical equipment maintenance facility will be renovated. Tools for both the regional and central workshops have been purchased and, while some have been distributed, the majority are being held until the new facilities are constructed. In addition to the vehicles already supplied, eleven new vehicles will be required. Seven vehicles will be assigned to the regional workshops to assure that parts and equipment flow reliably to the regional warehouses and workshops from the central warehouse on a timely basis. Two vehicles will be used to support mobile maintenance teams operating out of Tegucigalpa and San Pedro Sula. These teams will be capable of carrying out more sophisticated repairs than the regional teams and will provide them with on the job training during their visits. The two remaining vehicles will be used by facility maintenance teams and will operate in a similar fashion.

The Maintenance Division of the MOH, assisted by the Project Coordination Unit, is responsible for implementing this activity

12. Sub-component No. 12: Reinforcement of Management and Planning. The MOH underwent rapid expansion during the 1972 - 1980 period. During that time the percentage of the GOH budget devoted to health rose from 4% to 12%. Almost all of the budget increase, however, financed both capital investment and operating costs associated with service delivery expansion and very little financed the costs associated with increasing the Ministry's capability to manage the expanded system.

The critical problem identified at the time of Project preparation was the dearth of adequate managerial staff, particularly at the level of the Directorate General of Health (DG). The DG in 1980 consisted of two persons and was responsible for coordinating and supervising more than 30 offices at both regional and central levels. In addition, the manual information system inhibited the timely flow of information necessary to make appropriate management decisions. There were also problems in the linkage between centralized planning and decentralized implementation. The planning process was "top-down" with goals imposed by the central level. Little support was available to the regions in solving management problems and much less in improving overall management capability. The original Project design proposed to address these problems by expanding the management capability of the DG by adding five persons to the DG staff and by supporting the development of an automated information system. Over the life of the Project four major areas

of activity have developed: policy and program coordination, management development, information system development and local programming. The Project will continue support in those four areas.

The objective of this Project sub-component is to reinforce the capacity of the Ministry to manage its program and its resources, and particularly to improve the linkage between planning and execution in order to increase the effectiveness and efficiency of the MOH. Interventions have been designed to address each of the four areas mentioned above.

The first area is the development of a management information system. The Project will support a phased approach to developing a management information system. Several months of technical assistance have been provided both by A.I.D. and PAHO in developing an outline for a phased approach to information system development. The first step was the establishment of an Information Commission which serves as the policy making body for MOH information purposes. As a continuation of this first phase, an Information and Decision Unit will be formed and five micro-computers will be purchased for logistics, planning, administration, epidemiological surveillance and the Director General's office. The Unit's staff will include two new positions already approved by the GOH: a systems analyst and a programmer. Under the second phase a mini-computer that can use the micros as "smart-terminals" will be acquired. During the last phase these micro-computers will be introduced into the seven health regions.

A second area is the improvement of policy and program coordination. The key to achieving improvement in this area will be the strengthening of the MOH's analytical capacity and technical coordination. Once information is being generated, the Ministry must have a capacity to analyze the information, base appropriate decisions upon it and ensure that such decisions are executed in a coordinated fashion. In order to do this, the Director General's office has been strengthened by the creation and filling of four new sub-director positions - one each in the area of basic programs, complementary programs, technical support and administration. The Director General's span of control has thus been reduced from thirty to twelve. The new sub-directors, with the MOH's Chief Executive Officer (Official Mayor) and the head of the Planning Division, compose the Executive Coordination and Institutional Development Group (GCEDI). To improve the information available to this group for decision-making, technical assistance will help to improve the MOH's macro-economic analysis capacity, to develop a cost, budgeting, and accounting capacity, and to strengthen the services of the newly created Project Development, Monitoring and Evaluation Unit.

A third area is improved programming. A number of significant developments have occurred in this area. A local programming model has been developed. This has entailed the design and approval of new job descriptions for community and primary level personnel, the definition of geographic areas of influence for each health service center, and the development and field testing of local planning instruments. The model is ready for national level implementation. Once fully implemented, the model will allow goal setting to

occur and budgets to be developed at the local and regional level. Spin-offs of this process have been the design of new curricula for mid-wives, health guardians, health representatives, health promoters and auxiliary nurses; development of therapeutic manuals for use at the rural health center level; revision of performance indicators for primary health care personnel; development of a system for a yearly health census and the development of a system to permit regions to evaluate their own performance on an annual basis. Complementing this process will be a series of evaluations at the regional level which will occur annually. Impact will be measured and the results will serve as the basis of the annual national evaluation in January of each year.

The fourth area is management development. Activities to date have focussed on accomplishments of three specific tasks: improving administrative document flow, improving budgetary control and management training. Through the establishment of an administrative flow task force which identified unnecessary administrative steps, changes resulting in a 25% reduction in document flow time within the MOH were identified and implemented. Budgetary control procedures will utilize the micro-computers for tracking budget expenditures by various MOH cost centers. Early steps in this process have included the adaptation of software for using the computers for budgetary analysis and the development of cost indicators. An analysis of the 1983 budget already has resulted in an audit of one hospital where analysis revealed that food costs doubled each quarter without explanation. In this case, the availability of the information resulted in the identification of a specific problem, an on-site investigation, and the elimination of practices within the hospital which had exaggerated its expenditures on food. Under the final element, a needs assessment in management training has been completed, curricula have been designed, and training has begun.

At the regional level attention has focused on improved programming of resources. Various administrative improvements have been designed and tested in four of the eight health regions. To support regional supervision, a methodology for planning resources was developed. The methodology takes into account personnel, per diem, vehicles, gasoline, supplies and routing. In addition, systems for improving management of the cold chain have been developed and tested in two regions and are ready for national level implementation. Finally, the regional advisor has participated in the reorganization of the regional warehouses which were mentioned in the logistics section above.

The first of a series of activities in initiating administrative reform has been the improvement of administrative supervision, management training and regional administrative systems. Central level administrators have visited the health regions to observe their administrative procedures, and the visits have been utilized as an educational activity. A series of management training courses, beginning in April 1984, have been designed for high and mid-level MOH managers to impart modern management technologies: group decision making, management by objectives, and problem solving. Such management training courses will continue. In addition three new initiatives

will occur. The first is team building within the Directorate of Administration. This will be done through a series of workshops. A second will be reorganization of the Directorate of Administration itself, as a result of an analysis of its functions. And, finally, there will be an improvement of financial management through improved use of the regional level resources, through finding new ways of generating funds, and through better control of its own budget. Technical advisors in regional and central administration will support this effort.

a. Technical Assistance. To realize the accomplishments recorded to date in the four areas of management and planning mentioned above, 114 person months of technical assistance have been provided. It is estimated that in order to continue with the design and implementation of new management techniques an additional 108 person months of long-term technical assistance and 24 person months of short term assistance will be required.

b. Training. Training activities will take place in three areas. A total of 146 people at both the central and regional levels will be trained in the use of micro- and mini- computer equipment to be procured. Fifty people will be trained in information design methodologies. Forty people will receive training in productivity and cost-accounting analysis.

c. Equipment. Five micro-computers and one mini-computer will be purchased for the management information system.

d. Local Services. The site in the MOH where the mini-computer is to be installed will be remodeled. A.I.D. will finance the translation of both hardware and software manuals as needed into Spanish. Split A.I.D. funding of salary costs for the sub-directors will continue on a declining percentage basis until the GOH has completely absorbed the costs.

Implementation of this Project activity will continue to be the responsibility of the General Directorate of Administration and the Human Resources Division. The Project Coordination Unit will provide administrative assistance.

13. Sub-component No. 13: Mass Media for Village Health Workers. The institutional constraints which this sub-component originally was designed to address still exist largely because the focus of implementation has not yet been directed towards village health workers (VHWs). There are two reasons for this. The first is that from the beginning it was apparent that implementation of the activity would lead to a great increase in demand for VHW services. Without the logistics system functioning to the lowest levels of the MOH pyramid, the VHW's would not be able to respond to that demand. This would only serve to further diminish confidence in the VHW's, exactly the opposite of the desired effect.

The second reason is that the remarkable success of the AID/W funded Mass Media and Health Practices Project in introducing oral rehydration therapy has provided an attractive design alternative for the implementation of this

activity. Following the model of that Project, the Division of Education chose the four priority areas (malaria, immunizations, diarrhea, and tuberculosis) in which to apply the communications methodology beyond oral rehydration therapy. A combination of graphics and radio, close coordination with MOH program directors, and the use of pre-program research and post-program evaluations have resulted in continued high success rates in changing public knowledge and practices.

The objective of this activity is to create in each of the seven regions and at the national level a team of people capable of designing, producing, and carrying out educational campaigns which will effect changes in the knowledge, attitudes and behavior of the target population in support of the Ministry's priority programs and to contribute to the continuing education of health volunteers. Four educational campaigns per year between 1983 and 1987 will be conducted, one on each of the priority programs of the Ministry of Health. The campaigns will include problem investigation with focal groups in the target audience, material design, and validation of messages, which will result in the production of 90 national 15 minute radio programs, 625 local radio programs, 40 radio spot announcements; the broadcasting of 1,710 national programs, 7,310 local programs and 167,000 radio spots; and the preparation and distribution of 1,000,000 illustrated pamphlets and 125,000 posters.

The production of educational materials in support of the four priority programs will be continued outside of the intensive media campaign. The Ministry will produce 6,000 flipcharts (1,000 for each of the six themes), 18,000 manuals of norms and procedures and 480,000 pamphlets.

a. Technical Assistance. To provide overall technical guidance to this subcomponent, 31 months of a long-term technical advisor will be provided.

b. Local Services. Additional staff will be provided to the MOH Health Education Division, with Project funds. A.I.D. funds will be utilized to finance per diem for the Education Division staff to carry out field investigation, message validation, impact evaluation and supervision.

The Health Education Division, in coordination with the various MOH program chiefs, will manage this activity. The Project Coordination Unit will provide administrative support.

14. Sub-component No.14: Teacher Training. Because of the continuing difficulties in coordinating this activity between the National University and the Ministry of Health, practically none of the activities originally contemplated were carried out. The Mission does not believe that the objectives of the activity can be met without this coordination, and it is unlikely that communications between the MOH and the University will improve. Therefore, this activity is being discontinued. The table below indicates only funds expended under this activity to date.

15. Sub-component No. 15: Extension of Supervision. The extension of coverage program of the MOH has increased the number of health workers who work alone in isolated rural villages. While this can increase coverage significantly, it also drastically increases the supervision requirements of the system. These workers need supervision to maintain standards of quality, to introduce new techniques, to maintain enthusiasm, and to avoid abuses.

The overall objective of this activity is to extend the coverage of the supervision system to meet the additional demand created by the extension of coverage of the primary health care system into rural areas. Supervision includes one-on-one continuing education at the regional, area, health center and village levels and, to a lesser extent, evaluation of the health workers' efforts. The relationship between these levels is described more fully in Attachment F.1.

The principal factor limiting the expansion of effective supervision in 1980 was a lack of budgetary resources necessary to finance transportation and per diem. Good supervision norms had been developed under a separate A.I.D. contract and with PAHO assistance, but experience gained during the initial four years of the Project indicates that the supervision model thus developed was comprehensive and too complicated to be easily utilized. Initial efforts under the Health Sector I Project were aimed at simplifying and focussing the use of this model on the Ministry's priority programs: malaria, diarrhea, immunizations and tuberculosis. Once done, the model was partially implemented; that is, from the area to health center level. Inputs provided thus far have been 34 vehicles, per diem for supervision, per diem for training and technical assistance.

Under the extension, the Project will accomplish 500 supervision visits from the regional to the area level, 1,064 visits from the area to the health center level, and 31,500 visits from the health center to the community level. In addition, there will be 9,450 meetings of VHW's with auxiliary nurses at the health center, 1260 meetings of auxiliary nurses with area supervisors at the area level, and 126 meetings of area supervisors with the regional staff at the regional office.

a. Technical Assistance. The long term technical advisor provided for local programming under the Management and Planning Activity will also serve as an advisor to the supervision group.

b. Training. Training costs will be supported under the Continuing Education Activity.

c. Vehicles and Equipment. Four-wheel drive vehicles have been provided for each of the 34 health regions to assure the availability of transportation for supervision.

d. Related Local Costs and Services. In order to complete the targets listed above, Project funds will be utilized to provide per diem both for visits by supervisors to the lower levels (direct supervision) and for

regular meetings by staff with their supervisors. In addition, services will be provided for the production of supervision forms, guides and didactic materials.

The Office responsible for the implementation of this activity is the MOH Planning Division, in coordination with Human Resources Division and the regional offices. The Project Coordination Unit will provide administrative support for the activity.

16. Sub-component No. 16: Continuing Education for Village Health Workers. Activities under this subcomponent functionally have been part of the Continuing Education for MOH employees activity and will be managed henceforth as part of that subcomponent. To date, the activity has incurred expenses for the following activities.

17. Sub-component No. 17: Continuing Education. This activity seeks to incorporate into the on-going programs of the MOH the capacity to provide continuing education services to its staff. In this way, the quality of services provided by MOH personnel will be maintained and continuously upgraded. This education is for technical personnel at all levels of the MOH organization: VHWs, auxiliary nurses, health promoters, malaria personnel, maintenance personnel, logistics system personnel, and administrators. Also, doctors and nurses working at the regional and clinical levels will receive training. The content of the training is, and will be designed to facilitate effective execution of the extension of coverage program, and serves the basic purpose of introducing or reinforcing current norms and procedures, be they technical or administrative. Implementation of this activity also will result in the improvement of the curriculum of the professional training schools to orient them more directly to the MOH priority programs.

This activity has played a vital role in introducing throughout the MOH health care system new norms and procedures in logistics, cold-chain maintenance, supervision, and midwife practices. A number of other less comprehensive, but important subjects have also been the subject of training. Two parallel activities have been the development of the national information center and the design and publication of the Ministry's regular continuing education magazine. Four issues of this magazine have been produced and distributed, and production will continue at four issues per year.

The overall objective of this activity is to increase the efficiency and effectiveness of MOH primary care health workers at all levels of the health care system. In order to accomplish this, the following inputs will be financed:

a. Technical Assistance. An additional thirty-one person months of long-term assistance will be provided to assist the MOH to develop and carry out regular, in-service training programs for all levels of health personnel.

b. Training. 14,400 person weeks of training for MOH employees and 7,300 person weeks of VHW training and retraining will be financed. The activity also will provide 90 person months of short term and 12 person years of long term training in the priority health technology areas and support services.

c. Local Costs. A.I.D. funds will be used to finance per diem for trainees to attend the courses, personnel support to upgrade productivity of the MOH's Educational Materials Production Unit, and salaries for the regional continuing education coordinators.

d. Materials and Equipment. Educational materials and equipment will be provided for the MOH's Educational Materials Production Unit. In addition, Project funds will be utilized to expand and improve the information center and to establish regional information centers. A.I.D. funds will finance equipment, books, and magazine subscriptions. A.I.D. funds will also finance equipment and materials costs for the continued publication of the continuing education magazine.

The Human Resources Division will be responsible for the implementation of this activity and will coordinate with the normative divisions and regional officers. The Project Coordination Unit will provide administrative support for the implementation of the activity.

18. Sub-component No. 18: Acute Respiratory Infections. This is a proposed new technology component of the Project. The second leading cause of death in Honduras is from acute respiratory infections (ARI). The technology for attacking the problem exists, but remains to be adapted and disseminated throughout the MOH. Under this new priority program, A.I.D. will assist the MOH to develop norms and to treat 70% of ARI cases in children under five years of age according to the developed norms by 1987.

a. Training. Training in acute respiratory disease technology will be provided under the continuing education activity.

b. Local Costs. GOH counterpart funds will finance per diem costs for supervisory visits from the central to the regional level.

Implementation of this activity will be the responsibility of the Epidemiology Division in coordination with the Human Resources Division. The Project Coordination Unit will provide required administrative support.

19. Sub-component No. 19: Operations Research. In its efforts to improve the management, utilization and allocation of scarce resources, the MOH has found that it frequently lacks the necessary and comprehensive information upon which to base informed and rational decisions. A dramatic example of this was the process the Ministry went through to establish a system of drug sales through health centers as a cost recovery measure. The MOH initially was opposed to this because of the political ramifications of charging poor people for what had been a free commodity and a belief that poor people could

not or would not pay for drugs. To assist the MOH in making a rational decision on this, the AID/W funded Primary Care Operations Research (PRICOR) Project financed a study on alternative cost financing mechanisms. This study showed that people on the average pay much more for drugs per sickness episode than originally was thought. This led the MOH to conclude that if drugs were reliably available at the health centers, people would be willing to buy them, would make better use of the health system, and would receive more appropriate medications. Thus a policy decision was made to explore several drug sales options.

Activities under this subcomponent will result in 12 investigations of this type in priority areas over the next three years. The results of these investigations should lead to significant policy and program decisions. In order to accomplish this, Project funds will be utilized to finance the following:

- a. Technical Assistance. Twenty four months of long-term technical assistance will assist the MOH to develop and conduct operations research projects.
- b. Training. Long-term training of one epidemiologist, one biostatistcian and one social science research specialist will be financed.
- c. Commodities. One micro-computer will be purchased. Field equipment in support of Chagas disease investigations will be provided.
- d. Local Costs. Salary support for field supervisors and interviewers will be provided.

The MOH has established a Science and Technology Unit to stimulate, advise and coordinate operations research, and this unit will be responsible for conducting such studies.

20. Sub-Component No. 20: Nutrition. Protein-calorie malnutrition is suspected to affect over 40% of preschool children. Mild to moderate malnutrition affects the health of a substantial number of pregnant and lactating women and their babies. Anemias also are a major problem among pregnant and lactating women and children. In the past, the MOH has not had a well defined, organized, or integrated approach for dealing with nutritional problems. However, the Ministry recently identified nutrition as a priority program, set up the Office of Nutrition as a separate division, and has defined service priorities within the program as follows:

- a. Diagnosis and classification of protein-energy malnutrition and anemia;
- b. Detection of mothers and infants at high risk of becoming severely malnourished or producing low birth weight babies;

c. Provision of health and nutrition education, with emphasis on proper maternal and infant diet;

d. Provision of vitamins and mineral supplements for high risk groups, including anemia cases; and

e. The linkage of health services and supplementary feeding programs financed under PL 480 Title II and the World Food Program.

In addition, two preventive programs, iodization of salt and fortification of sugar with Vitamin A, have been identified as essential, but these activities do not involve direct service delivery.

The overall objective of this activity is to integrate nutrition-related services into the core MOH service delivery system. This sub-component will support this objective primarily in two ways. The first will be by funding a national nutritional survey to establish baseline data on nutritional status, food-consumption, food attitudes and beliefs, child growth patterns and socio-economic variables. No such information has been collected on a scientifically valid basis since 1966. Although statistics claiming "malnutrition affects 40-60% of the population" are used, no one is sure. The data will help in planning and targeting nutrition activities.

The second major input will be in the area of nutrition education and the linkage of health services and supplemental feeding programs. A.I.D. will fund in early FY'85 the CARE/Honduras Community Health and Nutrition Education (CHANE) Project. The purpose of the project is to provide effective community education and community participation to complement CARE's nutrition and water and sanitation Projects. CARE is the largest provider of supplementary foodstuffs in Honduras. The Health Sector I Project will use nationwide the materials and methodologies developed and tested by CARE in their project areas. It is estimated that 30% of the population will be covered by the CHANE Project and the remainder with HSI financing.

In addition, norms for nutrition-related activities will be revised, and personnel job descriptions and supervision responsibilities will be adjusted to include these activities. Currently, the MOH does not have a reliable system for diagnosing and treating anemia. The information system also will be reviewed and adjusted to permit adequate diagnosis, planning, and evaluation at all levels. Operations research and special studies will be conducted to identify viable mechanisms for linking health services with maternal and infant supplementary feeding programs currently in operation. Ways for encouraging community participation will be studied.

Training of health workers in detection, treatment and education of malnourished children, high risk pregnant and lactating women and preschool children is inadequate and will be improved through this Project. Continuing education in these subjects will be provided to all levels to health personnel.

Educational modules, methodologies, and materials for interpersonal health and nutrition education activities will be developed in conjunction with the CARE Nutrition Education Project (CHANE), which should begin in late CY 1984.

In order to accomplish this, the Project will finance the following:

a. Technical Assistance. A variety of contracting modes will be used to provide the technical assistance needed. These include an OPG with CARE/Honduras (not funded under this project), a contract to INCAP, use of long-term technical advisors provided under the Management and Planning activity, and short-term TA from AID/W centrally funded projects.

b. Training. Training will be financed under the Continuing Education activity.

c. Equipment. Financing for the reproduction of materials and the purchase of audio-visual equipment necessary to deliver these packages will be made available. Prenatal vitamins and minerals will be provided to high risk pregnant and lactating women. These resources will be coordinated through the management and logistics subcomponents.

d. Local Costs. Perdiem will be provided for supervisors involved in the field studies.

The Nutrition Division of the MOH will have overall responsibility for the management of this subcomponent, and will receive administrative assistance from the Project Coordination Unit.

#### IV. PROJECT ANALYSES

##### A. Technical Feasibility.

The purpose of the technical analysis is to determine whether it is possible to implement a project in the form proposed and whether the means selected and the methods proposed for the realization of the project elements are technically the most suitable and cost effective. The Health Sector I Project was the major output of a previous two-year Health Planning Project (No. 522-0148) and was based on a series of carefully prepared technical studies in both the disease treatment and administrative areas as summarized in the Health Sector Assessment 1975-1985 published in 1980. Three years of Project implementation experience has proven the suitability of the original Project design. The external evaluation carried out by Westinghouse in October, 1983 further confirms that conclusion. This report states that the basic Project design is still appropriate. Other than the technologies included in the new sub-components (operations research, nutrition and acute respiratory infections) there are no new technologies being introduced at this time.

1. Health Technologies.

a. Malaria. Three approaches are being supported by the Project to combat malaria. Two of these are time-tested technologies, mass medication and wall-spraying. Both have been used with success in Honduras for years. A new technology for Vector control has been introduced by this Project. As yet, neither sufficient time has elapsed nor sufficient coverage has been achieved to evaluate its impact. Vector control has been introduced in two of the country's most malarious regions (Choluteca and the Jamastran Valley) and the MOH's Vector Control Division anticipates introducing it into another four areas during the extended life of the Project. The technique, although as yet unproven in Honduras, has been utilized successfully in situations similar to those which prevail in Honduras. Furthermore, A.I.D. funded studies performed both during the development of the Project and during its execution have reaffirmed the desirability of increasing vector control activities in Honduras.

b. Immunizations. The use of vaccination to reduce the incidence of polio, diphtheria, pertussis, tetanus and measles is well proven. The technology already has resulted in a dramatic reduction in the incidence of these diseases. Although there is more controversy surrounding the use of BCG for the prevention of tuberculosis, it is currently recommended by the World Health Organization.

c. Diarrhea Control. The use of oral rehydration therapy for the treatment of dehydration caused by diarrhea was evaluated under the AID/W funded Mass Media and Health Practices Project. Although the purpose of the evaluation was more to determine the effectiveness of mass media in introducing a new health related behavior than to measure the impact of that behaviour, nonetheless the use of ORT in the test region resulted in a 40% reduction in mortality from diarrhea in the first study year. The same technology which was introduced and tested in that region of the country has now been expanded nationally.

d. Tuberculosis. The methodology being used by the MOH to combat tuberculosis has undergone a change since the beginning of the Project. One of the main problems has been that the treatment schemes previously used by the MOH required the patient to be under treatment for one year. Significant non-compliance problems existed as patients dropped out as they felt better clinically, but were not yet cleared of disease. In the new treatment scheme utilizing streptomycin in the first two months and isoniazid and rifampacin in the subsequent four months, the treatment regimen is halved with equal treatment efficacy. The regimen is one proposed by PAHO and has been tested in other Latin American countries.

e. Family Planning. Modern family planning methods were introduced in Honduras in the 1970's. Both the MOH and the private sector have ample experience with barrier, chemical and surgical contraceptive technologies. Certain strategies not previously used by the MOH in Honduras, such as allowing auxiliary nurses to prescribe oral contraceptives, have been

tested and found feasible in the Honduran Family Planning Association's Community Based Distribution Program. Insertion of intrauterine devices (IUD's) by professional nurses, while not previously practiced in Honduras, has been practiced in many similar countries with success. Approximately 30 MOH surgeons have been adequately trained in surgical sterilization and that training process will continue under the Project.

f. Respiratory Infections. The program being proposed for the treatment of acute respiratory infections, while new in Honduras, is well founded in current medical practice and principles. The program is based on giving symptomatic treatment for mild cases, long-acting penicillian and/or sulfamethoxazol-trimethaprin for moderate cases and hospitalization for severe cases. The approach used by the MOH in the implementation of this program, i.e., establishing norms, training health care providers in the norms, supervising performance in relation to the norms at all levels and carrying out annual evaluations, is the approach used with success in most of its other programs.

g. Nutrition. Although nutrition is a new sub-component in the Project, none of the technologies to be introduced are new. The main elements of the subcomponent are education, growth monitoring and investigation. The education activity will draw heavily on the methodology developed and very successfully implemented in the mass media sub-component of the Project. Growth monitoring, currently done only sporadically in Honduras, will become a regular MOH procedure drawing upon the extensive experience of INCAP in the region to assure acceptability. This activity also draws upon the results of an A.I.D. financed analysis of the nutrition situation carried out in 1983 which recommended targeting supplementary feeding at high risk populations (pregnant women, lactating women and children under five). A nutrition survey also will be conducted. Large, population based surveys, such as the Contraceptive Prevalance Survey in 1981, have been carried out successfully in Honduras. Nutrition surveys of the type contemplated also have been conducted in the region, notably in Costa Rica and Panama.

2. Management Technologies. The majority of the new technologies which have been introduced under the Project and which will continue to be reinforced and expanded, are "soft" management technologies; e.g., institutional problem definition, development and evaluation of alternative solutions; development and use of work groups; consensus building; leadership development, etc. Nevertheless, there are certain more specific management technologies identifiable and these are discussed below.

a. Logistics. A number of management technologies are being introduced and fortified under this activity. The most central is the design and implementation of a systematic approach to drug, equipment and supply purchase which would normalize and regulate all of the elements of such a system including the planning, procuring, storing, distributing, using, monitoring and evaluation aspects of the system. Such a system was designed by the MOH in the late 1970's, but was never implemented because the office that designed the system was not the office responsible for its

implementation. Therefore, there was neither understanding of the system nor commitment to it by those responsible for implementing it. This problem has been eliminated through the creation of "CONAME" (see section III C. Sub-component No. 10 page 18 above). Part of this process has been the creation of a basic medicine list. This is a management technology used successfully in many developing countries and one which also has advanced considerably in Honduras since Project initiation. The introduction of user fees for drugs is another technology being introduced as a direct result of Project supported activities. The social acceptability of this is discussed in the Social analysis which follows.

b. Maintenance. Studies of the MOH's maintenance programs and problems were carried out by A.I.D. financed consultants in 1979 and 1983. The former served as the basis for the design of the maintenance sub-component included in the Project, and the latter has served as a major input into the selection of an overall maintenance policy by the MOH. The strategy chosen in the Project of decentralizing maintenance by creating regional maintenance capacities was accepted as the preferred strategy in both studies for most vehicle, medical equipment and facility maintenance. The major constraints were recognized as being administrative, managerial and budgetary. All three of these constraints are addressed in the Project design. The first two are addressed by the provision of technical assistance and the latter, by including adequate funds for personnel and spare parts in the Project budget, both to be totally financed by the MOH by the PACD.

c. Management and Planning. The nature of Project efforts in this component, as in the others, was based upon a careful analysis carried out in 1979 and summarized in the Health Sector Assessment 1975-1985 published in 1980. The nature of the constraints is mentioned in Section II. B. above (p. 4). The major constraint was the lack of both service data and vital health data reporting. The Project proposes introducing automated information processing to address this constraint. The MOH has some experience with the use of computers, having rented time from the GOH's Bureau of Census and Statistics's computer for several years. However, the use of that computer and the data provided by it have only been utilized in a limited fashion for management purposes. This is largely because there has not been a systematic look at what program data needs to be collected and how that data must be organized and presented to serve as a useful management tool. Limited access to borrowed computer time has also limited the ability of the MOH to perform sufficient analyses of the data that are available. Computers are widely used in other GOH Ministries and A.I.D. has been involved in the introduction of computer-usage in several of them.

The strategies for addressing the remaining management and planning constraints are the strengthening of the Director General's office through the creation of four additional sub-Directors; the provision of technical assistance in the key areas of administration, planning, policy development and technical coordination; and through management training of key MOH managers and administrators. The Westinghouse evaluation confirmed the validity of this approach. "The accomplishments thus far in planning and

management are notable, even though their full impact will be felt only after sufficient time has passed so that reforms can be adopted throughout the health system."

d. Mass Media. The use of mass media to serve as a stimulus to the VHW's by increasing their prestige in the community was the primary objective of the mass media activity in the 1980 Project Paper. Subsequently, this orientation was judged premature by project implementors because it would stimulate an increased demand for their services while support systems were still weak. This would lead, in turn, to a further decline in their status. The current strategy of using mass media to complement MOH priority programs by stimulating changes in attitudes, knowledge and practices on the part of the target population has an ample body of successful experience in the previously mentioned AID/W Mass Media and Health Practices project and in the fifteen months of actual Project funded activities. Once again the Westinghouse evaluation notes this success.

e. Supervision. Once again project experience testifies to the implementability of the sub-component as previously designed and as to be continued in the proposed extension. The orientation of supervision as a "one-on-one educational process" rather than a policing or punitive process was noted positively in the Westinghouse evaluation. The system being implemented was designed under a previous A.I.D. contract and that design has undergone ample testing and revision by the MOH with assistance from both A.I.D. and PAHO advisors. Since both direct and indirect supervision are incorporated as part of the system, there are really no other alternatives to consider if there is to be supervision. The only significant constraints are the administrative and financial ones which are considered in other sections.

f. Continuing Education. In this sub-component a serious design flaw was noted the first time MOH/AID implementors sat down to do implementation planning. The amount and timing of training planned far exceeded the MOH's absorptive capacity and would have called for a virtual shutdown of operations as personnel were removed from operations in order to undergo training. This problem has been addressed by establishing training priorities for administrative, technical and community personnel. This prioritization allowed the MOH to carry out massive training programs in four key areas (supervision, cold-chain maintenance, logistics and midwifery) in 1983 without major disruptions in operations. That same technique will be applied in the remaining years. Other activities in this sub-component, such as the publication of a continuing education bulletin and the establishment of information centers are underway.

g. Operations Research Although this is a new sub-component its very existence as such is largely the result of the dramatic success of the "Alternative Financing Methods" study carried out with funding from the AID/W PRICOR Project. The MOH's whole-hearted participation in that study, the subsequent establishment of a Science and Technology Unit and finally the development and execution of other operation research projects indicate the technical capability of the MOH to carry out and sustain such a program.

## B. Administrative Feasibility Summary.

Three years of Project implementation experience and the completion of a comprehensive, problem-oriented evaluation put the Mission in a good position to identify and analyze the administrative feasibility of the Project. In discussing the administrative capability of the Government of Honduras to implement this Project, as designed, and to maintain the required level of activities after A.I.D. assistance has ended, there are several areas which need to be addressed: the human resource constraint within the Ministry of Health; the financial resource constraint faced by the Government of Honduras; the structure of the Ministry of Health vis-a-vis the project design and expected Project accomplishments; the administrative systems utilized by the MOH/GOH for project implementation; and, the political environment in which the Project is operating.

1. Human Resources. Honduras is the poorest country in Central America and the second poorest in the Western Hemisphere. Less than 25% of its young people ever enroll in secondary school, and less than 10% ever enroll in an institution of higher education. 40% of its adult population cannot read or write their names. It is little wonder, then, that one of the major obstacles to development and the implementation of development programs in Honduras is the availability of well trained professionals. Both the formal GOH development strategy and the A.I.D. strategy fully recognize and address this constraint openly. In nearly all of its development programs in Honduras, A.I.D. has built in components which seek to upgrade the skills not only of program managers, but also of those at the lower levels of hierarchical chains upon whom successful adoption of new technologies or new working arrangements depend.

The Health Sector I Project is a good example of this. At the upper levels of MOH and Project management, administrators are well-trained, possess good to excellent management and technical skills, and are capable and trusted leaders. The institutionalization of comprehensive training and supervision programs within the Ministry of Health directly addresses the human resource constraint at the mid- to lower levels. Training financed under the Project is highly focussed on improving the technical, supervisory, and managerial skills of these groups of individuals throughout the MOH system without whom the coverage of the primary health care delivery system cannot be extended.

Such a human resource strategy is not, however, without its costs. The cost of implementing a comprehensive program which attempts to effect substantial changes in the operational procedures and priorities of an entire Ministry at the same time that it attempts to significantly upgrade the skills of the individuals involved in the program is paid in terms of the time it takes to realize objectives. In recognition of this fact, this Supplement alters the design of the Project by extending the implementation period through 1987.

A related question, one raised in the Westinghouse evaluation, is that of the absorptive capacity of the MOH, particularly in regards to human resources. One aspect of this was the delays in the creation of some 67 permanent

positions called for in the Project. The evaluation states, "The issue of permanent positions has been deferred repeatedly, but must be confronted squarely before the level of project activity is increased with reprogramming." That issue was confronted and the GOH created all permanent positions called for in the Project effective May 1, 1984. The evaluators linked this same issue with that of counterpart availability for technical advisors. The focus of their concern was that of counterparts for the operations research advisor. Although that unit continues to be understaffed, the personnel in training do have permanent positions and will be incorporated into the unit during 1984. All other technical advisors also have adequate counterparts - one or more.

2. Financial Resources. The issue of the financial recurrent costs in terms of the ability of the GOH to support project activities after the A.I.D. inputs cease will be dealt with in the economic analysis, below. This discussion will limit itself to the ability of the GOH to provide adequate financial counterpart to implement project activities during the life of the Project.

The GOH is passing through a time of fiscal crisis. It has been operating on a no-growth budget for the past two years, and this will probably continue throughout 1985, at least. This has affected the budgets of nearly all GOH centralized and decentralized agencies. The budget of the Ministry of Health, however, has experienced some growth in recognition of the high priority placed by the Suazo administration on improving the health of the nation's citizens. Because of population growth, however, the amount of GOH resources allocated per capita to health has declined slightly in the past two years.

Largely because of its need to reduce the per capita costs of delivering health care, the GOH has placed high priority on the implementation of this Project and its objective of designing and implementing cost effective health delivery mechanisms. As such, the Project has not suffered a lack of counterpart, to date. In fact, permanent increases in GOH budgetary costs required under the Project Agreement, the addition of sixty-seven permanent positions, have been approved at a time when the GOH has instituted a freeze on the creation of new positions either through contract or on a permanent basis. If the Project has had a "counterpart problem" during the past three years, it has been on the side of overbudgeting counterpart vis-a-vis what the Project has been able to spend during any fiscal year.

3. Structure of the Implementing Organization. Annex F to this Project Paper Supplement contains a thorough description of the structure of the Ministry of Health and its component parts spread geographically throughout the nation.

The Ministry of Health is plagued with problems of an administrative nature. There are administrative "weak links" throughout the system, which adversely affect the ability of the MOH to provide adequate health care services. It is the major objective of the Health Sector I Project to address those weak divisions and offices that affect the ability of the MOH to deliver primary health care services. Several of the major Project components address this problem directly.

Administratively and technically weak offices within the MOH could also affect negatively the rate and quality of Project implementation. For this reason, Project implementation within the MOH is supported by a strong coordination office which has been able to take the lead in working directly with line divisions to plan Project activities, prepare procurement requirements, and budget financial support. This system seems to have compensated well for the weakness of the line divisions within the MOH and the Coordination Office role will continue and its staff will be further strengthened during the implementation of the amended Project.

4. External Administrative Support Systems for Project Implementation. The Project Coordination Unit mentioned above is the major Project implementation support office within the Ministry of Health. This unit is also responsible for facilitating project implementation with a variety of other administrative, budgetary, and oversight offices both within the Ministry of Health (budget office, legal office, and the Director General's office) and the Ministry of Finance and Public Credit (office of public credit, office of the budget, and the project control unit).

The slow pace of Project implementation has, in general, been a concern of A.I.D. for some time. It is also of concern at the highest levels of the Government of Honduras. The President of the Republic has within the past few months named an Ambassador for Coordination of International Development Cooperation, and a joint AID/Ministry of Finance working group has been established to investigate the problem. The result of this attention has been a thorough examination of the disbursement/implementation process both within and between implementing agencies.

The Health Sector I Project came under early review from both the Ambassador and the working group. In one of the group's most productive meetings, the GOH Project Coordinator placed clearly before the working group specific budgetary and legal requirements which, in his opinion, were partially responsible for slow disbursement progress. The problem in general terms is one of budgetary control procedures instituted as a result of the fiscal crisis conflicting with the more agile disbursement procedures required to increase the disbursement rate under international donor financed projects. More recently, the Ministry of Finance has succeeded in presenting two bills to the National Congress which, if approved, would make modifications in the Budget Law which would ease some of the budgetary controls on the use of external funds. The Mission is supportive of such actions, and hopeful that the modifications that result will help to facilitate disbursement and implementation progress for all A.I.D. financed projects. Largely because of the close and productive working relationship established between the Project Coordination Unit and the budget offices of both the MOH and the MOF and the Project Coordinator's full understanding of the MOF's financial approval and disbursement processes, the Mission expects to see the positive effects of such modifications of the Budget Law first under the Health Sector I Project. As such, the Mission expects to see an increase in the rate of Project implementation and Project expenditures towards the end of Calendar Year 1984.

5. Political Environment. Honduras is now entering into an election year. Past experience indicates that in the course of the election campaigning, attention can become diverted away from the real needs of projects towards the expediency, and more immediate requirements of gaining political support.

The Health Sector I Project has had some past experience with the patronage system; fortunately the record has been mixed with regard to its effects on the Project. In preparing for the upcoming year, the Mission working together with the Ministry of Health has procedurally done what it can to make the Project Coordination Unit at least semi-autonomous. However, there is little that the Mission can do vis-a-vis the personnel system of the MOH at large. We expect that at least some MOH personnel will change both prior to and after the elections. Past experience indicates, however, that within the MOH this usually results in exchanges of qualified personnel between offices, and that banishment usually takes the form of a rural posting. Because the Project works with the entire MOH system, the result is not expected to be deleterious to the forward pace of the Project; i.e., a person trained under the Project is not lost, he is normally shuffled around to another post where his or her new qualifications are just as needed.

C. Economic Analysis Summary.

Upon careful review of the components of the Project (HSI) extension, it was determined that an economic cost/benefit analysis could not be performed since the relationships between investment and related costs to benefits are not quantifiable. The closest one can come to determining those relationships is by examining the cost of treatment per patient at the different levels of services provided by the GOH. Without going into a great deal of detail, the Project Paper makes a supportable case that the type of services which the project supports, namely care at the CESAMO level and below and disease prevention, are much more efficient and cost effective than hospital care. There is no question that internal and external efficiency, as defined in the Project Paper can improve as a result of the types of investment being made under the Project.

The real economic issue posed by this Project is whether the projected financial position of the GOH will allow it to sustain an expansion of the HSI project activities as proposed. This is an important question, as the GOH has begun to implement a series of austerity initiatives which will constrain GOH outlays for the next five years or more. Thus, the economic analysis of the Project extension will concentrate on that question.

1. The Macroeconomic Setting. Without reciting the myriad macroeconomic problems affecting Honduras, which are detailed in the Amendment No. 3 to the Economic Recovery PAAD (522-0230), the problem can be characterized as one where the country has suffered a substantial income loss affecting all sectors of the economy for the last five years, and no end is in sight for the foreseeable future. Throughout this period, the GOH has

attempted to sustain a number of programs (health, education, defense, etc) by borrowing internally as well as abroad in order to make up for the losses in revenue experienced. As both credit sources have essentially dried up, the GOH has been forced to reduce expenditures and bring them in line with available revenues and reduced available financing.

This can be corroborated by reviewing Table I in Attachment J which shows the overall level of nominal and real GOH expenditures net of debt servicing for the 1979-1984 period. While nominal expenditures on a per capita basis and as a percentage of GDP show an upward trend, in real terms the figures tell a different story. For 1982-84, real and per capita expenditures suffered marked losses. These trends are likely to continue, as nominal expenditures are expected to remain at 1984 levels for 1985-86, with limited increases projected for 1987-89 while the population continues to grow rapidly throughout the period. This assertion is based on the fact that any increases in revenue expected over the next five years will be apportioned to meet security needs and to service an increasing domestic and external debt. Thus, the overall level of services provided by the GOH will necessarily decline throughout the next five years.

GOH expenditures on health have followed the same trends as those of the overall GOH budget. Table II shows overall expenditures of the Ministry of Health (MOH) in nominal and real terms, as well as on a per capita basis for the 1979-83 period. For 1979-82 MOH real expenditures grew 42% while per capita real health expenditures grew 28% for the same period. In 1983, however, the first signs of austerity are shown, as real MOH expenditures declined 15%, which on a per capita basis resulted in an 18% decline. Based on this data, and the almost constant share of health expenditures in the GOH budget (Table II), one can assume that the GOH will continue to treat the MOH budget as a constant proportion of overall GOH expenditures. Thus, nominal MOH budgeted expenditures are expected to remain constant for at least two more years and grow modestly thereafter. This implies that GOH health services also will decline, unless significant internal resources can be generated through cost-recovery schemes.

The upshot of the macroeconomic situation is that GOH expenditures in all social programs, including health, will be severely constrained for the next five years which include the extended life of the Project.

2. Historical Trends and Future Impact on the Ministry of Health Budget. Given the aforementioned budgetary constraints, the question then becomes what is the likely availability of domestic funds to sustain recurrent costs and in-kind contributions in support of Health Sector I Project activities, both during and after the Project. In order to answer this question, it is necessary to look at previous allocation patterns within the MOH budget to make a judgement regarding program priorities and to make some assumptions regarding the priorities of the GOH regarding the type of health services it wants to continue providing. Table III presents the domestic funds budget of the MOH by program for the 1979-84 period. The program which experienced the largest budgetary increase for the period is

central administration (55.3%) followed by the control of communicable diseases program (89%), which is the line item from which Health Sector I recurrent costs are apportioned. With the exception of the investment program and capital transfers which experienced a 20% increase and 10% decline respectively, all other programs (health promotion, hospital care and current transfers) experienced substantial increases which exceeded 73% for the period in question.

Table V which shows the budget by program with external and domestic funds and Table VI, which shows the share of each program with respect to the overall MOH budget, essentially corroborate the same trends as those shown in Table IV.

In sum, the foregoing tables show that primary health care expenditures, as distinct from hospital care, have increased substantially which suggests a shift in the emphasis of programs within the Ministry. It must be noted that during this period the construction of several hospitals was suspended which explains the relatively lower growth of hospital operating expenses. If this trend continues, the activities developed and initiated under the Health Sector I Project can be sustained by the GOH after the Project inputs cease.

However, there are strong indications from GOH and IDB Officials that the GOH intends to resume the construction of unfinished hospitals and to staff them appropriately. Aside from an IDB interest to resume the hospital program, the GOH is also under political pressure to come up with high visibility projects, such as hospitals prior to the November 1985 elections. Thus, any scenario projecting the availability of funds to finance recurrent costs and in-kind contributions for the HSI project extension must account for the increases in cost which may result from increased GOH emphasis in the completion of the GOH/IDB hospital program.

Table VII attempts to lay out one of the extremes of such a scenario under the following assumptions:

- a. That the 1984 overall budget allocated to the MOH will be straightlined in 1985 and 1986 and that this allocation will increase by 8% in 1987 and 10% in 1988 and 1989.
- b. That the GOH will fully implement its hospital construction program and will staff the hospitals accordingly.
- c. That any budget cuts to the rest of the MOH programs implied by assumptions a and b will be apportioned evenly to all programs.

In essence, the projected budgets for 1985-89 show the magnitude of the adjustments that would have to be undertaken within MOH programs other than hospital care and investment in order to accommodate a reduced MOH budget. The results are sobering.

In 1985, the adjustment would entail an overall reduction of L7,233,600 which implies reducing the 1984 funding level to every affected program by

L1,205,600. In other words, the MOH would have to obtain an equivalent amount in foreign financing in order to fully implement its hospital programs and maintain all others at the 1984 level.

In 1986, the situation would worsen, when the affected programs would experience an additional budget cut of over L900,000.00 each. Thus, if the GOH wanted to maintain the funding level for these programs at 1984 levels, foreign financing would have to reach over L12.5 million for that year. Furthermore, at this point the GOH would no longer be able to sustain the current transfers program.

Not until 1987, when the MOH budget is assumed to experience 8% growth, will each of the affected programs begin to regain a small portion of the losses experienced over 1985-86. These losses would not be fully recovered until 1989.

The implications for the Health Sector I project expansion are clear. Under the assumptions made, the MOH would not be capable of sustaining the recurrent costs arising out of the existing HSI Project and its programmed expansion, since in-kind contributions would in all likelihood be reduced as every program from which such contributions are received would experience substantial losses. The communicable disease program from which Project related recurrent costs are financed would be reduced by 3.8% in 1986 and an additional 3.5% in 1987. The 1984 funding level would not be available again until 1989 which represents a loss in real terms. The story for other programs which finance in-kind contributions to Health Sector I activities is worse similarly, if not worse.

More importantly, the implications of the foregoing scenario for the overall GOH health program are more disturbing, since the impressive gains achieved through primary health care initiatives could be lost for lack of funds. Independently of the need to expand the hospital program, which utilizes a substantial portion of MOH resources, the need for additional health care, the macroeconomic situation and sound financial principles require that the MOH look towards revenue sources other than budgetary allocations to help carry out its programs. This is clearly recognized by honduran health authorities and has become the subject of intense review by A.I.D. and Ministry of Health Officials.

The Mission, in conjunction with the technical assistance team currently working with the HSI project, explored a set of alternative arrangements under which the MOH could either increase its revenues or reduce the pace at which expenditures take place. These are:

a) Social Security Contributions: The implementation of an arrangement whereby the Social Security Institute (IHSS) would contribute a percentage of the operating costs in selected hospitals. The feasibility of this arrangement and the share of costs to be borne by IHSS are currently under study.

b) Enforcement of Cost Recovery Schemes: Gradual implementation of current MOH policies which call for hospitals to cover up to 30% of their operating costs through service fees. At present, hospitals generate an average of 5% of their operating costs. Current estimates project maintenance of the 5% in 1984, with an increase 10% in 1985, 15% in 1986 and 20% thereafter.

c) IDB Contribution to Recurrent Costs: Implementation of IDB proposal which would temporarily finance a portion of hospitals' operating costs. The details of this proposal are not yet known since the IDB Board of Executive Directors has not yet considered the expansion of the IDB hospital program.

d) Phased Inauguration of Hospitals: A hospital construction program which would stretch out the schedule. This arrangement would have the La Paz Hospital operating at 50%, 75% and 100% capacity each consecutive year beginning in 1985. The Ministry of Health is in full agreement with the feasibility of implementing this schedule.

While the number of combinations which could be arranged with the foregoing alternatives is probably very large, this analysis will examine the incremental impact which each of the foregoing alternatives would have on the ability of the GOH to sustain the primary health care program. In order to increase the realism of the analysis, the Ministry budget is assumed to remain constant in nominal terms through 1987, allowing only 3% nominal growth thereafter. Similarly, hospital budgets are assumed to grow by only 4% every two years, which is a realistic operational figure obtained from MOH officials. The order of the alternatives examined will begin with the one with the highest probability of being implemented.

The scenarios explored are as follows:

Scenario A

1. Phased inauguration of hospitals

Scenario B

1. Phased inauguration of hospitals
2. Implementation of cost recovery schemes

Scenario C

1. Phased inauguration of hospitals
2. Implementation of cost recovery schemes
3. Social security contribution of 25% in selected hospitals

Scenario D

1. Phased inauguration of hospitals
2. Implementation of costrecovery schemes
3. Social security contribution of 25% in selected hospitals
4. IDB contributions to recurrent costs

The table below summarizes the analysis results which are fully detailed in Attachment I. Each of the first four rows, shows the yearly impact of implementing scenarios A through D on changes in the MOH operating budget after hospital care costs and the budgetary growth assumptions for the MOH discussed above are taken into account. The last row shows the counterpart and received costs associated with the HSI extension using a 5% inflation factor from 1988 onward.

The Table shows that the implementation of scenarios A and B would not be sufficient to sustain the HSI extension because both would result in a reduction of the MOH operating budget with respect to 1984 levels.

The implementation of Scenario C results in moderate growth of the MOH operating budget not the increments in the budget are not sufficient to cover the counterpart and recurrent costs associated with the HSI extension in 1985, 1986, 1988 and 1989. The significance of this finding is that budgetary growth is registered under very stringent assumptions regarding growth in the overall Central Government budget, completion of the hospital program, and the yields generated by the cost recovery program. There is a strong possibility that each of these assumptions will prove overly pessimistic.

INCREMENTS THAT RESULT FROM IMPLEMENTATION OF DIFFERENT  
COST RECOVERY SCENARIOS  
(000 Lempiras)

| SCENARIO                    | 1984 | 1985    | 1986    | 1987    | 1988     | 1989     | 1990     | 1991     |
|-----------------------------|------|---------|---------|---------|----------|----------|----------|----------|
| A                           | 0    | (2,424) | (6,462) | (6,554) | (15,699) | (19,162) | (16,310) | (15,121) |
| B                           | 0    | 699     | 190     | 3,989   | (3,216)  | (5,573)  | (2,545)  | (914)    |
| C                           | 0    | 1,334   | 1,706   | 6,045   | 1,968    | 1,136    | 4,749    | 6,064    |
| D                           | 0    | 3,334   | 4,706   | 9,045   | 12,468   | 14,136   | 15,249   | 15,664   |
| Counterpart<br>Requirements |      | 3,946   | 4,114   | 4,792   | 4,400    | 4,620    | 4,851    | 5,093    |

D. Social Analysis Summary. The following narrative summarizes the Social Analysis included as Annex H to this Project Paper.

1. Changes in the Health Service Strategy. Most of the current characteristics of the health system in the country were introduced upon implementation of the 1974-78 National Development Plan. As a consequence of this plan, the MOH budget was substantially increased, the concept of planning was introduced into the health system, and the use of additional resources made available was rationalized. In addition, levels of health care were clearly defined; preventive health measures previously ignored became a priority; the poor majority living both in the countryside and in marginal urban barrios became the target group of public health programs; new health providers had shorter training periods and lower salary demands than those previously employed, and the implementation of the health programs was considered a shared responsibility of the central government and the community. The main result of the strategy was the definition of a health coverage system based on levels of health care with specific service radii and a patient referral system.

According to the new health service strategy: (a) minimum health service was to be provided through Village Health Workers and Rural Health Centers (CESARs) staffed with auxiliary nurses; (b) basic health care was to be provided through secondary level Health Centers (CESAMOs) staffed with a physician, an auxiliary nurse and a lab technician; (c) basic health care with hospitalization was to be provided through Emergency Hospitals (CHE) staffed with up to 9 physicians and several both graduate and auxiliary nurses; (d) basic health care with some degree of specialization was to be provided through Regional Hospitals, and (e) essentially specialized services were to be provided through National Hospitals. Whereas in 1974 the Village Health Workers Program did not exist, by 1983 there were over 13,000 para-professionals trained and providing services as part of the public health system. In addition, the number of CESARs increased from 201 to 436, CESAMOs increased from 77 to 123, CHEs increased from 2 to 6, and National Hospitals increased from 4 to 5.

2. Geographical Access to MOH Health Services. A mathematical model was utilized by Moore (1980) to evaluate both the geographical coverage and the effectiveness of the multi-level patient referral system in one of the country's health regions. This region was selected in part because it permitted consideration of the issue of clinic and hospital location, and walking time to health facilities was used to measure geographical access. This decision was made because: (a) the vast majority of travelways in the areas are foot-trails, and (b) a large proportion of the population in the region would not be able to afford other means of transportation even if more roads were available. According to this evaluation, the estimated ratio between service radii at adjacent health care levels within this referral system is 3:1. That is, walking time to the nearest CESAR is 1.5 hours; it is 4.5 hours to the nearest CESAMO and 13.5 hours to the nearest Regional Hospital. Moore (1980) has assumed that walking time to a CESAMO reaches the limit of a trip that can be made in one day. Travel to CESAMOs and the

Regional Hospital considered would require paying for motorized transportation and/or room and board. Because of the prevailing socio-economic conditions in the area studied, many families would not be able to afford making these expenditures. Consequently, the referral system may begin to break down in practice at about the CESAMO level. The exception to the rule may occur in those cases of serious illness when families are willing either to use up meager savings or even borrow money to make the necessary expenditures.

Following this train of thought we would have to conclude that CESARs, and most CESAMOS, constitute the most important health service levels of the health service hierarchy because of their location. This could also be true for VHWs. However, data on exact location of these workers was not available, and they were excluded from the evaluation performed. Given the importance of CESARs and CESAMOS, their outreach capacity was analyzed. According to that author, 60% of the population is 1.5 hours away from a CESAR, and 68% is 4.5 hours away from a CESAMO. Not all CESARs in the region analyzed are located to allow for optimal service coverage. If 13 of the 56 CESARs in the area were to be relocated, population coverage at that level would increase from 60% to 68%.

A household survey recently conducted in 5 of the 8 health regions of the country has corroborated these estimates. This survey detected both the most common illnesses among families interviewed and the sources of treatment utilized. Preliminary results of this survey have indicated that during the three months prior to the survey, 70% of the members of families visited suffered from acute illnesses which were treatable through the existing CESARs and CESAMOS. In fact, 65% of those that were sick during that period reported having attended a MOH facility in search of treatment.

Before the 1974-78 Development Plan, the MOH health services covered an estimated 50% of the country's population. If we take into account the results of Moore's analysis, those of the household survey and population growth over the last 10 years, we would conclude that there has been an increase in service coverage from 1.5 million to about 2.6 million people. The latter constitute the indirect beneficiaries of this project.

3. Cost of Services to the Public. Designers and implementers of the 1974-78 Development Plan argued that health was an obligation and a right for all, meaning that health services should not always be provided for free and that public health service users had to financially support the system. Upon implementation of the plan, a symbolic service fee was established. The purpose of this fee was to create among the public the habit of paying for consultations. This fee ranged from \$.25 to \$.50 at the CESAR/CESAMO levels, with payment waivers authorized to patients with no payment capacity. In the case of secondary health care, a fee of \$5.00 was established for child deliveries and a fee of \$12.50 for any kind of hospitalization, independent of the service and treatment provided. Patients with no payment capacity had to donate one pint of blood to the health facility where they were treated. The only services which were to be provided totally free were pre-natal care, child growth check-ups and immunizations.

The habit of paying for services provided by the public health care system appears to have been instilled. Preliminary results from the same household survey previously mentioned have indicated that families interviewed can and would pay an average fee of \$.65 per consultation. In addition, they would be willing to pay for the medicines distributed through the public health system provided that the funds collected through the sales would be used for the improvement of the health services at the community level. Both management and financial difficulties have prevented the government in the past from having an adequate supply of medicines to satisfy the demand throughout the health system. The desire on the part of health service users to pay for medicines is a response to the deficiencies observed in that system.

Financial support for the health system by users is critical for continuation and expansion of services, given the budget deficit that the public sector is facing. Special attention ~~should be given~~ to this mechanism in the near future particularly because of difficulties the government may have in paying even salaries of health care providers, which could result in generalized strikes on the part of health providers.

4. Cultural Feasibility of Improved Health Services to be Provided. The test of appropriateness of this Project in socio-cultural terms is whether it contains methodologies which will result in greater utilization of MOH health services and thereby will improve the health status of users. Cultural distance between health workers and health system clients; lack of information, both among health workers and among potential clients; and unreliability of the services offered are the principal factors preventing utilization of services by the target group. The mechanisms tending to encourage utilization of services are: (a) improvement of the supervision of health workers; (b) improvement and expansion of the skills of health workers through training; and (c) improvement in the performance of support systems to make primary health care services more reliable and, hence, more acceptable. The project provides the financial support needed to allow for the implementation of these mechanisms.

5. Cultural Acceptability of Technologies. No major obstacles are foreseen because of the lack of cultural acceptance of the different medical technologies proposed.

(a) Malaria control has been practiced in Honduras for decades. No cultural resistance towards chemotherapy or spraying is anticipated.

(b) Vaccination, and shots in general, have been accepted into cultural beliefs as a form of magic.

(c) Recent efforts to introduce oral rehydration as a technology against diarrheal diseases through radio messages and interpersonal communication have proved to be successful in increasing public awareness and in promoting the use of Litrosol, particularly when mothers must deal with serious cases of diarrhea. Additional promotion will allow mothers to use the technology also for less acute cases.

(d) The main resistance to TB treatment procedures observed in the past has been related to the isolation of patients in sanatoriums, particularly among tightly knit families. Under new norms, however, treatment of all but those cases with extra-pulmonary involvement or other severe disease will be treated as out patients.

(e) A high demand for contraceptive services has been detected among married women in reproductive age who do not want to have any more children, but who do not use any birth control mechanisms. Family planning programs in the past, however, have confronted high attrition problems. This has occurred in part because of poor geographical access to family planning services, the quality of services provided, and the cost of services available. Through this project, many of these problems should be overcome. Educational campaigns about responsible parenthood and promotional campaigns about contraceptive usage, carried out through complementary AID activities in Honduras, are likely to have an impact among couples breaking away from traditional attitudes about parenthood. These are associated with machismo among males and the need to bear children to get recognition and respect among women.

(f) The success of the Acute Respiratory Diseases component will depend more on the institutionalization of norms to treat them, including adequate referral by health guardians, rather than from specific socio-cultural variables.

6. The Presence of Foreign Technical Advisors within the MOH.  
In light of the absence of scientific and technical research in Honduras in practically all fields, for many MOH officials foreign technical assistance allows the GOH to keep up with scientific progress elsewhere. To fulfill this expected role, however, foreign technicians should be not only highly trained, but also have substantial field experience. The latter allows the technician to have an adequate background in problem analysis and in proposing solutions to be implemented in environments with many financial and institutional constraints. Because foreign technical assistance is conceived as part of a technology transfer process, foreign technicians also are expected to be didactic as well as supportive and cognizant of any local initiative to solve problems. Because they are foreigners, however, there is an expressed preference for them playing essentially the role of catalysts that step aside when appropriate, of being subordinate to government officials and/or of being respectful of the existing hierarchical structure within the MOH. There is a high degree of sensitivity within the MOH about foreign technicians abusing their positions by adopting an imperious attitude toward local personnel which at all times needs to be avoided. Technical assistance provided through this Project has tended to meet expectations. What seems to be a source of resentment, however, is AID restrictions with respect to the use of Project funds. For many, AID financing is conceived as having too many strings attached, particularly for the purchase of certain commodities and services. This perception partially explains the recent criticisms made in the press about the way grant funds under this Project are being utilized. The use of

these monies to pay for expensive technical assistance contracts awarded to a North American firm has been questioned. It has been claimed that Honduras should have more to say with respect to the use of funds which are defined as "donations", and that local firms should have a privileged position in future bidding processes where similar contracts are awarded. Supporters of this position are essentially local firms interested in winning the technical assistance contract to be awarded in the near future. Because this issue is likely to be discussed again when the bidding process actually begins, adequate information to the public regarding AID's contracting procedures may be necessary.

V. Financial Analysis and Plan

This Project represents a \$26,706,000 assistance program to expand the coverage and increase the efficiency of providing outpatient health care within resources and financial limitations. The total program cost, over the planned 7.5 years implementation period is \$39,888,000, which includes a GOH contribution of \$13,782,000.

The first tranche of this project was estimated at a total cost of \$32,952,000 over a 4 year planned implementation period, which included a \$17,061,000 GOH contribution and an A.I.D. portion of \$15,391,000. Table No. 3 shows the status of expenditures and the projected expenditures through 1987.

Subsequent amendments increased the total authorized A.I.D. contribution to \$17,916,000, including a grant portion of \$6,951,000 and a loan portion of \$10,965,000.

The proposed amended project represents a total cost of \$8,790,000. The GOH assistance required for the remainder of the Project will be \$4,948,000. The A.I.D. portion of this additional assistance consists of \$4,103,000 in grant funds to finance technical assistance, scholarships and short-term training, and \$4,687,000 in loan funds. Table I below summarizes Project authorizations, obligations, and funds requested in this amendment.

TABLE I  
A.I.D. FINANCING  
HEALTH SECTOR I PROJECT

| <u>A. Health Grant</u>                      | <u>Pop Grant</u> | <u>Total</u>      |
|---|------------------|-------------------|
| Authorized to date 4,646,500                | 2,304,500        | 6,951,000         |
| Obligated to date 4,646,500                 | 767,500          | 5,414,000         |
| <br>  |                  |                   |
| <u>B. Loan</u>                              |                  |                   |
| Authorized to date                          |                  | 10,965,000        |
| Obligated to date                           |                  | 10,965,000        |
| <br>  |                  |                   |
| <u>C. Total Authorized</u>                  |                  | 17,916,000        |
| Total Obligated                             |                  | 16,379,000        |
| <br>  |                  |                   |
| <u>D. Total Requested in this Amendment</u> |                  |                   |
| Grant                                       |                  | 4,103,000         |
| Loan  |                  | 4,687,000         |
|   |                  | <u>8,790,000</u>  |
| <br>  |                  |                   |
| <u>E. Total Amended Project</u>             |                  |                   |
| Loan  |                  | 15,652,000        |
| Grant                                       |                  | <u>11,054,000</u> |
|   |                  | 26,706,000*       |

\* Includes \$600,000 Pop central funds.

While the amount of these funds may appear to present disbursement problems, USAID is sanguine about the Project's ability to use them in a timely manner. The original health funds of \$3,058,000 were totally committed by July of 1984 and indeed an additional \$1,588,000 were requested to carry the Project through December of 1985. For that matter, should the Project continue to disburse currently authorized funds, at the rate of this past year, financial resources will be exhausted by June 1985.

In this PP amendment, an additional \$3,927,500 of health grant funds is requested. Over the last six quarters an average of \$300,000 per quarter has been expended. If that rate is maintained, we would expend \$2,400,000 by December 1987. However, this amendment increases the amount of TA and several special studies and purchases are anticipated which make expenditures of these funds virtually certain.

Admittedly, the movement of the originally obligated \$1,367,000 of population funds has been more difficult. In the first place, \$600,000 was reserved for AID/W purchase of population commodities and was way beyond our actual needs. (Honduras at the time was discovered to have a five year backlog of supplies.) The \$767,000 reserved for use at the Mission level did not move because the GOH had no population program. During 1984, however, the GOH has come to grips with its population related problems and has, albeit slowly, implemented a large scale family planning program. We think this program will enable us to expend the current authorized amount of \$1,704,500 and the additional \$175,000 requested. The \$600,000 AID/W reserved funds for population commodities remain at AID/W's disposition.

Loan funds have also been problematic. In the four and one half years of implementation experience some \$5,751,000 of the originally obligated \$10,965,000 remains unexpended. Two large budget categories account for 50% of these funds-- supervision and construction. Both activities have been difficult to get started and the supervision activity was over budgeted. Nevertheless, warehouse construction is now scheduled to start in January and some supervision funds have been expended and the excess reprogrammed.

USAID/H has prepared a schedule of projected liquidation of current loan funds which is included as Attachment L. This schedule shows all current loan funds being expended by the close of the second quarter of FY 86 (March 30, 1986). That would leave us with some \$4,687,000 to expend in the remaining seven quarters. For the last six quarters we have averaged \$648,000 per quarter in loan fund expenditures and simply maintaining that rate would allow for complete expenditure of the funds (7 quarters x \$695,000/quarter = \$5,536,000) by the projected PACD.

Disbursement of Project funds for authorized loan financed expenses and most grant financed commodities is effected to the Ministry of Finance and Public Credit by the A.I.D. Office of the Controller on a reimbursement basis. It is anticipated that limited U.S. Government funds will continue to be authorized for disbursement as an advance of funds, particularly for construction

activities. All grant funded technical assistance will continue to be contracted directly by A.I.D.; therefore, disbursement procedures will follow normal A.I.D. financial management practices for contracts which in the case of this Project involve direct dollar payments to U.S. contractors on a monthly basis, subject to submission and USAID approval of vouchers.

A total of \$600,000 has been budgetted for the procurement of family planning commodities. The majority of these funds will be reallocated to S&T/POP for the global procurement of commodities; a portion of allotted funds for this purpose may be retained by the Mission for the procurement of commodities not covered by the S&T commodity purchase contracts.

For disbursal of local currency costs, USAID and the GOH have set up a 1500,000 rotating fund with ESF generations in the Ministry of Health. Funds from this account are periodically disbursed to finance project costs. The fund is then replenished by USAID loan funds as needed, based upon liquidation documents sent by the Project Coordination Unit through the Ministry of Finance.

USAID loan funds are also disbursed through the Ministry of Finance as advances based upon the submission by them of quarterly budgets of estimated cash needs for the project.

Finally, USAID also disburses loan funds directly to suppliers for offshore procurements of commodities and supplies.

TABLE No. 2  
HEALTH SECTOR I PROJECT  
EXPENDITURES TO DATE

| SUB-COMPONENTS                | TOTAL<br>GRANT | TOTAL<br>LOAN | OVERALL<br>TOTAL |
|-------------------------------|----------------|---------------|------------------|
| Malaria                       | 118            | 802           | 920              |
| Rabies                        |                | 17            | 17               |
| Immunizations                 |                | 77            | 77               |
| Diarrhea Control              |                | 345           | 345              |
| Tuberculosis                  | 8              | 49            | 57               |
| Sexually Transmitted Diseases | 1              | 7             | 8                |
| Maternal Child Health         | 516            | 1             | 517              |
| Epidemiology                  | 7              | 1             | 8                |
| Logistic and Supplies         | 400            | 1,653         | 2,053            |
| Maintenance                   | 573            | 389           | 962              |
| Management & Training         | 1,986          | 1,030         | 3,016            |
| Mass Media                    | 133            | 372           | 505              |
| Teacher Training              | 27             | 28            | 55               |
| Supervision                   | 165            | 554           | 719              |
| Human Resources               | 344            | 653           | 997              |
| TOTAL                         | 4,278          | 5,978         | 10,256           |

TABLE No. 3  
HEALTH SECTOR I PROJECT  
PLANNED EXPENDITURES

| SUB-COMPONENTS                | Expended<br>To Date | L O A N F U N D S |       |       | Total<br>a, b, c | Total<br>Project |
|-------------------------------|---------------------|-------------------|-------|-------|------------------|------------------|
|                               |                     | 1985              | 1986  | 1986  |                  |                  |
|                               |                     | a                 | b     | c     |                  |                  |
| Malaria                       | 802                 | 1,638             | 528   | 280   | 2,446            | 3,248            |
| Rabies                        | 17                  |                   |       |       | 0                | 17               |
| Immunizations                 | 77                  |                   |       |       | 0                | 77               |
| Diarrhea                      | 345                 | 121               | 123   | 52    | 296              | 641              |
| Tuberculosis                  | 49                  |                   |       |       | 0                | 49               |
| Sexually Transmitted Diseases | 7                   |                   |       |       | 0                | 7                |
| Maternal Child Health         | 1                   |                   |       |       | 0                | 1                |
| Epidemiology                  | 1                   |                   |       |       | 0                | 1                |
| Logistics                     | 1,653               | 2,401             | 576   | 44    | 3,021            | 4,674            |
| Maintenance                   | 389                 | 353               | 172   | 72    | 597              | 986              |
| Management & Planning         | 1,030               | 261               | 152   | 120   | 533              | 1,563            |
| Mass Media                    | 372                 | 208               | 170   | 175   | 553              | 925              |
| Teacher Training              | 28                  |                   |       |       | 0                | 28               |
| Supervision                   | 554                 | 14                |       |       | 14               | 568              |
| Human Resources               | 653                 | 573               | 515   | 265   | 1,353            | 2,006            |
| Nutrition                     |                     | 191               | 1     | 1     | 193              | 193              |
| Science & Technology          |                     | 63                | 54    | 15    | 132              | 132              |
| SUB-TOTAL (LOAN)              | 5,978               | 5,823             | 2,291 | 1,024 | 9,138            | 15,116           |
| Contingency & Inflation       |                     |                   | 275   | 261   | 536              | 536              |
| TOTAL (LOAN)                  | 5,978               | 5,823             | 2,566 | 1,285 | 9,674            | 15,652           |

| SUB-COMPONENTS                | Expended<br>To Date | G R A N T F U N D S |       |       | Total<br>a, b, c | Total<br>Project |
|-------------------------------|---------------------|---------------------|-------|-------|------------------|------------------|
|                               |                     | 1985                | 1986  | 1987  |                  |                  |
|                               |                     | a                   | b     | c     |                  |                  |
| Malaria                       | 118                 | 628                 | 140   | 50    | 818              | 936              |
| Rabies                        |                     |                     |       |       | 0                | 0                |
| Immunizations                 |                     |                     |       |       | 0                | 0                |
| Diarrhea                      |                     |                     |       |       | 0                | 0                |
| Tuberculosis                  | 8                   |                     |       |       | 0                | 8                |
| Sexually Transmitted Diseases | 1                   |                     |       |       | 0                | 1                |
| Maternal Child Health         | 516                 | 537                 | 494   | 333   | 1,364            | 1,880            |
| Epidemiology                  | 7                   |                     |       |       | 0                | 7                |
| Logistics                     | 400                 | 220                 | 120   | 60    | 400              | 800              |
| Maintenance                   | 573                 | 120                 | 60    |       | 180              | 753              |
| Management & Planning         | 1,986               | 922                 | 925   | 405   | 2,252            | 4,238            |
| Mass Media                    | 133                 | 90                  | 90    | 45    | 225              | 358              |
| Teacher Training              | 27                  |                     |       |       | 0                | 27               |
| Supervision                   | 165                 |                     |       |       | 0                | 165              |
| Human Resources               | 344                 | 120                 | 120   | 100   | 340              | 684              |
| Nutrition                     |                     | 50                  | 50    | 0     | 100              | 100              |
| Science & Technology          |                     |                     |       |       | 0                | 0                |
| SUB-TOTAL                     | 4,278               | 2,687               | 1,999 | 993   | 5,679            | 9,957            |
| Contingency & Inflation       |                     |                     | 245   | 252   | 497              | 497              |
| TOTAL (GRANT)                 | 4,278               | 2,687               | 2,244 | 1,245 | 6,176            | 10,454*          |

\*Excludes \$600,000 POP central funds.

| SUB-COMPONENTS                | Expended<br>To Date | 1985  | 1986  | 1987 | Total (a) +<br>(b) + (c) | Total<br>Project |
|-------------------------------|---------------------|-------|-------|------|--------------------------|------------------|
| G O H C O U N T E R P A R T   |                     |       |       |      |                          |                  |
|                               |                     | a     | b     | c    |                          |                  |
| Malaria                       | 294                 | 221   | 140   | 70   | 431                      | 725              |
| Rabies                        | 41                  |       |       |      | 0                        | 41               |
| Immunizations                 | 58                  | 7     | 7     | 4    | 18                       | 76               |
| Diarrhea                      | 76                  | 48    | 48    | 24   | 120                      | 196              |
| Tuberculosis                  | 63                  | 70    | 16    | 11   | 97                       | 239              |
| Sexually Transmitted Diseases | 33                  |       |       |      | 0                        | 33               |
| Maternal Child Health         | 66                  | 16    | 20    | 22   | 58                       | 124              |
| Epidemiology                  | 132                 |       |       |      | 0                        | 132              |
| Logistics                     | 964                 | 60    | 60    | 30   | 150                      | 1,114            |
| Maintenance                   | 1,121               | 547   | 547   | 86   | 1,180                    | 2,301            |
| Management & Planning         | 4,755               | 156   | 154   | 74   | 384                      | 5,139            |
| Mass Media                    | 105                 | 37    | 37    | 17   | 91                       | 196              |
| Teacher Training              | 24                  |       |       |      | 0                        | 24               |
| Supervision                   | 377                 | 716   | 714   | 357  | 1,787                    | 2,164            |
| Human Resources               | 725                 | 18    | 18    | 9    | 45                       | 770              |
| Nutrition                     |                     | 4     | 4     | 2    | 10                       | 10               |
| Science & Technology          |                     | 65    | 65    | 33   | 163                      | 163              |
| SUB-TOTAL                     | 8,834               | 1,965 | 1,830 | 739  | 4,534                    | 13,368           |
| Contingency & Inflation       |                     | 12    | 225   | 177  | 414                      | 414              |
| TOTAL (GOH)                   | 8,834               | 1,977 | 2,055 | 916  | 4,948                    | 13,782           |

TABLE No. 4  
HEALTH SECTOR I PROJECT

| SUB-COMPONENTS                   | LOAN<br>TOTAL | GRANT<br>TOTAL | A. I. D.<br>TOTAL | GOH<br>TOTAL | GRAND<br>TOTAL |
|----------------------------------|---------------|----------------|-------------------|--------------|----------------|
| Malaria                          | 3,248         | 936            | 4,184             | 725          | 5,845          |
| Rabies                           | 17            | 0              | 17                | 41           | 58             |
| Immunizations                    | 77            | 0              | 77                | 76           | 153            |
| Diarrhea Control                 | 641           | 0              | 641               | 196          | 837            |
| Tuberculosis                     | 49            | 8              | 57                | 160          | 225            |
| Sexually Transmitted<br>Diseases | 7             | 1              | 8                 | 33           | 42             |
| Maternal Child Health            | 1             | 1,880*         | 1,881             | 124          | 3,885          |
| Epidemiology                     | 1             | 7              | 8                 | 132          | 147            |
| Logistic & Supplies              | 4,674         | 800            | 5,474             | 1,114        | 6,588          |
| Maintenance                      | 986           | 753            | 1,739             | 2,301        | 4,040          |
| Management & Planning            | 1,563         | 4,238          | 5,801             | 5,139        | 10,940         |
| Mass Media                       | 925           | 358            | 1283              | 196          | 1,479          |
| Teacher Training                 | 568           | 165            | 733               | 2,164        | 2,897          |
| Supervision                      | 2,006         | 684            | 2,690             | 770          | 3,460          |
| Human Resources                  | 193           | 100            | 293               | 10           | 303            |
| Science & Technology             | 132           | 0              | 132               | 163          | 295            |
| SUB-TOTAL                        | 15,116        | 9,957          | 25,073            | 13,368       | 38,441         |
| Contingency & Inflation          | 536           | 497            | 1,033             | 414          | 1,447          |
| TOTAL                            | 15,652        | 10,454*        | 26,106            | 13,782       | 39,888         |

\* Does not include \$600,000 for commodities.

## VI. Implementation Arrangements

### A. Host Country Arrangements

The Project Agreement Amendment will be signed by the Minister of Finance and Public Credit and the Minister of Health. The Ministry of Health will ~~continue~~ to be the institution responsible for Project implementation, through the established Project Coordination Unit. Counterpart allocations will continue to be made through the national budgetary process. CY 1984 counterpart, totalling \$947,000 is included in the approved budget. Day to day ~~Project~~ implementation authority will rest with the Project Coordination Unit.

One of the most troublesome aspects of Project implementation to date has been the search for an agile GOH disbursement mechanism to effect payments of training costs (materials, equipment, rental of space, etc.) and local participant costs associated with the training (per diem). The original Project design assumed these would be paid with GOH funds and reimbursed under normal A.I.D. disbursement procedures. Given the GOH fiscal crisis and the severe controls placed on the process by which disbursement of GOH funds takes place, the procedure originally contemplated has proven unworkable. After over a year working with partial measures, none of which solved the problem, AID and the MOF approved the establishment of a rotating fund utilizing ESF generations. This \$250,000 fund has been used to make the necessary advances to the Project in order to effect training activities and disburse per diem and housing costs of participants on site. Further refinements in the implementation procedures of the rotating fund are currently being examined in order to provide more flexibility during the end-of-year GOH auditing period, but the establishment of a sufficiently capitalized rotating fund has gone a long way toward facilitating Project disbursements for this critical activity. Under the extended Project, the rotating fund will be preserved as a mechanism to effect GOH disbursements.

Other than the establishment of this rotating fund, GOH implementation arrangements for the Project will remain essentially the same as those originally designed as they have evolved over the past three years.

### B. A.I.D. Arrangements

Project management responsibility will rest with the Office of Human Resources Development's Division of Health, Population, and Nutrition, which will be assisted by the Office of Development Finance and the Office of the Controller.

The Project as originally designed contemplated that the Mission's Health Officer, with the assistance of a full-time Project Liaison Officer, could adequately manage A.I.D. Project implementation activities. Experience has shown that the level of A.I.D. input required for the successful management and monitoring of the Project was seriously underestimated. This is primarily

due to two changes of events that could not have been taken into consideration in 1980. At that time, it was envisioned that all procurement would be accomplished by the Government of Honduras. For a variety of reasons, discussed at length in a series of PD-68 waivers located in the official Project files, that has proven to be impossible. Today, nearly all Project commodities and technicians are contracted by A.I.D. This has necessitated the addition of one full-time PSC to prepare PIOs, manage Project budgets and monitor expenditures. A second full-time, management and program specialist PSC will be added shortly to assist with those aspects of project implementation and to effect serious field monitoring of Project activities to which no one has been able to devote ample time.

In 1982, the Government of Honduras' public health system began to turn around the non-existent population policy of the previous years. The new Minister of Health and his assistants have chosen to articulate a family planning "position", if not a comprehensive population policy. As stated in the text, the MOH position now is that family planning should be promoted inasmuch as spacing children is in the best interest of maintaining the health of mothers and producing healthy babies. As this about-face was effected, the MOH turned to A.I.D. for assistance in implementing a newly revised family planning program. The population component of Health Sector I has been totally redesigned into a more action-oriented, visible program than that previously designed. The implementation of this component will now require additional assistance than that previously planned, and it is just now getting off the ground. Therefore, special assistance will be required to work directly on this component. A PSC will be contracted to serve as project assistant for population matters who will assist in the start up of this important component; provide direct technical assistance to the Maternal and Child Health Division of the MOH; serve as liaison officer between A.I.D., the Project Coordination Unit, the Division of Maternal and Child Health, and U.S. and local PVO's active in family planning programs in Honduras; monitor project activities in the field; and monitor the financial progress of the component.

The former Project Liaison Officer converted to direct hire status in September 1983. He is now the AID Project Manager, and his role will continue to be overall Project coordination. He will work directly with the Project Coordination Unit on matters of budgetary approvals, implementation planning and problem solving. He will be the A.I.D. monitor of the technical assistance team. He will work directly with the Director General of Health on matters of program policy. The Mission Health Officer will be responsible for the overall management of this Health Sector I team.

In sum, one AID US direct hire, and three professional PSC's (with clerical assistance) will be required to manage the Mission's major long-term institution building effort in the health sector. Guidance to the team will be provided by the Mission's Health Officer, a US direct hire employee, and the Director of the Office of Human Resources Development, also a U.S. direct hire employee.

1. Procurement Procedures. Given the wide variety and large quantity of procurements financed by the Project, a variety of procurement procedures have been, and will continue to be utilized.

All internationally procured equipment and technical assistance will be procured through A.I.D. mechanisms. This has included Mission direct contracting and AID/W contracting.

Local technical assistance and PSC's will be contracted directly by the Mission. The personnel of the Project Coordination Unit, and selected other loan financed MOH personnel will be contracted through Host Country Contracting mechanisms. A small amount of locally available, loan financed materials (office materials, small equipment purchases, etc.) also will be procured through Host Country Contracting procedures.

A detailed Project procurement plan indicating type of procurement, approximate value, and procurement mechanism forms part of this Project Paper Amendment, in Section VI.D., below.

2. Project Monitoring. Project monitoring will be the responsibility of the A.I.D. Project management team. Field monitoring will receive greater priority as the additional staff indicated above are hired and trained. Specifically, the population assistant will travel extensively to verify implementation of the Maternal/Child Health component in rural areas and MOH outposts. The Program and Management Specialist will be responsible for monitoring the progress of all other components. The A.I.D. Project Officer will be responsible for certifying the careful monitoring of the Project and will do direct on-site verification of implementation actions as required.

### C. Implementation Plan.

The Project will use the implementation planning process developed in response to the recommendations of the Westinghouse evaluation. Annex G presents the overall implementation plan for the three year extended Project life.

During the months of December and January, annually, detailed implementation plans for the coming year will be developed. Such plans are in use for 1984. These will allow Project implementors to make adjustments for any deviations from the plans of the previous year, will give a reasonable timeframe in which detailed activities can be calendarized, and will serve as the basis for monitoring implementation. Quarterly reviews between A.I.D. and MOH Project coordinators and the responsible MOH implementors will be held to evaluate implementation progress. More frequent meetings will be held if major implementation problems occur. To facilitate this process both the Project Coordination Unit and A.I.D. are adding one professional whose primary responsibility will be to monitor implementation.

Sub-components which continue to move slowly despite this close monitoring will be the subject of the special evaluations described under the evaluation section.

D. Evaluation Plan.

For the extended life of the Project regularly scheduled implementation evaluations and one major impact evaluation will be conducted.

Project implementation experience to date has demonstrated the necessity of conducting serious, objective Project implementation evaluations on a regular basis. For the increased life of the Project, the Mission proposes to undertake a series of Project implementation evaluations. Twice yearly the A.I.D. Management team and the Project Coordination Unit will identify problem Project activities; i.e., those activities which have demonstrated slow disbursement and/or slow implementation progress. These activities will be prioritized, and one or two will be examined in depth by outside consultants who will make detailed recommendations as to improving the performance of the activities. At the end of the subsequent six-month period, the same outside consultants will return to examine progress on the previous activities examined, as well as to investigate new problem activities. Six of these evaluations will take place during the extended life of the Project; an estimated total of twelve person months of services will be required. For reasons of total objectivity, the Mission will require that the institution awarded the contract for these evaluations be other than the company awarded the major technical assistance contract.

Six months prior to the PACD, a major Project impact evaluation will take place. Utilizing the Health Sector Assessment of 1980, including the detailed analyses that form the basis for the Assessment, and the 1980 Project Paper as indicators of the pre-intervention status of primary health care coverage in Honduras, the impact evaluation will measure in descriptive and quantifiable fashion the effect the Project has had on the following:

1. Expansion of the geographic coverage of the primary health care system;
2. Increase in the number of VHW's and their locations;
3. Improvements in the quality of care provided at the CESAMO, CESAR, and VHW level as determined by:
  - a. perceptions of MOH central and regional level personnel, and perceptions of intended Project beneficiaries;
  - b. measurable decreases in the incidence of diseases and death related to diseases covered by priority programs (malaria, immuno-preventable diseases, diarrhea, tuberculosis, and malnutrition); and,
  - c. reduction in the number of high risk pregnancies.
4. Increases in the cost-efficiency of primary health care delivery; and

5. Increases in number of patients seen per service unit (CESAMOs, CESARs, and VHWS).

VII. Conditions, Covenants and Negotiating Status.

The development of this Project has been a collaborative process between A.I.D. and the Government of Honduras since its inception. Representatives of the Ministry of Health have worked closely with the Mission during all phases of the Project. The Ministry of Health in agreement with the design and substantive terms and conditions of the Project, and the Minister of Finance and Public Credit has formally requested A.I.D.'s assistance in carrying out the Project. (See the Letter of Application, Attachment B.)

A. 1. Conditions Precedent.

Prior to any disbursement or the issuance of any commitment document under the Project Agreement (except for technical assistance) to finance activities under this Project, the cooperating country should furnish in form and substance satisfactory to A.I.D. documentation indicating that a country-wide hospital cost recovery scheme is being implemented.

2. Covenants.

The cooperating country covenants are as follows: MOH agrees to provide hospital cost containment measures and to provide necessary recurrent cost support to health care activities.