UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D. C. 20523

EL SALVADOR

PROJECT PAPER

HEALTH SYSTEMS SUPPORT PROJECT

AID/LAC/P-338

Project Number:519-0308

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: A (A = Add, C = Change, D = Delete) — Amendment Number: _____ — DOCUMENT CODE: 3

2. COUNTRY/ENTITY: El Salvador

3. PROJECT NUMBER: 519-0308

4. BUREAU/OFFICE: LAC / 05

5. PROJECT TITLE (maximum 40 characters): Health Systems Support Project

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 09 DD 30 YY 91

7. ESTIMATED DATE OF OBLIGATION (Under "B." below, enter 1, 2, 3, or 4): A. Initial FY 86 B. Quarter 4 C. Final FY 89

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

A. FUNDING SOURCE	FIRST FY B. FX	FIRST FY C. L/C	FIRST FY D. Total	LIFE OF PROJECT E. FX	LIFE OF PROJECT F. L/C	LIFE OF PROJECT G. Total
AID Appropriated Total			14,900	45,280	2,720	48,000
(Grant)	( )	( )	(14,900)	(45,280)	(2,720)	(48,000)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1.						
Other U.S. 2.						
Host Country			4,911		31,586	31,586
Other Donor(s)						
TOTALS			19,811	45,280	34,306	79,586

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	C. PRIMARY TECH. CODE 2. Loan	D. OBLIGATIONS TO DATE 1. Grant	D. OBLIGATIONS TO DATE 2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	E. AMOUNT APPROVED THIS ACTION 2. Loan	F. LIFE OF PROJECT 1. Grant	F. LIFE OF PROJECT 2. Loan
(1) HE						48,000		48,000	
(2)									
(3)									
(4)									
TOTALS								48,000	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)

11. SECONDARY PURPOSE CODE

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

A. Code							
B. Amount							

13. PROJECT PURPOSE (maximum 480 characters)

To support and strengthen the capability of the Ministry of Public Health to deliver and support basic health care services, including preventive and primary care services important to the MOH child survival program.

14. SCHEDULED EVALUATIONS: Interim MM 04 YY 88 / MM 08 YY 89 — Final MM 10 YY 90

15. SOURCE/ORIGIN OF GOODS AND SERVICES: CBI-designated CACM — [X] 000 [ ] 941 [ ] Local [X] Other (Specify) XXX

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

Payment Verification Procedures Approved:
Julie Davison
CONT/ J. Davison

17. APPROVED BY

Signature: B. Schaab for

Title: Robin Gomez
Director, USAID/El Salvador

Date Signed: MM 08 DD 04 YY 86

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM / DD / YY

AID 1330-4 (8-79)

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

PROJECT AUTHORIZATION

Name of the Country:	El Salvador
	The Government of El Salvador (GOES)
Name of Project:	Health Systems Support Project
Number of Project:	519-0308

1. Pursuant to Section 104 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Health Systems Support Project for El Salvador (the "Grantee"), involving planned obligations not to exceed Forty Eight Million United States Dollars (US$48,000,000) in grant funds ("Grant") over a five year period from the date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the Project. The planned life of the Project is 61 months from the date of initial obligation.

2. The Project consists of technical and financial assistance to support and strengthen the Ministry of Public Health (MOH) to deliver and support basic health care services, including preventive and primary care services important to the MOH child survival program.

3. The Project Agreements, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority, shall be subject to the following essential terms and covenants and major conditions, together with such terms and conditions as A.I.D. may deem appropriate.

a. Source and Origin of Commodities and Nationality of Services

Commodities financed by A.I.D. under the Project shall have their source and origin in the United States or in member countries of the Central American Common Market, except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have the United States or the member countries of the Central American Common Market as their place of nationality, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the Project, except as A.I.D. may otherwise agree in writing, shall be financed only on flag vessels of the United States.

b. Conditions Precedent to Disbursement

(1) Prior to the disbursement of A.I.D. funds, or to the issuance of any documentation pursuant to which disbursement will be made, the Government of El Salvador (GOES) shall, except as A.I.D. may otherwise agree in writing, establish a staff position reporting to the Vice-Minister and a Project Steering Committee, including but not limited to the heads of the Planning Directorate, the Drug and Supply Unit, the Director General, the Administration Directorate, and the Technical/Operative Directorate, for Project coordination.

(2) (a) Prior to the disbursement of A.I.D. funds, or to the issuance of any documentation pursuant to which disbursement will be made, for activities under the Improving Basic Health Services and the Strengthening Policy and Program Planning and Management Components, other than for the technical assistance contract personnel, the GOES shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., a detailed, time-phased Action Plan for Project activities to be carried out for the first year of the Project.

(b) Prior to the disbursement of A.I.D. funds, or to the issuance of any documentation pursuant to which disbursement will be made, for activities under the Improving Basic Health Services and the Strengthening Policy and Program Planning and Management Components, other than for technical assistance, for each subsequent year of the Project, the GOES shall furnish to A.I.D., in form and substance satsifactory to A.I.D., a detailed time-phased Action Plan for Project activities to be carried out during that subsequent year.

(3) Prior to the disbursement of A.I.D. funds, or to the issuance of any documentation pursuant to which disbursement will be made, for training activities under the Project, the GOES shall, except as A.I.D. may otherwise agree in writing, submit a detailed training plan which identifies GOES training needs and training resources available through Ministry and other donor projects.

c. Covenants

The Government of El Salvador shall covenant that, except as A.I.D. may otherwise agree in writing, it will:

(1) Obtain A.I.D.'s concurrence on the individual to be contracted or assigned as the staff assistant to the Vice-Minister, and to all contract extensions.

(2) Beginning in the GOES FY 1987, make every reasonable effort to effect the timely procurement of, and to fully disburse its annual appropriated budget for, pharmaceuticals and medical supplies.

(3) Beginning in the GOES FY 1987, initiate applied health research studies on health care financing and use such studies in the development of the detailed annual action plans for this Project.

(4) Jointly review with AID, annually, the findings of studies undertaken relevant to health care financing issues, and furnish a time-phased Action Plan to implement recommendations of the studies with the objective of increasing the efficiency and self-sufficiency of the public health sector.

(5) Make available adequately-trained personnel for anti-malarial activities, equipment and facilities maintenance, and health services, to carry out the planned activities of this Project.

d. Waivers

(1) The requirement for U.S. or Central American Common Market country nationality of suppliers of services is hereby waived in order to permit participant training in Mexico and Venezuela in an amount not to exceed $100,000.

Dwight Ink
Assistant Administrator
Bureau for Latin America
and the Caribbean

Aug 27, 1986
Date

Clearances:

LAC/DR	:PFeeney (draft)	date	25 AUG 86
LAC/DR	:ILevy	date	
LAC/CAP	:RNelson	date	
LAC/DP	:EHunt (draft)	date	22 AUG 86
LAC/DR	:JHester (draft)	date	22 AUG 86
GC/LAC	:MReidy	date	8/26/86
PPC/PDPR	:KBlakeslee (draft)	date	25 AUG 86
SER/AAM/OPS	: MMcDaniel (draft)	date	25 AUG 86
DAA/LAC	:MButler	date	
LAC/DR	:TBrown: TB	date	26 Aug 86

LAC/DR:LKlassen/PKBuckles:22AUG86/DOC.20140:ext. 75263

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BULK ANNEXES

I. PROJECT SUMMARY AND RECOMMENDATIONS

A. Recommendation

USAID/El Salvador recommends the authorization of a $48 million grant to support and strengthen the Ministry of Public Health (MOH) to deliver and support basic health care services, including preventive and primary care services important to the MOH child survival program.

B. Summary

El Salvador's public health care system faces many problems, which in part result from and are exacerbated by the continued erosion of its financial base and the conflictive situation. However, the war and the economy are not the only causes of stagnating health conditions in the country. Fundamental institutional problems predated both and continue to impede effective service delivery. Between 35% and 55% of the Salvadoran population of approximately 5 million lack convenient access to basic services, of either a public or private nature, and infant mortality rates remain high, with unofficial estimates at 70-80 per 1,000 live births. Also, the MOH continues to rely heavily on external donors to provide an adequate supply of drugs and medical supplies.

The purpose of this Project is to both support and strengthen the MOH to deliver and support basic health care services, specifically including those which extend the access of the Salvadoran population to preventive and basic health care services, such as immunization, oral rehydration therapy, and selected nutrition interventions.

The Project will provide targetted commodity assistance to the GOES to partially meet the gap between public health sector needs and the supply which can be provided through the regular GOES budget in order to maintain basic services at all MOH facilities. Simultaneously, the Project will assist the MOH to resolve key impediments to the provision and extension of basic health services to under-served and un-served areas and to develop effective and affordable community-based health service delivery mechanisms. Finally, the Project will assist the MOH to make institutional improvements which will make possible a more rational, cost-effective use of resources (facilities, manpower, and supplies) and to begin to develop long-term strategies for the health sector's self-sufficiency.

The Project has three components:

1. Logistical Support: Acquisition, Distribution and Management of Drugs, Medical Supplies, Equipment, and Facilities

Logistical support systems are a vital link in the health services delivery chain; weaknesses in these systems have contributed to drug and supply shortages and interruptions in service delivery. Accordingly, this Project will assist the MOH to improve these support systems, including drug and medical supply, equipment and facilities maintenance, and fleet management, thereby protecting the large capital investment these goods represent. Commodity support will also be provided under this component to help the MOH partially meet requirements for drugs and medical supplies, to upgrade the MOH vehicle fleet, and to better equip existing laboratory facilities. During the Project, $26.0 million in pharmaceuticals, $2.7 million in medical supplies, $2.3 million in insecticides, and $5.3 million in medical equipment, vehicles and spare parts will be purchased (75% of the total AID contribution).

2. Improving Basic Health Services Delivery

Improvements in the functioning of primary care facilities (i.e., health units and posts) and expansion of effective and affordable outreach programs are necessary for increasing service coverage. Support to improve the training and increase the range of services offered by lower level health care providers will be provided under the Project. Technical assistance and commodity support to the malaria control program will help to improve its capacity to plan and execute a full range of anti-malaria activities. The Project will also support the MOH health education department in preparation of materials and audio-visual messages to promote the use of oral rehydration salts, immunizations, and other child survival interventions. In addition, the Project will assist the MOH to improve the effectiveness of its ongoing outreach programs, including the malaria control program and child survival activities, and assess the viability and cost-effectiveness of programs and strategies for extending coverage such as through the new MOH Program for Rural Health (PROSAR).

3. Strengthening Policy and Program Planning and Management

Long-term strategies for the self-sufficiency of the health sector must begin to be implemented, if the MOH is to be prepared for the inevitable decline in donor contributions. Implementing these strategies necessarily requires realistic assessments of operational problems and their resolution by an informed MOH leadership. The Project will support the establishment of an automated management information system (MIS), initiated under the ongoing Health Systems Vitalization Project, which will provide managers and decision-makers with information to enable them to evaluate the

functioning of the health system and to identify and implement strategies for improving its effectiveness and efficiency. MOH personnel will be trained in the management, analysis, and use of data provided by the MIS, as well as in designing and conducting simple applied health research studies to obtain additional information required to support rational decision making and improve resource allocation.

USAID/El Salvador will negotiate a Project Agreement with the GOES, for a total LOP cost for the Project of $79.6 million. A.I.D. will provide $48 million or 60% of total Project costs in grant funds, and the GOES will provide the balance of $31.6 million in local currency in the form of cash and in-kind contributions. The life of the Project is five years, and the PACD is September 30, 1991.

II. PROJECT BACKGROUND AND RATIONALE

A. Historical Background

1. Health Conditions

As in many developing countries, morbidity and mortality data are of questionable validity and in El Salvador, this paucity of useful health data has been exacerbated as a result of the conflict. However, the data available indicate that despite the conflict, El Salvador has been able to maintain the comparatively good health conditions in the country and make modest gains since 1979 in areas such as in reducing infectious diseases. For example, the rate per 100,000 of reported cases of measles declined from 223 in 1979 to 120 in 1984;[1] and reported cases of polio declined from 52 cases in 1981 to 19 in 1984, with no reported cases during the first six months of 1986.[2] Vaccinations for measles declined between 1979 and 1983, from 180,223 to 155,682, but increased significantly during 1985 to 228,503 as a result of the MOH's immunization campaign.[3] Consistent efforts on the part of the MOH to improve and reorient its innovative malaria control program have also shown results. With a network of more than 2,000 voluntary collaborators serving as the basis for case detection and treatment with anti-malarial drugs, the rate of P. falciparum malaria dropped sharply in 1985 to 922 cases per 100,000 population, as compared to 1,626 cases per 100,000 in 1979 (See Annex E and Bulk Annex C). In addition, in the January-June 1986 period, malaria cases dropped by over 40%.

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[1] Salud Publica en Cifras, 1985
[2] PAHO, 1985
[3] Memoria, 1985

However, simple diarrheas, typhoid and para-typhoid continue to be major health problems in El Salvador, reflecting both the level of poverty and the decrease in stability in the country and its health care delivery system. As recently as 1983 (the most recent year for which data are available), diarrhea was the second leading cause of infant deaths, continued to be among the leading causes of death for the country as a whole, and was the most prevalent reported infectious disease.[4] Infant mortality was officially reported at 35.5 per 1,000 live births by the MOH, representing a continuation of a gradual decline in official infant mortality rates since 1970.[5] Although the official rate is believed to understate the real infant mortality rate by as much as 50% (current unofficial estimates of infant mortality are as high as 75 per 1,000 live births), the GOES's commitment to child survival interventions has resulted in a generally improving situation with respect to leading child survival indicators, and more progress is expected as a result of continued MOH commitment to the "Peace Through Health Program" sponsored by the Pan American Health Organization which places special emphasis on key child survival interventions. For example, the annual percentage of children under one fully immunized for polio has increased from 20% in 1983 to 54% in 1985, with immunization rates for measles for children under one showing a similar increase from 46% in 1983 to 71% in 1985. (See Annex E.)

Environmental conditions which influence health status have also shown some improvement in the past ten years, although the percentage of the rural population lacking access to safe water supplies (44%) and waste disposal (44%) were still high in 1984 (See Bulk Annex D). Illiteracy, which is highly correlated with infant and young child mortality in most countries, remains high in El Salvador.

2. MOH Organization and Health Services Delivery

The MOH is by its mandate responsible for assuring the delivery of health care services to the entire Salvadoran population, totalling 4.8 million. However, within the Government sector, the Social Security System essentially functions as a prepaid health insurance plan for those employees in the upper echelons of the formal labor market (7% of the population); and an additional 8% of the population has access to other private or quasi-public health care

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[4] MOH, Salud Publica en Cifras, pp. XII, 13, 11
[5] MOH, Memoria, 1984-85, p. 21

providers, including an extensive network of clinics operated by voluntary charitable organizations throughout the country. As a result, the MOH defines its target population as that 85% of the population without access to services available through such other institutions.[1] Estimates, however, of actual health services coverage on the part of the MOH range from 30% to 50%. Information gathered through interviews support these lower coverage estimates and indicates that much of the population practices self-care or consults a local private pharmacy before seeking care at the MOH facilities, which are chosen over private care only when the individuals have limited cash resources. Unfortunately, data are not readily available that could support any definitive estimate of actual coverage on the part of the MOH, nor preferred patterns of health care utilization.

Organizationally, the MOH has four principal Directorates, responsible for Planning, Regional Health Services (the Office of the Director General), Technical Operations (Technical/Operative), and Administration, and four staff offices, including the newly created Drug and Medical Supply Unit. It is a highly centralized, and predominantly vertical organization, which has recently embarked on a gradual process of decentralizing management functions and delivery of health services. For service delivery purposes, the Ministry of Health has divided the country into five geographic regions. These are the "Occidental" (Western), Central, Paracentral, "Oriental" (Eastern), and "Metropolitana" (Metropolitan). (See Annex F and the Institutional Analysis for more detail on the organizational structure and responsibilities.)

With the MOH emphasis on decentralization, the Regional offices are key links in the delivery of basic health services. With the exception of hospitals, all MOH facilities (and thus all MOH health care providers, including rural health aides (ARS) and midwives) are linked to the central office through the regional offices. The hospitals are gradually being more closely linked administratively and in terms of planning and budgeting processes with the MOH's regional offices. Each regional office staff now includes approximately 14 persons as a result of MOH efforts since 1983 to

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[1] The displaced population is included in this total, although PVOs, CONADES, and church organizations currently provide health care to some 100,000 displaced persons. As they are re-integrated into the general population and return to their home areas, the MOH will have to resume responsibility for their health care. Assuming that a large portion of the displaced population wishes to return to the increasingly secure areas in which MOH facilities are closed, this will present an additional burden on MOH resources.

strengthen these offices in preparation for decentralization to the regional level. Each region also has a warehouse for drugs and medical supplies, and access to a vehicle storage and repair shop (three of the five regions have their own vehicle repair shop, with a fourth shop shared by the Metropolitan and Central Regions).

The delivery system used by the MOH is basically the pyramidal configuration practiced in many developing nations. At the end of 1985 (for which the most recent complete survey data is available) there were 14 hospitals, 12 health centers, 100 health units, 174 health posts, 35 community posts, 7 dispensaries, and 30 nutrition centers. However, 50 of these 372 MOH facilities were closed as a result of the conflict, and all of these were primary care facilities -- 5 units, 37 posts, 6 community posts, and 2 dispensaries. As a result, a fewer number of primary care facilities were operating in 1985 (266) than in 1979 (268). (See Annex F, pp. 6 and 7, for additional information on number of facilities, distribution, and service population.)

Type of Facility	1979 Total	1985 Total	1985 Open	1985 Closed
Hospitals	14	14	14	0
Health Centers	9	12	12	0
Health Units*	99	100	95	5
Health Posts*	159	174	137	37
Community Posts*	10	35	29	6
Community Dispensaries*	0	7	5	2
Nutrition Centers	0	30	30	0
Total facilities	291	372	322	50

*Primary care facilities

Hospitals and health centers provide medical, surgical, pediatric, maternity and other specialized services, and have active outpatient departments. In 1985, hospitals and health centers were responsible for over 50% of all ambulatory care services provided. All of the 14 hospitals and 12 health centers are currently functioning, with at least 2 hospitals and 1 health center in each region.

The two principal types of facilities that provide primary health care are health units and health posts. Units are essentially ambulatory care facilities, usually having no inpatient medical beds. The units usually have a pharmacy and some have space for a laboratory (although most lack laboratory equipment and therefore have limited capability). The units are distributed throughout the country, with a larger concentration of units in the Eastern Region. Health and community posts constitute the most basic level of health care facility, in addition to the community dispensaries

and nutrition centers in the limited areas in which these specialized facilities operate. The health posts are permanently staffed (five days per week) by an auxiliary nurse who provides basic emergency care, preventive care focusing on maternal and child health (e.g., growth monitoring and family planning), and referral for other curative care and diagnostic services that cannot be performed at the post. At the end of 1985 137 of the 174 health posts were open. The largest concentration of health posts are in the Eastern region, with only four located in the largely urban Metropolitan region and the rest distributed fairly equally among the other three regions. Community posts are similar to the health posts but located in urban areas and are served by mobile teams instead of a permanently based auxiliary.

Community dispensaries and nutrition centers provide a very limited range of services. Dispensaries provide vaccination and first aid services and conduct health education activities. The 30 nutrition centers operate supplemental feeding prgrams, provide treatment and monitoring of malnourished children, and conduct health and nutrition education activities.

As these figures indicate, the physical infrastructure is extensive and relatively evenly distributed in terms of regional population figures. In addition, more than 50% of the facilities are of recent construction having been built since 1974 with IDB loans. Expansion undertaken since 1979 has been primarily at the intermediary and lower levels of the system, with 3 of the 12 health centers and 48 of the primary care facilities (units, posts, and dispensaries) built since 1979 with IDB funding and all 30 of the nutrition centers built since 1981 with AID funding.

Theoretically, the basis for establishing the tiered system of facilities was to provide for delivery of services at the lowest appropriate level of facility. However, operational norms for service delivery have not reflected this important general precept. Many tasks are reserved for doctors only, rather than being delegated to lesser-trained (and generally lower-cost) individuals such as nurses and auxiliaries who could in many instances provide such services.

Physicians account for 25% of the three principle categories of MOH care providers (physicians, graduate nurses and auxiliary nurses); this is a higher proportion than is appropriate given the primary care needs of the population and the MOH's policies of improving allocation of resources and efficiency of service delivery. The use of doctors to provide primary care is not cost effective, since many of these services could be provided by para-medical personnel or trained community workers. Limitations on hiring new personnel (e.g., nurses and lower level health care providers) who could replace physicians, combined with the current shortage of graduate nurses, however, will continue to result in less than optimal use of doctors by the MOH in the short term.

Data available regarding the number of outpatient consultations also show increasing use of secondary and tertiary care facilities (hospitals and centers) for primary care. Between 1979 and 1985 outpatient consultations increased at hospitals (by 9%) and centers (by 31%), but decreased at units and posts (by 16%). (See Bulk Annex D.) Whether this shift resulted from the temporary closing of primary level facilities or public perception as to the ability of primary level facilities to meet patient demand (including supplying drugs) is unclear. Access to health care providers is also a problem in the eastern and western regions, where the population is primarily rural and more dispersed.

Despite a long history of primary care programs and community participation efforts, outreach and the limited use of existing primary level services are key health service delivery problems in El Salvador. The most successful and sustained attempts by the GOES to expand basic rural service coverage are the Rural Health Aide (ARS) and Malaria Volunteer Collaborator programs. The Rural Health Aide program began in 1976 with A.I.D. assistance and is still functioning today. Rural health aides are paid community health workers who provide simple curative care, make simple diagnosis of ailments and refer patients to nearby health facilities, and assist in preventive health campaigns. In 1985, 236 rural health aides were included on the MOH's personnel roles. This is a decrease from the 1979 level of 301, with virtually all of the decrease being in the Paracentral and Eastern regions, which have been two of the most conflictive areas. The Malaria Volunteer Collaborator program (in which more than 2,000 persons participate) is an innovative one that has functioned since the mid-fifties. These volunteers are responsible for passive case detection through obtaining blood slides and providing presumptive treatment of fever cases. In addition, the MOH has also used mobile medical teams (a doctor, nurse, secretary, and occasionally a sanitary inspector) to augment the range of services offered at posts and dispensaries through once or twice a week visits -- a program considered increasingly important in the MOH's strategy for delivering basic health services.

The Technical/Operative Directorate of the MOH provides technical support for all MOH programs, with special emphasis having been given to child survival and malaria control programs. For example, the MOH's diarrheal disease control program has been operating since 1979, with the distribution of ORS packets an integral part of other MOH services. Immunization is also an "on-demand" service at all MOH facilities, and in 1985 the MOH introduced the use of campaigns in an effort to increase coverage, particularly in conflict areas (e.g., the northern area of the Eastern departments) and achieved a 50% increase in the number of vaccinations.

B. Project Rationale

In 1985, the MOH adopted its second Five Year Plan (1985-1989), with stated policies which reflect renewed attention on primary health care, decentralization, and community participation. The strategy described therein to improve the health of the Salvadoran population is to establish and give direction to the national health system, improve environmental conditions, and increase health services coverage. The policies that were stated as fundamental to the achievement of these objectives included improving the structure of primary health care delivery so as to increase efficiency and meet the health needs of the entire population; decentralizing decision making and administration; improving rational utilization of resources; and establishing mechanisms for achieving the long-term goal of an effective and efficient National Health System.

In little more than a year, the MOH has made some progress toward implementing these strategies and policies, particularly with regard to decentralization. A reorganization of the MOH designed to streamline decision making was effected shortly after the Five Year Plan was introduced. At the same time, the MOH began a comprehensive, phased review of the functions and organization of each division and department. As of June 1986, the MOH had prepared analytical reports on the functioning of five central MOH offices, with the recommendations for improved operations in various stages of review and implementation.

Efforts to improve the planning, programming, and budgeting processes of the MOH have also been initiated, with the establishment of a Commission to guide the development of a ministry-wide budget. Renewed priority has also been given to the decentralization of planning, budgeting and programming decisions. For the first time, regional offices are responsible for preparing and submitting budgets that are linked to their annual plans of activities, and hospitals, which have heretofore operated essentially as independent entities, are now required to coordinate with their respective region in the preparation of annual budgets.

The MOH has also spent the past year developing a strategy for extending service coverage. Initially designed as a volunteer effort, the new Programa de Salud Rural (PROSAR) has been re-formulated to incorporate paid staff who will perform a range of community health services focusing on preventive care. PROSAR might best be seen as a more finely tuned version of the rural health aid (ARS) program established with AID funding, with PROSAR giving greater emphasis toward community development. In contrast to the ARS program, the PROSAR community health worker will focus on community education, health promotion, and preventive health care, relegating curative treatment to a lesser priority. The key person in PROSAR will be a community health aide, who will be selected for

his/her qualities as a leader by the community in which he/she lives, in conjunction with staff from the regional office of the MOH. However, responsibilities for successful functioning of the program will be divided between the community and the MOH. With the initiation of PROSAR, community action for the health sector will be mobilized and managed through a Community Health Committee. Experienced ARS workers will supervise the PROSAR workers.

Also, as noted in Section II.A., in 1984 the MOH joined other Central American countries in the PAHO-sponsored "Peace Through Health Program" which is aimed at channeling external resources to assist the region in dealing with the critical problems in health care, including child survival, tropical disease control, and the availability of essential drugs. With PAHO support, El Salvador has been able to develop a comprehensive Child Survival Program and initiate a set of activities in support of this seven-point child survival strategy which focuses on: child growth and development surveillance, maternal care including prenatal care and training of traditional birth attendants, expanded immunization programs, control of acute respiratory infections, use of oral rehydration therapy (ORT) for diarrhea, health promotion through the use of mass media, and child spacing. Support for these programs has come from UNICEF, the Government of Italy, AID, and PAHO, as well as a host of other European nations. Progress has been made in expanding immunization coverage, increased use of ORT, and maternal care (See Annex E, p. 5). AID support for expanding mass media activities, strengthening the cold-chain and transportation systems for vaccines and medicines, and evaluation and monitoring in 1985 and 1986 should further assist the GOES in accomplishing its child survival objectives.

The MOH initiatives described above are all critical steps in rationalizing the services and decision making processes within the MOH, and should lead to improvements in the MOH's ability to deliver effective and efficient health services. The commitment and ability of the MOH to respond to longer-term questions of a comprehensive health care strategy, however, is clearly contingent on its capacity to provide and manage critical resources needed to deliver basic health services, particularly drugs, but also essential health care and laboratory equipment for use at the basic health services level. Moreover, it depends upon the MOH's ability to produce, analyze and utilize information required to make difficult decisions on resource allocation.

The Project rationale is based on the premise that the most cost-effective use of AID health resources in El Salvador is to assist the MOH to:

> resolve key impediments to the provision of basic health services, including the scarcity of drugs, supplies, and laboratory equipment, particularly at the level of primary care delivery;

C. Constraints to Effective Delivery of Health Services

1. Economic Decline and Resource Allocation

Financial constraints severely impede the effective delivery of basic health services by the MOH. The most significant of these is beyond the control of the MOH; that is, the pressure which has been exerted on social programs in general, including health programs, by the current civil conflict, coupled with an economic depression since 1979. In the years preceding the conflict, the MOH generally enjoyed an increasing absolute level of budgetary support. Between 1975 and 1979, the MOH's budget nearly doubled in size, growing 79 percent from 82.2 million colones in 1975 to 147.2 million colones in 1979. Since 1979, however, annual changes in the level of the Ministry's funding have been erratic, increasing by more than one-quarter in 1981, but holding about constant in 1981, and actually falling up to 8% per year in the remaining years.

Assessed in terms of its share of the total Central Government budget allocation and taking into account the impact of the growing rate of inflation, however, the pattern of recent developments becomes far less ambiguous and far less optimistic. In 1980, the MOH was allocated 10.6% of the total Central Government budget, but by 1986 this proportion had fallen to 7.1%. Moreover, further analysis shows that the MOH has, in fact, suffered a continual decline in its purchasing power since 1977. Looking at the most recent five year period, between 1980 and 1985 the MOH's level of real expenditures fell by 50% as a result of inflation. (See Annex G for selected financial tables and Bulk Annex A.)

During the past five years, as the MOH budget has effectively plummeted, and as the GOES has issued decrees that affect all ministries' budgetary decisions (e.g., a 1979 GOES decree prohibiting direct purchase of equipment), the MOH has met the shortfall in its budget to a great extent by relying on international donor resources. For example, while the Ministry has expended almost none of its funds for enlargement of the health services network (i.e., construction of facilities), it has benefitted from a $27.5 million IDB loan since 1979. The critical shortfall in drugs has also been met largely through the AID Health Systems Vitalization Project (VISISA), which has provided $23 million worth of drugs and medical supplies since 1984. Two loans from the Government of Colombia for drugs in 1984 ($2.7 million) and 1985 ($4.3 million) have also eased the MOH's shortfall in funds for drug purchases. The lack of adequately functioning bio-medical equipment has also been a problem. Since 1979, all equipment has been either purchased through, or donated by, some external financial resource, and the MOH now has an inventory of bio-medical equipment valued at between $25-30 million, with much of it purchased since 1980.

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The infusion of donor funds into the MOH budget, while meeting critical needs, does however, result in unintended negative consequences. The first is dependency. While difficult to measure in quantitative terms, this is an important consideration with respect to the MOH's ability to make difficult resource allocation decisions. If the assumption is made that donor agencies will continue to provide support in substantial amounts for these essential commodities, the Ministry has little incentive to alter its own allocation of resources to meet these needs. The second consequence concerns the recurrent costs that result from certain categories of funding. The IDB construction loans since 1974, which have built 173 facilities (160 of these posts and units), for example, have also resulted in an increased recurrent cost burden in terms of personnel and maintenance costs (facilities and equipment).

The distortion in the MOH budget that has resulted from the combination of the GOES moratorium on equipment purchases, continuation of a relatively large physician workforce level, and availability of external donor funding for non-personnel services costs is reflected in the allocation of MOH resources. For example, the share of personnel costs for the MOH's non-hospital functions has increased from 56% of the MOH's budget in 1977 to 92% in 1985. Concurrently, expenditures on materials, supplies, machinery and equipment have fallen from 44 percent to 8 percent in the MOH's budget. This reduced expenditure on materials and supplies has significantly affected the regional health facilities. Since 1977, in real terms the supplies and materials of health centers, units, and posts purchased with MOH budget funds have been contracting at an average annual cumulative growth rate of about eleven percent, leaving them in 1985 at a level 61 percent lower than in 1977. To fill this funding gap, MOH facilities have increasingly turned to funds they individually raise through voluntary contributions of from one to two colones (U.S. $ 0.20 - $ 0.40) per ambulatory visit to augment the MOH budget, which together with funds raised by patronato (i.e., community) steering committees, have been used to buy medicines and other supplies and materials, as well as pay for some staff positions. Generally, health units and posts have been put at a relative disadvantage as drugs have become an increasingly scarce commodity because the magnitude of patronato funds they have to supplement MOH-provided resources is much smaller than the amount of patronato funds raised for centers and hospitals.

Additional problems have arisen due to the fact that the MOH's budgeting process has been based on historical allocations, rather than allocations based on programmatic needs and MOH goals and priorities. For example, the focus of MOH resources on curative services has not changed significantly, as measured by the percentage of the total budget allocated to hospitals (40% in 1983 and 43% in 1985). (Memoria, 1984-85) Resource allocations based on historical trends do not facilitate responsiveness to new priorities and programs, especially when overall budgets are shrinking.

Cost-recovery and cost-reduction are widely-discussed needs, and the MOH has indicated that it is interested in both. Cost reduction measures appear to be feasible and possible for affecting resource savings in the short term. For example, reducing the apparent over-prescribing practices of physicians and improved tracking of drugs and supplies could reduce the volume of medications required; decentralizing repair of equipment and training operators and technicians in preventive maintenance could reduce maintenance and replacement costs of vehicles and bio-medical equipment; and providing services such as drug quality control testing to other health care agencies for a fee could offset the operating costs of some of these services to the MOH budget. In comparison, cost recovery measures appear to provide a longer-term solution to the MOH's financial problems. Users fees are already charged for lab and x-ray services, with a small contribution requested for each outpatient visit. Increasing these charges and instituting full cost recovery for pharmaceuticals are two obvious possibilities for augmenting the MOH's budget. However, the health care market and health care services, as a whole, require study in order to identify which of these and other possible mechanisms for increasing cost recovery and for improving efficiency are the most viable.

2. MOH Management Capability

In the past five years, the MOH has had five different ministers, with concomitant shifts in personnel in the Central Ministry and regional facilities and administrative offices. This, in addition to the financial difficulties described above, has resulted in an instability that has affected the implementation of virtually every MOH program. Further, the management processes of the MOH are highly centralized, and as a result of poor internal communication, the heads of directorates are frequently not aware of nor involved in important decisions which impact directly on their programs and on programmatic decisions for which they will have implementing responsibility. Further, decisions with regard to large purchases made by donor agencies, acceptance of direct donations of equipment, or loans for construction of facilities may be taken without regard to defined health needs or the ability of the MOH to maintain and meet the recurrent costs for the personnel, equipment or facilities. This occurs in part as a result of the fragmentation of information flow and the centralization of MOH decisions. Donors are also in part responsible, since each donor follows its own priorities which sometimes results in duplication or serious gaps. Decentralization of the decision-making process, and improvements in the MOH's planning and programming, should place the MOH in a better position to be active rather than reactive in its relationship with donor agencies and to improve the management of MOH and donor resources.

3. Provider Imbalance and Allocation

El Salvador faces a health provider "mix" problem (i.e., imbalance) similar to that surfacing as a critical health care issue in many other countries. The problem generally involves over-production of physicians, that is, production of numbers of physicians which exceed the country's ability to pay and support them and to employ them productively. Despite the present shortage of graduate nurses to assume tasks now performed by doctors, in the long run such use of doctors' services is not an optimal use of the MOH's resources. One primary difficulty in El Salvador lies in the fact that the GOES and MOH have inadequate information on which to base decisions regarding the training and utilization of health providers. For example, much better information is needed regarding health service needs, provider productivity, and public acceptance and utilization of providers. In addition, non-MOH forces that impact on these complex decisions (e.g., medical schools, physician groups, and the Ministry of Education) render GOES decisions in this area difficult and removes these from the exclusive purview of the MOH.

Unnecessary and inappropriate limitations on the range of services which nurses, nurse auxiliaries and community workers can provide is yet another constraint to broadening service delivery. Revised treatment norms which permit more services to be delivered at the lowest appropriate facility level and by the lowest appropriate service provider are being developed. A pilot effort is currently underway in the western region of the country to introduce new treatment norms and develop a comprehensive in-service training program, which can be implemented throughout the country to operationalize the revised treatment norms. The scarcity of financial resources and lack of information on which to base both comprehensive plans and specific designs for training of personnel is, however, a limiting factor in the MOH's ability to implement such a program.

4. Health Services Infrastructure

The physical infrastructure of the MOH is in relatively good condition, and has expanded significantly since 1979 as a result of a IDB health construction Project (the second such project) which built 51 MOH facilities. Although this extensive network provides a basis for provision of health services, the absence of water supplies, sewerage systems, and laboratories at the primary and secondary care levels limits the types and quality of health care services provided at many of those facilities.

A 1986 engineering survey of a sample of each type of health facility indicates that although the primary and secondary care facilities surveyed are in relatively good condition and repair, many are in need of basic water and sewage systems and back-up

electricity.[1] For example, of the 34 health posts visited, 66% had non-functioning toilets and nearly the same percentage have no cistern and an insufficient water supply. In addition, maintenance of facilities was identified as a problem, particularly in the primary care facilities.

The MOH hospitals surveyed were, on average, built 61 years ago, with some dating back to 1848. Despite the age of some of the facilities, the engineering survey indicates that the physical condition of hospitals is not a major impediment to delivery of services at this time. All have functioning emergency services and operating rooms, with most having new equipment which has been donated or purchased through loans (e.g., IDB and VISISA).

A long-term strategy for replacing (or closing) the older hospitals, such as Rosales in San Salvador, will have to be developed. However, prior to making decisions on the replacement of the older hospitals, available data on bed occupancy rates by facility and population concentrations and growth projections suggests the need for a more thorough assessment of the adequacy of secondary and tertiary care facilities before undertaking such costly investments.

The more pressing need of the MOH identified in the survey is action to protect the existing investment represented by the expanded network of primary and secondary care facilities. Improvements in maintenance services and infrastructure support systems such as water and waste disposal systems are needed to keep these facilities functioning and optimize service delivery.

D. Relationship to A.I.D. Policies and the Country Development Strategy Statement

The goals of U.S. assistance to El Salvador, as defined in the Mission's Action Plan for 1987, are to: (1) stabilize and reactivate the economy, (2) achieve economic recovery and growth above former levels based on an economically and socially sustainable base, (3) broaden the benefits of growth to increase the opportunity of the poor, and (4) improve democratic institutions and human rights by involving Salvadorans in decisions affecting the public interest. The goals are responsive to the recommendations of the National Bipartisan Commission on Central America.

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[1] The 1986 survey included 66 MOH facilities, including 4 hospitals, 6 centers, 22 units, and 34 posts.

El Salvador's economic and social goals are inextricably linked. Factors affecting their long-term achievement are the development of a healthy human and productive resource base and the strengthening of public and private service institutions. This Project will be the centerpiece of the USAID's strategy to enhance health services. Through efforts which build on the management improvements made under VISISA, this Project will assist the GOES in improving the reliability of the MOH's service delivery in both urban and rural areas, particularly at the primary care level, by providing commodity support, and extending service coverage.

The proposed activities respond directly to the Agency's new draft Health Policy, which give emphasis to activities which enhance child survival and which increase the cost effectiveness of health programs through improved program design, management and implementation. Moreover, the support for the MOH's pilot rural outreach program and increased resources devoted to primary care, where child survival activities are mostly delivered, will strengthen the framework in which the MOH's child survival strategy can be better implemented and institutionalized.

The MOH receives considerable donor support for its child survival program, particularly for immunization and ORT. UNICEF, the Italian Government and the EEC have taken the lead in financing the immunization and ORT components of the MOH's child survival initiative; AID has also taken a lead role in supporting the MOH's child survival program, using VISISA resources and other funding to support systems key to the success of MOH and other donor efforts in child survival. AID's future focus will be on assisting the MOH to develop a sustained capacity within the public health care system to effectively continue to provide ORT and immunizations, as well as other important child survival interventions in nutrition such as growth monitoring and in child spacing to round out the MOH's strategy. For example, the Project will support the MOH's health education division in producing child survival program operations manuals and growth charts, and use of mass media to promote correct use of ORT and to advertise immunization campaigns and programs. The Project will also continue support provided under the VISISA Project for logistical systems essential for the success of other donor-funded child survival activities, such as transport and maintenance of cold-chain equipment and laboratories. Continuing support for child spacing and family planning will be provided under the AID-funding Population Dynamics Project (see Section II.E.). In addition, AID's regionally funded project with the Pan American Health Organization, Accelerated Immunization, will provide specific support to complement USAID and other donor inputs for immunization.

E. Relationship to Other AID Programs

Several ongoing Mission projects provide or support health services in El Salvador. Together with this Project, the programs constitute a comprehensive response to the major health problems of the country.

Health and Jobs for Displaced Families (519-0281)

This Project, which was originally signed in May, 1982, provides food, jobs, and preventive and curative health services to the displaced population. The National Commission for Assistance to Displaced Persons (CONADES) and Project HOPE are the implementing agencies for health services. The preventive health sub-component focuses on immunization for pregnant women and children under five years of age and on oral rehydration therapy. The curative health sub-component supplements the MOH's coverage by providing primary health care to some 38,000 displaced persons and their host communities. An outreach program providing medical services to an additional 30,000 persons dispersed through the country is also being implemented by CONADES.

Population Dynamics (519-0210)

This $10 million three-year Project signed in August 1985 provides support (commodities and technical assistance) for family planning and population activities of the MOH, the Social Security Institute, the Hospital of the National Administration for Telecommunications, the Ministry of Planning, and the Salvadoran Demographic Association. The principal private sector participant, the Salvadoran Demographic Association, will carry out mass media and education programs which support family planning practices throughout the country.

Salvadoran Demographic Association (519-0275)

In addition to the support provided under the Population Dynamics Project, USAID has an ongoing project with the Salvadoran Demographic Association which supports their Contraceptive Social Marketing Program, Medical Services, Research and Training, and Information Education and Communications activities.

Center for the Promotion of Breastfeeding (519-0329)

In July 1986 USAID signed a three year, $250,000 cooperative agreement with the Center for the Promotion of Breastfeeding (CALMA) to continue assisting it in improving maternal and child health through improved nutritional practices of mothers, including but not limited to, increases in the number of mothers who breastfeed their babies. This Project will assist CALMA to carry out training activities for intermediary organizations, including MOH employees, in improved weaning practices, nutrition education, and early childhood stimulation.

Save the Children Integrated Rural Development OPG (519-0300)

This five year Grant signed in February 1985 with the Save the Children Foundation supports integrated community development activities in four selected impact areas. The health component is targetted at reducing child mortality and morbidity through a comprehensive primary health care program which includes training of community health workers, vaccinations, community wells, small water systems, latrines, communal dispensaries, and environmental sanitation campaigns.

Salvadoran Rehabilitation Institute

In August 1986 USAID will sign a one-year, $220,000 agreement with the Salvadoran Rehabilitation Institute (ISRI) to expand its production of prosthetic devices and improve physical therapy and other rehabilitation services for civilians who have lost the use of one or more limbs through accidents or debilitating illnesses. This one-year project will provide needed equipment and technical assistance to increase production of prosthetic devices and equip the center, as a precursor to longer-term funding which is planned by the German Government and CARE Germany. In addition, USAID is facilitating the development of a program to obtain private charitable donations of prosthetic devices and the services of U.S. prostheticians to fit the backlog of individuals currently awaiting ISRI's assistance.

Local Currency Generations

PL 480, HIG, and ESF local currency generations are being used to support potable water projects implemented by the national water company (ANDA) and the MOH's agency responsible for rural potable water systems (PLANSABAR). Water systems were installed in over 100 communities during 1985-1986, with an additional 76 communities scheduled to receive handpumps in 1986-1987; the total cost of these projects is $13.1 million. In addition, PL 480 local currency funds are supporting the MOH Rural Health Aide and PROSAR Programs, milk banks in hospitals, logistics for maternal child health nutrition supplementation, and decentralization, as well as counterpart for other donor programs.

ROCAP Programs

Under the regional ROCAP assistance to INCAP (Nutrition Institute for Central America and Panama), two projects are particularly relevant to this Project. Under the AID-assisted ORT, Growth Monitoring and Education Project, a full-time nutritionist is working with the MOH and Ministry of Planning to improve planning and implementation of targetted nutrition interventions, including child growth and surveillance, promotion of breastfeeding and

improved weaning practices, use of ORT, and nutritional supplementation. The second project, Food Assistance Support, is assisting the GOES to improve its targetting of food assistance and to begin development of multi-year plans for food assistance to the Salvadoran poor.

LAC and CA Regional Programs

Under the CA Regional Project, Malaria and Essential Drugs, training seminars have been conducted for malaria staff and the MOH has received assistance in designing training programs for the rationalization of pharmaceutical usage. Training has also been provided for a Salvadoran physician under the LAC Regional Project with the Interamerican College of Physicians and Surgeons.

F. Other Donor Activities

Inter-American Development Bank (IDB)

In mid-1985, the IDB completed its second Health Facilities Construction Project providing a total of over $60 million since 1974 in financial assistance to build new MOH health facilities. A new loan was recently approved to construct a new hospital (a replacement facility) in Sonsonate in the Western Region. The IDB has also provided extensive support for water and sanitation projects, and in late 1985 they initiated a $21 million rural water aqueduct and latrine project with PLANSABAR. Under the Project, 100 aqueducts benefitting 410 communities and 75,000 latrines will be constructed nationwide.

Pan American Health Organization (PAHO)

PAHO is the implementing agency for the AID-sponsored Malaria and Essential Drugs Project and the Accelerated Immunization Project which provides support for the entire Central American region in these two important sectors. In addition, PAHO's program has provided technical assistance to the El Salvador MOH in the initial development of MIS sub-systems focussed on automated administrative procedures, financial management and budgeting, and personnel management, and continued PAHO support for these sub-systems is planned. El Salvador is also participating with other Central American governments in the PAHO-sponsored "Peace in Central America through Health" program which includes assistance in seven areas: strengthening health services, tropical disease control, water and sanitation, human resources development, use of essential drugs, food and nutrition improvements, and child survival. Through this initiative, non-traditional European donor resources are being brought to bear to help develop comprehensive health services such as the establishment of a revolving fund for drugs by the Government of the Netherlands.

United Nations Children's Education Fund (UNICEF), the Government of Italy, and the European Economic Commission (EEC)

The UNICEF program supports El Salvador's eight point Child Survival Program. While providing general assistance to this program, UNICEF has focussed its efforts on the MOH vaccination campaigns in 1985 and 1986 drawing on $1.2 million made available through the Italian Government. In total, the EEC has committed $6 million for the 1985-90 period to be administered through UNICEF. UNICEF also supports a modest program in early childhood stimulation with the Ministry of Education.

United Nations Fund for Population Activities (UNFPA)

The UNFPA supports mainly the maternal/child care and nutrition aspects of overall primary health care within the MOH. They also support a population education project with the Ministry of Education. Annually, the support for maternal-child health programs averages $600,000.

Other Governments:

The MOH has received support from many governments, including two loans from the Government of Colombia for pharmaceuticals ($2.7 million in 1984 and $4.3 million in 1985). In 1986 the GOES signed a $4.3 million agreement with the Government of Argentina for medical equipment, and a $1.4 million grant from the Government of West Germany for the two year pilot phase of the new PROSAR program.

Private Voluntary Organizations (PVOs):

Nearly twenty international PVOs provide financial support and donations of medicines and medical supplies to support MOH and private health care programs. Prominent among these PVOs are CARITAS, which provides drugs and medical supplies; the International Rescue Committee, which operates a small community health worker program; the Knights of Malta which assists 168 private charitable clinics with medicines; Project HOPE which obtains and distributes donated medicines and supplies largely in displaced persons camps; Rotary International, which supports the immunization program; and the Rotary Club of Miami and the United Schools of America which recently donated over $300,000 in medical supplies, equipment and medicines for the Eastern Region.

III. DETAILED PROJECT DESCRIPTION

A. Goal and Purpose

The goal of this Project is to assist the MOH to improve access to, and availability of, basic health care services and reduce child and infant mortality.

The purpose is to support and strengthen the capability of the Ministry of Public Health to deliver and support basic health care services, including preventive and primary care services important to the MOH child survival program.

B. Project Beneficiaries

The principal beneficiaries of the Project will be the under-served and unserved segments of the Salvadoran population, who at the end of the Project will have greater access to basic health care services. The principal clientele of the MOH consists of the approximately 1.1 million women of childbearing age and infants and children under five years of age (approximately 950,000), who are also the persons of highest risk of disease and of preventable death and, appropriately, the principal target population of the MOH. The great majority of MOH patients come from the lower economic strata, given that other persons have access to health services from private physicians, pharmacies and quasi-public sources such as the Salvadoran Social Security Institute. The expansion and improvement of the MOH's basic health services will therefore increase the extent and adequacy of health services coverage of poor people, especially women, infants, children, and the heretofore under-served rural poor populace.

C. Project Components

The three Project components are described below, with summaries of the Project inputs at the end of each section. A comprehensive technical assistance plan is contained in Annex I.

1. Logistical Support: Acquisition, Distribution, and Management of Drugs, Medical Supplies, Equipment, and Facilities

a. Description: The objective of this component is twofold: (1) to improve the capability of the MOH to select, acquire, distribute and monitor the use of medicines and supplies; and (2) to strengthen logistical support systems for basic health care, particularly vehicle fleet management, bio-medical equipment maintenance, and facilities maintenance. (See Annex K for detailed descriptions of the bio-medical equipment, transport, and drug inventory control systems.)

The public health care system has suffered periodic shortages and stockouts in medicines and basic medical supplies for the past decade. Logistical systems for inventory control, distribution, and monitoring usage are also weak, although improvements have been made with the computerization of the drug inventory control system and training in supply management provided under VISISA. Added to these difficulties have been the complications arising from large influxes

of in-kind charitable donations (from foreign governments and private sources) of pharmaceuticals which have interfered with MOH attempts to reduce the range of medicines carried in their inventories to a more manageable and appropriate range for the country's morbidity and mortality conditions, consistent with its newly revised basic drug list (Cuadro Basico).

The newly created Drug and Medical Supply Unit, one of the MOH's principal responses to the need for improved supply management, has been given responsibility for determining requirements, making allocation decisions, and managing these resources; the Unit will also oversee the operation of the MOH's new Drug Quality Control laboratory. This Unit reports directly to the Minister of Public Health and will be the office primarily responsible for overseeing the receipt and distribution of Project-funded medicines and supplies. Given current budget estimates and patterns of resource allocation of the MOH, an overriding need of the MOH will continue to be budgetary support for the procurement of medicines and medical supplies. However, donor support for these items since 1983 (in addition to other non-personnel costs discussed throughout this section), while meeting the short-term needs of the Salvadoran population, has resulted unintentionally in a growing dependence on external donors for support for nearly all non-personnel costs of the MOH. Despite a planned doubling of MOH purchases in 1986, the allocated budget for medicines and supplies of $4 million will meet only 30% of the estimated $13 million in requirements in 1986, relying on the VISISA Project funding, PL 480 local currency generations, and other donors to meet the shortfall.

Project funding of $7.0 million in the first year will be used to meet the projected shortfall in in the MOH's ability to fully meet the requirements of the public health care system for medicines and supplies in 1987. Thereafter, in an effort to help the MOH lessen its dependence on AID for pharmaceutical and medical supply funding, the annual level of medicines and medical supplies purchased under the Project will decline by 10% per year. Over the life of the Project, the burden of the drug and medical supply requirement borne by the Project will be reduced from 54% to 28%.[1] The MOH will, therefore, have to gradually assume a greater share of this financing burden or obtain other donor funding. (See Table 1.)

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[1] Percentages are calculated using an annual estimate of the MOH's drug requirements for FY 1986 and FY 1987 of $13 million, with an annual increase of 6% each subsequent year for increased population, expanded coverage, and inflation.

I

Table I

GOES Annual Pharmaceutical and Medical Supply Requirements and Sources of Funds
(000 U.S. Dollars)

	ACTUAL FY 1985	PLANNED FY 1986	PROJECTED LIFE-OF-PROJECT FY 1987	FY 1988	FY 1989	FY 1990	FY 1991
MOH Annual Requirement*	12,000.0	13,000.0	13,000.0	13,780.0	14,606.8	15,483.2	16,412.2
Pharmaceuticals		12,000.0	12,000.0	12,720.0	13,483.2	14,292.2	15,149.7
Medical Supplies		1,000.0	1,000.0	1,060.0	1,123.6	1,191.0	1,262.5
MOH Purchases	2,260.0	4,000.0	4,000.0	4,500.0	5,000.0	5,500.0	6,000.0
PL 480 L.C. Purchases	253.0	460.0	2,000.0	2,000.0	2,000.0	2,000.0	2,000.0
Total MOH and Other Purchases	2,515.0	4,460.0	6,000.0	6,500.0	7,000.0	7,500.0	8,000.0
Requirement Unmet by MOH Budget	9,485.0	8,540.0	7,000.0	7,280.0	7,606.8	7,983.2	8,412.2
Projected AID Contribution	1,160.0	7,000.0	7,000.0	6,300.0	5,700.0	5,100.0	4,600.0
Pharmaceuticals			6,400.0	5,700.0	5,200.0	4,600.0	4,100.0
Medical Supplies			600.0	600.0	500.0	500.0	500.0
Other Contributions (e.g., GOC Loan, patronato funds**)	5,353.0	0.0	0.0	500.0	1,000.0	1,000.0	1,000.0
Shortfall	2,972.0	1,540.0	0.0	480.0	906.8	1,883.2	2,812.2

*Annual MOH requirement for FY 1987 is based on monthly consumption figures for 1985/86. Subsequent year estimates are based on a 6% per annum increase. These estimates do not include substantial donations by the private sector, such as the Knights of Malta, Project HOPE, and voluntary organizations.

**Patronato funds are included in FY 1985 actual figures, but not in future year estimates. These funds are under the control of the patronatos, and their use is determined by the leadership of the patronato.

As noted earlier, further improvements in supply management will be an important focus of this Project. As part of its responsibility, the Drug and Supply Unit staff will prepare an annual requirements estimate of medicines and supplies, which will be based increasingly on morbidity and mortality statistics and less and less on past consumption patterns (which are influenced both by the availability of pharmaceuticals and by the over-prescribing practices of many physicians). An analysis of donor inputs and of the availability of MOH funding to meet these needs will then be prepared by the Unit in conjunction with the Procurement Committee (consisting of the Director General, the head of Procurement, and the head of the Technical/Normative Directorate) and submitted to the Minister, identifying the anticipated shortfalls and financing needed to meet requirements. Improved estimates and more timely information on projected shortfalls should help to influence resource allocation decisions of the MOH, particularly when coupled with the declining levels of AID funding.

The Drug and Medical Supply Unit, working with the Procurement Committee and the head of the bio-medical equipment maintenance unit, is also responsible for bio-medical equipment procurement. Since there has been a government-wide moratorium on procurement of equipment and vehicles since 1979, no coordinating point now exists within the MOH for planning and effecting purchases. All new equipment since 1979 has been obtained through charitable donations or purchased using donor funds, following the peculiar source and origin requirements of each loan or grant. As a result, minimal effort within the Ministry has been devoted to preparing a comprehensive plan for purchasing and standardization. A first priority of the Unit under this Project will be to update the computerized inventory of bio-medical equipment in terms of availability and functioning of bio-medical equipment throughout the system. Then, based on standardized equipment lists (revised as appropriate for the revised treatment norms), a standardization plan will be developed, and a system of priorities and criteria established for the acquisition of bio-medical equipment and spare parts. Requirements for new and replacement equipment will be identified, along with other donor commitments for bio-medical equipment such as the recently signed $4.3 million agreement with the Government of Argentina. Project funding will be made available to purchase laboratory equipment for the health units where adequate space for laboratory facilities exists and trained staff are available.

Much of the current MOH stock of bio-medical equipment is old and includes an unreasonably large number of different es and models of items in any given category, thereby complicating maintenance. Under VISISA, a five year plan for the development of a bio-medical maintenance system was developed, which includes the establishment of a central facility providing services for the Metropolitan and

Central Regions and three regional centers located in each of the more remote regions (Eastern, Western and Paracentral). With VISISA support, a central maintenance center has been established and is providing services for the whole country; in spite of the heavy load and backlog of repairs to be done, the section has managed to focus its attention on prevention to the point that about 10% of the work is already of a preventive nature. Standard preventive maintenance routines for new equipment and high priority medical equipment (e.g., x-ray, anesthesia machines, and aspirators) and training and reference manuals for the use of trainers, technicians, and users are being prepared and will be ready in 1986. Using these materials, the MOH will initiate an extensive in-service training program including courses for users, maintenance technicians, and maintenance managers; this Project will provide support for the development of these competency-based (i.e., skill and task oriented) training programs, as well as tools and equipment for the three new regional repair and maintenance centers.

This Project will assist the MOH to become more efficient and assume greater responsibility for purchasing drugs, medical supplies, and equipment by streamlining procurement policies and procedures. Currently, the GOES purchasing process can take anywhere from 3 to 12 months, and the MOH has had little experience (or success) with offshore procurement. Given this, virtually all Project procurement will be carried out directly by A.I.D., utilizing the MOH for only limited (non-pharmaceutical) local-shelf items, and local personal service requirements.

Improvements in the MOH's forecasting capabilities with regard to requirement estimates, procurement planning, and inventory control are essential to the effective functioning of MOH facilities. Warehousing and transport systems are two other critical support systems which have been significantly improved under VISISA. Additional in-service training will be provided to improve the functioning of regional warehouses and inventory control. In terms of transport, the vehicle maintenance and management system established under the VISISA Project is well organized and already realizing benefits. With more than half of the MOH's vehicle fleet over 10 years old, the most pressing need of the MOH is replacement vehicles. A replacement strategy and standardization plan have already been developed, which as a result of improved management and maintenance includes reducing the total number of vehicles in the MOH fleet. The Project will provide replacement vehicles so as to reduce the average age of the MOH fleet to 5-7 years.

The last link in the logistical chain is the health care facility. Greater attention must be given to facilities maintenance and to ensuring that the primary care facilities have functioning water and sewage facilities. As noted in Section II.B., 66% of the posts included in the 1986 facilities survey had inadequate water supply

and sewage systems. The MOH General Services Office has responsibility for facilities maintenance services, and will be assisted under the Project in establishing an efficient system which places responsibility for the greatest burden of preventive maintenance and resources in the hands of the facilities directors.

b. Inputs: A Logistics Manager/Systems Advisor (who will also serve as the Deputy Chief of Party of the technical assistance team contracted for this Project) will provide technical assistance throughout the duration of the Project to the Drug and Medical Supply Unit. Additional technical assistance will be provided to the Unit by advisors in clinical pharmacology/drug formulary development and drug quality control. Technical advisors in procurement, bio-medical equipment maintenance, and transport will provide short-term assistance to the MOH in strengthening these logistical support systems. Finally under this component, the Project will provide $28.7 million in pharmaceuticals and medical supplies, $2.3 million in insecticides and larvacides for the malaria program (described in the next component), $4.6 million in vehicles and spare parts, and $700,000 in equipment for the units and posts and the malaria program (e.g., pumps, cisterns, sprayers, and laboratory and bio-medical equipment) over the five year period.

2. Improving Basic Health Services Delivery[1]

a. Description: This component focuses on improving the functioning of basic care facilities, particularly health units and posts which constitute the lowest principal levels of service, and outreach services. The objectives of this component are threefold: (1) to improve the capacity of the MOH technical support services,

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[1] For purposes of this Project, basic health services are defined as those provided by MOH personnel (including MOH-recognized volunteers) in homes and villages and at the MOH's most basic levels of health care facilities -- dispensaries and health posts and units. Basic services provided at those levels of the health care system include both curative care (now emphasized in the fixed facilities and by the mobile teams which serve some of them) and preventive services such as health education and immunization (emphasized in the Ministry's outreach and health education efforts).

including health education and training for basic health services providers; (2) to assist the MOH to improve treatment and expand the range of services provided by lower level care providers by operationalizing newly revised treatment norms and improving the quality of supervision; and (3) to improve and expand outreach services, including continued support for the malaria control program and PROSAR.

With more reliable drug and supply flow and improved facility maintenance, service providers will be better equipped to meet health care needs. However, treatment norms currently used by the MOH unnecessarily limit the range of services offered by lower level care providers, thereby contributing to the under-utilization of the primary care facilities. With technical assistance provided under VISISA, the Technical/Operative Directorate of the MOH has begun revising the treatment norms to provide for greater service delivery by the lowest appropriate service provider. Once finalized, the MOH Training Center will be responsible for developing appropriate training courses and a training plan for upgrading the skills of all MOH basic care providers.

This Project component will assist in finalizing the treatment norms and designing competency-based training programs keyed to these treatment norms and other specific needs related to improving the efficiency and effectiveness of health services delivery. Faculty of the MOH Training Center will receive technical assistance in the development and evaluation of competency-based training programs covering the full range of job-required skills and knowledge (including health education, preventive and curative services, basic management, and specific aspects of support systems) for MOH outreach workers, auxiliary nurses, graduate nurses, doctors, and technicians, as well as administrative personnel. In addition, this training of trainers will include participant training in the U.S. for two additional MOH faculty members in designing and evaluating competency-based training programs. The training programs which will be improved and designed with Project funding (and implemented with other donor funding) will be conducted on a regional basis, with in-service training being short-term (less than one week per course or activity) in order to reduce the burden on staff and their time away from tasks and delivery of services. A system for follow-up to monitor the health care providers in using their new skills will also be established, using supervisors who will themselves receive continuing education training in supervisory techniques. Project funding will support the development of training materials and operating manuals essential for improving service delivery, including general treatment manuals for care providers and facilities and manuals developed by the MOH specifically for child survival interventions.

Given the importance of outreach programs for extending coverage and for sustaining immunization, ORT, and other child survival programs, this Project component will also assist the MOH in developing sustainable and cost effective outreach programs. The PROSAR program, as described in Sec. II and Annex G, was approved for implementation on a pilot basis starting by the end of 1986. The MOH will begin by placing 72 workers in the southern part of La Union (the Eastern Region), adding 100 workers the following year in the northern part of La Union and the southern part of Morazan (also in the Eastern Region). Thereafter, assuming the success of the PROSAR program, 200 workers would be added each year to fully cover the four departments in the Eastern Region and bring the total number of PROSAR workers to 772 by the end of the project. Experienced Rural Health Aides (ARS) will be used as PROSAR supervisors, thereby achieving an integration of the two programs. The Project will support the MOH in achieving its expanded service coverage goals by assisting the MOH to evaluate the cost-effectiveness of the PROSAR program, both alone and in comparison with the cost-effectiveness of other MOH interventions, as a basis for modifying program plans and/or making resource allocation decisions.

Within this component, special emphasis will also be given to the malaria control program. Malaria is a serious and widespread problem in El Salvador, especially in the coastal areas, and combatting it requires effective specialized services at the community level in addition to services provided at MOH facilities. In 1985 and 1986 the Malaria Division has made significant progress in reducing malaria by targetted interventions in high transmission areas, including involving communities in source reduction efforts (See Section II.A. and Annex E). Project activities will assist the MOH to develop a long-term plan to replace the current ad-hoc planning and program operations, which will reduce the recurrent and foreign exchange costs of anti-malaria activities; to more directly involve health facilities in malaria diagnosis and treatment; and to improve epidemiological surveillance and evaluation of control methodologies. (See detailed analysis contained in Bulk Annex C.)

The Project will also strengthen the MOH's capacity to plan and execute child survival promotion and mass media activities in support of primary care providers and community workers. Support will be provided for selected existing health education programs (e.g, for materials development and printing, communication and mass media for the MOH's child survival activities) and for the development and implementation of several new foci of health education to support basic health services. These latter foci will include community-based health education and national campaigns using mass media to promote the public image and utilization of basic health services facilities and providers (including ARS and PROSAR personnel).

Finally, this Project component will provide support for training in the area of emergency medical services management. Under the VISISA Project, essential emergency medical equipment was purchased and used in upgrading operating and emergency rooms in MOH facilities. Trauma training modules have also been developed and are being evaluated and revised to serve as the basis for future training programs. Building on this work, Project funding will be used to support the training of emergency medical services directors for the hospitals and health centers and to upgrade in-service training programs based on needs identified in the review of emergency medical services being conducted under VISISA.

An increasing number of the MOH's trauma patients are civilians who have been wounded by contact mines placed in rural areas throughout the country. In the first six months of 1986 alone, over 170 individuals lost one or more limbs as a result of these accidents. For these individuals, the availability of emergency medical services is only the first step in a much longer process of rehabilitation. Unfortunately, the capacity of the one publicly-supported rehabilitation institute, the Salvadoran Rehabilitation Institute, is inadequate to fully meet the greatly increased demand for their services. Given the magnitude of this problem, A.I.D. recently signed a grant with this Institute to expand its production of prosthetic devices and improve rehabilitation services (see Section II.E.).

Considerable foreign donor interest exists in this problem, as well as support from several Salvadoran charitable institutions such as the 20/30 Telethon and the Lions Club for the expansion of the rehabilitation services. The A.I.D. project with the Institute is designed to serve as a pre-cursor to longer-term funding planned by CARE Germany and will complement the work of other donors in this field. However, throughout the duration of this Project and in the implementation of the project with the Salvadoran Rehabilitation Institute, A.I.D. will be continually re-evaluating the demand to assist in assuring that the availability and quality of services are adequate to meet the needs of the Salvadoran population.

b. Inputs: To assist the MOH in carrying out these activities, the Project will provide the services of a long term training advisor to work with the MOH to improve its competency-based training programs, with short term technical assistance provided by a health educator/communications specialist. Financial support will also be provided to the health education division and for materials development, printing for the health education and child survival activities, and to continue the use of mass media to promote the use of ORT and immunization. Finally, two MOH staff will receive training in the U.S. in the design and evaluation of competency based training programs.

3. Strengthening Policy and Program Planning and Management

a. Description: As was described in Section II of this Project Paper, the MOH has initiated efforts to improve its planning, programming and budgeting procedures and to decentralize responsibility for regional operations to the regional offices. The focus of this component is on supporting these MOH efforts, specifically including those relevant to resource allocation decisions and primary health care support systems of particular interest to this Project; i.e., drug supply management, bio-medical equipment acquisition and maintenance, and transportation. The particular approach to strengthening the MOH in this regard is two-fold: (1) continued assistance and provision of equipment necessary to computerize the Ministry's information system; and (2) technical assistance in health policy and planning to improve MOH research, program planning, monitoring, and budgeting processes. This latter focus will include the use of applied health services research to provide critical information for the MOH's use in policy and program planning in areas such as health care financing, private health care delivery, and health provider mix and training.

(1) Management Information System for Health Services Planning and Management

The development and operation of a computerized management information system (MIS) is essential to improved planning, program execution, and allocation decisions. The process of developing the computerized MIS began under the VISISA Project, and computer-based systems have been developed for drug supplies management and vehicle tracking and maintenance and a bio-statistics sub-system has been partially developed. A new sub-system for bio-medical equipment inventory management will be completed by November 1986. This Project will assist the MOH in operationalizing these systems and in developing new sub-systems for bio-medical equipment management and personnel and financial management. The MIS will provide information that can be used at all levels of health service delivery and decision-making with regard to critical support systems such as drug management, equipment and vehicle maintenance, and logistics, and administration, planning and service delivery. It will also serve as a critical communications link among the regional offices and as the basis for two-way feedback between the MOH central offices and the regional offices as the decentralization process moves ahead.

The MIS component includes design and refinement of systems software; provision of equipment (including microcomputers and related peripherals); training of MOH personnel in use of microcomputers, design and use of applications software (and in

design and use of related data collection forms); and analysis and use of reports resulting from the MIS sub-systems. By the end of this Project, the MOH will have in place a mainframe in the central Information Systems Unit and a network of 55 compatible microcomputers. The mainframe and ten of the microcomputers will have been purchased through the VISISA Project.

(2) Policy and Program Planning Capabilities

Having established a management information system for health services planning, a requisite for its appropriate use is the presence of a sufficient number of MOH personnel trained in the management, analysis, and use of information in the MOH's planning, programming and budgeting procedures. Supervisors, program planners, and policy makers will have to learn to use the new range of planning and monitoring tools available and simple methods for gathering data to supplement that routinely produced by the MIS.

The MOH Planning Directorate will be the locus for activities. It has been given the responsibility for coordinating the involvement of all MOH offices in developing integrated plans and budgets. As the Directorate responsible for ensuring that policies and programs are clearly related to the MOH's goals and objectives and that health delivery strategies are coordinated insofar as possible, it will also coordinate the collection and analysis of comparable data that are useful for decision-making purposes.

As a first step in implementing this Project component, the Planning Directorate (in cooperation with other MOH offices) will begin development of a detailed design for MOH-wide strengthening of policy and program planning for presentation to the Minister of Public Health by the end of the first Project year. This will be based on existing MOH planning, programming, budgeting and management initiatives, and include a detailed training plan for selected MOH central, regional and facility level staff in planning, management, and problem analysis.

While the MIS will be used, insofar as possible, as the basis for planning and program management, additional data will be required in order for the MOH to have adequate information in developing, assessing, implementing and evaluating means for improving the effectiveness and efficiency of the health services delivery system. To respond to these needs, applied health services research studies will be carried out under the aegis of the Planning Directorate at two levels: the central MOH level and the Regional level. National-level studies (i.e., on cost-recovery mechanisms) will be designed and conducted by the central office staff most involved in the study topic, with technical assistance from the Planning Directorate and the involvement of personnel at the regional and facility levels involved as appropriate. Regional and

local facility-based studies will be designed and conducted by trained personnel at those levels, also with technical assistance from the Planning Directorate, which will coordinate these studies to ensure that there is not undue duplication of effort and at the same time to develop comparable data sets wherever possible.

Primary areas for applied health research will be:

(a) Health Care Financing: Cost Recovery and Cost Reduction Strategies: The lack of systematic knowledge about the health care system of El Salvador is a problem that plagues any effort to develop recommendations about public health care financing. Systematic studies need to be undertaken to provide baseline data and feedback on the effects of measures suggested in preliminary investigations of cost recovery potential conducted in El Salvador, including the impact of: (i) formalizing and standardizing the present structure of user fees and increasing the level of fees; and (ii) instituting a full cost recovery program for all medicines. A comprehensive study of the health care system as a whole, including quasi-public health care institutions, private hospitals and clinics, pharmacies, and services available through charitable organizations will also be carried out to evaluate options for privatization, including the possible leasing or selling of MOH facilities and greater private sector provision of services. Utilization patterns and the functioning of informal referral networks would be important corollary studies.

(b) Health Provider Training and Employment: During the recent planning and development of the PROSAR program, the MOH has struggled with the trade-offs between use of volunteers and employment of additional rural health workers, including considering the ethical and recurrent cost issues. Clearly, the training and employment of additional rural health personnel is one of the most critical issues facing the MOH today, and one which will become increasingly important unless and until difficult decisions are taken by the GOES and the MOH. However, little information is available that can serve as the basis for rational decision-making in this regard. A study of the production and distribution of providers in the public and private sectors is critical and will be conducted within the first year of the Project. Information will also be needed on the effectiveness of the PROSAR program and the possible use of volunteers to further expand outreach such as some of the ARS have done.

(c) Drug Supply and Use: The supply, distribution and use of drugs has been and continues to be an important issue for the MOH and is directly related to its ability to provide adequate basic health services. Under the VISISA Project, a study of prescribing and dispensing practices is being implemented in one region. Based on the results of this, a larger study is planned involving the other regions to identify areas for improvement and to design strategies for improving drug supply, distribution and use. A comprehensive study will also be conducted of the private and public supply, distribution and use of drugs.

MOH staff at all levels will require substantial training to help ensure that the Ministry's plans are based on appropriate and adequate information, correctly interpreted, that the recommended strategies are linked to that information, and that the plans are actually used in designing and managing MOH programs and service delivery procedures at all levels. Short-term in-country training will be designed by the Planning Directorate in cooperation with the Training Center, the Technical/Operative and Administrative Directorates, the Office of the Director General, and regional offices. It will be based on the work already underway by the Planning Directorate (e.g., in the Santa Ana Region) and by the Technical/Normative Directorate (e.g., Development of Supervision strategies and preparation of treatment norms). The training will include use of morbidity and mortality statistics and health services utilization data in planning, design and use of analytic procedures (including, for example, selection and interpretation of computer-based data), goal setting and design and implementation of program strategies (including for example specific service delivery mechanisms) to meet identified health needs of the general population and of specific population sub-groups, methods for setting priorities among alternative strategies and resource allocation opportunities, preparing program-related budgets, and use of alternative monitoring methods and information sources (e.g., use of the MIS to monitor selected health status indicators).

b. Inputs: Two long term technical advisors, a Health Planner who will also serve as the Chief of Party for the technical assistance team and a Management Development/Health Services Research Specialist, will provide assistance to the Planning Directorate and the Office of the Director General for the duration of the Project. A MIS Specialist will also be needed for the first two years of the Project, and then intermittently for the remainder of the Project to assist the MOH in upgrading the computerized MIS. The skills of these technical advisors will be augmented with specialized short-term technical assistance, such as in areas of alternative cost-recovery schemes, patient utilization patterns, and adaptation of special software packages. The Project will purchase approximately $700,000 in computers and related equipment.

IV. FINANCIAL ANALYSIS

A. Financial Plan

Total Project costs are an estimated $79.6 million as shown in the following Financial Tables. AID will contribute $48 million and the GOES $31.6 million. The largest share of AID funds will be for drugs and medical supplies ($28.7 million or 60%). Another 12% will be for vehicles and spare parts, equipment for units and posts and the malaria program, and computers; and 12% of the funding will be used for short and long-term technical assistance. Remaining funds will be allocated for insecticides (5%), child survival promotion and support for the health education division of the MOH (2%), training (2%), administrative support personnel (1%), evaluation (1%), and contingencies (5%).

The GOES contribution to the Project is estimated at $31.6 million, representing 40% of Project costs. The GOES budget costs include pharmaceuticals; salaries for the PROSAR workers, logistical support personnel and participant trainees; vehicle operating and maintenance costs; labor and other construction costs for laboratory facilities at the unit and post level, and computer maintenance.

B. Financial Analysis

Over 75% of Project resources are being used to meet essential commodity requirements of the MOH that can only be met by off-shore procurement requiring foreign exchange. Of this, 65% will be used to purchase A.I.D.-funded pharmaceuticals, medical supplies, and insecticides having their source and origin in the U.S.; medicines which are available locally or can be purchased by the MOH offshore at a lower cost than in the U.S., will be purchased by the MOH using its own resources.

In view of the constraints cited earlier with respect to the MOH's budget, the design of the Project was conducted with due attention to the MOH's ability to sustain the operation of administrative, logistical and technical support systems strengthened by the commodity support, computerization of the MOH's management information system, and establishment of competency-based training programs. However, the fundamental premise of this Project is that with the establishment of more efficient support systems and a decision-linked management information system, the MOH will be in a position to rationalize its budget allocation process and effect shifts as appropriate.

C. Effects of AID's Project on Recurrent Costs

New recurrent costs to the GOES created as a direct result of the AID funding under this Project are minimal -- those associated with maintenance and operation of the computerized management information system (estimated at $15,000 per year during the Project and $50,000 per year thereafter), $75,000 in additional personnel costs for additional mechanics and bio-medical technicians, and the operating costs of the motorcycles for the malaria program ($4,500 per year). Maintenance and operation costs associated with the other vehicles should be reduced overall since the vehicles being purchased will replace vehicles of 10 years and older and the MOH will be reducing overall fleet size. Repair costs for bio-medical equipment should also be reduced with the introduction of new equipment and training of laboratory technicians in simple preventive maintenance techniques for the new equipment. In addition, for purposes of the recurrent cost analysis, however, we have also included the salary costs for the 172 PROSAR workers to be added to the MOH personnel roles during the two-year pilot phase ($344,000 per year) using GOES resources. Total recurrent costs added as a result of this Project are $473,500 per annum, or approximately 1% of the total AID Project funding.

Conservative estimates of the MOH's budget over the next five years, based on trends in the MOH budget as a percentage of the total GOES budget and GDP, would suggest an increase of approximately 19.0 million colones or $3.8 million (See Annex H tables and Bulk Annex A). Assuming the MOH institutes additional cost-recovery measures to generate resources to increase its purchases of pharmaceuticals (i.e., full cost-recovery for medicines), this budget increment could be used to cover the minimum recurrent costs generated by this Project, as well as the costs for expanding the PROSAR program beginning in the third year if an evaluation of the program supports such a strategy. The recurrent cost associated with an additional 600 PROSAR workers during the final three years of the Project would be $1.2 million per year.

However, as suggested above, the MOH will have to implement both cost-recovery and cost-containment measures during the Project period if it is to be able to assume a greater share of the burden for medicines and supplies, than it is able to currently. An explicit objective of this Project is to assist the MOH in grappling with issues related to health care financing. Applied health research studies on cost recovery and use of MOH resources will be conducted during the first and second years to assist the MOH in identifying viable options and formulating strategies to increase the self-sufficiency of the public health care system.

TABLE II

SUMMARY COST ESTIMATE AND FINANCIAL PLAN
(US $000)

	PROJECT INPUTS	A.I.D. FX	A.I.D. LC	GOES LC	PROJECT TOTAL
I.	COMMODITIES				
	A. Pharmaceuticals & medical supplies	28,700.0		25,000.0	53,700.0
	B. Equipment and materials	700.0		0.0	700.0
	C. Insecticides	2,300.0		0.0	2,300.0
	C. Vehicles	4,588.0		0.0	4,588.0
	D. Computer Equipment	687.0		0.0	687.0
II.	INFRASTRUCTURE MAINTENANCE/CONSTRUCTION	0.0		1,675.0	1,675.0
III.	PERSONNEL	0.0	550.0	2,930.0	3,480.0
IV.	CHILD SURVIVAL PROMOTION/HEALTH EDUC.	0.0	950.0	425.0	1,375.0
V.	PARTICIPANT TRAINING	300.0	0.0	40.8	340.8
VI.	TECHNICAL ASSISTANCE				
	A. Long Term	3,825.0	0.0	0.0	3,825.0
	B. Short/Medium Term	1,710.0	320.0	0.0	2,030.0
	C. Training Program Support	0.0	850.0	110.0	960.0
VII.	PROGRAM LOGISTIC SUPPORT	0.0	0.0	1,405.0	1,405.0
VIII.	EVALUATION	180.0	50.0	0.0	230.0
IX.	CONTINGENCY	2,290.0			2,290.0
PROJECT TOTAL		45,280.0	2,720.0	31,585.8	79,585.8

TABLE III

SUMMARY BUDGET OF PROJECT INPUTS AND OUTPUTS

(US$000)

Components	Outputs	A.I.D. FX	A.I.D. LC	A.I.D. Total	GOES Total	Project Total
I. Logistical Systems Support						
Pharmaceuticals & Supplies	$26 mil. drugs, $2.7 sup	28,700.0		28,700.0	25,000.0	53,700.0
Insecticides	Propoxur, abate	2,300.0		2,300.0	0.0	2,300.0
Equipment	Various	700.0		700.0	0.0	700.0
Vehicles	Various	4,588.0		4,588.0	0.0	4,588.0
Logistic Support	Gas, oil, supplies				1,250.0	1,250.0
Facility maintenance/repair	Water, sewer, other			0.0	150.0	150.0
Construction/refurbishment	60 new labs, 30 labs refur.			0.0	1,525.0	1,525.0
Personnel	60 biomed tech, 70 mech			0.0	1,230.0	1,230.0
Long Term T.A.	126 pm	1,537.5		1,537.5		1,537.5
Short term T.A.	Approx 84 pm	840.0		840.0		840.0
Short term training	Materials, workshops		150.0	150.0	25.0	175.0
Sub-total Component		38,665.5	150.0	38,815.5	29,180.0	67,995.5
II. Improving Basic Health Svcs.						
Child survival promotion	Materials/mass media		950.0	950.0	425.0	1,375.0
Short term training	Materials, workshops		500.0	500.0	60.0	560.0
Personnel	PROSAR & ARS supervisors			0.0	1,700.0	1,700.0
Long Term T.A.	48 pm	600.0		600.0		600.0
Short term T.A.	Approx. 34 pm	340.0		340.0		340.0
Sub-total Component		940.0	1,450.0	2,390.0	2,185.0	4,575.0
III. Policy and Program Planning						
Materials & Equipment	Computers	687.0		687.0		687.0
Logistic Support	Computer main. contract			0.0	60.0	60.0
Participant trainig	Health policy, ops. rsrch	300.0		300.0	40.8	340.8
Short term training	Materials, workshops		200.0	200.0	25.0	225.0
Long Term T.A.	134 pm	1,687.5		1,687.5		1,687.5
Short term T.A.	Approx. 53 pm	530.0	320.0	850.0		850.0
Sub-total Component		3,204.5	520.0	3,724.5	125.8	3,163.3
IV. Other Costs						
Personnel	T.A. Admin. support		550.0	550.0		550.0
Logistic Support	Rent add'l MOH offices			0.0	95.0	95.0
Evaluation	3 in-depth studies	180.0	50.0	230.0		230.0
Sub-total Other Costs		180.0	600.0	780.0	95.0	875.0
						0.0
PROJECT SUB-TOTAL		42,990.0	2,720.0	45,710.0	31,585.8	76,608.8
Contingency				2,290.0		
PROJECT TOTAL				48,000.0	31,585.8	79,585.8
(As a Percent of Total)				60%	40%	

TABLE IV

PROJECTION OF EXPENDITURES BY FISCAL YEAR

($US000)

SOURCE/USE	1986	1987	1988	1989	1990	1991	TOTAL	% CHILD SURVIVAL	$ CHILD SURVIVAL	
A.I.D.										
I. COMMODITIES										
A. Pharmaceuticals & Supplies		7,000.0	6,300.0	5,700.0	5,100.0	4,600.0	28,700.0	20	5740.0	
B. Insecticides		420.0	620.0	420.0	420.0	420.0	2,300.0	20	460.0	
C. Equipment and materials		330.0	130.0	80.0	80.0	60.0	700.0	40	280.0	
D. Vehicles		1,131.0	1,302.0	1,065.0	600.0	440.0	4,538.0	60	2752.8	
E. Computer Equipment		537.0	25.0	50.0	50.0	25.0	687.0	60	412.2	
II. PERSONNEL		110.0	110.0	110.0	110.0	110.0	550.0	20	110.0	
III. CHILD SURVIVAL PROMOTION/HEALTH EDUCATION		250.0	250.0	200.0	150.0	100.0	950.0	100	950.0	
IV. PARTICIPANT TRAINING		60.0	80.0	120.0	40.0	0.0	300.0	30	90.0	
V. TECHNICAL ASSISTANCE										
Long term		1,050.0	1,312.5	562.5	450.0	450.0	3,825.0	40	1530.0	
Short term		280.0	335.0	485.0	480.0	450.0	2,030.0	20	406.0	
Training Program Support		95.00	190.00	210.00	225.00	130.00	850.0	50	425.0	
VI. EVALUATION			60.0	70.0		100.0	230.0	60	138.0	
VII. CONTINGENCY		100.0	600.0	700.0	500.0	390.0	2,290.0			
A.I.D. TOTAL		11,413.0	11,314.5	9,772.5	8,205.0	7,295.0	48,000.0		13294.0	29.1% OF TOTAL FUNDS PROGRAMMED
G.O.E.S.										
I. PHARMACEUTICALS AND MEDICAL SUPPLIES		4,000.0	4,500.0	5,000.0	5,500.0	6,000.0	25,000.0	20	5000.0	
II. INFRASTRUCTURE MAINTENANCE/CONSTRUCTION		260.0	485.0	310.0	310.0	310.0	1,675.0	40	670.0	
III. PERSONNEL		314.0	669.0	669.0	669.0	669.0	2,930.0	90	2637.0	
IV. CHILD SURVIVAL PROMOTION/HEALTH EDUCATION		50.0	75.0	100.0	100.0	100.0	425.0	100	425.0	
V. PARTICIPANT TRAINING (SALARIES OF PART.)		9.6	12.0	15.6	3.6	0.0	40.8	30	12.2	
VI. TRAINING PROGRAM SUPPORT		12.5	22.5	27.5	30.0	17.5	110.0	80	88.0	
VII. PROGRAM LOGISTIC SUPPORT		265.0	282.0	284.0	286.0	288.0	1,405.0	50	702.5	
G.O.E.S. TOTAL		4,911.1	5,985.5	6,406.1	6,898.6	7,384.5	31,585.8		9534.7	30.2% OF TOTAL
TOTAL PROJECT		16,324.1	17,300.0	16,178.6	15,103.6	14,679.5	79,585.8			

TABLE IV (page 2)

RELATIONSHIP TO CHILD SURVIVAL OBJECTIVES

PROJECT PURPOSE: To support and strengthen the capability of the Ministry of Public Health to deliver and support basic health care services, including preventive and primary care services important to the MOH child survival program.

PROJECT COMPONENT/INPUT	IMMUNIZATIONS	ORT	CHILD MONITORING	OTHER INTERVENTIONS/COMMENTS
Logistical Systems Support				
Pharmaceuticals				Project-funded drugs will include antibiotics, anti-parasites, and other drugs used in treatment of common childhood illnesses. (Vaccines are being purchased by MOH and other donors.)
Medical Supplies	XXX	XXX		Project-funded medical supplies will be used in immunization programs and at ORT referral facilities. (ORS packets being purchased by GOES and other donors.)
Vehicles	XXX	XXX	XXX	Project-funded vehicles will be used in transport of drugs, care providers, and for supervision.
Insecticides				Reduce incidence of malaria in children which contributes to anemia, malnutrition, and vulnerability to other childhood illnesses.
Equipment and Facilities Main.	XXX	XXX	XXX	Improvements in facilities (water, cold chain maintenance, and laboratories) where routine, preventive, and emergency child survival activities are based.
Strengthening Basic Health Svcs.				
Competency-based training	XXX	XXX	XXX	Care providers will be better trained through improvements in competency-based training.
PROSAR - Pilot phase	XXX	XXX	XXX	PROSAR workers will be promoting immunization, teaching mothers in use of ORT, and identifying target children for child growth monitoring.
Promotion (mass media, materials)	XXX	XXX	XXX	Mass media and other materials will support child survival programs.
Policy and Program Planning (including Studies)	XXX	XXX	XXX	This component will improve the MOH's monitoring and evaluation of child survival programs as to coverage, cost-effectiveness, and impact.

TABLE V

SUMMARY OF RECURRENT COSTS

PROJECT COMPONENT/INPUT	ANNUAL RECURRENT COSTS GENERATED ($000) FY 87	FY 88	FY 89	FY 90	FY 91	FY 92	NOTES
Logistical Systems Support							
Pharmaceuticals	0.0	0.0	0.0	0.0	0.0	0.0	Overall requirement should not increase due to optimizing MOH purchasing.
Vehicles	16.5	18.0	19.5	19.5	19.5	19.5	Operation of new motorcycles for malaria service; 10 additional auto-mechanics. All other vehicles are replacement vehicles.
Equipment	60.0	60.0	60.0	60.0	60.0	60.0	Salaries for 30 bio-med tech. being hired in FY 1986 by MOH.
Facility (water/sewage systems)	0.0	0.0	0.0	0.0	0.0	0.0	Project finances repairs of existing water/sewage systems and will not increase recurrent costs of these facilities.
Insecticides	0.0	0.0	0.0	0.0	0.0	0.0	Project provides commodity support for ongoing MOH program. Spraying operations should not be needed after the five year Project period.
Strengthening Basic Health Svcs							
Child survival promotional activ.							Project will support mass media campaigns and materials development. No recurrent costs will be generated.
PROSAR workers	144.0	344.0	344.0	344.0	344.0	344.0	Salaries for two-year pilot phase; 172 workers.
Competency-based training	0.0	0.0	0.0	0.0	0.0	0.0	Technical assistance and support for materials development and printing will be provided under the Project. Other donors are funding actual traing programs.
Policy and Program Planning							
Computer maintenance	0.0	15.0	15.0	15.0	15.0	50.0	Maintenance contract with local firm
TOTAL	220.5	437.0	438.5	438.5	438.5	473.5	

V. IMPLEMENTATION PLAN

A. Administrative Arrangements

The Minister of Health of the Government of El Salvador will assume overall administrative responsibility for this Project. The Minister will delegate responsibility for oversight and Project coordination to the Vice-Minister, who will have a Project-funded staff assistant to monitor the day-to-day implementation matters for the Vice Minister. An internal Project Steering Committee will be constituted of the heads of the Directorates for Planning, Administration and Technical/Normative Operations, the head of the Drug and Medical Supply Unit, and the Office of the Director General of Health, with responsibility for the overall management and execution of Project activities, with the support of the technical assistance team. Personnel in each of these Directorates and Units will also be designated as counterparts for the technical assistance team who will be located throughout the central MOH. (See Annex I for administrative arrangements between the technical assistance team and MOH personnel.)

As a precondition to expenditure of funds by the GOES, establishment of the staff position to the Vice-Minister and the Project Steering Committee will be required. The MOH and USAID will jointly agree on the responsibilities, scope of work and reporting requirements of the staff assistant and this Project Committee. A detailed Action Plan, including a budget and schedule of activities, for the first year will be jointly developed and agreed to by the MOH (including the Project Steering Committee) and USAID and will be a Condition Precedent to disbursement. Progress toward goals established in this plan, and disbursements pursuant thereto, will be reviewed periodically with the AID Project manager. Subsequent allocations will be contingent on successful implementation of the activities described in the annual Action Plan.

Annual Action Plans (including budgets) for subsequent years will be prepared and submitted for AID approval at least 30 days prior to the beginning of each year of the Project. AID approval will be made by Implementation Letters. Once approved, the annual plan and budget will constitute the basis for all Project expenditures. For activities identified in the plan, no further AID approval will be required unless the value of a good or service exceeds $25,000.

The MOH will prepare its annual pharmaceutical requirements each year in August, together with a plan for MOH purchases and projected donations, and this will be reviewed by A.I.D. As is the case now, the list of needs will be based on an analysis of priority pharmaceuticals listed in the Cuadro Basico. Only those

pharmaceuticals which the GOES cannot obtain locally or from non-U.S. sources at lower costs, and which are required for priority health programs will be purchased by AID. PIO/Cs will be prepared and issued by USAID to AID/W for assignment to the GSA or VA.

Approximately $5.8 million will be used to finance the technical assistance required under the Project, which will be implemented through direct USAID contracts and buy-ins to regional and centrally-funded projects under authority to be included in the Project Agreement. Short-term technical assistance, including that which is available through AID/W centrally managed projects such as Stonybrook, PRICOR, and the Vector Biology Control Project, will be implemented through work-orders, buy-ins, or direct contracts with USAID, under authority to be included in the Project Agreement.

Implementation of the Project will be monitored by a USAID Project Implementation Commmittee, chaired by the Associate Mission Director for Operations, which will meet monthly, and at the regularly scheduled quarterly Project reviews with the Mission Director, Deputy Director, and the Associate Mission Director for Operations. The Project Implementation Committee will include representatives from the Office of Human Resources and Humanitarian Assistance, the Office of Projects, the Controller's Office, the Management Office, and the Program Office. The HR/HA Health Officer will be responsible for USAID's day-to-day management of the Project.

B. Disbursement Procedures

Standard A.I.D. disbursement procedures will be employed, appropriate to the complexity and requirements of each of the Project activities. A.I.D. direct disbursement mechanisms will be handled at the Mission level. All A.I.D. local cost contributions will be handled through the GOES's extraordinary budget process. A chart showing the methods of implementation and financing which will be used under the Project is included as Annex M. No Project funding is budgeted for independent auditing given the thoroughness of the GOES audit process for extraordinary budget expenditures which will be used for the $1.6 million in local cost contributions to be administered by the GOES. The balance of the Project funding will be disbursed through direct AID contracts or direct placement of participants by AID; audits by third parties are therefore not warranted.

C. Procurement Plan

A detailed procurement plan for pharmaceuticals and medical supplies, equipment, vehicles and technical assistance, including a schedule for all planned first year procurements, is included as Annex J. The source and origin of pharmaceuticals, medical supplies

and vehicles will be limited to AID Geographic Code 000 (with the exception of motorcycles). Other equipment and materials purchased with foreign exchange (U.S. dollars) will have their source and origin in the United States and the CBI-designated Central American Common Market countries. Local shelf items will be purchased in accordance with local cost procurement guidelines in Chapter 18 of AID Handbook 1, Supplement B.

D. Waivers

Included in the Project authorization will be a request for waiver of competition for the purchase of AMC vehicles under the Project, in accordance with the MOH's standardization plan. Ninety 125cc Japanese motorcycles will also be purchased; however, such motorcycles are covered by an AID/W blanket source/origin waiver for motorcycles with up to 125cc engines. Also included in the Project authorization will be a request for waiver of competition for the purchase of 100 portable spray pumps from H.D. Hudson Company and 12,000 nozzle tips from Spraying Systems Company. Again, the justification is standardization. Other source/origin waivers may be required for some laboratory equipment, but these will be sought through the appropriate means at a later date when the specific requirements have been identified. Additional study is underway to determine if a sole source waiver is needed for purchase of the computer equipment required. These will be based on the recommendation of SER/IRM after their review of the systems design.

E. Schedule of Major Events

A chronogram providing an overall picture of Project implementation with essential activities and timing laid out is included as Table VI. Table VII provides an estimated time schedule for the applied health research studies on key policy issues.

VI. MONITORING PLAN

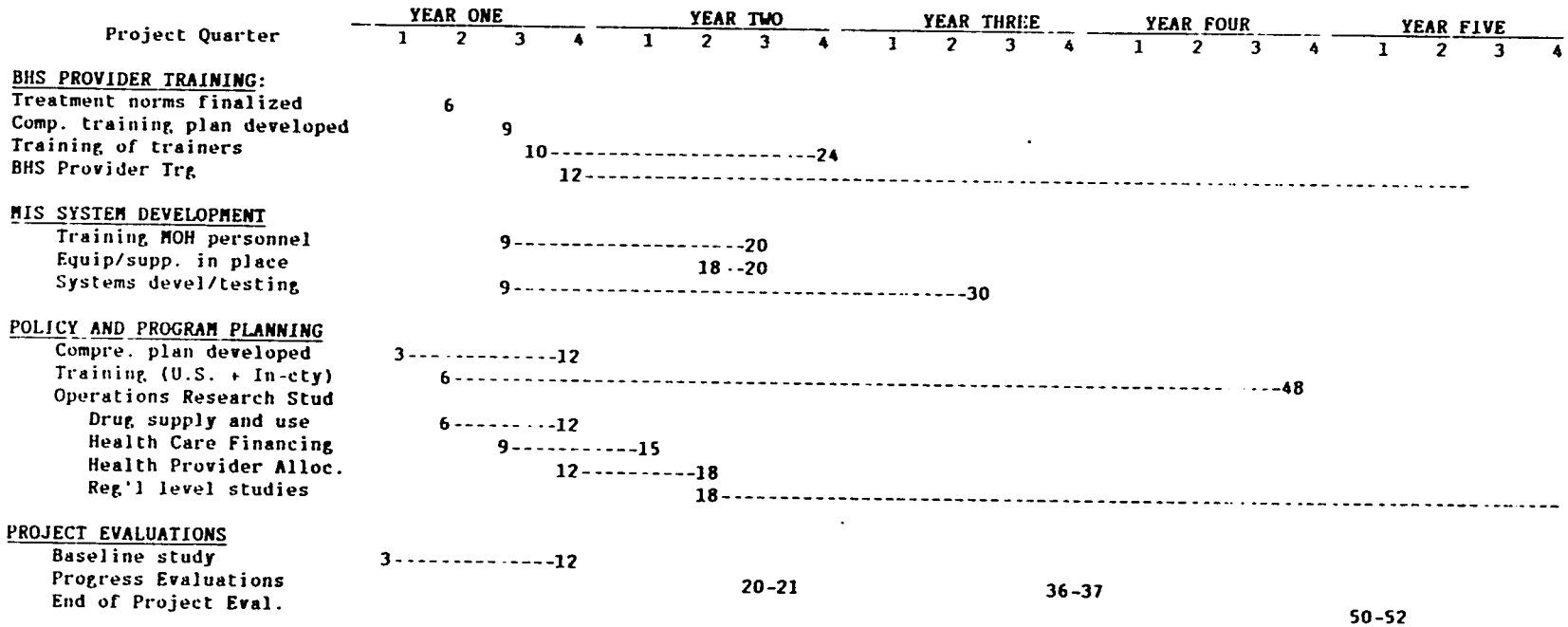
A. AID Project Monitoring Arrangements

Project monitoring will be exercised by the Health Officer assigned to the USAID's Human Resources and Humanitarian Affairs Office (HR/HA). The HR/HA Project Manager will work closely with the MOH and related GOES implementing entities (for example, the Corte de Cuentas and the Ministry of Planning) to assure that Project implementation plans and objectives are met, and will have the assistance of a full-time personal services contractor for procurement actions. In accordance with Mission Policy, and in particular in view of the recent Management Assessment of the VISISA Project, monthly Project review meetings will be held to review and direct Project implementation. The Associate Mission Director for

TABLE V I

MAJOR EVENTS

	YEAR ONE				YEAR TWO				YEAR THREE				YEAR FOUR				YEAR FIVE			
Project Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PROJECT START-UP																				
ProAg signed	X																			
CBD Ad. for RFTP	1																			
CPs met	2																			
VISISA T.A. Extension	3																			
PSC Contract signed	3																			
T.A. Proposals due		4																		
T.A. selected		5																		
T.A. contract signed			6																	
PSA Selected			6																	
T.A. team arrives				7																
VISISA T.A. Exten. Exp.				7																
COMMODITY ORDERS/ARRIVALS																				
PIO/C for drugs/supplies	3																			
PIO/C for malaria prog.	3																			
Vehicles ordered	3																			
IFB motorcycles issued	3																			
Motor. award made		5																		
Drug/supply arrivals			6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vehicle arrivals			6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mal. equip. arrives				7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Insecticide arrivals				8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MIS specs forwarded IRM		4																		
MIS equip. ordered			6																	
MIS equip. deliv/instal					9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biomed list standardized	3																			
PIO/C for bio-med		5																		
Biomed arrivals begin					9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



NOTE: Numbers indicate project months.

TABLE VII

PROPOSED CHRONOGRAM OF APPLIED HEALTH RESEARCH STUDIES ON SYSTEM-WIDE ISSUES*

Area of Research	Year One				Year Two			
	1	2	3	4	1	2	3	4
I. Health Care Financing:								
Patient Utilization Patterns San Salvador**	X							
Patient Utilization Patterns in Two Regions	X							
Patient Utilization Patterns in Other Two Regions	X							
Cost recovery for drugs		X	X					
Formalizing and standardizing user fee structure			X	X				
Hospital services financing					X	X		
II. Health Provider Training and Employment								
Provider Availability			X	X				
Effectiveness of PROSAR						X	X	
III. Drug Supply and Use								
Evaluate findings of Santa Ana Region on prescribing practices		X						
Revise methodology and conduct study in a second region				X				
Study of private pharamaceutical industry					X			

* This is an illustrative chronogram of studies relevant to national health care financing and policy questions. Additional regional operational studies will be carried out throughout the Project, beginning in the second year of the Project. A plan for these studies will be developed with the Health Policy advisor.

** Will be funded with FY 86 PD&S funding.

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Operations will chair these meetings. Representatives from the Offices of Human Resources and Humanitarian Affairs, Projects, Program, Management (Contracts), and the Controller will participate in the reviews.

The HR/HA Project Manager will also call upon other Mission Offices and Regional Services as needed throughout Project implementation. These will include:

1. The Projects Office (PRJ), which will monitor Project implementation to assure that the terms and conditions of the Project Agreements are met.

2. The Mission Controller (CONT), who will review disbursement and reimbursement requests for conformity with AID regulations and will ensure that adequate financial controls are exercised.

3. The Program Office (DPPO), which will assist in carrying out AID Project evaluations and related assessments.

4. The Management Office (MO), which will assist in the contracting of personnel and procurement of commodities.

5. The Education and Training Office (OET), which will assist the various implementing entities in certain AID administrative requirements for Participant Training.

6. The Regional Commodity Management Specialist (ROCAP), who will assist in periodically assessing the performance of the MOH procurement office and the adequacy of the procurement planning and implementation processes.

B. Assessment of AID Monitoring Capability

The recommendations of the recent Management Assessment on the VISISA Project have been fully considered in the development of this new Health Project. Therefore, a functioning Project Implementation Committee will be established to help ensure close cooperation among the USAID offices stipulated above in the management and monitoring of this Project. Moreover, a procurement plan has been developed and more carefully detailed annual procurement implementation plans will be developed and monitored throughout the Project. Given these efforts and the level of Mission staff, no difficulty is anticipated in carrying out Project Monitoring responsibilities.

VII. EVALUATION PLAN

AID and the GOES will conduct three Project reviews, utilizing in-house and external resources to be financed under the Project. Baseline data will be gathered during the first year, both as input

for the MIS and through the applied health research studies commissioned as part of this Project. A brief summary is provided here, with greater detail contained in Annex N.

The first evaluation is scheduled for 20 months after signature of the Project Agreement. This evaluation will measure progress in the delivery of commodities and planned improvements in the acquisition and management of drugs and medical supplies; compare efficiency of the maintenance systems for equipment and facilities before and during Project implementation; measure progress in the extension of health services to rural areas; examine progress in implementing malaria control activities; compare the status of the establishment of the MIS with the Project plan; and review the quality of the training programs and applied health research studies undertaken by the MOH. A second evaluation will be scheduled for the 36th month, largely focussed on these same outputs.

A third and final evaluation is planned for the final year of the Project. This evaluation will measure, in addition to output level indicators measured throughout Project implementation, attainment of the purpose and contribution to Project goal. Specifically, the final evaluation will measure the increased availability of basic health services; improvements made in the decision-making capabilities of the MOH as demonstrated through identifiable changes in resource allocation, effectiveness of primary level facilities and providers, and logistics improvement; and reduction in infant and child and mortality and key morbidities indicated in the logical framework.

Each evaluation report will, in addition to covering the above points, identify and discuss major changes in the Project's setting, including socio-economic conditions.

Evaluations will be carried out by a team of specialists, including external consultants. Evaluation services will be contracted by USAID/El Salvador utilizing Project funds, under authority contained in the Project Agreement.

VIII. CONDITIONS AND COVENANTS

Additional Conditions and Covenants beyond those normally contained in the standard A.I.D. Project Agreement will be as follows:

A. Conditions Precedent:

1. Prior to the disbursement of A.I.D. funds for activities under the Project, or to the issuance of any documentation pursuant to which disbursement will be made, the GOES will establish a staff position reporting to the Vice-Minister and a Project Steering Committee, including but not limited to the heads of the Planning Directorate, the Drug and Supply Unit, the Director General, the Administration Directorate, and the Technical/Operative Directorate, for Project coordination.

2. Prior to the disbursement of A.I.D. funds for activities under the Improving Basic Health Services and Strengthening Policy and Program Planning and Management Components, other than for the technical assistance contract personnel, or to the issuance of any documentation pursuant to which disbursement will be made, the GOES shall, except as the Parties may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., a detailed, time-phased Action Plan for project activities to be carried out for the first year of the Project.

3. Prior to the disbursement of A.I.D. funds for in-country training activities or participant training under the Project, or to the issuance of any documentation pursuant to which disbursement will be made, the GOES will submit a detailed training plan which identifies GOES training needs and training resources available through Ministry and other donor projects. Such plan will be prepared on an annual basis.

B. Covenants:

The GOES shall covenant that it will:

1. Obtain A.I.D.'s concurrence to the individual to be contracted or assigned as the staff assistant to the Vice-Minister, and to all contract extensions.

2. Beginning in the GOES FY 1986, make every reasonable effort to effect the timely procurement of, and to fully disburse its annual appropriated budget for, pharmaceuticals and medical supplies.

3. Make every reasonable effort to increase the amount of the MOH's operating budget for pharmaceuticals and to optimize the use of GOES-appropriated resources for these purposes.

4. Make every reasonable effort to budget an amount adequate to finance the recurrent costs of the public health care system.

5. Beginning in the GOES FY 1987, initiate applied health research studies on health care financing and use the results of such studies in the development of the detailed action plans required for this Project.

6. Prior to the obligation of additional health funds under this Project, the GOES and A.I.D. will jointly review the findings of studies undertaken relevant to health care financing issues and discuss and agree upon actions and/or strategies which will increase the efficiency and self-sufficiency of the public health sector.

7. At the end of the second year, participate in a joint GOES/AID review of Project activities and economic conditions relevant to continuing commodity support requirements of the MOH and the programming of planned future-year obligations under this Project.

8. Make available adequately-trained personnel for anti-malarial activities, equipment and facilities maintenance, and health services, to carry out the planned activities of this Project.

VII. SUMMARY PROJECT ANALYSES

A. Economic Analysis

This Project is designed to support and strengthen the MOH to deliver and increase the availability of basic health care services. In economic terms, the Project will invest resources in health care services which aim at improving the overall welfare of the population and as a result its productivity. The purpose of this analysis is to attempt to quantify the economic feasibility of carrying out such an investment.

1. Methodological Considerations

Much of this analysis is based on a recently published article by Ronald J. Vogel and Jon B. Christianson 1/, which discusses some of the problems that economic analysts may find in carrying out orthodox cost benefit analyses of health projects in areas where there is military conflict. The article was found to provide a reasonable framework to analyze the economic feasibility of this Project. The reader, however, should not assume that every subject

(1) Vogel, R. J. and Christianson, J. B., "The Evaluation of Economic Development Projects Where Military Conflict is Present: Investing in Health Care in El Salvador", Journal of Policy Analysis and Management, Vol. 5, 292-310, (1986)

in the article is covered, or that subjects covered fully reflect the views expressed in the cited article. The analysis will proceed by identifying the benefits and costs associated with the Project, by making an attempt at quantifying these. The net present value of each stream will be estimated using a discount rate, and the difference between both figures will be regarded as the net economic benefits associated with the Project. Since benefits will be estimated on the basis of specific assumptions about the impact of the Project, the analysis will include a section in which net economic benefits will be estimated on the basis of a range of those assumptions.

2. Project Benefits

There are four types of benefits which are usually identified with health projects: a) the value of avoided expenditures on curative services; b) the value of avoided physical and psychological pain and suffering associated with disease and death; c) the value which U.S. citizens place in achieving improvements in the health of residents of other countries; and, d) the value of avoided productivity losses associated with partial and total disability and early death.

The first category of benefits, or the value of avoided expenditures on curative care, can only be estimated if there exists a wealth of health and medical care data. At a minimum, detailed information is necessary on the impact of the program in terms of the composition and likely course of diseases avoided by the population served by the Project, and the future cost of medical services needed to treat each of the diseases avoided. Clearly, this type of information is not available in the Salvadoran setting. The complexity of the information required does not permit the utilization of assumption-generated estimates for this type of costs, and, therefore no attempt will be made to estimate them on that basis. Following what appears to be the standard analytical practice for this type of benefit, its quantitative magnitude is assumed to be sufficiently small not to warrant the effort to obtain an estimate.

The second and third categories of benefits, or the value of pain and suffering associated with disease and death, as well as the value which U.S. citizens place on improved health in El Salvador will be ignored. Clearly, there is no empirically sound basis on which to estimate these benefits.

The fourth category of benefits, the value of avoided productivity losses, is also difficult to estimate. The difficulty lies in defining empirically verifiable linkages between: a) the impact of the project and improved health; and, b) improved health and productivity increases. The first linkage requires defining the impact which Project activities will have on specific segments of the population (sex, age, etc). The second linkage requires an estimate of the productive life of each of the segments of the population served by the Project. There is no available data at that level of detail to permit the definition of either linkage. There is, however, an alternative way to "estimate" productivity gains associated with the Project on the basis of assumptions about the average size of the gain, the share of the population, and the impact of the conflict on productivity. If this method of estimating benefits exceeds the discounted stream of costs, the investment could be justified economically, especially when other known, but unquantifiable, benefits have not entered the cost/benefit calculus.

For purposes of estimating the value of avoided productivity losses, this analysis will utilize four assumptions which together generate estimates of economic benefits as follows:

a) The rate of productivity growth associated with the project: The Vogel and Christianson paper utilizes a range of four assumptions about productivity growth: 1%, 5%, 10%, and 15%. For the purposes of this analysis the range will be changed to 1%, 3%, 5%, and 10%. The 15% was discarded on the basis that it is too high an estimate of potential productivity increases in El Salvador under current circumstances.

b) The share of the total population served by the Project: This section also follows the Vogel and Christianson assumptions that the Project can potentially reach 85% of the population. However, this analysis utilizes a less pessimistic range of percentages of the target population actually served by the Project. The range used, which is 15%, 20%, 40%, and 50%, is regarded as more realistic than the range used in their paper, which includes 1%, 5%, and 10%.

c) The GDP per capita: This Mission will utilize a GDP per capita of $587, which was registered in 1985. This figure already reflects an exchange rate adjustment implemented in January 1986 which moved the rate to ₡5 to $1. The population figure upon which this figure was estimated is 4.77 million inhabitants, with a 2.7 rate of growth.

Table VIII presents a range of total economic benefits that would accrue in the first year under various assumptions. The upper left corner of the table shows the most pessimistic of the outcomes ($3.6 million), while the lower right corner shows the most optimistic of outcomes ($118.9 million). In order to estimate the stream of economic benefits under the Project, this analysis will depart from the assumption that reaching 15% of the target population per annum is a realistic and achievable objective. Any increment beyond 15% would be too optimistic under present circumstances, any fall below that figure would seriously a priori put in question the investment in the sector. This figure is deliberately below estimates made in other sections of the Project paper. The next step is to choose a likely range of productivity increases per capita associated with the yearly increment in the share of the target population reached by the Project (15%). In this case, this analysis will proceed by choosing three outcomes, the achievement of a 1%, 3%, and a 5% increase in productivity resulting from the services provided by the Project.

Once the base year benefits are established, the analysis proceeds to Project these benefits over a period of five years. These projections will take into account a population growth rate of 2.7% per year, and the likelihood that the productivity increases will not be sustained over time because of uncertainties associated with factors such as the armed conflict (optimism bias). The latter element is taken into account by assuming that first year productivity increases will decline by 50% each subsequent year and that such increases will end after the fifth year. The analysis will utilize five years as the time frame to measure benefits as well as costs.

3. Project Costs

This analysis utilizes all the costs associated with the Project. This includes the resources which A.I.D. and the Government of El Salvador will invest. The figures were obtained from the financial plan portion of the Project Paper.

4. Net Economic Benefits

Table IX shows an estimate of Net Economic Benefits on the basis of the combination of assumptions which appear to be as the most reasonable. The discount rate adopted is 12%, which is the standard practice for this type of Project. As previously justified, it is assumed that 15% of the population is reached every year. This estimate also adopts the assumption that the population served is able to achieve a 3% increment in productivity, and that such increments decline 50% each subsequent year. The net results of the discounted stream of benefits and costs shows a net present value of

TABLE VIII

ECONOMIC BENEFITS

(millions US$)

Percent of target population with improved productivity	Percent Improvement in Productivity			
	1%	3%	5%	10%
15.0%	3.6	10.7	17.8	35.7
20.0%	4.8	14.3	23.8	47.5
40.0%	9.5	28.5	47.5	95.1
50.0%	11.9	35.7	59.4	118.9
Productivity Gain per capita	5.9	17.6	29.4	58.7

Memorandum:
Total Population: 4.77 million
Target Population: 4.05 million
Per Capita GDP(1): $537

Source: Central Bank and Ministry of Planning Data

Table IX
Cost Benefit Analysis - Health Systems Project
(Millions of US$)

Assumptions		Net Present Value	
Discount Rate:	12.0%	Benefits	62.8
Population Reached:	15.0%	Costs	57.8
Productivity Gain:	3.0%		
Optimism Bias Correction:	50.0%	Net	5.0

	Accumulated Productivity Increases (Optimism Bias Corrected) per year						
YEAR	1	2	3	4	5	Total Benefits	Total Costs
1	10.7					10.7	16.3
2	11.0	5.4				16.4	17.3
3	11.3	5.5	2.7			19.5	16.2
4	11.6	5.7	2.8	1.3		21.3	15.1
5	11.9	5.8	2.8	1.4	0.7	22.6	14.7

Table X
Cost Benefit Analysis - Health Systems Project
Alternative Scenarios

Assumptions	Base Case	Model 1	Model 2	Model 3	Model 4	Model 5
Discount Rate	12 %	12 %	12 %	14 %	12 %	12 %
Population Reached	15 %	15 %	15 %	15 %	15 %	15 %
Productivity Gain	3 %	5 %	3 %	3 %	3 %	1 %
Optimism Bias Correction	50 %	50 %	40 %	50 %	40 %	50 %
				(Millions of US$)		
Net Benefits	5	47.3	12	4.3	-0.9	-36.5

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$5.0 million. This return suggest that investment in health has a high return, at least in economic terms. However, estimates which are generated on the basis of assumptions need to be tested for changes in the underlying assumptions which generated such results. The purpose of such testing is to make sure that positive results are not critically dependent on a given assumption.

5. Sensitivity Analysis

Table X presents a range of six different estimates generated under different sets of assumptions, including the one shown in Table 2. The principal assumptions tested are: i) the discount rate; ii) productivity growth; and, iii) optimism bias.

The discount rate was modified from the base case presented in Table 2 by raising it from 12% to 14%. As expected in cases where the time frame is short, the net economic benefits were reduced by only $0.7 million. Thus, if the rate of discount were increased to an even higher level the change in the net economic benefits would not be significant.

The productivity gain was tested for the values of 1% and 5%. The results show that net economic benefits are very sensitive to this assumption. In the case of the 1% assumption, net economic benefits become minus $36.5 million. This result must be viewed against the fact that other benefits identified above have not been quantified, and that the value of these benefits may indeed exceed the negative value obtained under this assumption. Conversely, raising the assumed productivity increase to 5% raises the net economic benefits by about $40 million.

The optimism bias correction was changed to 40% and 60%. The use of a 40% assumption reduces net economic benefits by approximately $6 million, while raising the correction to 60% increased net economic benefits by an almost similar amount (i.e., $6 million).

6. Conclusions

The forgoing analysis shows that investment in the health sector in El Salvador is an economically sound proposition, if the principal assumptions of the project analysis prove correct. Much of this will depend on the degree to which the Project is effective in reaching the target population with the intended services. This conclusion is based on the fact that economic benefits were only partially measured and that under the strictest of assumptions about the nature and magnitude of those measured benefits, a positive stream of economic benefits resulted.

B. Technical Analysis

The technical analyses are presented by Project component, as described in Section III of this Project Paper.

1. Supplies and Equipment Provision and Management

All of the pharmaceuticals to be procured through this Project will be ones included in the Cuadro Basico. It is not anticipated at this time that during the course of this Project drugs new to El Salvador will be procured. However, if that is the case, the new Drugs and Medical Supplies Unit will have reviewed the quality of the drug and approved it for introduction to and use in the MOH system. The same is true for other medical supplies that will be procured through the Project. With regard to management procedures, these will be strengthened through refinement of procedures (and the related data-base system) introduced during the VISISA Project.

Two aspects of supply management have been addressed during the VISISA Project, but require continued strengthening. The first is forecasting and procurement planning, which will be strengthened through the use of the MIS bio-statistics and inventory control sub-systems and the establishment of the Drug and Supply Unit as the coordinating point for forecasting, procurement planning, and monitoring the distribution and use of drugs. The second is the imbalance of drug distribution to and stock in MOH facilities. The MOH's effort to rationalize distribution is complicated by unforeseen donations and uncoordinated purchases by the patronatos. The aforementioned efforts of the Drug and Supplies Unit, particularly with respect to monitoring distribution and use and the computerized inventory control should facilitate improvements in this area as well.

The Project will provide bio-medical and electro-mechanical equipment and vehicles that are deemed by the MOH to be essential to provision of basic health services. Since 1979, the only equipment brought into the MOH has been provided by donors, and it has not been sufficient to bring these facilities' equipment up to the reasonable standards incorporated in MOH equipment lists for each type of basic health service facility. For example, IDB-funding did not provide laboratory equipment for health units. The equipment to be provided under the Project includes laboratory equipment for use at health units and water pumps and sewage connections at units and posts; none of these items represent any new technology for MOH personnel. Moreover, in the process of selecting and obtaining those commodities, the Project will assist the MOH with development and use of criteria for selection of equipment based on clearly defined service needs and likely impact on health outcomes, a standardization policy, recurrent costs, and training needs of providers and maintenance personnel.

2. Improving Basic Health Services Delivery

Success in strengthening basic health services, outreach and community health services will depend, as will efforts under other components of this Project, on assuring that a wide range of service providers and support personnel have the knowledge and skills necessary to carry out their tasks in accordance with MOH norms and standards. This makes effective training an essential element of the Project and of all of the MOH's efforts to improve its basic health services and their support. Therefore, the Project will include support for improvements in the pre-service training program being designed for PROSAR workers and in-service training programs for providers of basic health services, featuring increased MOH emphasis on competency-based training in addition to direct counterpart funding of training costs and of salaries of maintenance personnel and PROSAR workers.

Competency-based training is based on the analysis of skills and knowledge needed for effective and safe performance of job-required tasks and designed to ensure that trainees acquire and demonstrate their capacity for such performance. Its features usually include behavioral objectives, initial pre-testing of students' relevant skills and knowledge, a variety of instructional approaches and materials, focus on the learner more than on the trainer, and objective testing or rating of each student's performance against the training objectives. Competency-based training is applicable at all levels, although analysis of job-required tasks is easier for jobs involving repetition and regular routines. For more complex jobs, key tasks can often be isolated and competency-based training programs developed for them. Competency-based training has a high potential for assuring that MOH personnel acquire the specific skills and knowledge required by their jobs, as is necessary for successful implementation of MOH programs and systems, including those carried out under this Project.

Several constraints must often be overcome by competency-based training programs. One, common to many countries, is that both trainers and trainees are accustomed to rote learning and to testing which emphasizes retention rather than understanding, application, and skills. Another is that trainers (particularly physicians) sometimes believe that they should be allowed to (attempt to) teach whatever they personally consider appropriate, rather than following a prescribed program or method. A third problem sometimes occurs when objective testing produces results which are at variance with those which the trainer or program believes or wants. These constraints are expected to be surmountable in El Salvador because MOH leaders and trainers are convinced that systematic, efficient, norm- and task-based training is necessary for the attainment of their basic health services objectives and that competency-based training will help them meet those training needs.

3. Strengthening and Decentralizing Planning and Management Systems

The MIS will be the framework upon which the system-strengthening aspects of the Project are built. This component includes design and refinement of systems software; provision of equipment (including microcomputers and related peripherals) and training of MOH personnel. Full time (and short-term as necessary) technical assistance will be provided throughout the duration of the Project. While design, implementation and evaluation of a comprehensive MIS for the MOH may appear to be an ambitious undertaking, it is viewed as feasible for several reasons:

1) available software and computer languages make the development of the individual sub-systems and development of the integration software much easier than would have been the case even two years ago - this is a technology that is advancing rapidly and that has become much more feasible for use in health services management in developing countries;

2) ample technical assistance is available in the field of microcomputer applications in health care (including applications in El Salvador); and

3) the MOH has had experience in designing and implementing data-base management systems, virtually all of which were developed on relatively old equipment with old languages, but which nonetheless function. Although the data is in some cases much delayed, this is a result of lack of sufficient and appropriate equipment and software and insufficient personnel. The interest, capacity and groundwork for further implementation warrants further development in this important area.

The rapid rate of technological change and the relatively high cost of MIS equipment do not constitute obstacles or major problems for the MOH's development and effective use of the MIS. Maintenance capacity exists in the private sector for computer equipment, and the feasibility and cost-effectiveness of contracting the private sector for these services will be examined by the GOES. Given that MOH staff are trained in design and adaptation of the applications software, they should be able to make whatever changes are necessary over the foreseeable future. The basic hardware systems and the software which the MOH will be using have been carefully selected to permit transfer of the programs and/or data to other systems which may eventually replace the present and currently planned ones.

Qualified and interested MOH staff must be available at all levels in order to establish and operate the MIS. Certain staff have been identified during the course of this Project Paper preparation, but they are currently burdened with existing planning, programming and budgeting initiatives, development of overall supervision programs and specific norms, and conduct of specific pilot projects at the regional levels. It will be important to ensure that these individuals are not overloaded with functions related to this Project. This can be accomplished by integrating the activities that constitute this component with existing related activities of the MOH, and by identifying other (potentially) capable and interested individuals and involving them in the proposed new activities as early as possible.

In order to guide the MOH in its efforts to improve resource allocation, technical assistance will be provided to develop and implement planning, programming and budgeting procedures at the central and regional levels (focusing on decentralization), and to assist the MOH in designing and conducting applied health services research studies linked to key decisions areas faced by the MOH (e.g., cost recovery, health provider training and employment). Some of the techniques used in the studies may be new to MOH personnel. They will focus on low-cost, short-term data collection and analysis that will provide useful information at all levels of program planning and management. The MOH has individuals at the central and regional levels who have evidenced interest in and capacity for planning and applied research techniques. This Project will build on and expand this already-existing capacity in the MOH.

For both the MIS and the strengthened planning and programming capacity to be fully useful, the MOH must be able to act on recommended (alternative) decisions that result from the policy and program planning development process. This will be particularly true when these decisions and recommendations have implications for matters partially or entirely outside the purview of the MOH . Therefore, it will be important to define the framework within which the MOH can effect decisions with regard to basic health care in El Salvador.

C. Social Analysis

The social analysis for the Project focusses on those aspects of the Project and of current MOH initiatives which are likely to have the greatest direct social impact, i.e., those expanding the coverage and acceptability of MOH services among the rural poor. The sociologist's report, presented in Annex G, provides a much broader description and analysis of the MOH's PROSAR program and was considered by the MOH during the final definition of plans for the PROSAR program in June and July of 1986.

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health in El Salvador in 1978 found that men (who tend to have the family's cash) tend to seek health care from pharmacies (rather than from even the young social service year physicians at rural MOH facilities), while women and children, of necessity, have recourse only to MOH facilities and providers which are generally free.

The costs of using health services include, in addition to direct charges, the indirect costs of transportation, time lost from work, etc. In El Salvador, it appears that in recent years the overall costs to patients of using the nearest MOH health facility may be no more (or even less) than those of using more distant but larger facilities. The costs and inconveniences to patients which need to be considered when trying to understand patterns of use of MOH facilities include travel and waiting time and the likelihood of not being served or of receiving incomplete or unacceptable services (e.g., of not receiving desired drugs). These costs and inconveniences, along with other determinants of patient preferences, must be considered if utilization patterns are to shift toward ones which would permit treatment of most cases at the lowest level of the MOH system at which they can be effectively and safely treated, a basic principle of health services management.

Provision of adequate supplies of drugs at the lower levels of the MOH system is to be continued under the Project through providing drugs to the MOH and improving its systems for their distribution and use. Availability of drugs in the health units and posts (and from the PROSAR and ARS community health workers on a more limited basis) is expected to increase the utilization of their services. Such a shift in health services utilization should permit use of higher level MOH facilities for cases more appropriate to them and would help the MOH make better use of its resources. The success of the ARS and malaria volunteer collaborators indicate that the communities will seek services from lower level providers once their reliability and competence has been established. Association of the new PROSAR strategy with the ARS program will assist in building this confidence between the host communities.

There may, however, be some resistance among physicians (and perhaps some nurses) to delegation of certain health care tasks to nurses, auxiliaries and/or ARS and PROSAR workers. Several factors will help to overcome such resistance. One is the fact that non-physicians (and non-nurses) successfully perform the tasks in question in other countries. Another is that many of the tasks have already been delegated successfully to non-physicians in El Salvador, sometimes under special circumstances (e.g., "special care" by auxiliaries when there is no physician at their health posts). Yet another is that the delegated tasks will be carefully defined and delineated in the new MOH norms, and that competency-based training based on those norms will assure that the non-physician providers will be able to perform them effectively and safely.

Resistance to decentralization of decision making authority and of management theoretically could arise from central MOH officials accustomed to centralized power or from regional officers not anxious to take on the associated responsibilities and work. In fact, there appears to be little detectable resistance to such decentralization. High level central MOH officials, of all ages and lengths of MOH tenure, appear to be very supportive of it and many of them have been involved in preparations for it in recent years. Regional directors and their staffs (augmented in recent years to permit effective decentralization) are in favor of it, seem basically competent for their responsibilities and interested in broadening and deepening their skills, and have already undertaken a series of varied initiatives which bode well for their future performance.

If the supply of physicians continues to increase faster than the country's ability to employ them, under- or un-employed physicians may eventually come to see the community health workers as performing some tasks which they might otherwise perform themselves. In many countries, however, it has been found that physicians do not accept the positions and assignments which would permit them to provide services to rural people sufficiently close to their homes.

D. Institutional Analysis

The institutional development strategy of the Project is feasible within the existing institutional structure of the Ministry of Health. As with any institution, there are institutional deficiencies, and the Project will address those which it is capable of changing. However, none of the deficiencies appear to present a barrier to the achievement of Project objectives.

This institutional analysis draws from the reports of the Management Information Specialist, the Rural Sociologist, and the Health Economist, presented as Bulk Annexes to the Project Paper, as well as from the report of the Regional Commodity Specialist who reviewed the MOH's procurement capability. This summary analysis explores the institutional capabilities and needs of the key MOH Directorates and Offices for each of the major Project components.

1. Institutional Analysis of the Acquisition and Management of Drugs, Medical Supplies, Insecticides, Equipment and Facilities

The newly-established Drug and Medical Supply Unit, the Administrative Directorate, and the Malaria Division of the MOH are the primary implementing offices under this component. The Administrative Directorate has been the focus of the VISISA Project as it is responsible for procurement of supplies and management, personnel and finance. It has been, and likely will continue to be,

the Directorate most likely to prove difficult to "penetrate" with improved procedures, in part because those procedures currently in place have been used for some time and because individuals in these positions (e.g., finance and supply management) commonly resist change. However, both the VISISA Project and other advisors have recently noted improved receptivity to change in such important areas as finance and personnel management.

As a result of the innumerable problems encountered in the VISISA Project as a result of shortcomings in the MOH's forecasting and procurement planning capabilities, an evaluation of the MOH's procurement capability was performed as part of the Project Paper design. Although the MOH's ability to determine its needs and inventory control procedures have been enhanced considerably by the technical assistance being provided by the VISISA Project, the MOH procurement office lacks experience with AID host country contracting procedures for imports, has general limited capability, and is saddled with its own cumbersome procurement and payment procedures. Given this, and the requirement for U.S. Food and Drug Administration quality assurance of pharmaceuticals, all essential goods including technical assistance will be purchased by AID directly, relying on the MOH for purchases utilizing AID Project funds of only limited local shelf items and local personal service requirements. As technical assistance efforts at strengthening the MOH procurement capabilities take effect, more local services might be contracted through host country contracting procedures by the MOH if a reevaluation of its procurement capabilities so warrants.

The creation of the Drug and Medical Supply Unit (recommended by the VISISA technical assistance team) is an attempt on the part of the MOH to improve the coordination of activities related to supply management (focusing on drugs). The Unit has been established as a staff office reporting directly to the Minister of Health, advising him on all matters relating to the selection, testing, procurement, management, distribution, and use of drugs and medical supplies. The drugs and medical supplies financed by the Project will be under the supervision and control of the new unit. Although the responsibilities and degree of authority of the Drugs and Medical Supply Unit are presently being defined, the Unit will be a significant link in the decision-making process in the MOH. To do so, however, it must be be given the authority for all decisions related to the supply and management of drugs and medical supplies and be staffed with competent professionals for monitoring drug quality control.

Insecticides purchased with Project funding will be under the control of the Malaria Division of the MOH. The El Salvador Malaria Program has been applying a number of organophosphorus and carbamate insecticides in its spray operation program since 1973 in limited areas of the country. Under this Project, the GOES is expected to

use the insecticides propoxur and pounce and a larvacide, ABATE, in its field program. Each of these has been used effectively by the GOES under the VISISA Project. Special attention is given to the handling of the insecticide concentrates, both with regard to mixing and in disposing of left-over concentrates, and spraymen each receive up to 15 days' training per year in spray techniques and operational matters prior to the initiation of the major spray cycle. Visits have also been made to the warehouse facilities at the central level and at several outlying storage points, where facilities were found to be secure and constructed in a manner to protect the insecticide from rain and exposure to direct sunlight.

2. Institutional Analysis of the Health Services Implementing Offices

The major implementing organizations within this component are the Office of the Director General and the Technical/Normative Directorate. Two functions of the Director General are the focus of this Project: the regional offices and the MOH Training School. Considerable variation exists in the capabilities of the Regional Directors and their staff, most obviously illustrated in the degree to which certain regions have taken control of resources and decisions, using the decentralization strategy as the basis for so doing. However, few of the Physician/Directors and their staff exhibit the administrative and management skills necessary to make the decentralization strategy work well. The regional offices (including the regional warehouses and vehicle maintenance facilities) will be both responsible for undertaking activities, and the beneficiaries of several aspects of the Project. The Santa Ana region is already used as the basis for pilot tests of planning and budgeting procedures, development of norms, and improved supervision of providers. The San Miguel region is most affected by the conflicts, and therefore the most in need of creative approaches to management and delivery of basic services. Training will be required for the Regional Directors and their technical and administrative staff to enable them to effectively execute their responsibilities under the decentralization strategy.

The MOH Training Center (Escuela de Capacitación), which will be responsible for coordinating in-country and participant training activities, must improve its integration with other related MOH offices (e.g., International Cooperation, which keeps track of international scholarships and training opportunities, and the personnel division of the Administrative Directorate, which is responsible for evaluating employee training needs). It also must initiate linkages with the Technical/Normative Directorate, which is currently developing an innovative concept of and approach to supervision, as well as developing norms that will apply to all health providers and technical personnel and with the Administrative Directorate which is responsible for the logistics support for outreach services.

The Technical Operative Directorate is responsible for overseeing all of the MOH health service delivery, through the Director General's direct liaison with the regional offices. While the reorganization of 1985 improved upon a cumbersome organizational design, the creation of a single Directorate with this magnitude of responsibility may prove to have been unwise. Even within the Directorate, there are departments with far too much responsibility given their limited staffs. For example, the Department of Medical Assistance is responsible for community health (the ARS and PROSAR programs) as well as for hospitals; given the extraordinary historical power of the hospitals, and the fact that they are supposed to increasingly be linked to regional offices, this is probably an inappropriate organizational configuration. The burdens upon this directorate by virtue of its comprehensive responsibilities could impede successful implementation of the planning and budgeting aspects of the proposed Project. This is particularly true given the fact that its current director, who has extensive experience in the MOH, has just been named coordinator of the Drug and Supply Unit (which removes him from his current post). On a more general level, there is a severe shortage of effective administrators within the MOH, who have the depth and breadth of experience to successfully manage this and other directorates and offices. The technical assistance plan and training strategies have, however, been designed to overcome these institutional weaknesses.

3. Institutional Analysis of the Policy and Planning Implementing Offices

The Planning Directorate will be central to implementation of the Project. In addition to having overall planning and coordinating functions within the MOH, the Planning Directorate includes offices directly responsible for Institutional Development, Studies and Evaluations, and Programming and Budgeting.The Planning Directorate has had a key role in several MOH initiatives which provide the main bases for development and success of this Project. It prepared the MOH's Five Year Plan and was the main actor in development, refinement, and execution of plans for the April 1985 reorganization of the MOH for more effective management. It is a primary actor in the MOH's ongoing decentralization and management improvement efforts. Each of the offices within this Directorate, listed heretofore, have demonstrated the capability to carry out activities and functions required for achieving success, and the technical assistance provided to support each office will assist in further strengthening the planning, management, and evaluative capabilities of MOH managers and other personnel.

HEALTH SYSTEMS SUPPORT PROJECT (519-0308)

Total U.S. Funding: $48 million
Life of Project: 5 years, FY 86-90

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal	Measures of Achievement		
To assist the MOH to improve the access to, and availability of, basic health care services and reduce child and infant mortality.	Infant mortality reduced to 40/1000. 80% children under 1 fully vaccin. 85% children under 1 vaccinated for measles. Malaria rate reduced to 5/1000 pop. Death rate/10,000 from diarhhea reduced to 1.5. Larger % of poor population has access to primary care providers.	MOH records and surveys, and Project evaluations and reports.	Efforts to expand MOH basic health services will not be offset by other factors such as increasing civil violence.
Project Purpose	End of Project Status (EOPS)		
To support and strengthen the MOH to deliver and support basic health care services, including preventive and primary care services important to the MOH child survival program.	1. 90% of open MOH care facilities have at least minimum stock levels (appropriate to the level of facility) of selected* drugs and medical supplies. 2. 90% of MOH bio-medical equipment (including cold chain equipment) functioning. 3. 25% increase in the number of consultations given at the primary level (units, posts, and by community workers); 4. 20% increase in amount of MOH operational budget allocated for regional health services (i.e., facilities other than hospitals and outreach programs). 5. Improved MOH policy, program planning and management capabilities.	MOH procurement, distribution, and inventory records; spot checks; patient records from units, posts, and community workers; MOH records; and independent review and analysis of the MOH planning, budgeting, and programming sytems.	Expansion and improvement of the primary care services continues to be a MOH priority. Physicians support MOH efforts to increase range of treatment which can be provides by lower level MOH personnel (e.g., auxiliaries). Economic conditions do not result in reduced MOH budgetary resources. MOH continues its commitment to improvements in management and decentralization.

*Drugs and services monitored will be selected on the basis of their importance in relation to key morbidities, such as dehydration from diarrhea, respiratory tract infections, and malaria.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs:	Magnitude:		
1. Improved drug acquisition, distribution, and management systems.	1a. MIS drug supply and management sub-system established and operational, with computers in use by all regional warehouses. 1b. 20% increase in drugs (from the cuadro basico) dispensed by health units, posts, and outreach workers.	MOH records and site visits.	MOH is able to change public perception as to availability of medicines at primary care facilities.
2. Improved bio-medical equipment maintenance system.	2a. MIS bio-med sub-system established and operational, including inventory. 2b. Standardization policy adopted. 2c. Two additional regional bio-med shops opened and operating. 2d. In-service trg. for 60 bio-med tech. 2e. Bio-med maintenance teams have completed regularly scheduled preventive maintenance visits to all open facilities. 2f. 100 health tech and lab personnel trained in prev. maintenance.	MOH records and site visits.	MOH is able to retire it inventory of unusable equipment and to the extent possible to ensur equipment donations meet MOH specs.
3. Improved use and cost control systems operationalized for. vehicle management.	3a. Cost control and use monitoring procedures instituted. 3b. Maintenance schedule established and followed for all MOH vehicles. 3c. Seventy maintenance techs. trained.	MOH reports.	
4. Primary care facilities have adequate water and waste disposal systems.	4a. 90% of primary care facilities have adequate, functioning water and waste disposal systems. 4b. Routine maintenance procedures developed and functioning.	MOH reports and surveys.	
5. Lab facilities improved/ built and functioning in all open health units.	5a. 60 laboratories built 5b. 30 unit laboratories renovated. 5c. All open units have functioning labs.	Site visits and MOH reports.	MOH can successfully negotiate with a firm.

6. Improved surveillance of malaria incidence for case detection and targetting of residual spraying.	6a. Blood slide collection from health facilities increased to 10% of total no. of slides collected 6b. Residual spraying operations cover at least 90% of no. of houses programmed for each of the three cycles.	MOH reports and surveys	
7. Facilities management manuals, including treatment norms and prescription guidelines, developed for each facility level and distributed.	7. Manuals developed for all facility levels, which include revised MOH formulary, standardized treatment and prescription guidelines, facility-specific drug and supply lists, inventory control guidelines (including reorder points and minimum stock levels), and record-keeping and reporting procedures.	Product availability.	
8. Competency-based training program established for basic health service (BHS)providers and supervisors.	8a.2 additional trainers trained in competency-based training methodology. 8b.12 MOH trg. staff trained in curricula development and evaluation of trg. 8c.26 emergency medical services mgrs. trained.	MOH records.	
9. Computerized MIS with six sub-systems operational.	9a.45 new microcomputers operational. 9b.Software developed/adapted for six sub-systems.	Site visits and MOH reports.	
10. MOH staff trained in use of micro-computers and MIS systems use.	10a.79 MOH personnel trained in operation and/or programming.	MOH records.	Personnel trained on MIS can be retained by MOH.
11. MOH capability to conduct applied health services studies established.	11a.Regional applied health services research committees established. 11b.20 applied health services studies completed.	MOH reports.	MOH managers are receptive to suggestions for program modification.
12. Policy and program planning skills upgraded of key decision-makers and supervisors.	12a.61 participants complete training in health program planning, administration, and applied research.		

ARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
nputs:	Implementation Targets: ($ 000s)		
.I.D.			
1) Commodities			
Pharmaceuticals and supplies	28,700	USAID Controller's records and implemertation reports.	Sufficient funds will be made available to USAID.
Insecticides	2,300		
Equipment (bio-medical, pumps, cisterns, sprayers, etc.)	700		
Vehicles & spare parts	4,588		
Computer Equipment	687		
2) Technical Assistance	5,855		
3) Local Administrative Support	550		
4) Child Survival Promotion/ Health Education	950		
5) Participant training	300		
6) Training Program Support	850		
7) Evaluation	230		
8) Contingency	2,290		
Total AID Inputs	$48,000		

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
GOES			
(1) Pharmaceuticals and supplies	$25,000		
(2) Infrastructure construction/ refurbishment	1,675		
(3) Personnel	2,930		
(4) Child Survival Promotion/ Health Education	425		
(5) Participant Training (Salaries)	41		
(6) Training Program Support	110		
(7) Program Logistic Support	1,405		
Total GOES Inputs	$31,586		

5C(2) PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A. includes criteria applicable to all projects. Part B. applies to projects funded from specific sources only: B.1. applies to all projects funded with Development Assistance funds, B.2. applies to projects funded with Development Assistance loans, and B.3. applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

A. GENERAL CRITERIA FOR PROJECT

1. FY 1982 Appropriation Act Sec. 523; FAA Sec. 634A; Sec. 653(b).

   (a) Describe how authorizing and appropriations committees of Senate and House have been or will be notified concerning the project; (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than $1 million over that amount)?

   (a) A Congressional Notification will be submitted to members of the Committees during August 1986.

   (b) YES

2. FAA Sec. 611(a)(1). Prior to obligation in excess of $100,00, will there be

   YES

	(a) engineering, financial or other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?	
3.	FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?	Approval by the GOES Legislative Assembly is required for the Project. Approval is expected within 2-3 weeks of signature and no problems are anticipated due to prior USAID consultation with concerned GOES Ministries.
4.	FAA Sec. 611(b); FY 1982 Appropriation Act Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973? (See AID Handbook 3 for new guidelines.)	N/A
5.	FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed $1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?	N/A

6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.	No. This Project is designed to meet the specific needs of the GOES Ministry of Public Health in providing basic health care services to the Salvadoran population, given a range of economic and social conditions unique to El Salvador.
7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; and (c) encourage development and use of cooperatives, and credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.	The Project will increase the flow of international trade, foster private initiative, and improve the technical efficiency of the health sector.
8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).	The Project will directly benefit U.S. private trade through the procurement of medical equipment, pharmaceuticals, and vehicles manufactured in the U.S.

9.	FAA Sec. 612(b), 636(h); FY 1982 Appropriation Act Sec. 507. Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.	The GOES is providing counterpart contributions to the Project in local currency which totals 40% of the total project costs.
10.	FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?	No
11.	FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?	YES
12.	FY 1982 Appropriation Act Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?	N/A
13.	FAA 118(c) and (d). Does the project comply with the environmental procedures set forth in AID Regulation 16? Does	YES

the project or program take into consideration the problem of the destruction of tropical forests?	
14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)?	N/A

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec. 102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and	The Project is designed to improve the quality and increase the availability of basic health care services to the rural populate, as well as the presently served urban population.

otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used? — Yes

c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? — YES

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activitiy with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)? — YES

e. FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country "relatively least developed"? (M.O. 1232.1 defined a capital project as "the construction, expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than $100,000, including related advisory, managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character.	No
f. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?	YES
g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage	The Project responds directly to the needs of the population for health services and the institutions which serve them.

institutional development; and supports civil education and training in skills required for effective participation in governmental processes esential to self-government.

2. Development Assistance Project Criteria (Loans Only) — N/A

a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan, at a reasonable rate of interest.

b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan?

c. ISDCA of 1981, Sec. 724 (c) and (d). If for Nicaragua, does the loan agreement require that the funds be used to the maximum extent possible for the private sector? Does the project provide for monitoring under FAA Sec. 624(g)?

3. Economic Support Fund Project Criteria — N/A

a. FAA Sec. 531(a). Will this assistance promote economic or political

stability? To the extent possible, does it reflect the policy directions of FAA Section 102?

b. FAA Sec. 531(c). Will assistance under this chapter be used for military, or paramilitary activities?

c. FAA Sec. 534. Will ESF funds be used to finance the construction of the operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the president certified that such use of funds is indispensable to nonproliferation objectives?

d. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?

5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

1.	FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed?	YES
2.	FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him?	YES
3.	FAA Sec. 604(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company?	YES
4.	FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If offshore procurement of agricultural commodity or product is to be	YES

financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.)

5. FAA Sec. 604(g). Will construction or engineering services be procured from firms of countries otherwise eligible under Code 941, but which have attained a competitive capability in international markets in one or these areas? — N/A

6. FAA Sec. 603. Is the shipping excluded from compliance with requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent that such vessels are available at fair and reasonable rates? — NO

7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? If the facilities of other — YES

Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?

8. International Air Transport. Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available? — YES

9. FY 1982 Appropriation Act Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States? — YES

B. Construction

1. FAA Sec. 601(d). If capital (e.g., construction) project, will U.S. engineering and professional services to be used? — N/A

2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? — N/A

3.	FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed $100 million (except for productive enterprises in Egypt that were described in the CP)?	N/A
C.	Other Restrictions	
1.	FAA Sec. 122(b). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter?	N/A
2.	FAA SEc. 301(d). If fund is established solely by U.S. contributions and administed by an internatioal organization, does Comptroller General have audit rights?	N/A
3.	FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries?.	YES
4.	Will arrangements preclude use of financing:	YES
	a. FAA Sec. 104(f); FY 1982 Appropriation Act Sec. 525: (1) To pay for performance of abortions as a method of family	

planning or to motivate or coerce persons to practice abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; (4) to lobby for abortion?	
b. FAA Sec. 620(g). To compensate owners for expropriated nationalized property?	N/A
c. FAA Sec. 660. To provide training or advice or provide any financial support for police, prisons, or other law enforcement forces, except for narcotics programs?	N/A
d. FAA Sec. 662. For CIA activities?	N/A
e. FAA Sec. 636(i). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained?	YES
f. FY 1982 Appropriation Act, Sec. 503. To pay pensions, annuities, retirement pay, or	YES

adjusted service compensation for military personnel?	
g. FY 1982 Appropriation Act, Sec. 505. To pay U.N. assessments, arrearages or dues?	N/A
h. FY 1982 Appropriation Act, Sec. 506. To carry out provisions of FAA section 209(d) (Transfer of FAA funds to multilateral organizations for lending)?	N/A
i. FY 1982 Appropriation Act, Sec. 510. To finance the export of nuclear equipment, fuel, or technology or to train foreign nationals in nuclear fields?	N/A
j. FY 1982 Appropriation Act, Sec. 511. Will assistance be provided for the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights?	N/A
k. FY 1982 Appropriation Act, Sec. 515.. To be used for publicity or propaganda purposes within U.S. not authorized by Congress?	N/A

ANNEX C 2307

AUG 8 1986

Oficio No.

Extracto No.

ACTION COPY

No. del Exp. HP/HA

ACTION DUE: 8/19

Info:	AD	DIR/SA
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Subject: Requesting Donation.

ACTION T

DATE

INITIALS

USAID / SAN SALVADOR
C & R
015672

MINISTERIO DE SALUD PUBLICA
Y ASISTENCIA SOCIAL
REPUBLICA DE EL SALVADOR, C. A.
TELEX 20704 MSPAS-SAL

San Salvador, 8 de agosto de 1986.

Sección : CORRESPONDENCIA

Asunto: Solicitud de Donación

Sr. Robin Gómez
Director USAID/El Salvador
Ciudad.

En nombre del Gobierno de El Salvador por este medio me permito solicitarle formalmente asistencia financiera, en concepto de donación, hasta por la suma de aproximadamente US $48,000,000.00 (CUARENTA Y OCHO MILLONES DE DOLARES) durante los próximos cinco años para el Proyecto -- "Apoyo a los Sistemas de Salud", cuyo objetivo es apoyar y reforzar el Ministerio de Salud Pública y Asistencia Social a dar los servicios básicos de Cuidados de Salud, específicamente aquellos que amplian el acceso de la población Salvadoreña a los servicios de salud preventiva y básica.

Las necesidades requeridas a aportar por el GOES en concepto de contrapartida son del equivalente a una suma de US $31,585,800.00 a ser generadas con fondos propios y del PL-480.

Esperando contar con su valioso apoyo y cooperación a la presente solicitud, me es grato reiterarle las muestras de mi distinguido aprecio y consideración.

Dr. Benjamín Valdez R.
MINISTRO

/eb

AL CONTESTAR ESTE OFICIO, CITENSE LOS DATOS CONTENIDOS EN EL CUADRO DEL ANGULO SUPERIOR DERECHO.

UNCLASSIFIED ANNEX D

Department of State

OUTGOING TELEGRAM

PAGE 01 OF 03 STATE 053129 [illegible] AIDDA15 [illegible] PAGE 02
ORIGIN AID-28

ORIGIN OFFICE [illegible]
INFO FRA-02 AALA-01 [illegible] LACE-03 LACO-01 [illegible] FVA-01
AMAD-01 FOPR-01 PPPB-02 CC-01 GCLA-03 GCFS-01 O-02
CALI-02 CPP-01 CPS-02 CT-01 DIAE-01 SIN-01 STPC-01
EAST-01 FEE-05 FVC-02 FVPP-01 AGRI-01 [illegible] STEA-01
OMB-02 IRCY-05 PELO-01 /054 AB

INFO LOG-00 ES-08 IO-17 AFA-00 L-03 /026 R

DRAFTED BY: AID/LAC/CR:EDAMS, (13420)
APPROVED BY: AID/AA/LAC:DINK
AID/LAC/DR:LARSSEN (DRAFT) AID/LAC/DP:CO-BEG (DRAFT)
AID/LAC/CR:FREEMEY (DRAFT) AID/LAC/DP:PMOSKOWITZ (DRAFT)
AID/LAC/CAP:NELSON (DRAFT) AID/PPC/PDPR:JWEBER (DRAFT)
AID/LAC/DP:FSELLAR (DRAFT) AID/LAC/DR:JHESTER (DRAFT)
AID/GC/LAC:CDAVIDSON (DRAFT)
AID/LAC/DR:ILEVY
AID/LAC/CONT:DFIEBING
AID/LAC/DR:TEPOWN
AID/DRA/LAC:PEUTLER

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TO AMEMBASSY SAN SALVADOR IMMEDIATE

UNCLAS STATE 053129

AIDAC

E.O. 12356: N/A
TAGS:
SUBJECT: HEALTH SYSTEMS MANAGEMENT PROJECT (519-0309):
GUIDANCE FOR PP DEVELOPMENT

REFS.: A) STATE 038708) STATE 231978

1. THE SUBJECT PID WAS REVIEWED ON THURSDAY, JANUARY 23, 1986. PID IS APPROVED CONTINGENT ON SATISFACTORY RESOLUTION WITH CONGRESS OF ISSUES ON THE HEALTH SYSTEMS VITALIZATION PROJECT WHICH AFFECT AID INVOLVEMENT IN PUBLIC SECTOR HEALTH ACTIVITIES. IN THIS REGARD, BUREAU IS NOW BEGINNING A REVIEW OF AID MANAGEMENT OF HEALTH PROJECTS. THIS REVIEW WILL INCLUDE ANALYSIS OF COSTS ASSOCIATED WITH THE DELIVERY OF HEALTH SERVICES. THE MISSION IS AUTHORIZED TO PROCEED WITH INTENSIVE REVIEW FOR THE NEW PROJECT WITH THE UNDERSTANDING THAT ADDITIONAL GUIDANCE MAY BE FORTHCOMING PENDING THE OUTCOME OF THE VICIOSA MANAGEMENT ASSESSMENT (REF A) AND DISCUSSIONS WITH CONGRESS ON OUR CONTINUED ASSISTANCE TO EL SALVADOR FOR HEALTH. AS A RESULT OF THE DAEC REVIEW OF THE PID, THE FOLLOWING GUIDANCE FOR PP DEVELOPMENT IS PROVIDED.

2. PROJECT PAPER REVIEW AND APPROVAL. IN VIEW OF THE SENSITIVITY OF ISSUES ON THIS PROJECT, THE PROJECT PAPER MUST BE REVIEWED AND APPROVED BY AID/W.

3. PROJECT STRATEGY. GUIDANCE PROVIDED IN REF (B) PERTAINING TO THE FY 86/87 ACTION PLAN PROJECT REVIEW IS STILL VALID: THE BUREAU SONGLY ADVISES THAT THE MAJOR THRUST OF THE PROJECT SHOULD BE STRENGTHENING MOH CAPABILITIES FOR DELIVERING HEALTH CARE SERVICES. THIS DOES NOT PRECLUDE, HOWEVER, USE OF PRIVATE SECTOR FIRMS TO PROVIDE SERVICES FOR WHICH THEY HAVE A COMPARATIVE ADVANTAGE. THE POSSIBILITIES FOR PRIVATE SECTOR PARTICIPATION WILL BE EXAMINED IN THE AFOREMENTIONED PROJECT ASSESSMENT AND SHOULD BE FURTHER EXPLORED DURING INTENSIVE REVIEW.

A. THE PROJECT PAPER SHOULD CLEARLY DOCUMENT THE RATIONALE FOR ALLOCATION OF RESOURCES UNDER THE PROJECT AND, MORE SPECIFICALLY, FOR THE DURATION OF THE PROJECT UNDER THE VARIOUS COMPONENTS. THE DISCUSSION OF THE CAPABILITY TO MAINTAIN SERVICES NOW BEING PROVIDED UNDER THE HEALTH SYSTEMS PART OF THE PROJECT PROPOSES TO ADJUST THE MOH TO ABSORB FOR WHAT ARE OR ADDITIONAL AREAS SUCH AS THE EXPANSION OF [illegible] OF HEALTH VOLUNTEERS. INTERVENTIONS ADOPTED MUST BE CLEARLY RELATED TO IMPROVING HEALTH STATUS IN EL SALVADOR.

B. THE BUREAU IS IN AGREEMENT WITH MISSION'S PLANS DESCRIBED BY THE DEPUTY DIRECTOR AT THE DAEC TO MOVE AWAY FROM THE RESOURCE TRANSFER APPROACH TO FUNDING MOH HEALTH SERVICES WHICH IS NOW THE CASE. TOWARD, A KEY FOCUS OF THE NEW PROJECT SHOULD BE THE DEVELOPMENT OF COST RECOVERY MECHANISMS AND METHODS FOR MORE EFFICIENT USE OF MOH RESOURCES IN DELIVERING HEALTH SERVICES. THE ABILITY OF THE GOES TO ESTABLISH VIABLE SYSTEMS LEADING TO LESS RELIANCE ON DSF AND PL 480 LOCAL CURRENCIES SHOULD ALSO BE EXAMINED. [illegible] PROJECT FUNDS SHOULD ENCOURAGE MEASURES [illegible] EFFICIENT USE OF [illegible] POLICY REFORMS WHICH SHOULD BE [illegible] IN THE PP.

C. THERE WAS DISCUSSION AT THE DAEC OF CHILD SURVIVAL WHICH IS OF GREAT INTEREST TO CONGRESS. AGENCY GUIDANCE ON CHILD SURVIVAL WILL FOLLOW SHORTLY. THE PP SHOULD DESCRIBE HOW CHILD SURVIVAL ACTIVITIES ARE BEING DEALT WITH BY THE GOES AND THE USG AS A WHOLE, INCLUDING AID. THE RATIONALE MUST BE CLEAR FOR INCLUSION OR NON-INCLUSION OF THE PROJECT OF CHILD SURVIVAL ACTIVITIES.

4. PROJECT DESIGN. GUIDANCE FOR DEVELOPMENT OF PROJECT COMPONENTS FOLLOWS, BY COMPONENT:

1) HEALTH SUPPLIES MANAGEMENT. EFFICIENT AND TIMELY PROCUREMENT OF PROJECT COMMODITIES AND ESPECIALLY DRUGS MUST BE ASSURED. THE PP SHOULD CAREFULLY ANALYZE THE COST, STAFFING AND MANAGEMENT IMPLICATIONS OF DIFFERENT PROCUREMENT MODES (HOST COUNTRY DIRECT AID, PASA, GSA, ETC.) AND SHOULD STRONGLY JUSTIFY THE DECISION TO USE A PARTICULAR AGENCY OR FIRM FOR PROCUREMENT OF COMMODITIES FROM THE U.S. WITH REGARD TO PARTICULARLY [illegible] PROCUREMENTS, APPLICABLE FEDERAL AND LOCAL REGULATIONS MUST BE CLEARLY AND PROMINENTLY DESCRIBED AND THEIR POSSIBLE EFFECTS ON PROCUREMENT CARRIED OUT IN THE PP'S PROCUREMENT PLAN. COORDINATION OF THE ARRIVAL OF COMMODITIES AND ANY TECHNICAL ASSISTANCE WHICH MAY BE REQUIRED FOR THEIR USE SHOULD ALSO BE DISCUSSED. IT WAS CLARIFIED BY MISSION REPRESENTATIVES AT THE DAEC THAT AID FUNDED DRUGS FOR THE MOH WILL BE PROCURED IN THE U.S. UNLESS THEY ARE AVAILABLE LOCALLY AT LOWER PRICES, THAT THEY MEET FDA STANDARDS AND QUALITY CAN BE ASSURED, IN WHICH CASE THE MOH WILL BE RESPONSIBLE FOR PROCUREMENT. PP SHOULD ALSO CONTAIN STEP-BY-STEP EXPLANATION OF INVENTORY CONTROL AND END-USE TRACKING SYSTEM BEING ESTABLISHED WITHIN THE MOH.

2) HEALTH INFRASTRUCTURE. EXISTING AND EQUIPMENT INFRASTRUCTURE MAINTENANCE COSTS TO BE ASSUMED BY THE GOES AS A RESULT OF THE PROJECT MUST BE ESTIMATED AND THE ABILITY OF THE MOH TO FINANCE RECURRENT COSTS RELATED TO INFRASTRUCTURE CREATION AND MAINTENANCE ANALYZED. THE PP SHOULD INCLUDE INFORMATION IDENTIFYING THE HOSPITAL AND OTHER HEALTH FACILITIES TO BE REFURBISHED, THE DESIGN STANDARDS TO BE FOLLOWED, AND COST ESTIMATES, THEREBY MEETING THE REQUIREMENTS OF SECTION 611 (A) OF THE FAA. MISSION REPRESENTATIVES AT THE DAEC INDICATED THAT THE PP

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WILL INCLUDE A REQUEST FOR A WAIVER OF SOURCE AND ORIGIN REQUIREMENTS TO LIMIT PROCUREMENT OF CONSTRUCTION AND SUPERVISORY SERVICES TO SALVADORAN SUPPLIERS.

3) RURAL OUTREACH. IF THE MISSION ELECTS TO PROCEED WITH AN ACTIVITY FOR RURAL PRIMARY HEALTH CARE OUTREACH, IT MUST BE MADE CLEAR TO THE HOH THAT THIS MODEL IS BEING FUNDED ON AN EXPERIMENTAL BASIS ONLY. THERE IS NO ASSURANCE THAT AID WILL FUND REPLICATION OF THE TESTED MODEL. TRAINING REQUIREMENTS FOR HEALTH OUTREACH PERSONNEL AND SUPERVISORS MUST BE CLEARLY DELINEATED IN A TRAINING PLAN AND FUNDING PROVIDED SHOULD BE SUFFICIENT TO MEET CLEARLY ESTABLISHED NEEDS. THE EXPERIENCE IN EL SALVADOR OF THE AID RURAL HEALTH AIDES PROJECT (519-0179) AND THAT OF OTHER DONORS LIKE UNICEF AND CO-FINANCED PVOS SUCH AS PROJECT HOPE SHOULD BE ANALYZED.

4) MANAGEMENT SUPPORT SYSTEMS. HUMAN RESOURCE DEVELOPMENT REQUIREMENTS ARE SUBSTANTIAL FOR IMPROVEMENT OF HOH MANAGEMENT SUPPORT SYSTEMS. EVERY ATTEMPT MUST BE MADE TO ENSURE THAT PROJECT FUNDING FOR LONG AND SHORT TERM TRAINING IS SUFFICIENT TO MEET THESE NEEDS. IF SUFFICIENT RESOURCES ARE NOT AVAILABLE FOR MANAGEMENT-RELATED TRAINING UNDER THE PROJECT, THEN THE MISSION SHOULD CONSIDER COMPLEMENTARY FUNDING FROM OTHER PROGRAMS, SUCH AS CAPS, AND SHOULD SPECIFY THIS IN THE PP.

5. PROJECT MANAGEMENT.

A. GOES. GUIDANCE TRANSMITTED IN REF (B) ON IMPLEMENTATION MECHANISM FOR PROJECT IS STILL VALID. THAT IS, THE EXECUTIVE MANAGEMENT GROUP (EMG) SHOULD HAVE MAXIMUM FLEXIBILITY AND INDEPENDENT ADMINISTRATIVE AUTHORITIES TO ENSURE RESPONSIVENESS TO PROJECT IMPLEMENTATION REQUIREMENTS. THE PP ADMINISTRATIVE ANALYSIS SHOULD THOROUGHLY ASSESS CURRENT EMG STRENGTHS, WEAKNESSES, ITS PERFORMANCE UNDER VISTA AND WHAT CHANGES ARE REQUIRED IN THE GROUP'S COMPOSITION TO REFLECT IMPLEMENTATION REQUIREMENTS FOR NEW PROJECT ELEMENTS. FINALLY, THE PP SHOULD DESCRIBE REQUIREMENTS FOR INTERACTION AMONG THE EMG, USAID PROJECT MANAGEMENT AND THE PROJECT TECHNICAL ASSISTANCE TO STRENGTHEN THE EMG'S CAPABILITIES TO MANAGE EFFECTIVELY. ANALYSIS RESULTING FROM THE ASSESSMENT DISCUSSED IN REF (A) SHOULD BE OF HELP IN THIS REGARD.

B. AID. RECRUITMENT OF A NEW HEALTH OFFICER FOR THE MISSION REMAINS A TOP LAC BUREAU PRIORITY. SEPTEL FOLLOWS

C. TECHNICAL ASSISTANCE. THE PP SHOULD CLEARLY STATE LONG AND SHORT-TERM TECHNICAL ASSISTANCE REQUIREMENTS FOR THE PROJECT, RELATING THEM TO EACH PROJECT COMPONENT AND ALSO PRESENTING A CONSOLIDATED SUMMARY OF SKILLS, PERSONYEARS, FUNDING REQUIRED AND CONTRACTING MODE ENVISIONED.

6. ECONOMIC ANALYSIS. THE PID DID NOT INCLUDE AN ECONOMIC CONSIDERATIONS SECTION PER SL. GIVEN THE IMPORTANCE OF ISSUES RELATED TO RECURRENT COSTS AND ALLOCATION OF RESOURCES, THE PP MUST INCLUDE A DETAILED ECONOMIC ANALYSIS DEMONSTRATING THAT THE APPROACH PROPOSED IS OPTIMAL FROM AN ECONOMIC STANDPOINT.

7. PROJECT DESIGN TEAM. THE DESIGN REQUIREMENTS FOR THIS COMPLEX PROJECT ARE SUBSTANTIAL. BASED ON TECHNICAL EXPERTISE BETWEEN MISSION AND LAC/DR STAFF SUBSEQUENT TO THE PID, THE MISSION IS ADVISED TO PROVIDE FOR THE FOLLOWING SKILLS TO CARRY OUT THE INTENSIVE REVIEW:

A. PUBLIC HEALTH SPECIALIST/TEAM LEADER (15 PERSONWEEKS)
B. MANAGEMENT SYSTEMS SPECIALIST (6 WEEKS)
C. PROCUREMENT PLANNER (3 TO 4 WEEKS)
D. HEALTH ECONOMIST (13 WEEKS)
E. FACILITIES INVENTORY SPECIALIST (6 WEEKS)
F. MAINTENANCE PLANNER (2 WEEKS)
G. ARCHITECTURAL ENGINEER (6 WEEKS)
H. MALARIA SPECIALIST (3 WEEKS)
I. HEALTH PLANNER/CHILD SURVIVAL/EPIDIMICLOGIST (8 WEEKS)
J. EVALUATION/OPERATIONS RESEARCH SPECIALIST (6 WEEKS)
K. SOCIOLOGIST (3 WEEKS)

AS DISCUSSED WITH MISSION REPRESENTATIVES TO DAEC, TOTAL ESTIMATED COST OF DESIGN EFFORT IS MORE THAN DOLS 400,000 IF ALL EXPERTISE IS CONTRACTED FROM THE OUTSIDE. IF MISSION OYB OF DOLS 350,000 FOR HEALTH PD & S NEEDS TO BE AUGMENTED, ASSUME MISSION CAN TRANSFER FUNDS FROM ELSEWHERE IN HEALTH OYB. ESTIMATED DURATION OF TEAM'S WORK IS 3.5 MONTHS. WE ESTIMATE LATEST POSSIBLE STARTING DATE, TO ALLOW OBLIGATION THIS FISCAL YEAR, IS APRIL 1. THIS IS OF PARTICULAR CONCERN AS FUNDS RESERVED FOR THIS PROJECT REPRESENT OVER 23 PERCENT OF LAC FY 86 HEALTH ACCOUNT. MISSION MAY WANT TO UTILIZE IN-HOUSE RESOURCES TO FILL SOME OF THESE NEEDS IF IT CAN BE ASSURED THAT ALL DESIGN REQUIREMENTS CAN BE FULFILLED ON A TIMELY BASIS AND THAT A HIGH QUALITY PRODUCT WILL RESULT. MISSION HAS INDICATED THAT IT CAN HANDLE IN-COUNTRY PREPARATIONS FOR CONTRACTING OF DESIGN TEAM AND THAT ASSISTANCE FOR THIS PURPOSE OFFERED BY LAC/DR IS NOT REQUIRED. LAC/DR REITERATES WILLINGNESS TO ASSIST IN ANY WAY POSSIBLE TO ENSURE THAT THE PROJECT ANALYSIS AND DESIGN IS OF VERY HIGH QUALITY.

8. PROJECT BUDGET COSTS FOR ALL ACTIVITIES (TECHNICAL ASSISTANCE, COMMODITIES, TRAINING AND LOCAL EXPENSES) SHOULD BE PRESENTED IN THE PP IN A UNIFORM MANNER SO THAT THEY CAN BE EASILY DISCERNED. THERE SHOULD BE A SEPARATE LINE ITEM FOR EVALUATIONS.

9. PAYMENT VERIFICATION. MISSION IS REMINDED THAT ALL PROJECT PAPERS MUST FOLLOW THE GUIDANCE PROVIDED ON PAYMENT VERIFICATION BY AA/M TO MISSION DIRECTORS ON DECEMBER 30, 1983 (AND RETRANSMITTED BY AA/LAC ON FEBRUARY 3, 1986. PLEASE REFER TO PAGES 6 THRU 8 WHICH DEAL SPECIFICALLY WITH PP CONSIDERATIONS.

10. EVALUATION PLAN. THE PP SHOULD INCLUDE AN EVALUATION PLAN WITH WELL-ARTICULATED BENCHMARKS TO ACHIEVED DURING THE PROJECT.

11. IEE. WHILE PERMANENT MALARIA SOURCE REDUCTION ACTIVITIES WILL NOT BE FUNDED BY AID UNDER THE PROJECT, THE IEE SHOULD BE REVISED TO MORE ACCURATELY REFLECT THE POSSIBLE IMPACT OF THESE ACTIVITIES.

12. LOGICAL FRAMEWORK. BUREAU ASSUMES THAT LOGFRAME WILL BE EXPANDED, TO INCLUDE MORE DETAIL ON PROJECT OUPUTS. GOAL AND PURPOSE STATEMENTS COULD BE REVISED TO ADD CLARITY AND TO BETTER PERMIT MEASUREMENT OF ACHIEVEMENT. ESPECIALLY IMPORTANT IS THE PROPOSED END-OF-PROJECT STATUS (EOPS) EXPECTED.

13. DESCRIPTION OF PREVIOUS PROJECTS. PP SHOULD INCLUDE DISCUSSION OF ALL ELEMENTS OF VISTA, INCLUDING COMPONENTS I-B, I-C AND IV, WHICH ARE NOT DESCRIBED IN PID.

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14. GRAY AMENDMENT. GRAY AMENDMENT POLICIES SHOULD BE CAREFULLY CONSIDERED DURING FP PREPARATION. A PLAN FOR THE UTILIZATION OF MINORITY AND WOMEN OWNED BUSINESSES SHOULD BE PRESENTED.

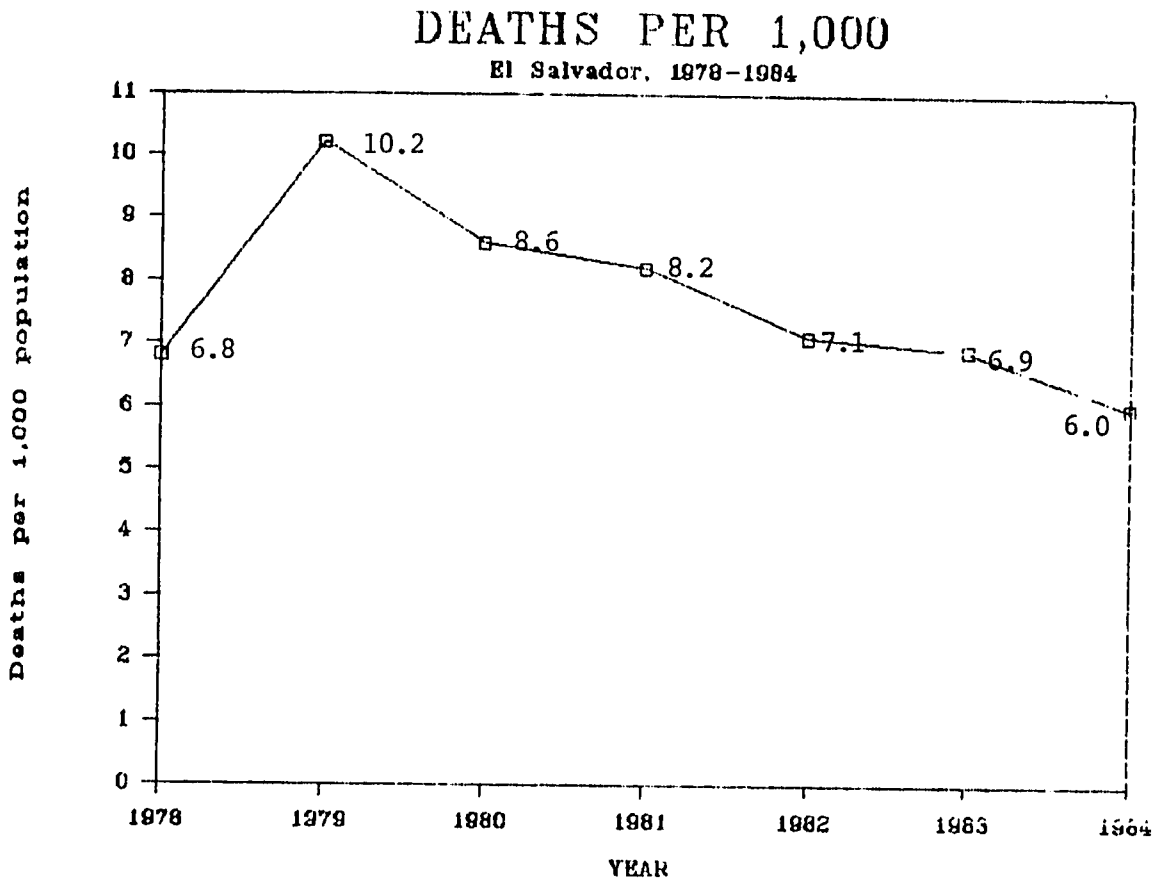
15. FINAL PID. THE PID HAS BEEN REVISED PER DISCUSSIONS BETWEEN MISSION AND AID/W STAFF AND COPIES WILL BE HANDCARRIED TO MISSION IN NEAR FUTURE. WHITEHEAD

Annex E

SELECTED HEALTH INDICATORS

1. Mortality: Deaths Per 1,000
2. Leading Causes of Death
3. Morbidity: Ten Most Common Transmissible Diseases
4. Selected Indicators of Health Services Availability, By Region: 1979 and 1985
5. Vaccinations of Children Less than One Year in El Salvador 1980-1985

FIGURE !



Sources: MSPAS. Salud Publica en Cifras, various years

Alens, A. Socio-demographic Aspects Related With Health Services. El Salvador, 1986, p. 10

TABLE 2

SELECTED REPORTED LEADING CAUSES OF DEATH

Cause	1982	1983	1984
Various Perinatal causes	2898	3552	2898
Homicides & other intentional deaths	2576	2266*	1929
Intestinal infections	2645	2206	1702
Other violence		2302*	N/R
Motor vehicle accidents	677	724*	713

Sources: For 1982 and 1983: MSPAS. Salud Publica en Cifras, No. 16, p. 11, 12

For 1984: MSPAS. Memoria, p. 7

* The source for these data is an unpublished table from the Health Statistics Unit, MOH.

Note: These causes of death were those that were consistently in the top ten (with the exception of "other violence").

TABLE 3

TEN MOST COMMON TRANSMISSIBLE DISEASES
(Expressed in Rate per 100,000)

Disease	1979	1982	1983	1984	1985
Diarrheal diseases	3397	2897	2218	2882	2482
Intestinal parasites	3018	2831	2304	2574	2348
Influenza and grippe	2328	1660	1591	2111	2140
Malaria	1626	1690	1251	1399	922
Amoebic dysentery	260	298	263	182	165
Gonorrhea	120	*	114	179	92
Measles	223	97	82	120	111
Syphillis	143	95	77	119	80
Dengue	499	101	73	114	*
Hemorrhagic conjunctivitis	*	87	56	100	*
Epidemic Parotiditis	70	97	*	*	*
Scabies	*	*	*	*	96
Typhoid fever	*	*	*	*	70

* Did not appear in the "top ten" list for that year. (For gonorrhea, 1982 this is probably an error in view of trends.)

Sources: MSPAS. Memoria. 1984-85, p. 21 and 1985-86, p. 8
MSPAS. Salud Publica en Cifras. Anuario No. 16, pp. 14-15

Selected Indicators of Health Services Availability by Region in 1979 and 1985

Selected Indicators	El Salvador		Western		R E G I O N S							
					Central		Metropolitan		Paracentral		Eastern	
	1979	1985	1979	1985	1979	1985	1979	1985	1979	1985	1979	1985
1. Medical Consults (Per 100 inhabitants)	54	47	41	45	60	48	80	68	46	39	45	32
2. Rural Health Aides (ARS) (Per 10,000 inhabitants)	1.2	0.9	1.0	1.0	1.6	1.6	-	0.4	1.5	1.1	1.2	0.6
3. Rural Health Midwives (Per 10,000 inhabitants)	N/A	2.9	N/A	2.4	N/A	3.6	N/A	3.8	N/A	3.3	N/A	2.5
4. Beds (Per 10,000 inhabitants)	14.4	12.9	15.6	13.9	6.2	6.3	30.2	21.3	9.9	9.4	6.6	8.4

Source: Alens, A. Socio-Demographic Aspects Related to Health Services, 1986.

Vaccinations of Children Less than One Year in El Salvador
OPV, DPT, Measles, and BCG
1980-1985

Year	Population Less Than 1	Polio - 3 doses		DPT - 3 doses		Measles		BCG	
		Number	%	Number	%	Number	%	Number	%
1980	188,033	78,455	42	81,713	43	84,048	45	105,272	56
1981	193,751	73,072	38	80,731	42	84,635	44	90,227	47
1982	199,708	84,372	42	84,416	42	85,538	43	91,003	46
1983	204,308	40,936	20	42,481	21	92,998	46	97,248	48
1984	210,322	64,151	31	65,321	31	85,609	41	45,669	22
1985	170,581	92,507	54	92,438	54	120,667	71	84,860	50

Source: PAHO. Based on estimates of population less than one year of age.

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Annex F

ORGANIZATION OF THE PUBLIC HEALTH CARE SYSTEM

The Ministry of Public Health was reorganized in April 1985 as part of an effort to decentralize authority and decision making (see organizational chart). Choosing to work with the existing mix of departments and divisions, the reorganization was essentially a change in reporting relationships, reducing the number of directorates and operational offices reporting directly to the Minister from seven to two: Planning and the Director General. Regional Offices and the remaining two Directorates, Technical/Operative and Administrative, now theoretically report to the Minister through the Director General. Four staff offices operate as autonomous units, reporting directly to the Minister and Vice-Minister, including the newly created Drug and Medical Supply Unit. The responsibilities of these Directorates, the Drug and Medical Supply Unit, and the Regional Offices are as follows:

Directorate for Planning: The Planning Directorate consists of five units and has responsibility for reviewing MOH programs, monitoring coverage of services, managing the decentralization process, and preparing long term MOH plans. Three Units under this Directorate are particularly important to this Project. The Health Statistics Unit is responsible for the biostatistics component of the information system, receiving and analyzing all health service and status data. The Programming and Institutional Development Units are the focal points for the decentralization of planning and budgeting processes.

Director General for Health: The Office of the Director General is responsible for operation of all health services. The five regional offices, the Technical/Operative and Administrative Directorates, and four separate units including the Training Center report to this Office.

Technical/Operative Directorate: This Directorate is the heart of the health services delivery system of the MOH. Its two Divisions are responsible for virtually all aspects of public and personal health service programming, as follows: Environmental Health, including sanitation, rural water supply, and malaria; and Integrated Individual Health Services, including maternal child health, nutrition, dentistry, mental health and personal health services. All MOH care facilities (including hospitals) and rural outreach programs are overseen by the Integrated Individual Health Services Division, as well.

Administrative Directorate: This directorate includes four Divisions (Finance and Accounting, Personnel, Purchasing, and General Services), a computer unit, and a technical unit responsible for the administrative decentralization process. General services is currently responsible for vehicle, facilities and bio-medical equipment management and maintenance, although maintenance of vehicles and biomedical equipment is being decentralized to the regions.

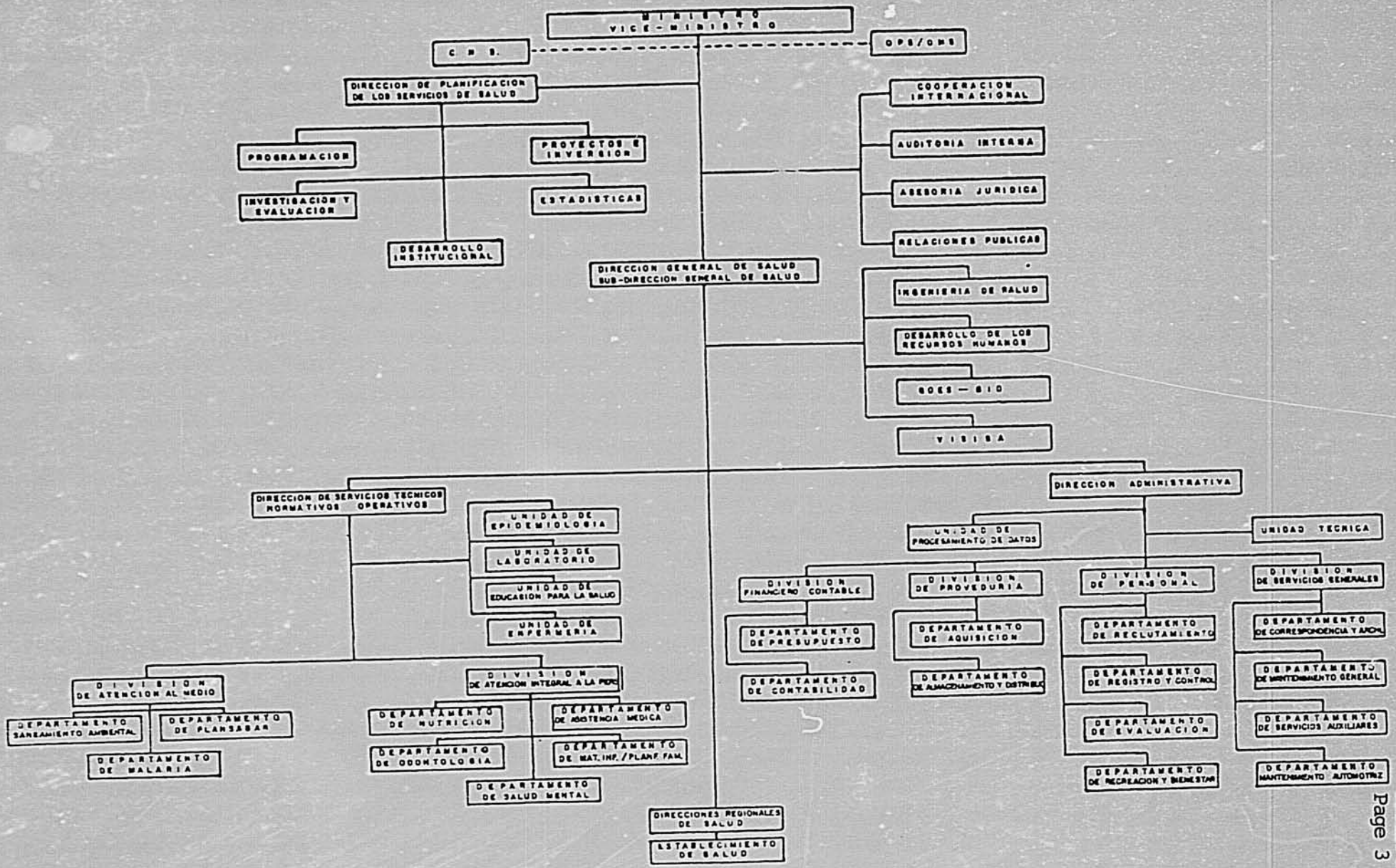
Drug and Medical Supply Unit: The Drug and Medical Supply Unit was officially established in June 1986 by Ministerial Decree, with responsibility for management of drugs and medical supplies, including determination of requirements and allocation of supplies through the system. The Unit's full range of responsibilities and priorities are currently being revised, but will include direction of the new Drug Quality Control Unit as part of its supply management function.

Regional Offices: For service delivery purposes, the Ministry of Health has divided the country into five geographic regions. These are the "Occidental" (Western), Central, Paracentral, "Oriental" (Eastern), and "Metropolitana" (Metropolitan). (See map of the regions.) The largest region in terms of area is the Oriental, consisting of four provinces and representing 26% of the population. The smallest region, but most densely populated having 27% of total population is the Metropolitan Region, consisting of San Salvador and surrounding territory. The other three regions, Central, Paracentral, and Occidental cover 12%, 15%, and 20% of the population respectively. Although the conflictive situation affects health services throughout the country, the Central, Paracentral and Oriental have been particularly affected as they include the northern and eastern parts of the country.

The five regional offices are responsible for coordinating MOH activities in their respective areas. With the exception of hospitals, all MOH facilities and all MOH health providers (including rural health aides and midwives) are linked to the central office through the regional offices. Each regional office staff now includes approximately 14 persons as a result of MOH efforts since 1983 to strengthen these offices in preparation for decentralization to the regional level. This staff includes as key staff a physician-director, deputy director, supervisor of physicians, supervisor of nurses, epidemiologist, statistician, nutritionist, and sanitary workers/supervisors. Each region also has a warehouse for drugs and medical supplies, and a vehicle storage and repair shop.

El Salvador's current public infrastructure of 342 facilities, over 50% of which have been constructed since 1978 with the IDB, is impressive. Moreover, the expansion that has taken place has been at the intermediary and lower levels of the system, with 11 of the 12 health centers and 50% of the Units and Health Posts being new. In addition, the emergency services areas of many of the hospitals have been refurbished with VISISA funding, as have the facilities in centers where needs were identified. (The support services network of facilities (warehouses and vehicle repair shops) have also been upgraded within the last three years with VISISA funding.)

ESTRUCTURA ORGANIZACIONAL DEL MSPYAS



The delivery system used by the MOH is basically the pyramidal configuration practiced in many developing nations. In 1985 there were 14 hospitals, 12 health centers, 100 health units, 174 health posts, 35 community posts, and 7 dispensaries. A table showing the distribution of these facilities by region and the relationship between open facilities and the population follows. For purposes of understanding how the system functions, brief summaries of the number, geographic distribution, and operation of each level of facility follow:

Hospitals: Fourteen MOH hospitals are currently functioning, with five located in the Metropolitan area and the remaining nine distributed fairly evenly throughout the four outlying regions. Services are predominantly OPD visits or consultas, although limited preventive services are available.

Health Centers: The 12 centers, with 40-80 beds, function principally as small hospitals with active outpatient departments. There is at least one center in each region and five in the Eastern region. Typically, they are staffed by 4 to 10 physicians, 10-15 nurses, 2-3 laboratory technicians, 1-2 dentists, 15-20 auxiliaries, 3-5 sanitary inspectors and 3 clerks. In essence, they are small hospitals which may have operatories, specialized care units and health-related program functions. Nonetheless, their chief focus is on primary and backup secondary care.

Health Units: The Units are essentially ambulatory care facilities, usually having no inpatient beds. The units usually have a pharmacy and a laboratory with limited capability. Typically, they are staffed by a full-time physician assisted by one to two other full-time doctors, 5-10 graduate nurses, 10-12 auxiliary nurses, 1 lab technician,. 2-3 sanitary inspectors, a dentist, and a secretary/receptionist. Where possible, health units are used to help coordinate the malaria control program and other specialized efforts of the MOH. Currently there are 100 health units (95 functioning), broadly distributed throughout the country, with a larger concentration of units in the Eastern Region.

Health Posts: These facilities constitute the most basic level of health care facility. They are permanently staffed by an auxiliary nurse, and offer services 5 days a week, from early morning to mid-afternoon. Notably, they are not open Saturday or Sunday. A medical team consisting of a doctor, nurse, clerk, and occasionally a sanitary inspector, are supposed to visit once or twice weekly on a regular schedule. Currently 137 of the 174 health posts are open, with the largest concentration (45) in the East and the rest distributed fairly equally among the other three rural regions. Only four posts operate in the largely urban Metropolitan region.

A newer concept is the community post, which is similar to the health post but in an urban area. However, unlike health posts they are not staffed by a permanent auxiliary nurse, but are serviced entirely by a mobile team of health personnel (doctor, nurse auxiliary and sanitary inspector). Thirty-five community posts operate throughout the country.

A few scattered dispensaries, staffed by an auxiliary nurse, also operate in the Eastern region (4) and in the Metropolitan region (1), and provide first aid and health education.

Although services are available to anyone, in an attempt to partially cover costs, the MOH established a system of user fees (circa 1947) for services. for those able to pay. A donation of one or two colones (at the current exchange rate ¢2 is equilavent to $0.40) is requested for services provided at hospitals, centers, units, and posts. These revenues are intended to supplement the operating budgets of facilities and are under the control of community health boards (patronatos). These fees are augmented by the proceeds of various fund-raising activities sponsored by, and philanthropic contributions made to, the community health boards. The combined totals annually raised in the health centers, units, and posts constitute seven percent of the annual general-budget-funded expenditures for services. It is clear, however, that what has been decreed by law, and what has actually come to be, are quite different in the case of the patronatos. Many units and posts do not have a community health board, or at least do not have a functioning board. In many facilities, decisions regarding how funds will be used are made by the director of the facility, with the patronato providing more of a clearinghouse and monitoring service.

Health Facilities and Population, by Region, 1979 and 1985

REGION/ TYPE OF FACILITY	TOTAL 1979	TOTAL 1985		URBAN 1979	URBAN 1985		RURAL 1979	RURAL 1985		1985 POPULATION (in thousands)			OPEN FACILITIES PER POPULATION IN RURAL AREAS
	Total	Total	Open	Total	Total	Open	Total	Total	Open	Total	Urban	Rural	
EL SALVADOR - TOTAL	291	342	292	271	284	245	20	58	47	4,806	2,275	2,531	1:54,000
Hospital	14	14	14	14	14	14	--	--	--				
Health Center	9	12	12	9	12	12	--	--	--				
Health Unit	99	100	95	97	98	94	2	2	1				
Health Post	159	174	137	145	153	118	14	21	19				
Community Post	10	35	29	6	6	6	4	29	23				
Dispensary	--	7	5	--	1	1	--	6	4				
WESTERN REGION	51	67	64	47	50	50	4	17	14	960	375	585	1:42,000
Hospital	3	3	3	3	3	3	--	--	--				
Health Center	2	2	2	2	2	2	--	--	--				
Health Unit	20	21	21	20	21	21	--	--	--				
Health Post	26	31	31	22	23	23	4	8	8				
Community Post	--	10	7	--	1	1	--	9	6				
Dispensary	--	--	--	--	--	--	--	--	--				
CENTRAL REGION	55	63	47	55	57	42	--	6	6	587	222	365	1:73,000
Hospital	2	2	2	2	2	2	--	--	--				
Health Center	--	1	1	--	1	1	--	--	--				
Health Unit	15	14	14	15	14	14	--	--	--				
Health Post	38	39	24	38	39	24	--	--	--				
Community Post	--	7	6	--	1	1	--	6	5				
Dispensary	--	--	--	--	--	--	--	--	--				

REGION/ TYPE OF FACILITY	TOTAL 1979 Total	TOTAL 1985 Total	TOTAL 1985 Open	URBAN 1979 Total	URBAN 1985 Total	URBAN 1985 Open	RURAL 1979 Total	RURAL 1985 Total	RURAL 1985 Open	1985 POPULATION (in thousands) Total	Urban	Rural	OPEN FACILITIES PER POPULATION IN RURAL AREAS
METROPOLITAN REGION	43	42	42	39	38	38	4	4	4	1,286	1,055	231	1:58,000
Hospital	5	5	5	5	5	5	--	--	--				
Health Center	1	1	1	1	1	1	--	--	--				
Health Unit	23	23	23	23	23	23	--	--	--				
Health Post	4	4	4	4	4	4	--	--	--				
Community Post	10	8	8	6	4	4	4	4	4				
Dispensary	--	1	1	--	1	1	--	--	--				
PARACENTRAL REGION	52	58	54	52	53	50	--	5	4	736	216	520	1:130,000
Hospital	2	2	2	2	2	2	--	--	--				
Health Center	3	3	3	3	3	3	--	--	--				
Health Unit	13	14	14	13	14	14	--	--	--				
Health Post	34	37	33	34	34	31	--	3	2				
Community Post	--	2	2	--	--	--	--	2	2				
Dispensary	--	--	--	--	--	--	--	--	--				
EASTERN REGION	90	112	85	78	86	65	12	26	20	1,237	407	830	1:41,500
Hospital	2	2	2	2	2	2	--	--	--				
Health Center	3	5	5	3	5	5	--	--	--				
Health Unit	28	28	23	26	26	22	2	2	1				
Health Post	57	63	45	47	53	36	10	10	9				
Community Post	--	8	6	--	--	--	--	8	6				
Dispensary	--	6	4	--	--	--	--	6	4				

Source: Alens, A. Socio-Demographic Aspects Related With Health Services. El Salvador, 1986, pp. 22, 23, 76.

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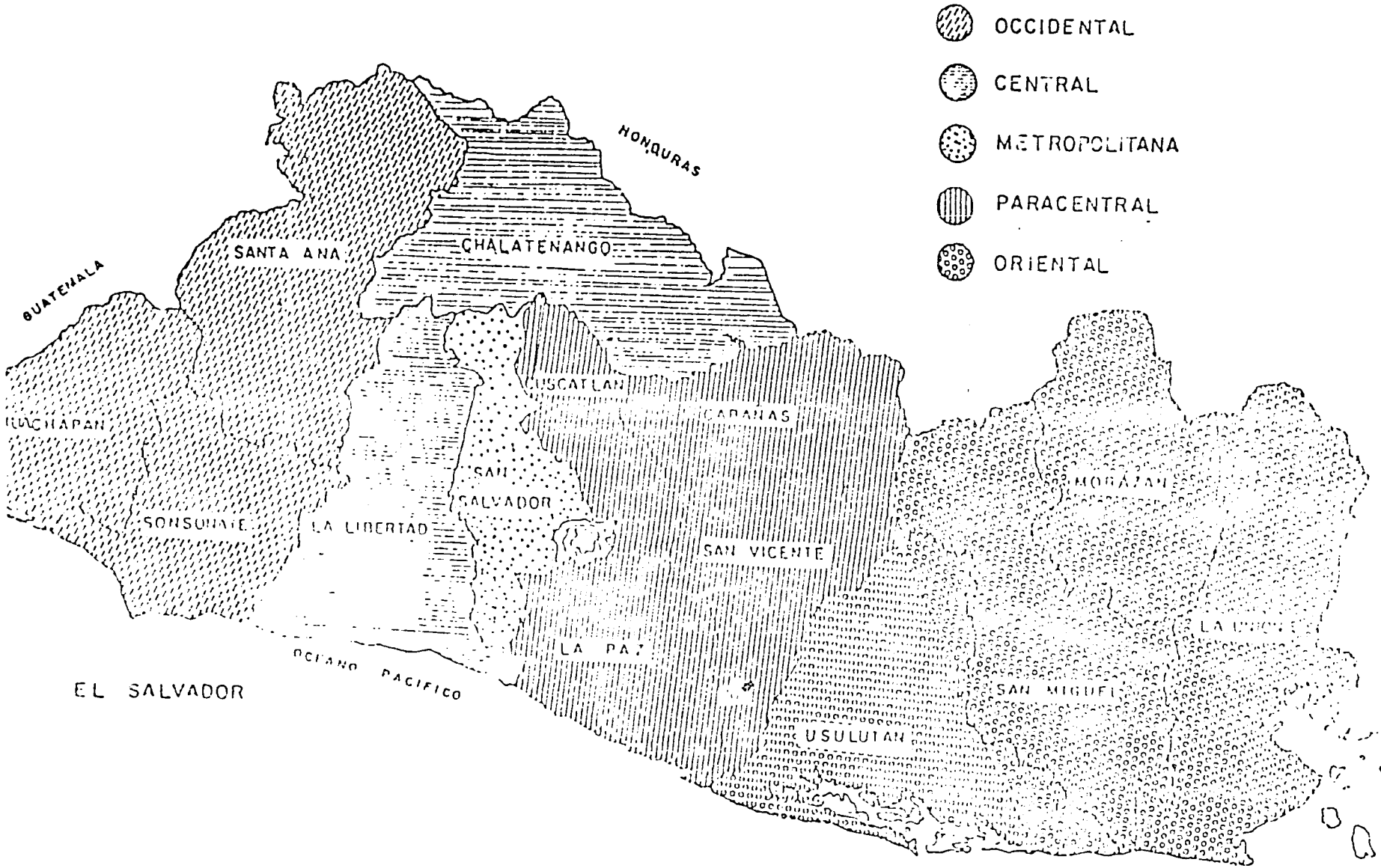
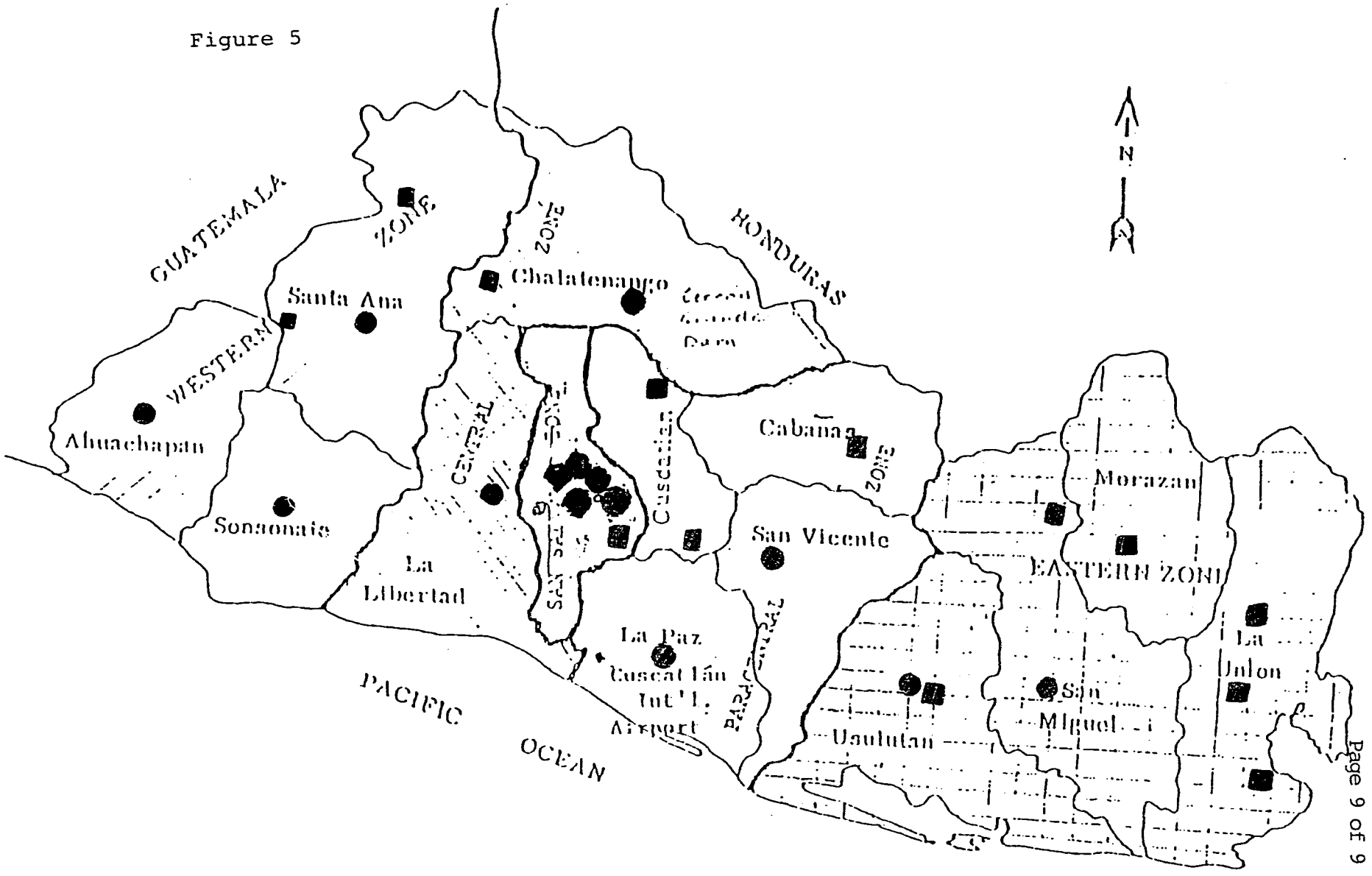


MAPA DE EL SALVADOR SEÑALANDO LAS CINCO REGIONES DE SALUD EN QUE ESTA DIVIDIDO EL PAIS

Figure 5



FIVE HEALTH REGIONS OF EL SALVADOR

Source: Alens, A. Socio-demographic Aspects Related with Health Services. El Salvador, 1986, p. 31-32

■ Health Centers
● Hospitals

Comments on the feasibility of the Ministry of Public Health and Social Assistance's Programa de Salud Rural (PROSAR) San Salvador, El Salvador

Mac Chapin
June, 1986

Introduction:

This report attempts to describe and take a critical look at the Programa de Salud Rural (PROSAR), a rural health outreach program which is presently being designed within the Ministry of Public Health and Social Assistance (MOH). At this date, the operational lines of the program have not yet been fully defined and approved in the MOH; several alternatives and possibile strategies for action are now being debated internally, in the department of Asistencia Médica. This report will therefore portray the program as it is coming together within the MOH and examine the appropriateness and soundness of the different options that are being discussed. In no way should what is written here be construed as an attempt to impose a design for the rural health program.

There are several key issues related to the feasibility of PROSAR, its relationship to other MOH programs (and its fit within the general health care panorama), and its social and economic justification, especially at a time when there are numerous rumors over the need for drastic cuts within the MOH. The matter of the technical feasibility is intimately tied up with PROSAR's intimate conceptual relationship to the Programa de Ayudantes Rurales de Salud (ARS), which has been part of the MOH since the mid-1970's. For this reason, the second section of this report describes the ARS program so that the close parallels with PROSAR can be seen and inferences may be made as to how the two might be welded together so that they can draw strength from each other.

Second, because of budgetary shortages, it has been suggested that either (1) the community pay a salary to the full-time PROSAR community worker, the Ayudante Comunitario de Salud (ACS), or (2) the ACS can be convinced to work on a voluntary basis, with only limited remuneration. These suggestions will be explored through an examination of the nature of traditional community organization in El Salvador and a number of examples taken from the history of volunteer social service in rural areas.

Fieldwork for this report was carried out during four weeks in El Salvador from mid-May through mid-June, 1986. It involved trips to the Eastern, Western , and Para-Central Regions, where interviews were held with residents of cantones and municipal towns; Auxiliary Nurses and Doctors in Health Posts, Units, and Centers; Ayudantes Rurales de Salud (ARS) and their Supervisors (both Regional and Specific); and Regional Health Office staff. In the Central MOH Offices, I was fortunate enough to be invited to participate in the planning sessions for the PROSAR program, which were held in the Department of Asistencia Médica. Among other people interviewed were members of private voluntary organizations working in the field of health, as well as officials of A.I.D. It must be noted that systematic fieldwork at the community level was severely limited by the present conditions of unrest present throughout most of the country.

The Programa de Salud Rural (PROSAR):

In March of 1986, the Planning Division of the Ministry of Health presented a document entitled Proyecto de Salud Rural Comunitaria, commonly referred to as PROSAR. As conceptualized, it fits within the broad framework set forth in the recently elaborated El Camino Hacia la Paz, a position document which outlines the government's social and economic development plan for the next few years. On a more specific level, it constitutes part of the MOH's contribution to the deepest rural penetration in a publicized campaign to administratively decentralize government agencies and place strong emphasis at the level of the municipalities, which are described as "an efficient social body for the identification and solution of many problems, since the municipalities and their cantones and caseríos understand more clearly the needs and preferences of their inhabitants and, for this reason, they are able to meet more adequately their needs."

PROSAR is an attempt by the MOH to continue the process of regionalization of the primary health care system and extend its coverage by reaching into the cantones and caserios. With this program the MOH proposes to work closely with rural communities in the selection of community leaders who will devote themselves, either on a voluntary or a paid basis, to curative and preventive health care, with a strong commitment to community development activities. Key to the present approach is the notion, which has been pushed to the foreground, that the community must be the principal actor in its own well-being:

> Responsibility for the execution of the program rests with the community; the Ministry of Public Health and Social Assistance and other institutions will be elements of technical and administrative support.

The primary agent of change in this process will be either a paid MOH employee working full-time (called an Ayudante Comunitario de Salud - ACS) or a volunteer who works 15 hours per week (called a Lider Comunitario de Salud - LCS). At present, these two alternatives are being discussed within the MOH, although it appears clear that the job entailed necessitates a full work day and requires a salary, for reasons which will be discussed below. For this reason, as well as for consistency, the term Ayudante Comunitario de Salud (ACS) will be used throughout this report unless a more precise distinction needs to be made.

The ACS is conceived of as a catalyst, a person who orients and collaborates with the community in which he lives and works. He participates with the community in generating activities, making contacts with government and private agencies providing financial and technical assistance, and providing health education. Whereas the Ayudante Rural de

Salud (ARS) program, which is essentially the model on which PROSAR has been conceived and designed, began with the premise that the ARS was the primary actor in a largely passive and formless community which needed to be helped along and educated, PROSAR stresses the active participation and primary role of the community in the process. Beyond this, while the ARS program's priorities were theoretically headed by preventive health care and education, in fact curative health care came to absorb, through the years, a good portion of the ARSs' time and energy (the ARS program is discussed later in this report). PROSAR, by contrast, focuses strongly on community development and education, relegating curative treatment to the lower shelves. The priorities for PROSAR are laid out as follows:

(1) Health promotion, taking into account aspects such as: health education (literacy), housing, work, recreation, household gardens, small animal raising, and others, according to the needs of the community.

(2) Preventive health care: immunization, basic sanitation, nutrition, etc.

(3) Curative health care: simple medicines, referral, detection of illness.

The key person in PROSAR is the ACS, who will be selected for his qualities as a leader by the community in which he lives, in conjunction with staff from the regional office of the MOH. He will be surrounded by a number of Colaboradores Voluntarios de Salud (CVS) who will be unpaid "satellite" health promoters living in the caseríos of the cantón in which the ACS lives. This group will be supervised by a Supervisory Team composed of an Auxiliary Nurse, a Sanitary Inspector, and a driver. A Coordinating Team, made up of a Doctor, a Nurse, a Sanitary Inspector, and a Health Educator, will in turn manage the entire operation from the regional level of the MOH.

Communities chosen for inclusion in PROSAR -- 10 in the initial pilot stage -- must (1) be 90 minutes or more from the nearest health facility; (2) be without any sort of non-traditional health service; (3) have a population of approximately 1,500 to 2,000 inhabitants; and (4) have interest in and willingness to participate in the program. The ACS must (1) be a resident of the community; (2) be accepted by the community; (3) have participatory leadership qualities; (4) know how to read and write; and (5) be willing to undergo training and commit himself to the program for at least two years.

Responsibilities for successful functioning of the program are divided between the community and the MOH. With the initiation of PROSAR, community action for the health sector will be managed through Comités de Salud, which are made up of the ACSs and the CVSs, as well as other interested local

citizens. Specific objectives to be reached by the community, embodied in the Comité de Salud, are:

(1) Identify the problems of health through the ACS, organized clubs, and other change agents.

(2) Take care of the community's health through the preventive and curative activities developed by the ACSs and CVSs, organized clubs, and other change agents.

(3) Identify the cases which cannot be resolved in the community and refer them to the nearest, most appropriate health establishment.

(4) Participate in the solution of the problems which deal with health through intersectoral coordination.

The MOH is responsible for the following objectives of the program:

(1) Provide technical and administrative assistance to the ACSs in preventive and curative activities.

(2) Implement preventive and curative activities, to be developed by the ACSs, CVSs, and organized community groups.

(3) Complement educational activities of the ACSs, the CVSs, the organized clubs, and the community in general, through collective communications media.

(4) Train health staff working in development of the program at the central, regional, and local levels.

(5) Train the ACSs, the CVSs, and organized clubs so that they share the responsibility for health care.

(6) Train, at the regional and local level, the ACSs in the methodologies of community development and group dynamics.

(7) Promote actions which contribute to the improvement of the environment that will diminish health risk factors.

(8) Attend regularly to cases referred by the ACSs to health facilities.

(9) Strengthen the health facilities, especially those associated with PROSAR.

(10) Coordinate activities with different institutional and private sectors for solutions of health-related problems.

The ACS and the CVSs in his radius will be supervised by a motorized Supervisory Team made up of an Auxiliary Nurse, a Sanitary Inspector, and a Driver who will ideally visit them at least once a month in the villages in which they work. Their responsibilities include:

(1) Orientation of the ACSs in carrying out activities.

(2) Support and strengthening the training of the ACSs (follow-up).

(3) Assistance in running community meetings.

(4) Education at the community level.

(5) Support of the ACS and the community in planning appropriate activities.

(6) Supervision of the technical aspects of the ACSs' work: e.g. vaccination, first aid, referrals, etc.

(7) Review and analysis of reports and informational documents.

(8) Analysis and assistance in control of materials, medicines, etc.

(9) Review and analysis of progress of the program and necessary readjustments.

The primary differences between the program carried out by the volunteer "leader" (Líder) and that executed by the paid "aide" (Ayudante) are tied to the amount of work and the complexity of the tasks expected. Obviously, more can be done during a complete eight-hour day than in a loosely organized three-hour period fitted around other more substantive activities. The paid ACS takes on a structured full-time job, and his involvement in other productive activities is virtually precluded. The volunteer works with health-related responsibilities in his off hours, after he has finished the tasks which bring in his livelihood. The volunteer worker will not be expected to spend much of his time with community development activities and health education. His range of responsibilities will be circumscribed to cover curative and preventive health care referrals to the nearest appropriate health facility, with a minimal amount of "promotional" work that in some way involves education and community development.

The volunteer, for example, will only be held accountable for approximately one-third of the tasks assigned to the paid ACS. Furthermore, duties performed at the nearest health facility will be more infrequent and less demanding.

As presently envisioned, PROSAR will be implemented on a pilot basis, with ACS's placed in 10 communities (cantones) in the Eastern Region of the country. This is an interesting place to begin. The departments of San Miguel, La Unión, Usulután, and Morazán have traditionally been among the most conflictive areas of the country, but concentrated and steady military action in the region has, according to official estimate, "recuperated" large chunks of formerly rebel-held territory during the first half of this year. PROSAR would be part of a campaign of consolidation through "civic action," which would be in effect a combined effort of a variety of government ministries. Health agents are seen as perhaps the least controversial government workers -- and the record bears this out -- and for this reason they are being pushed to the front of the social services initiative in recently recovered zones.

It has already been noted that PROSAR is clearly modelled after the Programa de Ayudantes Rurales de Salud (ARS), a rural health outreach program which presently exists in El Salvador. Indeed, PROSAR, although it has been announced as an innovation of sorts, is conceptually very similar to the ARS program. For this reason, it would be useful to describe this program in some detail before entering into discussion of the advisability of the different aspects of PROSAR.

The Programa de Ayudantes Rurales de Salud (ARS):

The Programa de Ayudantes Rurales de Salud (ARS) was begun in 1976 in an attempt to extend the nation's health care system into the rural areas, in what was then referred to as a policy of "rural penetration." The program, which received initial support from AID, was based on the premise that until then the health care system had been skewed overwhelmingly toward the urban areas, with little more than thin tendrils spreading out into the countryside to the level of the municipal headquarters, where a scatter of health posts had been established beginning in the early-1950's. The ARS program was to take movement into the rural areas one step farther, into the cantones, where modern health care was virtually non-existent. ARS were (and still are, by and large) chosen by MOH officials at the regional level from among three or four candidates proposed by the cantones in which they live. Although they are employees of the MOH, and report directly to the MOH regional offices, they are generally perceived as members of the community who are, to a significant extent, at

the service of the community as a whole. The program began with a heavy emphasis on prenatal and infant care, family planning, sanitation (latrines, waste disposal, potable water), and nutrition; and the ARS were given first aid kits and limited medicine chests, with basic remedies such as aspirin, calamine lotion, and de-worming medicine. Thus, the bulk of the ARS's work was to be educative, preventative, with a minimal stock of curative medicines for treating simple afflictions. More serious cases were to be referred to the nearest health facility. Although the availability of medicines has always been significant and important, the limited curative function of the ARS was clearly secondary. In fact, it was used to some degree as a bait to attract and gain the confidence of community members so that the more substantive educative activities could be carried out.

It should also be pointed out that the ARS was initially perceived as a change agent, a community development worker, a person who was to aid in "coordinating and adequately strengthening the different programs of rural penetration, with strong participation from the human potential of the communities." (Programa de Ayudantes Rurales de Salud, MOH, 1980, pg. 1) However, this function was for the most part lip service: it was mentioned in initial position papers as a policy, but no strategy for making it operational was articulated.

Original projections for the number of ARS to be stationed in communities throughout El Salvador were ambitious, running from 2,000 to 3,000. To date, approximately 420 ARS have been trained by the MOH, and an estimated 200-260 remain in the system (some counts include the ARS supervisors). The program began well, with 340 ARS trained from 1976 through 1978, and ARS supervisors were recruited from among Evaluators working on the Malaria program. However, the ARS program became bogged down with the onset of the civil disturbances of 1979, the arrival of general confusion, and subsequent budget cuts within the MOH. Only 80 ARS were trained from 1979 through 1984. Finally, in 1985, a group of 29 ARS, all selected from the Agrarian Reform Sector, was trained.

Attrition from the ranks of trained ARS has occurred for a number of reasons. A small number of ARS have risen to become supervisors of their colleagues; and in fact a considerable percentage of the present supervisors are former ARS. A limited number of ARSs have been let go, but most have resigned either for personal reasons or because they have found something better. ARSs in conflictive zones have, in some cases, resigned and left their communities, taking a variety of directions that have not been systematically tracked. More often, however, they have kept their positions and been transferred, in cases where their villages have been threatened or abandoned altogether, to either the regional offices, to nearby health facilities, or other cantones.

of ARS

Pay is presently around 650 colones per month (approximately $130), a sum judged sufficient, especially in the current context of high unemployment. However, in the past years payment has been irregular, tardy, and often involving travel to San Salvador and other inconvenient places, a situation which has inspired a good measure of discontent.

The central MOH office in San Salvador exercises little control over the ARS program, and its involvement with and committment to it has been fragmented and lethargic since 1978, when its role changed from that of technical backstop to little more than distant administrative and accounting functions. Since the program began, it has been under four distinct divisions: first Materno Infantil (from 1976 to 1981), then Servicios Operativos (from 1981 to May of 1985), then Educación Para la Salud (from May of 1985 until approximately April of 1986), and finally Asistencia Médica. The remoteness of the Central Office to the ARS program is underscored by the fact that in at least two regional offices news of the recent switch to Asistencia Médica has (as of May, 1986) only arrived in the form of rumor, and not through official notification. One regional ARS coordinator was still holding documents because he didn't know to which department in San Salvador he should send them; and a small group in Oriente thought that something called "Atención Médica" might now be in charge of the ARS program.

The ARSs are theoretically responsible directly to the regional office; and indeed, on MOH organizational charts they are connected by a long line that extends from the regional office to the cantón, independent of the health posts and units. In fact, however, the ARS have been connected to the health facilities nearest them from the beginning, and this relationship has become closer with time. They presently spend one day per week helping out at the health facilities in their area, and most of their logistical support comes from the posts and units. The services they perform at the facilities are not systematically structured according to a general plan. Some of them learn a good deal about curative and preventive medical techniques from the resident nurses and doctors, and this information enables them to work more effectively in their communities. Others are used in large part to handle odd jobs such as cleaning equipment or sorting out medicines and what they learn is negligible. In any case, this requirement removes four work days in the community from their monthly schedules.

The ARSs are supervised, at least in theory, by a team consisting of a doctor, an auxiliary nurse, a health educator, and a sanitary inspector (with some variation, but off the same theme). This team visits the ARSs themselves on occasion, but most of their contact in the field is with the Regional or General Supervisor and his Specific Supervisors. The Regional Supervisor oversees a group of between six and 12 Specific Supervisors, who in turn have charge over between eight and 12

ARSs. The most important and constant supervision and moral and logistical support takes place at this level. Many of the supervisors have been with the program from the first years, and a significant number are former ARSs. It is significant that their salaries are just a fraction above that of the ARS, and they are both caught in the same pay schedule.

The task of the supervisor is to visit the ARSs in their cantones, evaluate their work, assist them during community meetings and talks, comply with administrative tasks

While the Supervisors are one cut above the ARS in status and in breadth of experience, both groups are fish from the same pond and the relationship between them, observed on a variety of occasions and in different social and work situations, is perhaps best described as collegial. It is at this level that the ARS program gains its vitality and cohesion. From this point up communications begin to fray and linkages become more and more uncertain and unclear.

The ARSs received initial training of from 8 to 12 weeks, carried out in the regions through the Escuela de Capacitación Sanitaria. Since then, they have been virtually abandoned. From time to time they have been gathered together for one-day discussions on this or that, but these sessions are apparently improvised, disorganized, largely irrelevant, and of little value or interest to the ARSs. The Supervisors have been given several more substantial courses lasting a week or two and covering subjects such as administration and community development. These sessions, which have excluded the ARSs because of tight budgets, are accompanied by the d[illegible] ous premise that what is learned will be passed on to [illegible]RSs. Missing from the program is a steady, coherent, an[illegible] litarian program which satisfies the needs of the ARSs to learn new techniques and methods for working in their communities, brings them together to discuss, in organized fashion, their individual experiences and allows them to reflect on what they are doing, and reinforces their sense of being an integral and worthwhile part of the the health care community that makes up the MOH. The ARSs are seldom asked their opinions on their work, their frustrations, and their needs. (A while back in the Eastern Region, the ARSs and their Supervisors were asked, in an improvised session, what they needed in terms of training. A list was apparently composed of their responses and sent to some department or person at the San Salvador office; but none of the ARSs or Supervisors ever heard anything more about the matter.) In other words, since the initial orientation follow-up with additional training and refresher courses has been virtually non-existent.

The method of payment of the ARSs has been problematic from the beginning, although it has become even more frustrating and detrimental to productive work since the conflict began in 1979. Virtually all of the ARS and the Supervisors find themselves in the administrative category called Ley de Jornal (or Contrato por Planilla). This category, in contrast to Ley de Salario, places them apart from the roster of permanent employees of the MOH, for they are essentially working on a contract basis. They can easily be dismissed bureaucratically if it is decided that budget cuts must be made -- a situation which has been oppressively nearby during the past few years and is the source of constant insecurity.

However, the most onerous burden of their inclusion in the Ley de Journal bracket involves the monthly contortions they are forced to suffer to receive their checks. The present system, it must be said, is due to the war. During their first years they were paid cash in envelopes which were dropped off at the nearest health facility. After a few payroll messangers were robbed and/or wounded, the Ministry of the Treasury began sending payment for all workers employed by various ministries under the Ley de Jornal to a single locale. At the present time, both the ARSs and the Supervisors must journey to the regional office to pick up a document which they in turn take to another place to receive either checks or money, where they must stand in line with hundreds of employees from other ministries and government offices. In order to confound robbery attempts, the place of payment is periodically changed and the more remotely located ARSs miss their checks. It is not uncommon for confusion to occur in this system and the ARSs are forced to travel all the way to San Salvador to receive payment. In short, the monthly quest for the paycheck is time-consuming, often costly (some ARSs routinely spend more than 20 colones on transportation alone), and occasionally fruitless. Between two and four days are lost each month as a matter of course due to administrative blockage. Aside from the inconvenience this causes the ARSs, it digs into their working time and decreases considerably their efficiency. Unfortunately, no current evaluation of the ARS program exists, and it is therefore necessary to rely heavily circumstantial and impressionistic clues to piece together and assessment of its effectiveness (a systematic evaluation was apparently done within the MOH in 1978 or 1979, but it would have offered no more than old data if it could have been unearthed). It can be said with certainty, however, that the ARSs have generally served to educate the people in their communities on a basic and useful range of topics related to health, sanitation, and nutrition; they have brought simple curative medicines into the villages and assisted in preventive health campaigns; they have made simple diagnoses of ailments and referred patients to nearby health facilities; and some of them have taken on a larger community role by moving into the sphere of village organization and development. An other

words, they have, to a remarkable degree, lived up to the description of the work they were programmed to carry out, and these initial duties have been supplemented by other tasks over the years.

The ARS program constitutes the vital link between the rural outback of El Salvador and the formalized health system embodied in the facilities staffed by nurses and doctors. Without the intervention of the ARS over the last 10 years, the cantones and their caserios would be virtually outside the reach of modern health care. Most of the ARS have been with the system for more than five years, and many from the original three groups, trained through 1978, are still working. When they first began, their place within the system was either ignored or looked down upon, since they were campesinos with no formal training in health care. During the first years, the ARSs note, doctors (especially) almost refused to acknowledge their existence as employees of the MOH. But now that they have had a chance to work closely with the nurses and doctors they have gradually shown their worth and demonstrated their value at the community and the health facility level, they are accepted. Patients they refer to the health facilities are given attention, and each year the ARSs are given a greater range of responsibilities -- a sign that their abilities are valued.

Similarities and differences between PROSAR and the ARS program:

Both programs work at the level of the cantón with a paid leader (at least in the most reasonable form of PROSAR) who works in community development and preventive and curative health care. The list of activities for both Ayudantes is virtually the same, although the ACS is scheduled to concentrate more heavily on community action than the ARS, whose original job description was more narrowly focused on preventive and curative health care. Both the ARS and the ACS are chosen by the community and representatives of the regional office of the MOH.

PROSAR might best be seen as a more finely tuned version of the ARS program. It is built squarely on the experience gained in the ARS program, and in truth it is this experience which gives sense to PROSAR (after all, PROSAR did not spring fully formed out of a void). The change in emphasis toward community development is the end result of a logical process which has been unfolding empirically, through experimentation and self-questioning, in the ARS program. It has been noted that the ARS program design began with cursory discussion of community development but offered no systematic methodology for making it operational. In fact, however, many of the ARS have come to realize that community development action is necessary in their cantones, that health education and care must go hand in hand with local organization across sectors in order to be effective. Concretely, they have realized that there is a

necessary relationship between health and nutrition (which involves agricultural production and contact with the Ministry of Agriculture) and literacy training (which involves contact with representatives of the Ministry of Education and other agencies working in adult education). On a more general level it is much easier to work on health issues in a community that is organized than one that is no more than a geographically defined scatter of houses. Those ARS who have worked in community development activities across sectors -- a trend that has become more prominent in recent years .

In the matter of supervision, PROSAR is presently structured differently from the ARS program. While the ARSs are supervised at the community level by roving Specific Supervisors, each of whom covers the activities of between 7 and 10 ARSs, the ACS of PROSAR are to be supervised by a team made up of an Auxiliary Nurse, a Sanitary Inspector, and a Driver. According to the present design of PROSAR, the Supervisory Team will be trained in the art of supervision, then it will be set loose to cover all of the 10 ACS who will make up the pilot phase of the program. It would be worthwhile to examine more closely the differences between these two systems.

In the pilot phase, the PROSAR supervisory system will involve three people, all of whom will receive a salary, and a vehicle, which will in turn consume fuel and, if it is similar in nature to other vehicles travelling country roads in El Salvador, will need periodic repairs. It is highly likely that it will occasionally be out of commission or sequestered for some other, more pressing task of the regional MOH office. When this happens, it is probable that the team will be unable to make its supervisory rounds. Now, if this scenario is multiplied by 17 -- taking a total of 171 ACSs as the goal for PROSAR over the next few years -- the possibilities for breakdown in the system also multiply. And so does the cost of the program, which would have under its wing 51 supervisory team members and 17 vehicles.

By contrast, the system of having a Specific Supervisor who carries out most of his work by hitching rides and traveling on foot is simpler (it precludes the need for coordination of members of a team), more reliable (it is not dependent on a MOH vehicle), and far less expensive. If by any chance there is any weakness in the support system at the level of the regional MOH office, the team-with-vehicle system will fail while the single supervisor system will function, as it has done with the ARS program.

A word or two should also be said about the difficulties of supervising, with a team, the work of a volunteer community worker (as an alternative to the paid ACS), since this option is still being considered by the PROSAR design team. Because the volunteer will be doing virtually all of his work during the afternoon and evening, the Supervisory Team, if it is to actively collaborate with him in his work sedv dvo yuiiazedt%

will have to arrange a schedule that takes this into account. It will have to travel during the afternoons and be prepared to spend the night in some of the more isolated communities (which would make up the bulk of those communities selected, since they will be located at least 90 minutes from the closest health facility). It is difficult to visualize how all of this would take place in any coherent fashion.

The Potential for Community-level Economic Support for PROSAR Health Workers:

According to MOH tradition, all health facilities -- from hospitals on down to the level of the health post -- are supported by patronatos, which are in essence committees made up of local leaders. These patronatos are at the service of the health facilities and assist them in raising and spending money in benefit of the facilities. In fact, they have been formally set up by the MOH and are subject to a code of regulations subsumed under the Ley de Patronatos, which restrict use of the money to purposes related to the health facilities they represent. Some of the patronatos already existed under another name (usually comité or directiva) before the MOH appeared on the scene and had traditionally worked on a wide variety of community projects, which may or may not have included health care. The large majority have apparently been formed more or less on the spot, out of what amounts to an organizational void.

Patients who use health facilities are charged a fee of two colones for each consultation; at the hospitals and the centers this fee is usually collected, while at the lower levels, the units and the posts, it is common for patients to pay whatever they are able, which is often nothing. This money is placed in a fund which is managed by the staff of the health facility, although it is referred to as the patronato fund. Extra money may be raised through various activities staged by the patronato or facility staff or both (as is often the case). And in theory all of this money is pooled and spent in accordance to mutual agreement reached between the head of the health facility and the patronato. Funds are commonly used to buy medicines which have not been supplied by the MOH, to cover staff salaries, or to purchase needed equipment.

In practice, however, the patronato scheme is a good deal more complex and less reliable than its ideal characterization. As a general rule, the patronatos surrounding hospitals and centers tend to be stronger and more capable of raising money through activities than their counterparts at the lower levels, although even here their record is spotty at best. The patronatos of some of the hospitals and centers apparently exist "only in name;" and where this is the case virtually all of the money available through the "patronato fund" comes from patients' visits and is

managed by health facility staff. In a few cases, the patronato takes an active role and actually works to raise money and collaborates closely with the health facility director and his staff in planning allocations. But the rule appears to be a largely passive or rubber stamp association of people, and the fund is simply used for purposes outlined by the facility's director.

At the unit and post levels the number of functioning patronatos drops off sharply. In fact, at the level of the municipal headquarters, where these facilities are usually located, there are very few local participatory organizations that exist for any purpose. The interaction of patronatos with units and posts, while not entirely absent, is tenuous and usually perfunctory, more symbolic than functional.

At the cantón level, where the (ARS) work, the local community group, if it exists, is generally called either a directiva or a comité. Again, the canton-level directiva should not be seen as a functioning institution that is regularly found throughout the rural areas of El Salvador. In some communities it exists to carry out village projects such as construction of a school or repair of a bridge or a washed-out road. But even this is infrequent. The ARSs have tried to work with those which are operating or help form them when they don't exist, but work in this direction has been, by all accounts, slow and difficult.

One initial version of the (PROSAR) proposal suggests that these local directivas can use their energies to gather together money (and perhaps food) within the cantón to pay a monthly salary to the Ayudante Comunitario de Salud (ACS), who would work full-time, thus assuming a burden akin to that which the MOH has carried in the ARS program. The feasibility of this scheme is doubtful for several reasons.

First, virtually everyone interviewed noted that the cantones are far too poor to assume this expense, especially in the present climate of drammatic unemployment and the rising cost of living. Given an average community of 150 families, each family would be required to produce two colones per month to pay the Community Leader 300 colones ($ 60) a month, a salary which is less than half of that which an ARS presently earns. If the salary were to be lifted to that of the ARS, community members would have to gather together four colones each month -- an astronomically high figure for people living on the borderline of subsistence.

Second, it is clear that the Community Leader would be doing virtually the same things presently expected of an ARS, with perhaps a few additional tasks added on. While early plans assumed that this set of responsibilities could be carried out in a 15 hour week, working after the close of a regular work schedule, realistic assessment of the situation shows that the projected work plan comprises a full-time job. (The pared-down version of what would be expected of the PROSAR volunteer is so skimpy as to represent an emaciated

distortion of the original concept of the program.) This being the case, it is difficult to see how the Community Leader is to somehow be paid by the community and the ARS by the MOH. This is assuming, of course, that the MOH will continue supporting the ARS program.

Third, there is overwhelming evidence that the directiva (or the comité), which would presumably be the local institution charged with managing the contract with the Community Leader, cannot be counted on to function on a general basis throughout the country. In many cases (if not most) it simply doesn't exist at the cantón level as an operational entity. And even where it does exist and serves to undertake and successfully complete community projects, in no case does it manage cash and pay the monthly salary of anyone rendering services to the community. In other words, if such responsibilities were to be contemplated, the institution would have to be created and/or strengthened, and an administrative/banking mechanism would have to be implanted.

There do exist some cases in which cooperatives in the agrarian reform sector have used already existing mechanisms of this sort to hire ARSs and school teachers. This sort of arrangement has been consciously sought by the government, and several cooperatives have attempted to lure needed ARSs and teachers to work for them. The most common arrangement is to automatically subtract a set fee, usually one colón, from the monthly wages of each cooperative member. In the Eastern Region, one cooperative took in an ARS but stopped footing his salary after three months. A teacher, who received 400 colones per month from another cooperative, lasted seven months. Two teachers, both receiving 350 colones per month, have been working at another cooperative for about three months and already there are growing murmurs among members to the effect that they should not be covering costs that the Ministry of Education should assume. In the Western Region there are some rather sophisticated cooperatives with relatively complex administrative structures that are apparently supporting ARSs, and perhaps teachers (but information on this point is weak). However, it is apparently the case that the attempt to have the agrarian reform cooperatives pick up the cost of ARSs working for them has been far less successful that initially expected. Thus, even where the mechanism exists, the record is poor.

In conclusion, the assumption that cantón-level associations are organized or can easily be organized to collect and manage money, even if money were available (which it is not), and use it to pay regular wages (however minimal) to a Community Leader is unfounded. No cases in which this sort of arrangement has functioned have been found, and our understanding of the nature of the rural areas of El Salvador leads squarely to the belief that reliance on directivas for this purpose will result in frustration. Even where cantón-level directivas are organized and are carrying out community projects, they do not have the capacity to administer a steady flow of money to cover salaries.

Although it is not entirely certain that agrarian reform cooperatives are incapable of collecting and managing money to pay the salaries of ARSs (and teachers), there is enough evidence to show that this strategy is not very reliable. It is hypothesized that it will have the best chance of working on the larger, more economically sophisticated cooperatives, which only comprise a small fraction of those within the agrarian reform sector. By no means can it be counted on throughout the sector. It must be realized that the agrarian reform cooperatives are already deeply in debt, and assumption of still another expense, especially when the service being paid for is not apparently productive in the short run, is perhaps unrealistic. At least, this reasoning has been offered by community organizers familiar with failures on cooperatives in the Eastern Region.

Volunteers and Other Variations:

An alternative to the notion that communities could pay regular salaries for PROSAR health workers was that the health workers would simply be unpaid volunteers. This scheme removes the burden from both the MOH and the community and relies on the altruistic spirit of the PROSAR worker. It has already been noted that if the health worker, called a Líder Comunitario de Salud (LCS), were to work on a voluntary basis his schedule would be cut down to fit within a 15 hour week. However, even with a greatly reduced work load, the characteristics of voluntarism would make PROSAR a much more ineffective and shaky beast than the one being fashioned with the full-time paid ACS.

There are several volunteer programs in the rural areas, and designers of the PROSAR proposal apparently figured that the tradition of donating one's services free of charge was sufficiently well-established to allow the unpaid LCS concept to take root and flourish. However, closer inspection of a few of the volunteer or seemingly volunteer programs that do exist makes this assumption more problematic and tenuous.

The volunteers with the Malaria Program are often brought forward as an example of how the incentive of helping the community is sufficient to extract volunteer work. In fact, however, the malaria volunteers have a small, closely-defined list of tasks -- taking blood smears and passing out pills and writing down minimal information -- that does not encroach substantially on the time they need for productive activities and does not take them far from their homes.

The traditional midwives deliver the vast majority of the babies in the rural areas and they receive payment (however small) for their services. Most of them are women over the age of 50, are illiterate, and are in a real sense experienced specialists in all aspects of pregnancy and childbirth. Beyond this, and most important, they fill a culturally prestigeous position in society, one which carries a heavy load of tradition with it. As with the malarial volunteers, their

profession is narrowly circumscribed, although it involves considerably more responsibility and time.

Save the Children has been working since 1979 with volunteer Health Promoters (as well as promoters in education and agriculture) in four towns of El Salvador (Ilobasco in Cabañas, San Martín in San Salvador, and two communities in La Unión). Two or three volunteer promoters are located in each community. They are young (average 23 yrs. of age) and they work in their free time. They are not paid for their services; instead, incentive to work without remuneration comes from the recognition they gain from their fellow villagers. They are given continuous technical and moral support by Save the Children staff, and in its limited functions the program is apparently successful.

The Catholic Church has health promoters in out-lying communities who serve as ambulatory medicine vendors. They work part-time and are remumerated for their time through a percentage of the drugs they sell at a price just under that of nearby pharmacies. While this comprises a service to the community and at the same time is to a large extent economically self-sufficient, it is limited almost entirely to curative medicine. If some combination of this scheme were to be attempted in PROSAR, it would be necessary to move the focus of the ACS away from community development or eliminate it entirely, and concentrate on the sale of medicines. Clearly, this would dillute considerably (if not eliminate) the core concept of PROSAR's original design. Beyond this, the legality of such a scheme within the MOH would have to be reviewed.

In sum, volunteers have been used throughout the rural areas for limited tasks that do not cut significantly into their schedules of production. Thus, the idea of utilizing volunteer collaborators in the caseríos, where they will work as satelites that complement the work of the ACS, should be a productive arrangement. Attempts to squeeze a full-scale work schedule out of peasant volunteers carrying out a complex of tasks will surely fail; and thoughts of relying on rural community organizations, where even these do exist, for economic support of the ACSs should be put aside. If the original concept of PROSAR health workers is to be kept intact, the MOH will need to pay them a salary. The salary should be similar or identical to that earned by an AP.S.

Conclusions and Issues:

(1) The Programa de Salud Rural (PROSAR), as it is now being developed within the MOH, shows obvious parentage with the Programa de Ayudantes Rurales de Salud (ARS), a rural health "penetration" initiative launched in the mid-1970's with support from AID. In fact, although PROSAR is being presented in some quarters as an innovation of sorts, it differs little from its parent except in its explicit call for stronger emphasis on community action and participation. However, it should be noted that even this change in philosophy -- toward a broader, more integrated view of health -- is a result of experience gained from the ARS program.

PROSAR should not be dealt with separately from the ARS program. It is clear that the strength in the proposed PROSAR is derived from the collective experience gained from the ARS program, and that the ARS program is presently alive and well. In fact, it appears to be flourishing, despite the chronic absence of support in the form of training (on a continuous basis) and resources in general from the higher levels of theMOH. In other words, there presently exists in the MOH a large body of rural health outreach agents with considerable experience and talent. This experience is valuable and should not be lost.

(2) The proposed design of PROSAR is perhaps best seen as a methodology which would be used, with substantial effectiveness, to fine-tune the ARS program. If used with committment, it could build upon the solid foundation already laid by the ARS program and strengthen the MOH's rural health outreach capability. The closer PROSAR follows the ARS program model, the greater chance it will have of functioning. This is to say that while the pilot phase of PROSAR is being run in the Eastern Region, it should be fed by the experience of the ARS presently working there and the two programs should, as soon as possible, be combined as one. If they are allowed to run parallel to each other without touching, it is probable that PROSAR will shrivel up and fail within a short time.

(3) It is unthinkable that the ARS program could be cut and in some fashion be replaced by PROSAR. First, the MOH would find itself in the somewhat awkward position of having to deal with approximately 250 laid-off employees who possess the skills needed in a band of newly-hired employees for an "innovative" program which is a virtual copy of the defunct program.

(4) The MOH has considered two alternative strategies which would relieve the Ministry's necessity of paying salaries to the PROSAR health workers. The first alternative places the community in charge of collecting money and paying a regular salary to the ACS. This is not feasible for several reasons: (a) rural communities, which at the present time are desperately poor, do

not have the incentive to pay the salary of a person who does not bring immediate productive returns to the community; and (b) El Salvador's rural communities are not generally cohesively organized for communal tasks, especially those that involve collecting and managing money. Beyond this, similar arrangements with ARS and teachers have been attempted within a number of the cooperatives of the agrarian reform sector -- where management mechanisms exist -- with very little success.

The second alternative involves enlisting the PROSAR health workers as volunteers. While volunteerism is fairly common in rural El Salvador, it is almost exclusively done on a very limited basis, with specific, well-defined tasks; and it does not cut significantly into the time volunteers need for productive activities. If the PROSAR worker is to be a community development agent who coordinates his efforts with other government ministries and private agencies, volunteerism cannot be counted on. If his duties are sharply circumscribed and restricted to a minimal range of tasks, then unremunerated collaboration may be expected. However, the adoption of this lost option would mean simplifying the program to the point where it would cancel out its own objectives, which are to stimulate community participation.

In conclusion, if the program is to work the PROSAR health workers must be paid a salary (probably equivalent to that which an ARS currently receives).

(5) The ARS program should be continued, and strengthened through the efforts of PROSAR, for it is a vital link between the formal health establishment and the rural outback of El Salvador. At the same time, however, certain economic realities must be confronted and pondered. At present, the ARS program consumes more than 2 million colones in salaries per year for the ARSs and their supervisors. If PROSAR is launched as something separate, with its projected 171 ACSs in place within the next five years (who would presumably earn a salary similar to the ARS), and the ARS program were to continue, this would add another 1.5 million colones just in salaries to the MOH's rural outreach program. In total, this would represent, within the next five years, an estimated 3.5 million colones (without accounting for inflation, which is presently racing forward), in salaries to cover the two programs (or the one program, if they are to be merged).

(To this, just for the fun of it, we may add the approximately 100 ARS presently working for Project HOPE, since it is rumored that they will eventually be absorbed by the MOH. At the salary of the MOH ARS (which is apparently low by HOPE standards), this would represent another 900,000 colones, raising the total to just short of 4.5 million colones per year in salaries alone.)

The pilot phase salaries for PROSAR do not represent a major expenditure, and they can be used to test the new methodology. Expansion of the program, unless it is done with ARSs, will probably be too expensive.

(6) The supervisory system proposed for PROSAR would add another 51 paid employees to the roster, 17 vehicles, and fuel and maintenance expenses. These costs can easily be eliminated by using the supervisory system presently employed in the ARS program. Utilization of the Specific Supervisor strategy would also be more reliable and efficient.

Annex H

MOH BUDGET AND ALLOCATION OF RESOURCES

FIGURE 1

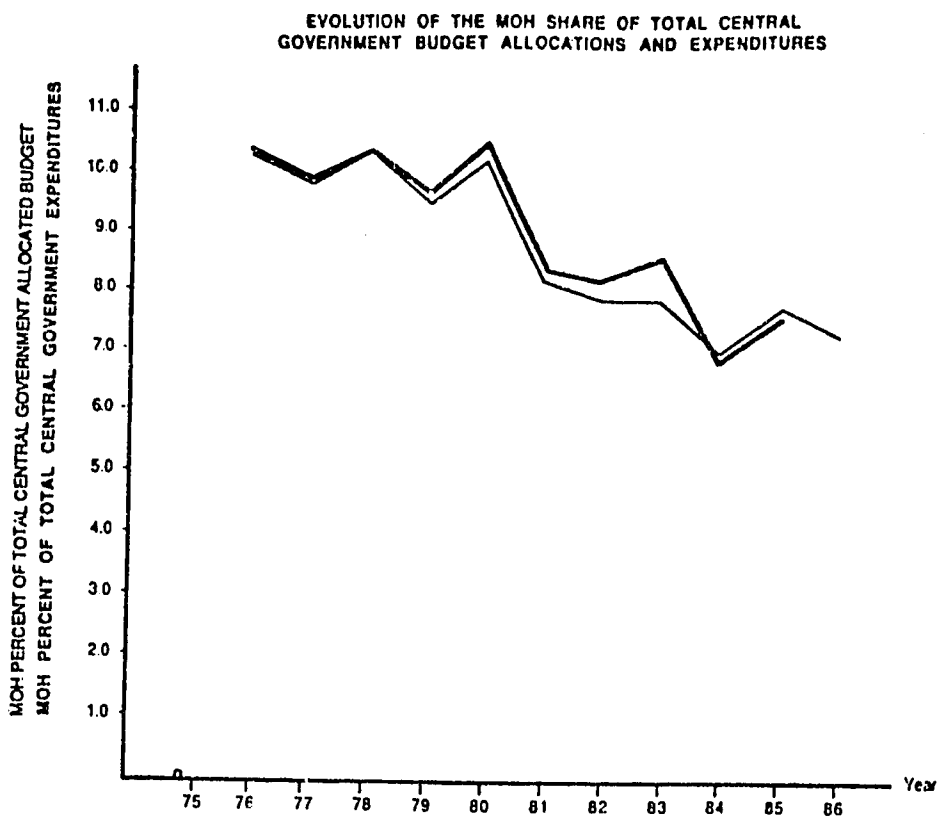


FIGURE 2

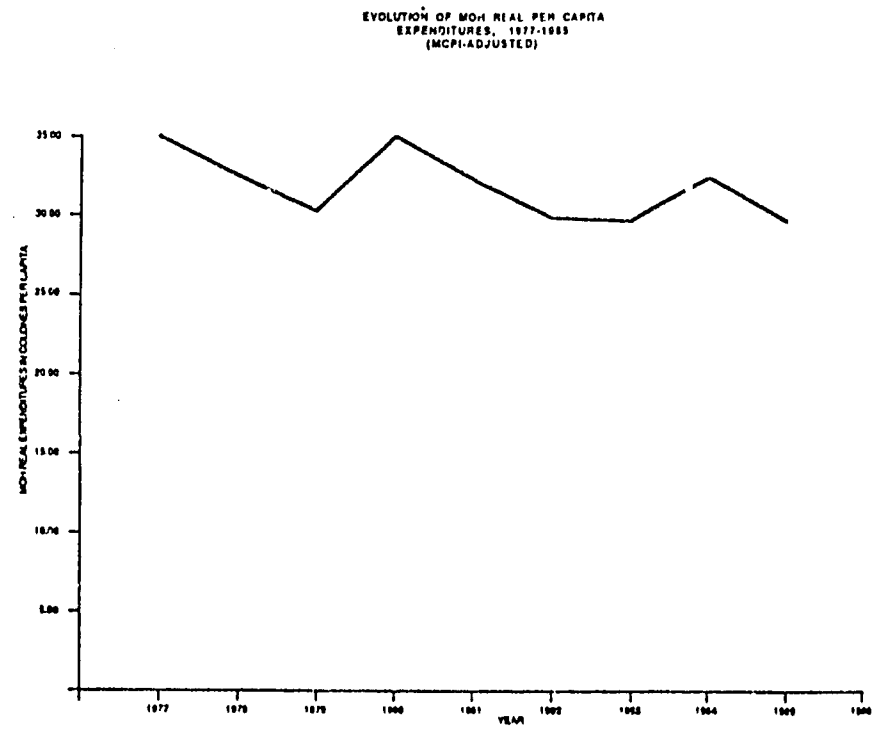


FIGURE 3

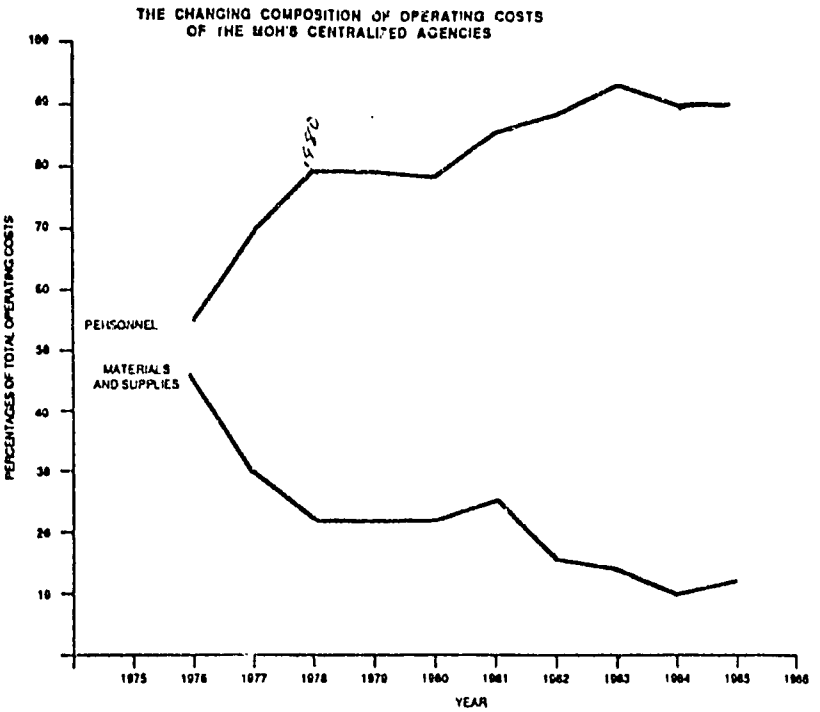


FIGURE 4

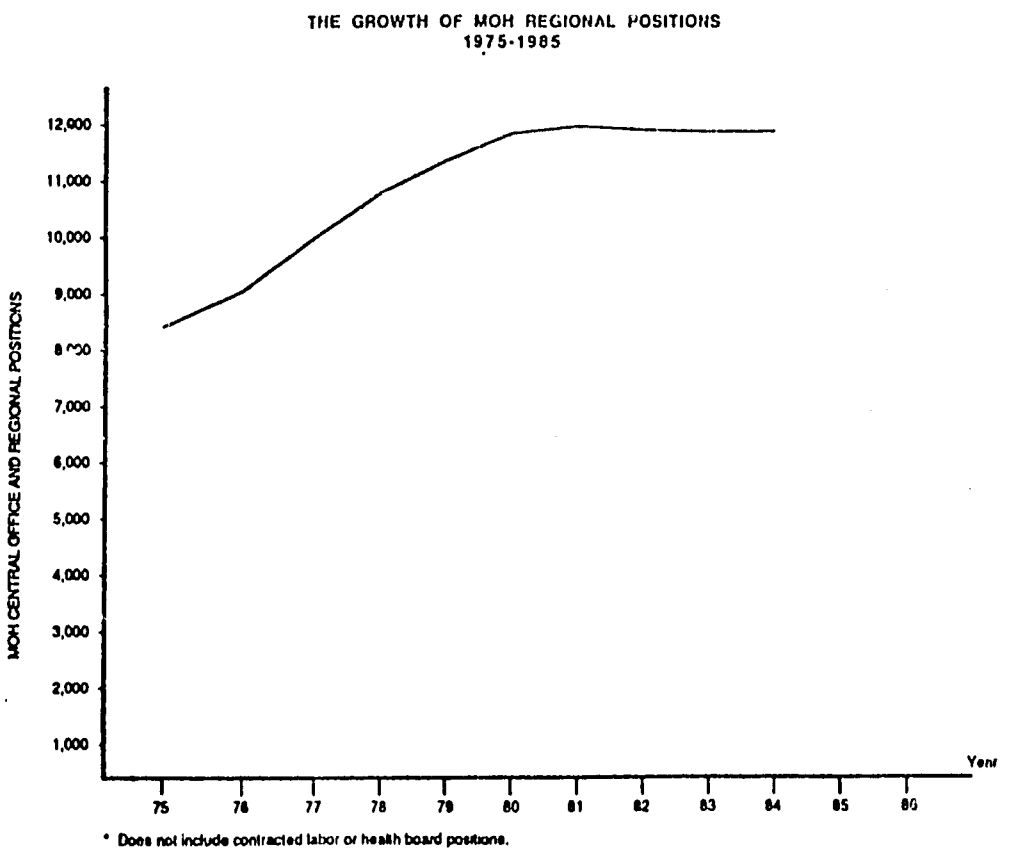


TABLE 1

EVOLUTION OF THE MOH SHARE OF THE
TOTAL CENTRAL GOVERNMENT BUDGET ALLOCATION
ND EXPENDITURES

YEAR	SHARE OF BUDGET ALLOCATION	SHARE OF EXPENDITURES
1975		
1976	10.6%	10.7%
1977	10.1%	10.2%
1978	10.7%	10.7%
1979	9.7%	9.8%
1980	10.6%	10.8%
1981	8.6%	8.7%
1982	8.1%	8.5%
1983	8.1%	9.2%
1984	7.2%	7.0%
1985	7.6%	7.5%
1986	7.1%	

Source: Informe Complementario Constitucional sobre la Hacienda Pública, Ejercicio Fiscal, various years.

TABLE 2

EVOLUTION OF THE MOH BUDGET ALLOCATION
AS A PERCENT OF GROSS NATIONAL PRODUCT

YEAR	PERCENT
1975	1.80%
1976	1.75%
1977	1.79%
1978	1.93%
1979	1.71%
1980	2.09%
1981	2.17%
1982	2.01%
1983	1.76%
1984	1.87%
1985	1.41%

ANNUAL AVERAGES:	1975-1979:	1.796
	1980-1982:	2.09
	1983-1985:	1.68

Source: Informe Complementario Constitucional, Ministerio de Hacienda, various years.

TABLE 3

MINISTRY OF HEALTH BUDGET ALLOCATIONS
(IN CURRENT COLONES)

YEARS	TOTAL (FINAL) BUDGET ALLOCATIONS	OPERATIONS BUDGET	CAPITAL BUDGET
1975	82.196.160	68.684.710	13.511.450
1976	111.269.600	84.547.000	26.722.600
1977	128.287.862	98.731.400	29.556.500
1978	148.504.300	112.879.300	35.625.000
1979	147.155.000	125.695.000	21.460.000
1980	186.396.000	151.479.000	34.917.000
1981	187.972.900	160.360.000	27.612.900
1982	180.546.400	151.846.400	28.700.000
1983	177.822.600	145.821.600	32.001.000
1984	213.891.500	157.965.000	55.926.500
1985	197.532.900	164.601.700	32.931.200
1986	186.888.160	170.876.750	16.011.430

Source: Informe Complementario Constitucional sobre la Hacienda Pública, Ejercicio Fiscal, various years; Diario Oficial Tomo No.289, No.243, Dic. 21, 1985.

TABLE 4

MINISTRY OF HEALTH BUDGET ALLOCATIONS AND PROJECTIONS

YEAR	ALLOCATION (Col. 000)	AS % OF GOES BUDGET	AS % OF GDP
1979	147,155.0	9.7	1.71
1980	186,396.0	10.6	2.09
1981	187,972.9	8.6	2.17
1982	180,546.4	8.1	2.01
1983	177,822.6	8.1	1.76
1984	213,891.5	7.2	1.87
1985	197,532.9	7.6	1.41
1986	186,888.2	7.1	1.398
1987	197,852.9	7.14	1.386
1988	199,779.0	7.07	1.375
1989	201,705.9	6.99	1.363
1990	203,632.4	6.91	1.351
1991	205,558.9	6.83	1.339

TABLE 5

MINISTRY OF HEALTH EXPENDITURES
(IN CURRENT COLONES)

YEAR	TOTAL EXPENDITURES	OPERATING EXPENDITURES	CAPITAL EXPENDITURES
1975	86.465.425		
1976	110.829.200	84.251.800	26.577.400
1977	127.060.800	98.192.400	28.868.400
1978	143.278.800	108.755.300	34.523.500
1979	142.090.500	123.169.000	18.921.500
1980	178.435.700	147.491.100	30.944.600
1981	167.025.900	152.184.100	14.841.800
1982	165.677.100	149.823.100	15.854.000
1983	170.395.900	143.515.300	26.880.600
1984	191.551.200	157.288.500	34.262.700
1985	176.522.700	164.445.400	12.077.300

Source: Informe Complementario Constitucional sobre la Hacienda Pública, Ejercicio Fiscal, various years.

TABLE 6

MINISTRY OF HEALTH EXPENDITURES IN REAL TERMS/CONSTANT COLONES BASE: CPI 1978*

YEAR	TOTAL EXPENDITURES	OPERATING EXPENDITURES	CAPITAL EXPENDITURES
1975	114,959,700 (1)	96,062,500 (1)	18,897,100 (1))
1976	144.685.640	109.989.295	34.696.345
1977	148.435.514	114.710.748	33.724.766
1978	147.710.103	112.118.866	35.591.237
1979	130.718.031	113.310.948	17.407.083
1980	139.839.890	115.588.636	24.251.254
1981	114.088.730	103.950.888	10.137.842
1982	101.269.621	91.578.912	9.690.709
1983	92.056.132	77.533.928	14.522.204
1984	92.671.118	76.095.065	16.576.052
1985	69.937.678	65.152.694	4.784.984

(1) Allocated

* See Appendix A for the CPI values used in the adjustment.

Source: Computed from data contained in various issues of the Informe Complementario sobre la Hacienda Pública, Ejercicio Fiscal.

DISTRIBUTION OF THE MAJOR OPERATIONS
EXPENDITURES OF MOH's NON-HOSPITAL FUNCTIONS
(IN THOUSANDS OF COLONES)

YEAR	PERSONNEL	MATERIALS, SUPPLIES MACHINERY & EQUIPMENT	THESE OPERATIONS EXPENDITURES AS A % OF TOTAL OPERATIONS EXPENDITURES
1977	24.836.8 (56%)	19.577 (44%)	98.6 %
1978	30.216.8 (70%)	12.946.7 (30%)	98.2 %
1979	36.444.7 (78%)	10.079 (22%)	98.2 %
1980	46.184.7 (79%)	12.537 (21%)	98.3 %
1981	47.422.5 (77%)	14.558 (23%)	98.8 %
1982	47.260.6 (85%)	8.175.2 (15%)	98.3 %
1983	49.164.4 (87%)	7.173.6 (13%)	98.6 %
1984	55.879.7 (93%)	3.970.7 (7%)	98.6 %
1985	59.772.1 (92%)	5.350.3 (8%)	97.5 %
1986	53.453.3 (77%)	19.010.4 (23%)	98.8 %

THE GROWTH OF MATERIALS AND SUPPLIES COMPONENT OF THE REGIONAL HEALTH SERVICES PROGRAM EXPENDITURES

	1977	1978	1979	1980	1981
Nominal colones	1.251.347	1.354.407	1.320.670	1.883.233	1.998.585
Real colones*	1.461.854	1.396.296	1.214.968	1.475.888	1.365.154
Annual % change in nominal terms		(8.2%)	(- 2.5%)	(42.6%)	(6.1%)
Annual % change in real terms		(-4.5%)	(-13.0%)	(21.5%)	(-7.5%)

	1982	1983	1984	1985	1986 (original allocation)
Nominal colones	1.322.983	1.235.175	1.509.777	1.450.894	1.875.910
Real colones	808.669	667.301	730.419	574.839	
Annual % change in nominal terms	(- 3.4%)	(- 6.6%)	(22.2%)	(- 3.9%)	(29.3%)
Annual % change in real terms	(-40.8%)	(-17.5%)	(9.5%)	(-21.3%)	

1977-85 Averages: Average annual growth rate of nominal expenditures: 2.0%
Average annual growth rate of real expenditures: -9.2 %
Cumulative annual growth rate of nominal expenditures: 1.85%

Overall changes 1977-1985 : Nominal expenditures: 15.9%
Real expenditures: -61.0%

* CPI-based adjustment. Base is 1978.

Source: Informe Complementario Constitucional, various years.

TABLE 8 (Page 1)

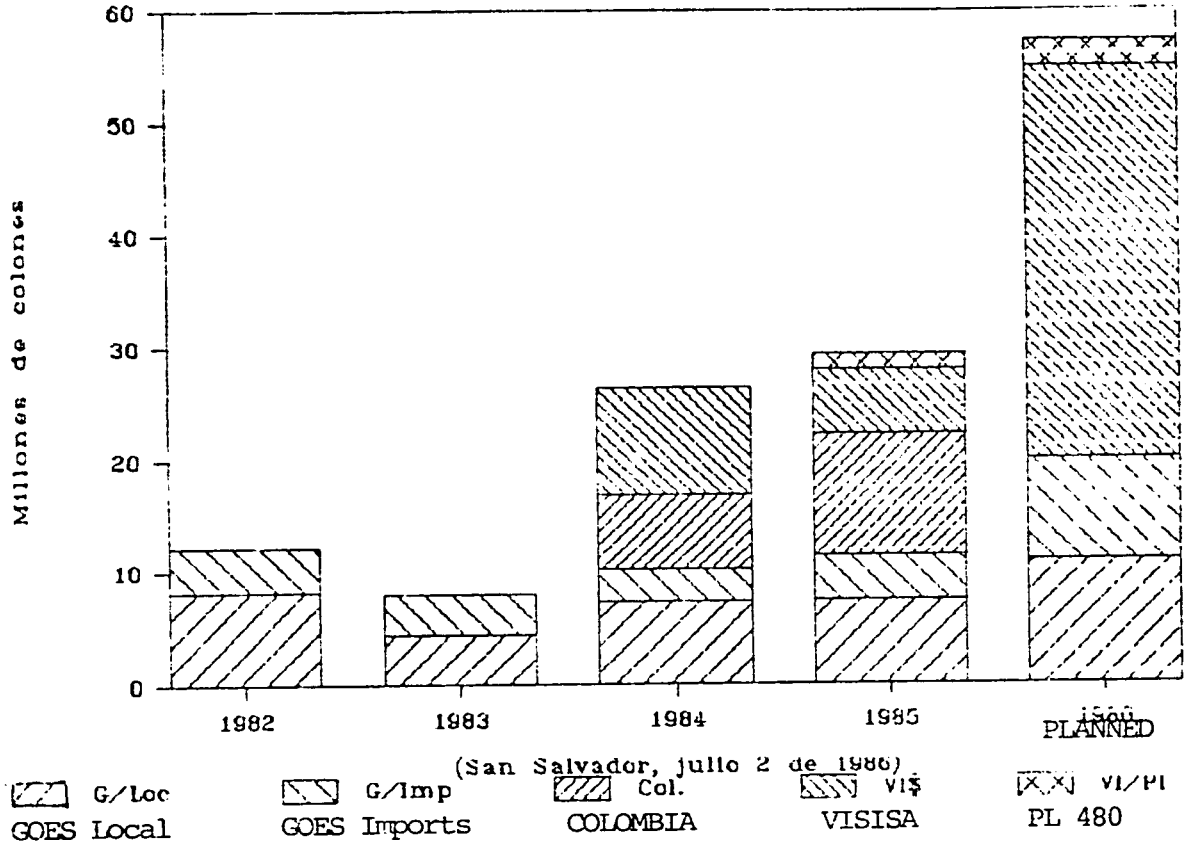
COMPRAS DE PRODUCTOS FARMACEUTICOS

AÑOS		1982	1983	1984	1985	PLANNED 1986
NACIONALES	LOCALES	8,158,821.oo	4,430,935.30	7,320,149.80 (VI/84)	7,383,693.85	11,000,000.oo
	IMPORTACION	3,954,601.30	3,488,563.32	2,791,417.30 (VI/84)	3,965,090.oo	9,000,000.oo
COLOMBIA				6,735,167.50 (XI/84)	10,764,832.50	
VISISA	PIO/C			9,466,685.oo (X /84)	5,823,400.oo	35,000.000.oo
	PL/480				1,275.000.oo	2,287,100.oo
T O T A L		12,113,422.30	7,919,498.62	26,313,419.60	29,212,016.35	57,287,100.oo

San Salvador, julio 2 de 1986.

COMPRAS DE PRODUCTOS FARMACEUTICOS

Min. de Salud Pública, El Salvador



(San Salvador, julio 2 de 1986)

EB, julio 4, 1986

ANNEX I

Technical Assistance Plan

Technical assistance will be provided to the MOH in each component area of the Project. In view of the extent of technical assistance required, it will be contracted directly by A.I.D. through authority to be contained in the Project Agreement. The following plans will be reviewed against the new ceiling requirements being developed for U.S. personnel in El Salvador, and modified if a ceiling problem arises. However, given the qualifications and experience required for the three long term advisors, it is believed that third country nationals will be the likely candidates.

The MOH will be involved in finalizing the scopes of work for the technical assistance team to ensure that they feel their needs have been adequately reflected. Three long-term technical assistance advisors will be provided for the duration of the project; these are: Chief of Party and Health Planner; Systems Advisor/Deputy Chief of Party; and Management Development/Health Services Research Advisor. Seven additional technical advisors will be provided for the first 12-24 months of the project, and then on an intermittent basis as the MOH's needs for assistance have been reduced. These include advisors in management information systems, clinical pharmacology and formulary development, training, malaria control, transport, bio-medical equipment maintenance and procurement. The technical assistance team will also obtain the services of expert short-term consultants, as required, in the development of specific MIS sub-systems, to assist the MOH personnel conduct applied health research studies, establishing the drug quality control lab, and preparation of health education materials and technical course development, etc. The MOH's annual implementation plan will identify any additional technical assistance, including those which are within the scope of the project and others which must be met from other funding sources. All technical assistance to be provided through the Project will be agreed to jointly by the MOH and USAID.

A summary of these technical assistance requirements, and brief statement of duties for each follow.

SUMMARY OF PROJECT TECHNICAL ASSISTANCE

Area	Person months	Counterpart Units
Project Management/Health Policy and Planning		
C.O.P./MD and Health Planner	57 pm	Planning Directorate and Vice Minister
Management Development/ Health Svcs. Rsch. Advisor	57 pm	Director General and Planning Directorate
M.I.S. Advisor	21 pm plus 9 inter.	Information Unit
Logistical Support: Acquisition, Distribution, and Management of Drugs Medical Supplies, Equipment and Facilities		
Dep. Chief of Party/Logistics Manager and Systems Advisor	57 pm	Supply Unit and Vice Minister
Procurement Advisor	21 pm plus 12 inter.	Admin. Dir/Procurement
Clin. Pharm./Formulary*	18 pm plus 18 inter.	Supply Unit**
Biomed. Equip. Maint. Spec.	18 pm plus 18 inter.	Admin. Dir/Gen. Svcs.
Transport/Vehicles Advisor	12 pm plus 15 inter.	Admin. Dir/Gen. Svcs.
Improving Basic Health Services Delivery		
Training Advisor	24 pm plus 18 inter.	Dir. General/Trng.Cntr
Malaria Control Officer	24 pm plus 18 inter.	Malaria Division
Short Term Consultants to be provided under Project		
Health Svcs. Rsch. Advisors	Total 15 pm	Planning Directorate
MIS Sub-system experts	Total 18 pm	Information Unit
DQC Advisors**	Total 24 pm	Supply Unit/DQC
Health Educ. Advisors	Total 14 pm	Technical Oper. Dir
Epidemiologist/Entomologist	Total 4 pm	Malaria Division

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* This advisor will provide on-the-job training for the Salvadoran staff. However, MOH officials report that there are only two Salvadorans specifically trained in pharmacology (one in ISSS and one at the university), so that further training may be required for those who will be on the staff of the Drug and Medical Supplies Unit. Short-term training will be needed after the first year, and is available (in Spanish) in Spain, Costa Rica, Guatemala, Panama, and Mexico.

** Drug Quality Control advisors are expected to be needed in several specialties, for 6 person-months each: Analytic, Bio- vailability, Pharmakinetics, and Microbiology.

TECHNICAL ASSISTANCE - SCOPES OF WORK

Field of Expertise	Timing	Duties
(A) Long Term		
C.O.P./Health Planner	57 person months	The Chief of Party will be a health planner/physician who will work with the the Director of the MOH Planning Directorate as his/her principal counterpart, but will also relate to the Vice Minister. The Chief of Party will coordinate and supervise the activities of the other members of the technical assistance team. He/she will be the principal contact between the team (and the contracting company) and the MOH, GOES, and AID. He/she will review their scopes of work and periodic work plans with them and MOH colleagues to assure relevance, appropriateness, and feasibility, especially with regard to MOH policies, plans, programs, and activities. As necessary and appropriate he/she will assist the MOH and the other consultants to revise the consultants' scopes of work and work plans in keeping with those criteria. He/she, with MOH counterparts, will also coordinate the overall efforts of the team and of the individual consultants with those of other technical assistance personnel. The COP/Health Planning Advisor will assist his/her technical counterpart, the Director of the MOH Planning Directorate, in all areas of health planning, with emphasis on those health planning areas and tasks specifically noted in the Project Paper and on those activities of the Planning Directorate directly related to the Project's purposes, outputs, and activities.

Deputy C.O.P./Logistics Manager and Systems Advisor	57 person months

He/she will work both in San Salvador and in the Regions to help the MOH to augment the health planning and health services management capacity of the central MOH and regional offices staffs and to assist in application of that capacity at all levels. He/she will also work with counterparts, other MOH staff and other MOH advisors (including those from other projects and supported by other donors) to coordinate planning and implementation of health sector programs and activities.

The Project's Manager/Systems Advisor will have as his/her chief counterpart the Director of the MOH Drug and Supply Unit. He/she will also serve as the Deputy Chief of Party, and will be an experienced supply systems manager, with appropriate overseas experience, who will also need to have relevant experience in both technical assistance team and development project management.

He/she will work under the direction of the Chief of Party and assist the COP by taking responsibility for for personnel, equipment, and financial management matters within the team and the project. As the Systems Advisor, he/she will work closely with other TA team members and offices within the MOH. Primary areas of concern will be development of the Unit and of the capacity and work of its own staff and of other MOH units and staff members in the areas directly relevant to supply systems. Those areas will include (but not be limited to): determination of needs, demand and requirements; priority determinations; setting of specifications; local and international procurement procedures, including advertising, tenders, qualification, and evaluation of offers and offerors; procurement contracting; receipt

and evaluation of goods supplied; follow-up on deficiencies; record keeping and inventory control; warehousing and storage; transport; ordering, order processing, and distribution within the MOH system; supervision; stock level systems, criteria and controls; financial, stock control, and performance monitoring systems; and supply program monitoring and evaluation.

Management Development and Hlth. Svcs. Rsch. Advisor	57 person months

The Project's Management Development and Health Services Research Advisor will be a Health Services Management expert with appropriate overseas experience and with knowledge, skills and experience in applied health services research in developing countries. He/she will work closely with a counterpart in the MOH Planning Directorate, and will have the responsibility of assisting the Planning Directorate and MOH managers to develop and strengthen management support systems, especially as indicated in the Project Paper and with regard to management systems and problems directly relevant to the Project's purpose(s), outputs, and activities.

The advisor's work will involve: systematic analysis and description of support and management systems and of their objectives, strengths, weaknesses, and problems; determination of priority problems and issues; specification of problems for solution; operational definition of criteria for useful solutions to system problems; development and initial feasibility assessment of alternative approaches to solving problems and improving systems; further development, assessment, specification and testing of promising solutions and approaches; and ranking or comparison and selection of solutions or changes for wider or permanent application. In all aspects of

		his/her work, the advisor will help the MOH to develop and improve its support and management systems and to augment and apply its capacity for problem solving approaches and health services research (as outlined above). This will include development with MOH colleagues of relevant training programs and applied health services research programs. It will also involve development of a network of MOH (and other Salvadoran) colleagues with interests and capacities in those areas, in contact with international resource institutions and with other groups and individuals involved in similar efforts.
(B). Short Term		
M.I.S. Advisor	21 person months, plus 9 intermittent	The MIS Advisor will be experienced in the design and implementation of comprehensive computer-based management information systems in national, regional and local level health agencies and at the health facility level. This experience should include the design and implementation of systems utilizing microcomputers, and including as least three of the following sub-system categories: biostatistics, drug supply management, vehicle maintenance, biomedical equipment maintenance, personnel and finance. He/she will also have demonstrated experience in identifying, selecting and adapting existing software as appropriate, and in coordinating (or conducting) training programs for information systems users (technical personnel an health services providers). The MIS advisor will have the head of the Information Systems Unit as his/her counterpart, and work closely with the newly-established Information System Users Committee.

M.I.S. Sub-systems Advisors	18 person months	The MIS Sub-systems advisors will work on a short-term basis, depending on the need for specific assistance in the design and implementation of specific MIS sub-systems that will be part of the MOH/MIS. These include biostatistics, drug supply management, vehicle maintenance, biomedical equipment maintenance, personnel and finance. The MOH will work with the MIS Advisor (see above) in determining when sub-systems technical assistance is necessary, and defining the scopes of work for the short-term advisors. The short-term advisors will have as their counterpart the head of the Information System Unit, and will also work closely with the relevant MOH office(s), according to their sub-system specialty (e.g., personnel).
Procurement Advisor	21 person months, plus 12 intermittent	The Project's Procurement Advisor will be a person with extensive experience, including international experience, in procurement systems development and management, with substantial experience in drug procurement systems. The Procurement Advisor will work closely with his or her principal counterpart, an MOH official within the Procurement Division of the Administrative Directorate. The Procurement Advisor's principal responsibilities will include assisting MOH procurement personnel and other concerned MOH officials (including the Drug and Medical Supplies Unit) to strengthen the capacity and effectiveness of the MOH procurement system. Initially, the advisor will focus on helping the MOH to assure that Project-provided commodities are selected, adequately specified, put out for bid, subjected to correct and effective bid evaluation and contracting procedures, documented, tracked through shipping and port procedures, received,

shipped to appropriate storage or forwarding points, checked (with appropriate follow-up as needed for deficiencies), temporarily stored as necessary, and released against receipt to users or others as appropriate.

Clinical Pharmacologist/Formulary/ Drug Surveillance Advisor	18 person months, plus 18 intermittent

The Project's Clinical Pharmacology, Formulary, and Drug Surveillance Advisor (hereinafter referred to as the Clinical Pharmacologist) will work closely with colleagues in the MOH Drug and Medical Supplies Unit, with a specific counterpart to be assigned within the unit by its Director. The Clinical Pharmacologist will work with MOH colleagues and other TA team members to: strengthen and effectively apply MOH capacity to evaluate treatment needs, especially those involving drugs and medications; determine treatment regimens most suitable and effective under the prevailing circumstances in El Salvador (with alternate regimens for significant special conditions as necessary); develop standards, treatment plans, and training, reference and clinical record documents incorporating those plans and standards; develop and help to implement training programs for MOH drug system personnel, health care providers, and managers (at all appropriate levels); and help develop and implement (in collaboration with MIS personnel and others) systems to monitor and evaluate progress and attainment of objectives in all of these areas.

The clinical pharmacologist will also work with MOH colleagues (and other colleagues and short term consultants, as appropriate) to develop, adequately staff, and operate the Drug Quality Control Laboratory within the Drug and Medical Supplies Unit. This will involve systems and procedures design, equipment selection and

		specification, equipment calibration and procedural standardization, personnel training, and development of internal and external quality control systems for the laboratory itself. The advisor will supervise the Project's short term consultants and advisors involved in development and operation of the Drug Quality Control Laboratory and in other efforts related to his or her work.
DQC Advisors	24 person months, intermittent	Several short term Drug Quality Control Advisors will be needed during the Project for specific assignments related to development and standardization of the Drug Quality Control Laboratory within the MOH Drug and Medical Supplies Unit. They are expected to include six months of services of technical specialists in each of the following areas of testing and quality control: Analytic, Bio-availability, Pharmacokinetics and Microbiology. They will work under the supervision and direction of the Clinical Pharmacologist and of the Directors of the Drugs and Medical Supplies Unit and the Drug Quality Control Laboratory.
Biomedical Equipment Maintenance Advisor	18 person months, plus 18 intermittent	The Project's Biomedical Equipment Maintenance Advisor will be an engineer (preferably a biomedical engineer) with appropriate training and experience in biomedical equipment maintenance, repair and management and with experience in the development, operation and management of biomedical equipment maintenance systems. The Biomedical Equipment Maintenance Advisor will work closely with a counterpart, the Director of the MOH Biomedical Equipment Repair and Maintenance Section (under the Maintenance Division of the General Services Department, within the Administrative Directorate). He/she will be responsible for assisting MOH personnel to further develop and

		institutionalize the Biomedical Equipment Maintenance and Repair System which was strengthened under the VISISA Project. In addition to relatively routine engineering and operations development work related to the Biomedical Equipment Maintenance and Repair Section, the advisor's work will include: systematic management analysis; problem analysis; priority setting; solution development and testing; systems design and analysis; development of training programs and training and reference materials; operation of computer-based management information systems related to the section's work; personnel and performance evaluation; and further development and operation of systems for monitoring and evaluating the section's performance and its progress toward and achievement of its objectives.
Transport/Vehicles Advisor	12 person months, plus 15 intermittent	The Vehicle Maintenance Advisor will have as his/her MOH counterpart the head of the Vehicle Maintenance Department in the General Services Division of the Administration Directorate. He/she will also work closely with all of the heads of the regional repair shops. He/she will have at least five years of experience in designing, implementing and managing transport systems at the national, regional and local levels for governmental agencies in developing countries, preferably for health systems. He/she will be primarily responsible for effecting additional improvements to the present Vehicle Maintenance System and for promoting institutionalization of these improvements, particularly at the regional level. The specific focus of activity will be on identifying and correcting obstacles to efficient and appropriate use of MOH vehicles;

		refining and institutionalizing the MASCI information system; improving the system for reordering and distributing spare parts; improving existing administrative and monitoring systems; and continuing the design and conduct of training programs for mechanics and drivers.
Training Advisor(s)	24 person months, plus 18 intermittent	The Project's Training Advisor will be a health or training professional with adequate and appropriate experience in task analysis and in the design, development and implementation of competency-based training programs for auxiliary or paramedical health workers. He or she will work closely with an assigned principal counterpart in the Ministry of Health's Training Unit (Centro de Capacitacion), with other staff of the unit, with persons who have training responsibilities at central and regional levels, and with MOH and T.A. personnel who are developing norms and standards for job performance within the basic health care services and support systems. The Training Advisor will help MOH colleagues (and other T.A. personnel) to define specific knowledge and skill requirements and to develop and implement appropriate competency-based training (and evaluation) programs and materials for selected MOH jobs in basic health services delivery and support. Both pre-service and in-service training will be included, with a focus on implementation of MOH norms and standards which are currently being reviewed and revised. The basic health services positions for which training programs will be developed are expected to include rural health aides, auxiliaries, graduate nurses, social service year physicians, regional supervisory personnel, sanitary inspectors, and nutritionists.

Malaria Control Officer and Advisors	24 person months, plus 18 intermittent	There will be three short-term Malaria advisors: Malaria Control Officer, Medical Entomologist, and Epidemiologist (with malaria specialty). The duties of each of these are briefly described. All three will have as their counterpart the head of the Malaria Department in the Environmental Division of the Technical/Operative Directorate of the MOH. The Malaria Advisor will have an MSc degree in medical entomology (Ph.D. or DSc. degree desirable but not mandatory). Completion of a senior malariology course is desirable. He/she must have a minimum of four years' experience with malaria eradication or control programs, of which at least two years must have specifically involved the execution and management of all entomology aspects of such a program, including design of headquarters and field operations covering anopheline bionomics and vectorial significance. "Hands-on" experience must include optional anopheline collection methods, rearing (colonization techniques), use of WHO standard test equipment and protocols for a) susceptibility to insecticides of adults and larvae; b) bioassay determination of duration of effectiveness of insecticidal residues on various types of sprayed surfaces; and c) bioassay evaluation of effectiveness of ultra-low volume (ULV) applications of insecticides. The Malaria control officer will be a senior grade local hire with at least a master's degree in the biological or engineering sciences, with a degree in medical entomology or parasitology preferred. He/she will have no less than five years' experience in mosquito control or malaria control, and will be familiar with the proper application and use of pesticides in a malaria

control or mosquito control operations and be able to train personel in these subjects with special emphasis on health safeguards. He/she should have at least three years' experinece in an international organization, U.S. agency or a country program which has as its main activity the control of malaria or other vector-borne diseases.

He/she will act as ahe part-time specialist in the Malaria Department, assisting the MOH in planning, operation, monitoring and evaluation of the department's program and specific activities. This will include monitoring of field operations, establishment of a viable training program, evaluation of MOH training procedures and assisting in the procurement process for malaria commodities.

The Medical entomologist will review and upgrade the operations of the Malaria Department, focusing on the Entomology Section, focusing on a) verification of duration of effectiveness of propoxur (or other insecticides, as required) on constructin materials commonly used in rural housing, and b) field techniques for density measurements of anopheline larvae and adults in an area in which efforts are being made to alter and/or control the salinity of coastal estuarine waters.

The Malaria Epidemiologist will have an MD, Ph.D. or D.Sc. degree; an MPH is desirable but not necessary. He/she will have a minimum of four years' experience in malaria eradication or control programs of which at least two years must have specifically involved the collection of (or supervision of collection of) malariometric data, analysis of such data, and

		the translation of such analyses into operational strategies.
Health Education Advisor(s)	14 person months	This advisor will be primarily concerned with the short-term, intensive orientation of the chief of the Epidemiology Section with regard to policy formulation concerning operation of the malaria surveillance systems and with review and analysis of qualitative and quantitative aspects of the networks of Voluntary Collaborator Posts. The Health Education advisor(s) will have at least an MPH or MA with a specialty in health education in developing countries, and will have at least three years' experience in designing and implementing health education and mass communications programs at the national, regional and local levels in developing countries. The specific expertise and training requirements and scopes of work for the health education advisors will be determined by the MOH based on their particular needs throughout the course of the project.
Health Services Research Advisor(s)	15 person months	Short-term health services research advisors will be called upon as necessary by the MOH to assist the MOH in designing and implementing health services research projects. One individual could be selected to provide assistance on an as-needed basis throughout the project, or several individuals selected for particular areas of emphasis. In any case, the specific experience and training and scopes of work will be determined by the MOH based on particular needs throughout the course of the project. He/she will work with the head of the Planning Directorate as primary counterpart, and with other offices (including regional offices and facilities) as appropriate. He/she should have at least five years' experience in

designing and implementing health services research projects at the national, regional and local level, with at least three years' experience in doing so in developing countries. He/she should have also have experience in training health personnel at all levels of the system in design and implementation of health services research projects.

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DETAILED PROCUREMENT PLAN

I. ASSESSMENT OF HOST COUNTRY CONTRACTING CAPABILITIES

Throughout the implementation of the on-going Health Systems Vitalization (VISISA) Project, innumerable problems have been encountered as a result of short-comings in design and most elements of implementation, including procurement. A very basic limitation of the Ministry of Health was their inability to develop a timely and accurate determination of needs. With that basic limitation, procurement problems were destined to occur.

Host country contracting for the importation of pharmaceuticals was attempted at one point in the VISISA Project. That tender was eventually cancelled, as only a few bids were received (reflecting the U.S. pharmaceutical industry's lack of confidence in procurement procedures other than those they are used to), and the few bids received did not meet the A.I.D. and GOES requirements.

The approval process for local procurement under the VISISA Project is as follows:

1. Hospitals and other health care facilities send lists of requirements to the MOH Procurement Office. The MOH Procurement Office forwards requirements for those which GOES funding is not available to the VISISA Administrative Unit.

2. If the items are allowable under the VISISA Project and funds are available, the Administrative Unit will reserve funds.

3. An allocation of Project funds is then requested from the Ministry of Planning Office responsible for the control and audit of all funds in the "extraordinary" budget, the Secretaria Tecnica del Financiamento Externo (SETEFE).

4. Upon receipt of the allocation (which may take anywhere from two weeks to three months, the Administrative Unit forwards a requisition to the MOH procurement office.

5. Depending upon the value of the procurement, the following approvals are required:

   a. Procurements less than $5,000: An informal solicitation of offers is made; offers are evaluated by a MOH bid evaluation committee; and a Purchase Order is issued to the awardee. If the Purchase Order is for less than $200, the Procurement Director may sign it; otherwise it must be signed by the Minister of Public Health.

b. Procurements between $5,000 and $20,000: Solicitations are prepared and forwarded to USAID for approval. Upon receipt of approval, the solicitation can then be provided to several suppliers; offers are received and evaluated by a committee. These evaluations and draft contracts must be approved by USAID before signing. Contracts over 10,000 must also be forwarded to both SLTEFE and the GOES Court of Accounts for approval of funds.

c. Procurements over $20,000: Notice of tender is published in local papers; solicitation document prepared and forwarded for USAID prior approval. The solicitation is then issued and offers are opened publicly. The process then continues with the same approvals as required in b above.

The Ministry's ability to determine its needs has been enhanced considerably by the technical assitance being provided by the VISISA Project. Difficulties caused by inventory problems should be minimal for this Project because of the technical assistance that has been provided in this regard and the establishment of the new Drug and Medical Supply Unit and the MIS control system. However, even with these improvements in the overall system, the MOH procurement office lacks experience with AID host country contracting procedures for imports, has general limited capability, and is saddled with the GOES cumbersome procurement procedures which under VISISA have been complicated even more with the number of approvals required. Given the above, and the requirement for U.S. FDA quality assurance of pharmaceuticals, the MOH will purchase only limited local shelf-items and local personal service requirements for this Project. As technical assistance efforts at strengthening the MOH procurement capabilities take effect, more local services might be contracted by the host country if a reevaluation of their procurement so warrants.

II. COMMODITIES

a. Pharmaceuticals and Medical Supplies.

Planning the procurement of pharmaceuticals and medical supplies for this Project is facilitated by the experience that has been gained by USAID and AID/W, as well as the MOH under the VISISA project. In addition to this experience, any procurement procedure must also factor in the recently heightened sensitivity to quality assurance of drugs and medical devices.

As noted earlier, the pharmaceutical procurement problems encountered during the VISISA project were caused by a variety of factors, but mainly related to the untimely determination of needs. If the pharmaceutical requirements are known sufficiently in advance, standard procedures can be followed that will help to ensure the cost-effective procurement of pharmaceuticals that meet the quality standards required by AID. Host country contracting was unsuccessful in the VISISA project, and given the burdensome procurement approval procedures, it will not be used for procurements for this project.

The U.S. General Services Administration has considerable experience in these types of procurements, but has been faulted for not providing timely and thorough status reporting. Procurement Services Agents are unproven at large pharmaceutical procurements and their ability to coordinate with FDA and assure quality requirements is unknown. In comparison, the USAID's experience with the Veterans Administration (VA) is positive, and are the USAID's preferred procurement channel for pharmaceuticals. If arrangements cannot be made with the VA to provide procurement services for this project, USAID will request AID/W assign the procurement responsibility to GSA, and try to develop a system for more timely status reporting.

Ongoing AID-financed and GOES-funded procurements of pharmaceuticals are expected to satisfy needs through March, 1987. The MOH has stated that the pharmaceutical requirements for the period beyond that time-frame will be known by August, 1986. PIO/Cs will be prepared and forwarded to AID/W in October/November, 1986, which should allow sufficient time for the VA or GSA to make awards by February, 1987, for product arrivals beginning March/April, 1987. However, given the possibility that disbursements are delayed or other possible unforeseen delays affect the schedule outlined above, USAID will assist the MOH to make an additional procurement of pharmaceuticals with PL 480 local currency funds, such that thedelivery of proect-funded pharmaceuticals is less critical until June/July, 1987.

The issue of Maximum Order Limitations (MOL) comes into play only when GSA or VA is purchasing from the Federal Supply Schedule (FSS), which would not be anticipated in the above-described scenario. The large volume of procurements under this project would normally not be cost-effective if purchased under the FSS agreements that are negotiated based on smaller quantities. Much better prices would be expected as a result of the VA or GSA tendering process for the large MOH requirements. Therefore, in order to obtain the best prices, it is essential that the MOH requirements be identified early enough to allow for proper tendering by VA or GSA. Given the improved MOH inventory system and requirements forecasting ability, timely processing of PIO/Cs is anticipated.

b. Biomedical, Scientific and Spraying Equipment, MIS Hardware and Software, and Insecticides and Larvacides

The MOH has developed equipment lists by facility type and prepared a list of bio-medical equipment. However, given the complications arising in bio-medical equipment maintenance caused as a result of the wide variety in equipment type and brand, the final development of specifications will be developed based on a MOH standardization policy which will be developed in the early months of this Project. The requirements for the Hudson Sprayers and spare parts for the malaria program have been identified and specifications developed, and are included as an Annex to the malariologist's report. The requirements and specifications for the insecticides and larvacides have also been completed, but the procurement should be timed so that the material arrives as necessary to ensure its availability for the spray cycles.

Application of the insecticides is made during the rainy season (March - October). Current and arriving stocks of insecticides will be sufficient for needed application until June, 1987. Therefore, insecticides and spraying equipment purchased under this Project will be ordered for arrival before June, 1987. The larvacide application is during the dry season (November - April), so its procurement will be timed so that arrival of product is September/October, 1987.

The Management Information System (MIS) hardware and software requirements have been identified, but specificatons can be finalized only after the current technical assistance contractor completes the ongoing procurement of the MIS for the VISISA project. Compatability between the new equipment obviously must be assured. When the system configuration and specification has been finalized, they will be forwarded to AID/W for review prior to the issuance of a PIO/C to AID/W or a Procurement Services Agent contracted under the IQC mechanism.

Host country contracting for these goods will not be done for reasons noted in the Assessment of Host Country Contracting Capabilities. USAID direct contracting is possible, but would require the issuance of several tender documents and the coordination of purchases from several suppliers. However, as stated above, this mechanism will be used when it is feasible and will result in more cost-effective purchasing. The PSA IQC mechanism will allow for the issuance of one or two work orders for the initial project requirements. A Mission contracted PSA will be responsible for the remaining project requirements so that the project managers are working with only one firm throughout the project (unless AID/W can arrange for the issuance of PSA IQC work orders to the same PSA). Working with a limited number of PSAs throughout the life of the project will have the advantage of easier coordination. If the Mission contracts for the services of a PSA, it will be an AID direct contract, to avoid host country contracting delays that may occur as explained earlier.

c. Vehicles

Approximately 50 utility vehicles are to be purchased each year of the project as replacement vehicles, and will be used primarily for distribution of drugs and medical supplies. In addition, the anti-malaria component requires a total of 90 light-weight motorcycles and two aluminum v-hulled boats. Specifications for these vehicles have been developed. The USAID Contracts Office can handle this relatively straight-forward purchase (each year), thereby avoiding the PSA fee that would otherwise be charged. In addition to the cost savings, the tracking of the procurement status will be easier within the mission.

All equipment and materials imported under the project will be purchased on the basis of CIF, San Salvador for surface freight (via Santo Tomas), and CIF Comalapa for air freight. Receipt, distribution and use of goods will be handled by MOH. Funding from this Project may be used to finance the contracting of two additional port reception personnel to clear customs and initiate receiving reports, based on a review of USAID's experience under the VISISA project.

d. Local Shelf-items

It is expected that small quantities of supplies available locally will be required by the Project. The MOH will be required to provide USAID with an action plan and detailed budget covering these anticipated procurements. Upon approval by USAID of the action plan, the MOH will be provided a local currency advance to cover the proposed purchases. USAID approval of tender documents and contracts will be required only for contracts exceeding the equivalent of $100,000. USAID will perform cursory quarterly audits and detailed annual audits of MOH files to assure compliance with AID requirements. Any transaction not meeting AID requirements will be disallowed.

III. Source and Origin

The source and origin of pharmaceuticals, medical supplies and vehicles will be limited to AID Geographic Code 000. The motorcycles, which are 125cc, are covered by an AID/W-issued blanket waiver, and will have Code 935 origin (Japan). Other equipment and materials purchased with foreign exchange will have their source and origin in the United States and the CBI-designated Central American Common Market countries.

IV. Waivers

The project proposes to finance the purchase of 100 each portable spray pumps from H.D. Hudson Company and 12,000 nozzle tips for on-hand Hudson sprayers from Sprayer Systems Company. MOH has been standardized on Hudson sprayers for several years. Procurement of the nozzle tips from the manufacturer is required to insure their compatability with the equipment on hand.

The project also calls for the procurement of utility vehicles and pick-ups, which will be purchased from AMC in accordance with the MOH's standardization plan for vehicles (Ministerial Resolutions Nos. 242 of Sept. 8, 1983, and 85 of March 13, 1985. The current inventory of vehicles of the MOH supports the justification to purchase AMC utility vehicles (Cherokees) and pick-ups (Comanches). Of a total fleet of 298 utility vehicles and pick-ups, 197 are of American manufacture, with 187 or 95% of these AMC. Because of the justified MOH standardization program and given the requirement for large numbers of export models with warranty coverage in El Salvador, the only possible source is AMC.

FAR 6.302.1 states that "When the supplies or services by the agency are available from only one source and no other type of supplies or services will satisfy agency requirements, full and open competition need not be provided for." Based on the foregoing, authority is requested in the Project Authorization to purchase 100 each Hudson portable insecticide sprayers from H.D. Hudson Company; 12,000 sprayer nozzle tips from Sprayer Systems Company, and 255 AMC utility vehicles and pick-ups from American Motors Corp. Other source and origin waivers may be required for some laboratory equipment (e.g., microscopes and balances) but the waivers will be sought through the appropriate means at a later date when the MOH has develcoed a standardization policy and the specific requirements are identified.

The Mission is also requesting a waiver of the requirement for U.S. or Central American Common Market country nationality of suppliers of services in order to permit participant training in Mexico or Venezuela. The cost of third country training in not expected to exceed $100,000. Pursuant to Handbook 1B, Ch. 5B4c(1) and Ch. 5C, the AA/LAC has the authority to approve the requested waiver for services valued at less than $5 million.

V. Schedule for Procurements

A chart showing the chronology for the first year procurements is attached. The Regional Commodity Specialist will periodically review the status of procurements and assist USAID in the development of carefully detailed annual procurement plans throughout the Project.

4706B and 2368T

COMMODITIES	Conditions precedent met	1st Month	2nd. Month	3rd. Month	4th Month	5th Month	6th Month	
Pharmaceuticals and Medical Supplies (first tranche)		PIO/C prepared and forwarded to AID/W	AID/W assigns to VA	VA advertises	VA issues tenders	VA receives bids, evaluates and awards	Air shipments begin to arrive	
Bio Medical equip. insecticides, sprayers (first tranche)		PIO/C prepared and forwarded to AID/W		AID/W issues work order to PSA IQC	PSA advertises for biomedical equip & insect., places order for sprayers		PSA receives bids, evaluates and awards	7th month-shipment of sprayers begin 8th month-shipment of equip & insect. begins
Vehicles (first tranche)		PIO/C prepared and issued to USAID/CO	USAID/CO advertises for the motorcycles & places order w/AMC for the utility vehicles & pick-ups **/	IFB for motorcycles issued		Bids for motorcycles received, evaluated & awarded	Utility vehicles & pick-ups begin arriving	9th month motorcycles begin arriving
MIS hardware and software (first tranche)		Specs.foward-ed to AID/W IRM for review		IRM provides OK to move forward	PIO/C prepared and forwarded to AID/W for PSA IQC		AID/W issues work order	10th/11th months equipment delivered and installed

**/ MOH is standardized on AMC for utility vehicles and pick-ups.

Annex K

Biomedical Equipment and Maintenance System of the Ministry of Health and Social Assistance of El Salvador

Ing. Luis Oliva*
Lcdo. Carlos Pereira*
Eugene R. Boostrom, MD, DrPH*

Introduction

The Ministry of Health and Social Assistance of El Salvador (MOH), with technical assistance from Health Information Design (HID) under the AID-sponsored VISISA Project, has embarked on a program to strengthen its system for the selection, acquisition, distribution, operation and maintenance of biomedical equipment. The purpose of this report, prepared in the course of development of a Project Paper proposing further AID support for the MOH, is to briefly describe that system and the efforts and plans to strengthen it.

The efforts of the MOH in this area, like those to improve the MOH transport system, are carried out by MOH and technical assistance (TA) personnel working at appropriate levels of the system, but with specific approvals and authorizations (decrees, in some cases) from high level MOH officials. They provide examples of concrete MOH efforts to decentralize its management support systems and of effective MOH/TA collaboration to accomplish MOH objectives within the framework of the Five Year Plan of the MOH.

Objectives and Strategies of the Biomedical Equipment Maintenance and Repair System

The objectives of the MOH Biomedical Equipment Maintenance and Repair System are to assure that the MOH has full use of its biomedical equipment throughout at least the normal

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* Ing. Oliva and Lcdo. Pereira are both advisors to the Ministry of Health under the VISISA contract of Health Information Design, Inc. Dr. Boostrom is Team Leader for the Project Paper Design for the Health Systems Support Project.

expected useful life of the equipment, that neither the time during which that equipment is out of use for repairs and maintenance nor the costs of repairs and maintenance are excessive.

The principal strategies which the MOH seeks to follow in strengthening its biomedical equipment repair and maintenance system are standardization, regionalization (decentralization), and development of an effective program of preventive maintenance. The TA team considers that these strategies are more likely to be effective, if the additional MOH positions needed and the three small (165-260 square meters) regional workshops are available.

Background of the MOH Biomedical Equipment System

In the mid-1970s, when El Salvador in general and the MOH in particular were functioning better than at present, the MOH had a biomedical equipment maintenance system which is reported to have been able to maintain and repair some of the equipment at reasonable cost and to obtain local services for maintenance and repair of other equipment. In the late 1970s and early 1980s, the disturbed conditions in the country and diminishing MOH budgets and expenditures (especially operating expenditures), had practically halted such activities. Much MOH equipment fell into a state of disrepair, some items for lack of attention and maintenance and others for want of spare parts which were not being imported or could not be purchased. By 1983, the situation had become grave, as it had in the MOH drugs and medical supplies systems. It was clear that new equipment would be needed to replace irreparable or antiquated equipment. It was also clear that effective and efficient use and maintenance of the new equipment would require standardization, training of users and repair/maintenance personnel, and upgrading of repair and maintenance facilaities through the regionalization.

VISISA Technical Assistance

Biomedical equipment repair and maintenance is a key part of the VISISA project, both because of the existing needs of the MOH and because of the needs to track, maintain and repair equipment provided under the project. (An estimated $8 million of biomedical equipment will have been provided to the MOH through VISISA by the end of the project in December 1986.) The present Transport Advisor, Lcdo. Carlos Pereira (who had worked in El Salvador for several years previously) was in El Salvador for three weeks in May/June 1983 with regard to the Biomedical Equipment and Transport Maintenance aspects of a VISISA project planning mission. Recognizing the gravity of the biomedical

equipment problem, he recommended and arranged for two trips of an equipment maintenance specialist, who carried out analyses and initial systems design tasks and developed specifications for parts, equipment tools, etc., to be provided under VISISA. This short term advisor was expected to serve as a long term advisor to VISISA, but due to a one year delay in the project TA he was unavailable and a substitute candidate was sent instead by the TA contractor. Some maintenance and evaluation forms were developed, but these were only partially implemented by the MOH. A five year plan for development of the biomedical maintenance system was also prepared, and although only a one year plan had been requested the five year plan was appended to the present TA contract under VISISA.

Selection, Acquisition and Standardization of Biomedical Equipment

As is the case with its vehicle fleet, the MOH stock of biomedical equipment is old and includes an unreasonably large number of different makes and models of items in any given category. The equipment is old because there has been little money or a replacement policy that includes methods or criteria used to determine life expectancy of equipment. It includes a variety of makes and models because there had been little attempt at standardization in the past, because items were purchased piecemeal over periods of many years, and because various donors provided equipment of their own choosing.

In January or February of each year, requirement estimates for biomedical equipment are sent to the MOH Director General of Health by the Regional Health Offices, which base them on information which they receive from health facilities. A medical supervisor visits the facilities to verify the needs for the requested equipment. The verification is based partly on standard lists of equipment for various types of facility (developed in relation with the Inter-American Development Bank facilities development), but with consideration also given to special circumstances such as increased surgical needs in conflict areas. The regional requests are then reviewed in meetings involving Medical Care and the Biomedical Maintenance

engineers, in order to determine what type of equipment would best meet those needs and to develop specifications for the equipment. Orders for equipment are normally placed in the month of March, and equipment arrives in approximately six months. If foreign exchange is needed for a purchase, a delay of three months is entailed to obtain the exchange authorization from the GOES.

Standardization of equipment is underway, facilitated by VISISA through direct purchasing in the U.S. Setting of specifications and comparison of equipment available is being facilitated by the acquisition of new equipment catalogues, which had not been obtained when the MOH was purchasing little equipment and in any case was doing so less systematically than at present.

A system of priorities and criteria for the acquisition of biomedical equipment has been established. However, the TA team notes as a problem the fact that the system is sometimes by-passed when hospital directors or others petition directly to high MOH officials, visiting U.S. dignitaries, or local USAID officials for equipment for their own facilities. A similar problem persists in the area of donated equipment.

The TA team for maintenance has noted increased rationalization and appropriateness of equipment orders since approximately December of 1985, which they associate with increased involvement of senior MOH officials in the decisions.

Organizational Location of the Biomedical Equipment Maintenance Unit

The Biomedical Equipment Maintenance Unit is located within the MOH Maintenance Unit, under the Administrative Directorate, as shown below:

Director General
of Health
!
Administrative
Directorate
!
General
Services
Division
!
Maintenance
Department
!
Biomedical Equipment
Maintenance Section

Staff and Staff Needs of the Biomedical Equipment Maintenance Unit

The Biomedical Equipment Maintenance Unit now has a staff of 16, including two engineers and 14 technicians. Thirteen additional technicians are to be added during 1986 (positions approved by the MOH, now to be filled). The plan for further development of the unit calls for 17 additional positions for regions (to serve mainly centers, units and posts) and 80 additional positions to serve directly in hospitals and health centers (which have much more complex equipoment).

A plan for the selection of technical personnel for the unit has been developed (including criteria and plans for testing) and is awaiting MOH approval.

Decentralization of Biomedical Equipment Maintenance

Development plans for the unit call for one central maintenance center, at San Esteban, where the newly re-equipped center, now serving the entire country, would come to provide specialized services for the whole country while continuing to provide regular regional services only for the Metropolitan and Central Regions. In addition, three regional centers would be established, in the Eastern, Western, and Paracentral Regions. The working relationships among the technicians serving at the regional level and those serving units and posts will be developed as decentralization efforts continue to place the hospitals under the control of the regional health offices.

Shift to Preventive Maintenance

Only a thorough program of preventive maintenance will enable the MOH to accomplish its objectives in biomedical equipment maintenance and repair. In spite of the heavy load and backlog of repairs to be done, the section has already managed to focus its attention on prevention to the point that about 10% of the work is already of a preventive nature. They hope to raise that to 50% over the next three years. This improvement will require regionalization; a shift in the attitudes and approaches of the maintenance and repair personnel; a shift of responsibilities for certain routine maintenance tasks to the users or to the operators who will be trained for those tasks; continued good management and leadership; careful monitoring; and sufficient funding to prevent regression to an urgent-repairs-only mode of operation.

Standard preventive maintenance routines are being prepared and will be ready in 1986 for new equipment and high priority medical equipment (e.g., x-ray, anesthesia machines, thoracic aspirators. Priorities have been set on the basis of service needs, costs of equipment, and ease of obtaining spare parts. The priority setting of preventive maintenance was very systematic in accordance with a standard technical procedure.

Manuals and Reference Materials for Biomedical Equipment Use, Repair, and Maintenance

Under VISISA, training and reference manuals have been developed in Spanish for the use of trainers, engineers, technicians, and users of equipment. In addition, a large number of equipment manuals are being translated into Spanish for use by the same groups.

Training Program Plans and Activities for Biomedical Equipment Use, Repair and Maintenance

The MOH and T.A. teams have prepared an extensive training program plan, which has now been approved by the MOH and is currently being reviewed by the MOH Training Unit for coordination with other training activities. In 1986, 17 courses and seminars are to be given for persons involved with biomedical equipment (users, maintenance technicians and maintenance managers). Eight courses will be given for maintenance technicians, nine seminars for equipment users, and two courses will be held in maintenance administration. There will also be 37 on-the-job training activities for users of specific equipment, focussing on their immediate priority needs.

Development of a Regularly Updated Computerized Biomedical Equipment Inventory

Partly to support the equipment selection/acquisition and preventive maintenance programs mentioned above, the section is developing a computerized inventory system for all biomedical equipment. Some of the approaches and programs used are ones which are also used in a similar MOH system for vehicle tracking and maintenance, in operation since January of 1985. The initial data to be input consist of updated data from a 1985 nationwide MOH biomedical equipment survey survey carried out by George Kraus International in order to determine estimated repair needs and cost of repair, but also containing other information useful to the MOH Biomedical Maintenance Section.

By the end of 1986, the MOH Biomedical Maintenance Section (BEM) and the T.A. advisors expect that 25% of all facilities (including approximate proportional representation of all types of facilities) will be included in the inventory system. Updating of data will take place after each visit to a facility by a member of the biomedical equipment maintenance staff. Such visits will take place on a regularly scheduled basis, with frequency depending upon specific needs and upon the amounts and types of equipment present. The range of frequencies will extend from monthly visits to hospitals to six-monthly visits to health posts.

Five Year Plan for Development of Biomedical Equipment Maintenance Services

The present TA team and their MOH counterparts consider that a five year plan, which was developed in 1985, with some adjustments in view of progress and experience to date, would provide a solid basis for further development of Biomedical Equipment Maintenance Services.

Evaluation Plans for the Biomedical Equipment Maintenance and Repair System

The BEM section and the TA advisors are currently testing an administrative system which will permit ongoing monitoring and periodic evaluation of the degree to which the system is functioning and is achieving its objectives. In some ways, that system will be similar to the one which is already in use with regard to vehicle maintenance. Both systems are designed so as to permit managers at various levels of the respective systems, as well as their superiors, to retrieve specific computer-generated reports which will show the accomplishments and records of their units in the light of their objectives and the performance of other units, in addition to providing data and references needed for maintenance, for example of specific equipment.

Some Additional Specific Subsystem Problems Mentioned by the T.A. Team

This section reports several additional problems, not included in other parts of this summary report, which were mentioned by the T.A. team. Where specific actions of the MOH

or USAID were mentioned which may or could resolve those problems had also been mentioned (not necessarily directly in connection with the problem), they are noted.

1. Improper operation and maintenance of basic services (e.g., steam in hospitals) means that some equipment (e.g., sterilizers) cannot be operated permanently.

2. Delays in obtaining spare parts (sometimes because of lack of foreign exchange or of a credit line in the U.S.) cause long delays in repairing easily reparable, sometimes crucial equipment.

3. Lack of continuity of T.A. provided to the BEM section (including both temporal and personal continuity) has caused unnecessary delays in the progress of improvements which were underway.

4. Damage to equipment by users and untrained (unofficial) repairers.

   The section has carried out a census of those who use (and those who sometimes attempt to repair) various types of equipment, and will provided training to users and others as necessary to reduce these damages and to improve utilization of equipment. Reference materials and translated manuals (and systems to encourage their immediate accessibility and use) will also help to overcome such problems.

5. Lack of per diem (expense payments for travel and especially for overnight stays).

   Regionalization of the repair and maintenance systems will help to reduce the problem posed by lack of payments for overnight stays. At present, technicians are sometimes reported to spend most of a day traveling to and from a work site, leaving only an hour or two at mid-day for work at the site.

6. Basic equipment (boilers, laundry, machinery, generators, etc.) is not included in the maintenance component of VISISA, and delays of six months are common while awaiting authorization of foreign exchange.

   The T.A. team suggested an AID-backed line of credit in the U.S. for these purchases, as well as for biomedical and vehicle purchases and spare/repair parts.

7. Standard orders for spare parts (e.g., 10%) placed with equipment (and vehicles) are sometimes filled with inappropriate parts.

The T.A. team suggested that such problems may be due to manufacturers trying to rid themselves of un-needed parts. Detailed specifications in MOH orders for appropriate spare parts should help eliminate this problem, as should follow-up on clearly inappropriately filled orders.

8. Low MOH salaries for maintenance and repair personnel.

MOH salaries for technicians in biomedical equipment repair and maintenance average 750 colones ($150) per month, or about half of the average private sector earnings. While the salary levels are outside of the control of the section's leaders (and to some extent the MOH), they believe that at least for the next few years, the lack of private sector jobs in their field and the workers' desire for steady employment will protect them from loss of workers to the private sector. In addition, they have adopted a policy of giving the technicians training a little at a time, according to priorities, partly so that they will have something to which to look foward.

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SUMMARY DESCRIPTION OF THE TRANSPORT SYSTEM IN THE MINISTRY OF PUBLIC HEALTH AND SOCIAL ASSISTANCE

Prepared by Carlos Pereira and Irene Boostrom*

Introduction. The Ministry of Health and Social Assistance of El Salvador (MOH) has in place an impressive transportation support system that has managed to function and improve in spite of the armed conflict. Over the past two years, the transportation specialist funded through the VISISA project has worked closely with the MOH to improve the vehicle maintenance system at the central and regional levels. The purpose of this report, prepared in the course of the development of a project paper proposing further AID support for the MOH, is to briefly describe the MOH Transport System and the efforts and plans to strengthen it.

Overview of Organizational Arrangements

The MOH transport system is an example of the Ministry's effecting the decentralization of administrative services. At the central level, the Automotive Department is within the Division of General Services, which in turn is part of the Administrative Directorate. The Department has a staff of more than 100 persons, 36 of whom are mechanics who work at the Matazano central repair center located in San Salvador and 51 of whom are drivers.

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Each of the regions is responsible for maintenance of vehicles assigned to it. At the regional level, the Automotive Section is also within General Services, although a proposal to make the Automotive Shop function as a separate department within regional administration is likely to be approved in the next few months. At the regional level, there are approximately 24 mechanics and 199 drivers, relatively evenly distributed across the regions.

The MOH presently has 469 vehicles. Since January, 1985 the number of vehicles has fluctuated as new vehicles have been added to the fleet and old ones have been deleted. Notably, as of April, 1986, 56% of the MOH vehicles were more than 10 years old. At present, the maintenance of vehicles assigned to regional offices and hospitals is supported through MOH and

patronato funds. The regional offices track expenditures separately for MOH and patronato funds. In 1985, the patronato expenditures accounted for approximately 15% of the vehicle operating costs.

The VISISA Transport Advisor has helped to ensure institutionalization of improvements in the MOH's vehicle maintenance system by working closely with the responsible MOH central and regional office staffs and by securing support at the highest level in the Ministry (i.e., the Minister, Vice-Minister and Director General). The latter support has been manifested in terms of specific Ministerial decrees regarding the vehicle maintenance system (for example, Resolution 85).

Vehicle Maintenance System

Organization and Reporting. The vehicle maintenance system is well organized, and improvements in its operation have been significant in the past two years. A systematic reporting system (the MASCI System), based at the regional level, tracks use and maintenance of the Ministry's vehicles (including gas and oil consumption and cost), and is used to identify vehicles in need of replacement. The reports track each vehicle in the system and are designed to ensure that both preventive and corrective maintenance are adequately performed. This is accomplished by highlighting (in a summary report - No. 103) the percentage of operational and down-time by central office, region and hospital. This report in turn is based on compilation of data for all vehicles in these fleets.

In 1985 the MASCI system was computerized by the MOH Data Processing Center (now the Information System Unit) with technical assistance from the VISISA transport specialist, and was installed on the Ohio Scientific Computers available at the Ministry. This computer-based system has recently been adapted to D-BASE III. Unfortunately, because of the excessive workload at the Information System Unit, the computer printouts are six-months delayed. However, the information system has been designed to be functional manually, notwithstanding the delays in the computer-based information.

The MOH has already realized the benefit of this reporting system. For example, as a result of tracking the use of individual vehicles and purchase of gas, the MOH had a surplus of gas at the end of 1985, rather than a deficit in the Fall, as was historically the case. This is a rare occurence for most countries.

Maintenance schedules and operation. Specific maintenance schedules (Preventive Maintenance Schedule Program) have been developed for all types of vehicles in the MOH fleet. These guide the mechanic in the proper service to be performed for each vehicle (forms 120 to 150). A "Scheduled Confirmation System" has been developed and implemented to determine -- on a monthly basis -- if the Preventive Maintenance is being performed in an acceptable manner (form 111).

Maintenance of central office vehicles is carried out at a workshop at Matazano, which has been refurbished through the VISISA project. For the Malaria Department (which has 54 vehicles), maintenance is handled both at the regional level and in Matazano, according to their assigned location. The regional office vehicle repair shops are also being refurbished through VISISA. The time taken to approve construction (refurbishment) of repair shops has been a detriment to maintenance of vehicles. However, as two of the regional offices (Santa Ana and San Vincente) will have have adequate repair shops as of the end of July 1986, this problem is diminishing in importance. An important advance has been the assignment of Petty Cash funds to the regional transport office for use in purchasing vehicles parts and supplies as needed. This has significantly reduced the downtime of vehicles. However, it has been recommended that a simple accounting system and guidelines should be introduced, as well as unscheduled external audits twice a year. The petty cash fund should also be increased.

The MOH has experienced a problem with regard to servicing of vehicles by the manufacturers local representatives. For example, while it is the policy of the Ford Motor Company to guarantee its vehicles, the local representative has refused to service the Ford vehicles that have been purchased through VISISA. Furthermore, U.S. automobile manufacturers have ignored repeated requests from the MOH (and the VISISA transport specialist) for information regarding catalogues for spare parts, and in fact have ignored requests for spare parts that are urgently needed for the MOH vehicles.

A recently-introduced report is being used to identify apparently inappropriate "breakdowns" of the vehicles; this is allegedly a method used by drivers to have time off. The planned introduction of "stand-by" vehicles is intended to correct this problem.

Training. Training of mechanics is conducted at the central level (at the Matazano repair center) and at the regional level. Training manuals have been developed by the VISISA Transport Advisor, and a number of training courses and

seminars have been conducted, including training of mechanics and administrative training for MOH central and regional office personnel. The training (including the manuals) is both non-specific (for the older vehicles, which are of 18 different makes) and specific, for the recently-purchased vehicles for which manuals have been requested and obtained. On-the-job training courses in vehicle maintenance are provided at least twice each month. In addition, formal training has been given in administration of transport (including the MASCI system), diesel fuel systems, coding systems, engine rebuilding and tune-up (including oscilloscope use). Driver training has been given on-site at the central repair and storage facility and at every region and hospital. This training has included procedures for daily inspection of the vehicles and general responsibilities of the drivers. Drivers' manuals have also been provided.

PRIORITY PROBLEMS.

In designing technical assistance for the new A.I.D. Health Systems Support Project, specific problem areas should be targeted. Importantly, as a result of the fact that the current transportation advisor has worked closely with the MOH at all levels to institutionalize improvements and personnel capacity in the system, it is likely that technical assistance can be phased-down during the lifetime of the project. Key problems that should be addressed during the Project are:

1. Securing replacement parts from U.S. manufacturers;

2. Ensuring servicing of U.S.-manufactured vehicles by local Salvadoran company representatives;

3. Reducing the length of time for the Corte de Cuentas to approve removal of non-functioning vehicles from fleet, and improved guidelines on methods of disposal (e.g., sale of vehicles, with use of proceeds possibly to pay for replacement vehicles/parts);

4. Facilitating administrative procedures within MOH; and

5. Institutionalizing and improving upon petty cash system at regional level.

DRUG PROCUREMENT, WAREHOUSING AND DISTRIBUTION IN EL SALVADOR'S MINISTRY OF PUBLIC HEALTH

Introduction

The MOH's drug supply management system has been extraordinarily burdened as a result of the conflict (and the resulting need for emergency medical supplies), in addition to the serious financial limitations under which the MOH has operated since 1979. Moreover, the tremendous influx of charitable donations which are for all intents and purposes beyond the control of the MOH have strained the system, exacerbating the problems in purchasing and inventory control which had resulted from weaknesses in the MOH's procedures for estimating pharmaceutical and medical supply requirements. The VISISA Project was designed to provide support to MOH efforts to improve these drug procurement and inventory control systems, and the MOH's capabilities have been strengthened significantly as a result of the computerization of the drug inventory control system and training provided to MOH personnel in warehousing and inventory control. The recent creation of a Drug and Medical Supply Unit in the MOH, responsible for all determining pharmaceutical and medical supply procurement needs, warehousing, and distribution systems should result in continued improvement in these systems, particularly with the additional support to be provided under this Project.

Overview of MOH Organizational Arrangements

On June 2, 1986, a Ministerial Decree established a Drug and Medical Supplies Unit within the MOH in order to:

1. Rationalize the use, storage and distribution of drugs and medical supplies;

2. Improve the purchases of drugs and medical supplies;

3. Ensure the quality of medications and medical supplies throughout the administrative process;

4. Train personnel involved in the administrative and technical processes with regard to drugs and medical supplies;

5. Create an effective technical and administrative system that optimally integrates both functions; and

6. Establish an operative system of pharmacological surveillance and prescription and use of drugs based on morbidity.

The centralization of responsibility for determining pharmaceutical and medical supply procurement needs, warehousing, and distribution of the MOH in this Unit, where the new Drug Quality Control laboratory is also located, at the level of the Minister represents a significant elevation of responsibility and places it in the hands of personnel better qualified to determine annual requirements and make allocation decisions based on morbidity data. Prior to the establishment of the Unit, decisions with regard to the commodities which would be purchased using the MOH's limited budget resources were made by the Procurement Department, which also had responsibility for placing the orders, negotiating contracts, and distributing pharmaceuticals and supplies among the various MOH facilities.

A Pharmaceutical and Medical Supply Committee has also been established, composed of all offices directly involved in pharmaceutical and medical supply management, which is chaired by the Minister with the Director of the Drug and Medical Supply Unit as Secretary. This advisory committee coordinates the acquisition, supply, and distribution of drugs and medical supplies through the Drug and Supply Unit. In addition, a Therapeutic Committee was established, coordinated by the Technical/Operative Directorate, and including representatives of that Directorate, the four basic medical specialties, and the Chemistry, Pharmacy and Medical faculties of the College of Medicine and Pharmacy.

The Procurement Process

Any procurement process must begin with a determination of requirements. A recent revision of the basic drug list (Cuadro Basico) used by the MOH serves as the starting point for making these estimates. The list currently in use contains some 395 preparations -- less than half the over 800 preparations included in 1983 -- with the items grouped according to the facility level authorized to use each drug. For example, level 1 includes some 20 drugs for use by rural health aides, and level 4 preparations (125 items) are reserved only for specialized services in referral hospitals.

Using this basic drug list, each Regional Office submits its annual estimate of needs for pharmaceuticals and medical supplies for the centers, units and posts in the region in August; each of the 14 hospitals prepares a separate request which is submitted at the same time as the Regional Office requests. Currently, estimates are based on prior year consumption statistics, which have been influenced by the availability of pharmaceuticals, rather than morbidity and service utilization statistics. (The establishment of the bio-statistics and inventory control sub-systems under the VISISA Project and upgrading planned under this Project will, however, enable the MOH to increasingly base these estimates on morbidity, rather than prior year consumption.)

These estimates are submitted to the MOH central Procurement Department in August of each year, which calculates total quantities and estimated costs. These totals are then submitted to a Procurement Committee consisting of the Director General, the head of Procurement, and the head of the Technical/Operative Directorate, which determines which products need to be reduced in quantity or eliminated based on available MOH budget resources. The resultant recommendations are submitted to the Minister for approval. The 1982 Ley de Proveeduria de Salud governs the procurement process, which can last for more than six months, with delivery of products sometimes taking as long as twelve months after the contract signing date for products when foreign exchange resources are required.

Inventory Control and Drug Tracking

Once the products arrive in country, the MOH must retrieve the drugs and medical supplies from customs and inspect and count each individual unit of the product at the central warehouse. These receiving processes, which require the counting of each individual unit rather than a sampling process, can delay the distribution of commodities as long as several weeks if several large shipments arrive at the same time.

Under the VISISA Project, a new central warehouse in San Salvador was built and a computerized inventory management system has been established for drug supply management. As it now exists, the basic control units are the central warehouse and the four regional warehouses (also built or refurbished under the VISISA Project). All drugs received at the warehouses are recorded on the system, which includes generic name, preparation, units, cost and expiration date.

The filling of orders begins with a review by the chief of the warehouse, who evaluates the quantities requested and authorizes the quantities to be distributed. This evaluation is based on existing stocks and a Master Distribution List, which is based on budgetary considerations and prior year's consumption statistics. Data on the specific distribution of medicines and supplies to health facilities is entered into the inventory control system at the central warehouse, although this data input will be handled by the regional warehouses as soon as the new computers are installed in the four regional warehouses. This information has been collected from the regions and inputted at the central level for distribution of all drugs registered through the Central MOH warehouse which have arrived since May 1986.

Verification procedures established under the VISISA Project to ensure that the stocks required/requested were shipped are being modified to reflect the availability of the computerized flow data. In June 1986, MIS technicians within the MOH began computer tabulation of the semi-annual audit required by the Salvadoran audit agency (Corte de Cuentas) of all expendables and equipment. Because this includes all items procured or otherwise received locally (e.g., charitable donations and medicines and medical supplies purchased by the patronatos), the inventory will assist the Ministry to verify total availabilities and, in the future, improve estimates of total usage. The new verification procedures for distribution involve: comparison of reports prepared by the warehouses and facilities on planned distribution and receipts; spot checking during field visits arranged for other purposes and in response to local complaints; and a proportionate 10% random sample of inventories in all facilities to verify the accuracy of computerized reports. Once the computerized system is fully operational at the regional levels, it is anticipated that a smaller sample size could be used for monitoring purposes.

Distribution Process

Distribution from the central warehouse to regional warehouses and facilities is dependent on transport. Lack of reliable transportation is a major problem in El Salvador, as it is in other developing countries; moreover, the conflict further impedes the routine transport of drugs to some rural health facilities.

At the facility level, the distribution of products from health care provider to patients is impeded by the lack of trained staff. It has been estimated that each MOH patient receives an average of four prescriptions per visit to a MOH facility. If one considers the actual need for drugs based on medical indications and appropriate prescribing practices, it is probable that this represents a significant over-prescribing pattern, although there is inadequate data at present to make definitive statements in this regard.

Priority Problems in the Drug Procurement, Warehousing, and Distribution Process

1. The procurement process is not based on morbidity and mortality data, but rather on historical consumption.

2. The procurement process is cumbersome and lengthy.

3. There is virtually no coordination in purchasing of drugs among the public and quasi-public agencies.

4. The process of intake of drugs and medical supplies is unnecessarily cumbersome, and should be based on a sampling rather than a complete count of items received.

5. The Corte de Cuentas is excessively slow in visiting warehouses to examine and approve of disposal of old or inutile drugs.

6. Some warehouses and facilities have no signs or labels on storage bins and boxes indicating the contents or the expiration dates of the contents. This, combined with the fact that some facilities and warehouses follow a "last-in, first-out" inventory procedure results in drugs being wasted because their expiration date has passed.

7. At some facilities, the Kardex Systems are not used because of a shortage of personnel.

8. At some facilities, there is no clear separation of duties with regard to warehousing and dispensing of medications.

9. Physicians excessively and inappropriately prescribe and dispense medications.

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ANNEX L

REVISED
INITIAL ENVIRONMENTAL EXAMINATION (IEE)

PROJECT LOCATION: El Salvador

PROJECT TITLE: Health Systems Management Project (519-0303)

LIFE OF PROJECT: FY 1986 - 1991

FUNDING (000): A.I.D. = $48,000,000
GOES = $25,000,000
TOTAL = $73,000,000

IEE PREPARED BY: Julie Klement, AID/LAC/DR/HN
Technical information provided by Donald J. Pletsch, Consultant, Vector Biology and Control Project, Medical Services Consultants, Inc. Arlington, Virginia
Roberto Gavidia, USAID/El Salvador

IEE Reviewed by:
ENVIRONMENTAL ACTION RECOMMENDED

Negative Determination
No further environmental analysis is required. If new chemical, biological or physical vector control methodologies are introduced into the program after the approval of this project, the environmental impact will be reviewed, and, if necessary, environmental studies or assessment will be carried out.

MISSION DIRECTOR CONCURRENCE

Robin Gomez
USAID/Director

Date 08/04/86

INITIAL ENVIRONMENTAL EXAMINATION

I. PROJECT AND SUB-COMPONENT DESCRIPTIONS

The purpose of the Health Systems Support Project is to support and strengthen the capabilities of the Ministry of Public Health (MOH) to deliver basic health care services, particularly those which extend the access of the Salvadoran population to preventive and primary health care services such as immunization, oral rehydration therapy, and health/nutrition education. The Project is composed of three components: (1) supplies and equipment acquisition and management, including support to strengthen the capacity of the MOH to select, acquire, distribute and manage such commodities based on needs and priorities; (2) strengthening basic health services delivery (including child survival and malaria control activities), particularly by improving the functioning of basic care and outreach programs; and (3) strengthening the planning and management capabilities of the MOH, particularly those systems essential to basic health services (e.g., drugs and supply management, transport, and equipment and facility maintenance). The approach will focus on increasing the utilization of existing facilities by improving service programs and outreach activities. The Project will also emphasize improving the flow of information necessary to ensure the availability of drugs and supplies at all facility levels and to facilitate decision making and rational allocation and use of resources.

Malaria control activities included in the Health Services Support component will assist the GOES to contain or further reduce the incidence of malaria, through support for a responsive, efficient and effective nationwide malaria control program. Project support will assist the MOH's Malaria Department to implement targeted antimalaria activities in areas which historically have experienced or are experiencing high rates of malaria transmission. The malaria control program will emphasize a selective mix of vector control measures coupled with a better balance between the passive case detection and treatment by volunteer collaborators and treatment and diagnosis by the nation's private and public health facilities. Progressive reduction of malaria transmission by vector control and radical drug treatment for humans are expected to continue to reduce the geographical area requiring active intensive control measures, thereby reducing the administrative and financial costs of the program. Successful execution will depend on a number of key variables, including vector resistance to the insecticides used, epidemiologically-accurate targeting of spray operations, cooperation and participation of the public and health service staff, continued reduction in the P. Falciparum malaria, and expanded use of feasible alternative control measures. Although the implementation of large scale vector control measures such as permanent drainage and canalization are not included within the scope of this Project, support for "operationsl research activities" will include evaluative studies of the effectiveness of source reduction through salinity and water control in estuaries and lagoons, as well as studies on the residual effectiveness of the synthetic pyrethroid (Propoxur) currently being used and bendiocarb which will be field-tested following WHO/PAHO testing protocols.

Malaria control activities supported by project funds will consist of three elements:

1) Technical Assistance for program monitoring, upgrading control methodologies currently in use (and/or developing alternatives to these methodologies) and training of personnel in operation and maintenance of US-supplied equipment and commodities;

2) Participant and/or in-country, in-service training in anti-malarial operational research and entomological and epidemiologial surveillance; and

3) Commodity support for insecticides, spraying equipment, vehicles, and various other laboratory and entomological equipment and supplies.

The implementing agency will be the Malaria Division of the MOH.

Using malaria prevalence data from 1979-83, which was collected by the network of nearly 2,500 volunteer collaborators located through out rural El Salvador, the Malaria Division stratified the country into areas of high, low, and medium endemicity in 1984. Roughly 25% of El Salvador has a malaria prevalence rate of 60 or more cases per 1,000 population annually. Another 25% of the country has rates between 20 and 60 cases annually and the rest of the country has a lesser prevalence. Malaria Division activities are concentrated in the area of highest malaria prevalence and endemicity. By targeting activities (inter-domiciliary spraying, larviciding and active drug distribution) in these areas of greatest transmissions it will be possible to bring down high transmission rates eventually to low levels in these areas and to practically zero in the rest of the country. However, since the resources currently available allow only partial coverage of the most endemic areas this is expected to be a long term process beyond the scope of this project.

The anti-malarial drugs being used in the program (to be purchased locally by the GOES) are: chloroquine and primaquine. The use of Fansidar is descouraged because there are no indications of chloroquine resistence yet in the malaria parasite. During project implementation, the Malaria Division will continue to monitor malaria parasite susceptibility as well as the efficacity of the insecticides being used to control larvae and adult farmes of the malaria mosquito vector.

II. Evaluation of Environmental Impacts

The general A.I.D. Environmental Impact Statement (EIS) for malaria programs included an in-depth review of the impact of malaria programs on the environment. The conclusions of the EIS were that the major insecticides used in malaria control programs have a favorable risk-benefit impact on the environment due to their method of application in public health programs. In 1977, a comprehensive Environmental Assessment undertaken in Sri Lanka concluded that residual insecticides used in malaria control efforts are not detrimental to the environment and have a very favorable risk benefit ratio. In May, 1980, an Environmental Assessment carried out on the use of similar residual insecticides and larvicides in India's malaria control activities reached similar conclusions.

One of the purposes of the comprehensive EIS submitted by A.I.D. and accepted by the Environmental Protection Agency (EPA) was to avoid duplicating environmental review efforts for projects of a similar nature in countries with comparable conditions. Environmental studies have been made on malaria control programs in the last four years in India, Thailand, Nepal, Haiti and Sri Lanka with a similarly favorable risk-benefit conclusion. The points of similarity between this project and previous environmental studies, both of residual insecticide use and other methods of malaria control should obviate the need for another major analysis. All the above reports are available in AID/Washington.

Chemical Control Aspects

The El Salvador Malaria Program has been applying a number of organophosphorus and carbamate insecticides in its spray operation program since 1973 in limited areas of the country. Under this Project, the GOES does not plan to use the insecticides malathion, DDT or BHC, but is expected to apply propoxur and pounce (permethrin) on a limited and selected scale, and continue conducting limited testing of bendiocarb as a residual insecticide if Anopheles albimanus becomes completely refractory to propoxur. The GOES malaria program will also be applying a larvicide, ABATE, in its field program.

The insecticide Propoxur is a carbamate which has both contact and fumigant action. This insecticide is applied as a residual spray at two grams/square meter and is effective up to three months. Propoxur is registered by the EPA in the United States for residual control of adult mosquitoes; it is also bio-degradable. The Malaria Division has used this compound successfully over the last ten years in El Salvador without incidents to either spray personnel or village populations. Precautions are taken by the Malaria Division in applying Propoxur, including intensive training in the handling and application by spray personnel, provision of protective clothing, rigid supervision, and educational efforts in the villages. Spraymen are required to wash after a day's work and before smoking or eating. No cholinesterase monitoring is indicated when carbamate insecticides are applied since the inhibited enzyme is deactivated too quickly for this to be a useful preventive or monitoring measure of intoxication.

The Abate, applied as a larvicide on mosquito breeding sites, and the "pounce," used for ultra low volume spraying (fogging), are among the safest biodegradable pesticides available. The larvicide Abate, an organophosphate, is to be used as a supplementary larvicidal control measure during the life of the project in some locations mainly during the drier portions of the year. This compound has been shown to have low toxicity even if taken orally and applied dermally. Normal applications of Abate as a larvicide in water is about 0.5 ppm. Even if an adult were to drink the water treated directly and if 2 liters were consumed, the maximum amount of Abate inhibed daily would be 1 mg. This compares with a dosage of 256 mg./man/day fed to human volunteers for 5 days and 64 mg./man/days for four weeks without clinical symptoms or side effects. Through the dermal route, Abate was found to be even less toxic. Abate has a short half life, is not stored in the body and produces no known chronic or residual effect. Abate has been used in malaria and mosquito control programs for approximately twenty years and is a safe product which is registered without restriction as a mosquito larvicide in the U.S. by the Environmental Protection Agency (EPA).

Due to its expense, the application of pounce (permethrin) in ultra low volume fogging will be on a selective focal basis and limited to times of unusually high vector mosquito densities. The GOES malaria service has used synthetic pyrethroids over the last 8-10 years without incidents. This insecticide is a knock-down chemical and has no residual or very limited residual effect. The oral LD50 of Permethrin (Ponce), a synthetic pyrethroid, is 4000 mg./kg., which indicates a very safe product. It is applied at 5-10 grams of actual material to a hectare of land and at this dosage rate there are no adverse environmental implications. It biodegrades rapidly. The toxicological information available indicates that no serious health environmental problems should arise from use of this material, but care in handling and application are to be carried out by the Malaria Division through proper training of concerned personnel, adequate supervision, and provision of protective clothing. Pounce (permethrin) is also registered by the EPA for adult mosquito control in the U.S. using ULV or Cold Fogger techniques, as it would be used under the Project.

Environmental Management

Preliminary steps have been taken by the MOH toward an engineering project in Estero Ticuiziapa near the La Libertad beach region which would in effect improve on a practice used for years by ranchers to control mosquito breeding in that area, by avoiding the excessive flooding of pastures bordering the estuary which produces a mixture of fresh and sea water to the point of favoring anopheline development. The anopheline larvae cannot tolerate high salinities (sea water) but do well in fresh and mildly-brackish water. Control of anopheline breeding by installation of tide gates succeeded in controlling Trinidad's coastal malaria vector in the early 1940's, but attempts to exploit this weakness of anopheline biology have not yet been investigated in Central America.

Although this engineering project will be outside the scope of this Project, the Malaria Division will supervise and monitor its execution. The Malaria Division is particularly interested in observing the anopheline response in terms of the densities of An. albimanus larvae and adults, and to monitor any subsequent effects on the malaria situation in the adjacent communities. The Division will, therefore, carry out studies on anopheline biology and malaria incidence reduction associated with the source reduction procedures. Although the estuary tidal control project's outside the scope of the Project, no adverse environmental effects of this GOES engineering project is foreseen since it will involve only a mechanical action to obtain results commonly achieved by manual operations of the local ranchers and local residents of the area.

Health education designed to increase the understanding, cooperation and participation in the program at the community level is as important as the technical operations of vector control, case finding and treatment. Because it is relatively difficult to achieve and measure results in this area, health education is often neglected in malaria programs. The Malaria Division recognizes the importance of health education and is attempting to strengthen this component of their program, including village educational programs on positive small scale environmental modifications such as draining, filling, or saline regulation by flushing to reduce breeding areas, and reducing Man-vector contact though the design and siting of villages and promoting the use of bed nets. It is expected that implementation of any of these environmental management actions will lead to an improvement of the environment and will not create environmental hazards or problems.

Health Safeguards

Special attention is given to the handling of the insecticide concentrates (both water dispersible powders and emulsion concentrates) by the Malaria Division. In the case of Propoxur, the Project will procure and provide this insecticide in separate pre-measured packets which will fill one spray pump (pre-weighed). This pre-packaging of insecticide packets eliminates personnel exposure which would be required in packaging and weighing from a bulk product. In preparing suspension or emulsion of the insecticides, use is made of long-handled mixers to protect the operator from splashing and to allow stirring from a standing position to further reduce possible intoxication of spraymen

Insecticide concentrates left over from the operation (unused packets or unused mixed concentrates) and the empty containers are returned from the field and either stored or disposed of safely in a manner designed not to contaminate water sources or create any other environmental hazard. The washing of spray equipment is also done in a manner which will not allow the washing waste water to enter wells, streams, lagoons, swimming pools or any other water source which could be used by persons or animals for drinking or washing.

It should be noted that each sprayman receives up to 15 days' training each year in spray techniques and operational matters prior to the initiation of the major sprav cycle. Approximately 15% of their training time is spent on health safeguards for protection of both personnel and villages. At the start of the spraying cycle each spraymen is issued 3 sets of protective uniforms, which include a long-sleeved shirt, a metal helmet, rubber gloves which extend about half way to the elbow, rubber boots, a gauze face mask (if required) and some belladona drops in case of a sudden emergency. Spraymen are supervised and required to change uniforms on a regular basis.

Each sprayman is also issued a personal instruction booklet describing the proper techniques and precautions to take when employed as a malaria program spray operator. There are series of instructions issued by the malaria program for spraymen, team leaders, Chiefs of Zones, and villages in the application of insecticides. Copies of these instructions are on file at USAID/El Salvador.

The "Manual de Operaciones de Rociado," issued by the GOES Division of Malaria, and used as a guide by the program contains instructions on health safeguards which are to be followed by field personnel in applying insecticides and in training. There are specific instructions for fenitrothion and propoxur in this manual. A copy is available at USAID/El Salvador.

Visits have been made to the warehouse facilities at the Central Level and at several outlying storage points. The Central Warehouse was found to be secure, constructed in a manner to protect the insecticide from rain and exposure to direct sunlight, with solid floor and in good housekeeping condition.

Official documentation on the application and storage of insecticides issued by the Division of Malaria are on file at USAID/El Salvador. These instructions are considered suitable and adequate for this program.

Project Monitoring

The project will employ a contract malaria control officer to insure that training in health safeguards is carried out and to observe actual field operations at the time of spraying. A report on each site visit will be made.

Other Factors

El Salvador uses a large amount of insecticides in its agriculture activities which include many very toxic compounds which have far more human health hazards than the insecticides used in the malaria program. There is very little control on the use and storage of these agriculture chemicals.

The Malaria Program will continue to make every effort to protect the environment, its workers and the population from mis-use of any of its working insecticides, but their overall environmental effect is already quite limited when compared to insecticides used in other ongoing in-country activities.

III. Recommendation

In view of the above examination of the environmental issues of this project, it is recommended that a negative determination be made for this project.

Trials with bendiocarb (to be purchased with MOH funding) are scheduled for September, 1986 to test as a possible backup insecticide for propoxur if anopheline susceptibility to propoxur should deteriorate. The trials will be carried out in selected areas in accordance with WHO/PAHO guidelines and protocols for field trial; A PAHO malariologist and the AID contract malariologist will supervise the field trials as well as the evaluation of the use and effectiveness of the other planned anti-malarial activities. Prior to any broadscale field use of bendiocarb, an IEE will be made and submitted.

ENVIRONMENTAL IMPACT CHECKLIST

IMPACT IDENTIFICATION AND EVALUATION

N - No environmental impact

L - Little environmental impact

M - Moderate environmental impact

H - High environmental impact

U - Unknown environmental impact

\+ - Positive impact

\- - Negative impact

Impact Areas and Sub-areas

A. 1.	Land Use	
	a. Increasing the population	N
	b. Extracting natural resources	N
	c. Land cleaning	L+
	d. Changing soil character	N
2.	Altering natural defenses	N
3.	Foreclosing important uses	N
4.	Jeopardizing man or his works	N
5.	Other factors (e.g., increase agricultural productivity)	N

B. Water Quality

1.	Physical state of water	N
2.	Chemical and biological states	N
3.	Biological Balance	N
4.	Other factors	N

IMPACT IDENTIFICATION AND EVALUATION FORM

C.	Atmosphere	
1.	Air additives	N
2.	Air pollution	N
3.	Noise pollution	N
4.	Other factors	N
D.	Natural Resources	
1.	Diversion, altered use of water	N
2.	Irreversible, inefficient, commitments	N
3.	Other factors	N
E.	Cultural	
1.	Altering physical symbols	N
2.	Dilution of cultural traditions	N
3.	Other factors	N
F.	Socioeconomic	
1.	International impacts	L+
2.	Change in population	L
3.	Changes in cultural patterns	N
G.	Health	
1.	Changing a natural environment	L+
2.	Eliminating an ecosystem element	N
3.	Risk of intoxication of staff	M-
4.	Other factors	N

H. General

1.	International impacts	L+
2.	Controversial impacts	N
3.	Larger program impacts	N
4.	Other factors	N

I. Other Possible Impacts (not listed above) N

METHODS OF IMPLEMENTATION AND FINANCING

Method of Implementation	Method of Financing	Approximate Amount ($ 000)
Pharmaceuticals and Medical Supplies AID/W thru VA	Direct reimbursement	$28,700
Insecticides PSA	Direct pay	2,300
Equipment and Computers	Direct pay	1,400
Vehicles	Direct pay	4,600
Technical Assistance Direct Contracts with Firms and Individuals, and Buy-Ins	Direct pay	5,800
Local support costs (Admin. & Training)	Direct pay	1,400
Child Survival Promotion/ Health Education	Direct pay	1,000
Participant Training	Direct pay	300
Evaluation	Direct pay	200
Contingency	Direct pay through one of the above methods of implement.	2,300
Project Total		$48,000

Annex N

DETAILED EVALUATION PLAN

Evaluation and related monitoring of this Project is to be jointly conducted by the MOH and USAID, with the intent of in the long-term institutionalizing within the Ministry an improved capacity for policy and program evaluation and monitoring. The conceptual approach to be used assumes that the evaluation will be designed and implemented so as to determine the accomplishments and impact of the Project (as defined by the Logical Framework), and to respond to changes in goals and objectives of the MOH so as to ensure that the Project continues to meet the needs of the MOH and its target population. To this end, within USAID the Project Implementation Committee will be responsible for monitoring progress. Within the MOH, the Project Steering Committee will be responsible for monitoring progress. In addition, the evaluation process will consist of: development of an overall evaluation design, conduct of a baseline study, on-going project monitoring and evaluation, and conduct of external evaluations.

1. Development of overall monitoring and evaluation design. Because of the comprehensive nature of the project, an overall monitoring and evaluation plan will be developed in the first six months of its implementation. This will include further specification of priority decision-linked issues and system problems related to the three components of the Project; refinement and further definition of the indicators specified in the logical framework (including definition of specific outcome measures and description of external variables likely to impact on each measure); and identification of specific methodologies appropriate to collect and analyze data with regard to those indicators. At this same time, specific roles and responsibilities of MOH, AID and technical assistance personnel will be identified and agreed-upon and training needs with regard to project monitoring and evaluation will be identified.

The monitoring and evaluation of the project will serve as an important training vehicle for MOH personnel at all levels. The MOH will be responsible for undertaking evaluation design activities in conjunction with the AID, with technical assistance provided by the CCP/Health Planning Advisor and the Management Development/Health Services Research Advisor. In addition to the training in policy and program planning under the third component, MOH personnel will receive training in the use of techniques designed to ensure utilization of evaluation results by decision-makers at all appropriate levels (both within the MOH and in related governmental and private agencies), and by health providers in service delivery.

2. Conduct of the Baseline study. Although baseline data exists for measuring achievement of the EOPs, additional data will be developed during the first year to more fully assess the range of impacts of the Project. The collection of this additional baseline data should be completed by the end of the twelth month of the project.

3. External evaluations. During this five-year project, AID and the GOES will conduct four project reviews, in the Project's 20th, 36th, and 50th months, utilizing in-house and external resources to be financed under the Project. The MOH has expressed a particular interest in having frequent external evaluations to ensure that the Project is meeting its needs and is responsive to AID requirements. The evaluation teams should be in country for at least one month for each evaluation, and longer for the mid-term (36th month) and final evaluations. The teams will be contracted by USAID utilizing Project funds. The HR/HA Project Manager, in coordination with offices represented on the Project Implementation Committee, will be responsible for coordinating all evaluation activities with regard to this project, including selection and coordination of external evaluation teams and approval of their reports. The teams should be comprised of individuals expert in each component of the project (e.g., drug supplies management, MIS, planning and administration of health programs) In addition, the evaluation team should include at least one host-country public health expert.

The external evaluations will focus on the specific EOPS and output indicators specified in the Logical Framework, as well as the stated objectives of the MOH with regard to the project, and related objectives included in long-range plans of the Ministry. The evaluations will also address major changes in the Project's setting, including socio-economic conditions that might have had an impact on the Project. At the conclusion of each evaluation, the team will meet with MOH officials (including representatives of all levels of service provision and management) and with the USAID Project Implementation Committee to discuss the results and to recommend means of overcoming any constraints that have been identified with regard to achievement of project objectives.

The first evaluation is scheduled for 20 months after signature of the Project Agreement. This evaluation will measure progress in the delivery of commodities and planned improvements in the acquisition and management of drugs and medical supplies; compare efficiency of the maintenance systems for equipment and facilities before and during project implementation; measure the status of the extension of health services to rural areas; compare the status

of the establishment of the MIS with the project plan; and review the quality of the training programs and applied health research studies undertaken by the MOH. The mid-term evaluation will be scheduled to begin in the 36th month and will be an intensive evaluation, focussing on the same indicators as the first evaluation, as well as the efficiency and appropriateness of project interventions.

A final evaluation will be conducted near the end of the Project, in FY 1991. This evaluation will assess, in addition to output level indicators measured throughout project implementation, attainment of the purpose and contribution to the project goal. It will also assess the development impact of the project, identify lessons learned for future projects, and evaluate the project's sustainability and replicability. Specifically, the final evaluation will measure the increased availability of basic health services among rural populations and improvements made in the decision-making capabilities of the MOH as demonstrated through identifiable changes in resource allocation, increased access to health care and utilization of MOH primary level facilities, increased levels of drug stocks, improved treatment procedures, and more efficient logistics.

TRAINING PLAN

The availability of an adequate supply of qualified and motivated health care personnel is a decisive factor in any program which seeks to maintain and improve the quality of basic health care services. Currently, the GOES public health system includes approximately 1,500 physicians, 1,350 nurses, 2,850 nurse auxiliaries, and an additional 2,000 trained medical personnel (e.g., rural health aides, health educators, sanitation workers, nutritionists, therapists, and medical and laboratory technicians). Prior to 1983, the MOH was responsible for overseeing the training of all medical and paramedical personnel. However, two years ago responsibility for physician and nurse pre-service training was given to the Ministry of Education, which operates a national nursing school and oversees public and private university training for physicians and the private nursing institute in San Salvador.

In-service training continues to be the responsibility of the MOH, as well as all training for lower-level health workers such as sanitarians, rural health aides (ARS) and the new PROSAR workers. These pre-service and in-service training programs are operated by the MOH's Training School. However, due to financial constraints, no pre-service training has been conducted since 1983 and in-service training programs have been focussed largely on skills required to implement the MOH's child survival program, which is largely supported by UNICEF with Italian Government funding. In addition, technician training in bio-medical equipment maintenance, vehicle maintenance and repair, and supply management and warehousing has been provided under the ongoing VISISA Project with external consultants, and the assistance of the responsible administrative divisions of the MOH, and the publicly-supported Institute for Applied Technical Training, which receives support from the Pan American Development Foundation.

The analysis conducted as part of the development of this Project identified the inappropriate use of medical, nursing and paramedical personnel as a major inefficiency in the MOH's health care delivery system and a limiting factor in terms of expanding service availability. Moreover, these analyses suggested that the increased use of secondary and tertiary care facilities was at least in part attributable to the relatively narrow range of services offered by the nurses and nurse auxiliaries who staff primary care facilities. Accordingly, the focus of the Project component, Strengthening Basic Health Services, is on expanding the range of services offered by lower level care providers and improving the quality of services offered. The objective is to ensure that quality services are delivered at the lowest appropriate care facility by the lowest-level care provider possible.

The Project will assist the MOH in finalizing revised treatment norms and in designing and implementing competency-based training keyed to these treatment norms and other specific needs related to improving the efficiency and effectiveness of health services delivery. A training advisor will assist the MOH's Training Center in upgrading in-service training programs for medical, nursing and paramedical personnel and the pre-service training program for the new PROSAR workers, with special emphasis on skills related to key child survival interventions (e.g., immunization, use of ORS, and growth surveillance). In addition, ongoing work in the development of trauma training modules will be reviewed and additional training programs in emergency medical services will be developed where needs are identified.

The MOH Training school has a twelve-person faculty, and has conducted training for the rural health aides, traditional birth attendants, health inspectors, and statistical assistants. Four center staff have already participated in competency based training of trainers courses and form a core staff of trained trainers; two additional members of the Center's faculty will receive this type of training in the U.S. under the Project. In addition, the basic skills of the Center's staff in curriculum design and evaluation of training will be strengthened through Project-funded technical assistance and short courses funded by MOH counterpart.

Training for the PROSAR community health workers and the rural health aides who will supervise them will be funded and implemented by the GOES with German Government assistance. Similarly, training costs for the orientation and skills enhancement of doctors, nurses, auxiliaries, and community health workers and leaders involved in implementing the child survival programs will continue to be financed by UNICEF with Government of Italy funds; technical assistance from PAHO and the sub-regional health institutes (INCAP and PASCAP) in support of these programs will also continue. Given the support of other donor resources for these training activities, the AID Project-funded inputs are designed to complement these resources by improving trainer skills, the curricula used, and evaluation of the training programs.

The Project-funded training advisor will also assist the MOH in upgrading in-service training programs in two distinct areas -- logistics and planning. In logistics, we include short seminars, workshops and on-the-job training of mechanics, repair and maintenance technicians, health technicians and laboratory personnel using bio-medical equipment, and warehouse and supply

management personnel at the various levels. While this will be coordinated through the MOH Training Center, additional assistance will be provided through the Institute for Applied Technical Training to continue support in technical course design and implementation initiated under VISISA. Planning skills training to be supported by this Project will include workshops and on-the-job training aimed at improved regional and local level program planning and monitoring. Using the improved data bases developed by the MIS, and the planning skills, improved targeting of resources will be possible. Specific on-the-job training in computer use and data analysis is planned, building on the pilot regional planning training activities initiated under VISISA.

A total of $850,000 has been budgeted to support the in-country, local currency costs of the short term training activities. This amount includes in-country costs of the training in the use of the MIS, data analysis, and logistics support, as well as the costs of developing, finalizing and/or printing a range of training materials. Major outputs will include: finalization of the Provider Treatment Norms; development of Facility Operations Manuals, MIS Systems Users Manuals, Bio-medical Equipment Maintenance Manuals, and material for the competency-based training programs; and printing of Child Survival Manuals.

The Project will also provide support for participant training in the U.S. and third countries in health planning, epidemiology, operations research, and primary health care management. The U.S. participant training program is designed to infuse up-to-date concepts and skills required to improve health services planning and delivery. Illustrative training plans for these two distinct types of training follow. However, since all training activities are intended to complement MOH training programs and scholarships provided by the Government of Spain, PAHO, and other governments, the Project will require the development of annual training plans by the MOH to ensure that the resources from various donors are complementary and used effectively.

SHORT TERM TRAINING*

TYPE OF PERSONNEL/SKILL AREA	NO. OF PERSONNEL	TYPE OF TRAINING
Component I: Logistical Support Systems		
Warehouse and Supply Management	15	In-service, on-the-job training in supply manage. and use of MIS inventory control system
Bio-medical equipment technicians	60	In-service, on-the-job training.
Health Technicians and Lab Personnel and other users of bio-med equip.	100	In-service training in use and preventive maintenance.
Vehicle repair mechanics	70	In-service, on-the-job training.
DQC lab technicians	5	Short seminars by technical advisors; on-the-job training.
Component II. Strengthening Basic Health Services		
MOH Faculty in Curricula Development and Training Evaluation	12	Seminars by T.A.
Emergency Medical Services Managers	26	Seminars/workshops based on VISISA work.

TYPE OF PERSONNEL/SKILL AREA	NO. OF PERSONNEL	TYPE OF TRAINING
Component III. Policy and Program Planning		
MOH Central and Regional Statisticians and Epidemiologists	12	Use of MIS; regional workshops in data analysis
Regional Services Directors and Fiscal Officers	20	Use of MIS; workshops on program budgeting.
Warehouse managers and supply clerks	12	Use of MIS inventory control.
Health planners and technical services unit managers	15	Use of MIS; workshops on applied health research
Other computer users	20	Use of MIS sub-systems.

*This training plan includes only those individuals who will be trained directly by Project. During the life of the Project, MOH care providers will receive training in the revised treatment norms and child survival skills using Project-funded materials, but with the training costs being paid for largely through other donor contributions.

PROPOSED PARTICIPANT TRAINING

Type of Training	Year 1		Year 2		Year 3		Year 4		Year 5		TOTAL	
	Nos.	Cost	Nos.	Cost	Nos.	Cost	Nos.	Cost	Nos.	Cost	Nos.	Cost
I. U.S. Long Term (@ $25,000/year)												
Health Economics (18 months x 2 persons)	-	-	1	25.0	1	37.5	-	12.5			2	75.0
Bio-stat./Epidemiology (1 year x 2 persons)	-	-	1	25			1	25.0			2	50.0
Health Planning (1 year x 1 person)	-	-			1	25.0					1	25.0
Sub-Total U.S. Long Term	-	-	2	50.0	2	62.5	1	37.5	-	-	5	150.0

Type of Training	Year 1 Nos.	Year 1 Cost	Year 2 Nos.	Year 2 Cost	Year 3 Nos.	Year 3 Cost	Year 4 Nos.	Year 4 Cost	Year 5 Nos.	Year 5 Cost	TOTAL Nos.	TOTAL Cost
II. U.S./Third Country Short Term (@ $5,000/month)												
Health Planning (2 mos. x 2 persons)	2	20.0									2	20.0
Operations Research (2 mos. x 5 persons)	2	20.0			3	30.0					5	50.0
Statistics/Epidemiology (3 mos. x 2 persons)			1	15.0	1	15.0					2	30.0
Primary Health Care Mgmt. (2 mos. x 2 persons)			1	10.0	1	10.0					2	20.0
Training of Trainers Skills (2 mos. x 2 persons)	2	20.0									2	20.0
Sub-Total U.S./Third Country Short Term	6	60.0	2	25.0	5	55.0					13	140.0
III. Third Country												
CA Regional Seminar/Workshops: Essential Drugs, Child Survival, Ops. Research (@ 1,000 per participant)			5	5.0	2	2.0	3	3.0			10	10.0
Sub-Total Third Country			5	5.0	2	2.0	3	3.0			10	10.0
Total All Participant Training	6	60.0	9	80.0	8	119.5	4	40.5			28	300.0

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