Document of
The World Bank

Report No: 22626-ES

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$142.6 MILLION

TO

THE REPUBLIC OF EL SALVADOR

FOR

AN EARTHQUAKE EMERGENCY RECONSTRUCTION AND

HEALTH SERVICES EXTENSION PROJECT

October 31, 2001

Human Development Sector Management Unit
Central America Country Management Unit
Latin America and the Caribbean Regional Office

CURRENCY EQUIVALENTS

(Exchange Rate Effective October 30, 2001)
Currency Unit = Salvadoran Colones
US$1.00 = 8.75 Colones

FISCAL YEAR

January 1 to December 31

ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ARI	Acute Respiratory Infection
CMF	Construction Management Firm
DHS	Demographic and Health Surveys
EDI	Enteric Diarrhea Infection
FISDL	Social Investment Fund for Local Development
GOES	Government of El Salvador
HIV	Human Immune-deficiency Virus
IBRD	International Bank for Reconstruction and Development
IDB	Inter-American Development Bank
IMBM	Institutional Modernization Benchmark Matrix
IEU	Infrastructure Executing Unit
ISSS	Salvadoran Social Security Institute
LACAP	Ley de Adquisiciones y Contrataciones de la Administración Pública
M&E	Monitoring and Evaluation
MOH	Ministry of Health
MSPAS	Ministerio de Salud Publica y Asistencia Social
NGO	Non-governmental Organization
PAS	Policy Activity Schedule
PCU	Project Coordinating Unit
PMR	Project Management Report
SIBASI	Health Districts (Sistemas Básicos de Salud Integral)
SOE	Statement of Expenditures
STD	Sexually Transmitted Disease
SUMA	Supply Management

Vice President: David De Ferranti
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Sector Manager: Charles Griffin
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El Salvador

Earthquake Emergency Reconstruction and Health Services Extension Project

CONTENTS

Annexes

Additional annexes, where applicable: Letter of Sector Policy, Eligibility Criteria for Beneficiaries and Hospitals, and summaries of the Environmental Assessment, Social and Environmental Analyses, Indigenous Peoples' Plan, Resettlement Plan, etc.

Map

El Salvador
Earthquake Emergency Reconstruction and Health Services Extension Project

Project Appraisal Document

Latin America and the Caribbean Region
LCSHH

Date: October 31, 2001	Team Leaders: Gerard M. La Forgia/Sandra Rosenhouse
Country Manager/Director: Donna Dowsett-Coirolo	Sector Manager/Director: Charles Griffin
Project ID: P067986	Sector: HY – Other Population, Health & Nutrition
Lending Instrument: Emergency Recovery Loan/Sector Investment Loan	Theme(s): Health/Nutrition/Population
	Poverty Targeted Intervention: [] Yes [x] No

Project Financing Data

[X] Loan [ ] Credit [ ] Grant [ ] Guarantee [ ] Other [Specify]

For Loans/Credits/Others:

Amount (US$m): US$142.6 million

Proposed terms: [] To be defined [ ] Multicurrency [X] Single currency US Dollars
[] Standard Variable [X] Fixed Spread [] LIBOR-based

Grace period (years):	5 years
Years to maturity:	17 years
Commitment fee:	0.85% first 4 years, 0.75% afterwards
Service charge:	0%
Front-end fee on Bank loan:	1.0%

Financing plan:

Source	Local	Foreign	Total
Government	8.7	14.2	23.1
IBRD	55.4	87.2	142.6
Total:	64.1	101.4	165.7

Government's Reconstruction Program:

IDB	20.7
CABEI	26.0
Japan	20.0
GOES	26.8
Others	10.1
Total:	103.6

Borrower: REPUBLIC OF EL SALVADOR
Guarantor:
Responsible agency: MINISTRY OF HEALTH
Estimated disbursements (Bank FY/US$M):

FY	2002	2003	2004	2005	2006	2007
Annual	5.1	23.2	54.5	42.8	12.8	4.2
Cumulative	5.1	28.3	82.8	125.6	138.3	142.6

Project implementation period: 5 years
Expected effectiveness date: February, 2002 **Expected closing date:** April 30, 2007
Implementing agency: MINISTRY OF HEALTH – Contact person: Vice-Minister of Health Dr. Herbert Betancourt
Contact person: - Ministry of Health - El Salvador, Tel: (503) 222-7725. Fax: (503) 221-0985

A. Project Development Objective

1. Project Development Objectives: (see Annex 1)

The proposed project seeks to restore hospital operations and minimize losses in health status to vulnerable populations living in the country's earthquake-damaged Central and Para-Central Regions and to improve the health status of underserved populations elsewhere, with special emphasis on the poverty-stricken Northern Region. This will be achieved by: (i) rebuilding and improving health sector infrastructure damaged or destroyed by the earthquakes; (ii) extending the coverage of essential health and nutrition services through a community-based outreach approach; and (iii) strengthening the institutional capacity of the Ministry of Health (MOH) to develop and implement policies and priority programs for the health sector.

2. Key Performance Indicators: (see Annex 1 for a list of performance indicators)

The project's performance will be guided and measured by indicators covering the following areas:

- Hospital reconstruction/rehabilitation: facilities constructed/rehabilitated, services fully functioning, increased efficiency, and patient satisfaction;
- Preventive and corrective maintenance: maintenance staff trained, protocols/manuals produced, and facilities with functioning programs;
- Essential health: vaccination rates, malnutrition, growth monitoring, prenatal care, tetanus vaccination rates, and utilization;
- National priority programs: entomological surveillance, incidence of dengue and HIV/AIDS, toxic medical waste management; and environmental health; and
- MOH stewardship role: contracting and forming partnerships with NGOs, foundations, cooperatives and government agencies such as ISSS and municipalities, performance agreements with MOH providers, national health policy formation, information technology, communication strategies, and monitoring and evaluation.

B. Strategic Context

1. Sector-related Country Assistance Strategy (CAS) goal supported by the project: (see Annex 1)

Date of latest CAS discussion: March 6, 1997 (R97-27). A CAS for the FY 2002-2005 period is being presented to the Board with this project.

The new CAS takes into consideration the economic disruption caused by the earthquakes in January and February 2001 and their devastating impact on health infrastructure and the redrawing of the poverty map. The CAS has an overriding reconstruction/ poverty reduction objective of reducing nationwide poverty to 30-35 percent by year 2005, despite heavy losses due to earthquakes. The proposed project is the centerpiece of the Bank's emergency reconstruction assistance. First, the project will reconstruct seven large hospitals in earthquake-affected areas and make them more functional and more efficient and patient-friendly. Second, it will strengthen essential health and nutrition services in earthquake-affected and extremely poor areas by expanding coverage of essential services for the poor, supporting cost-effective health and nutrition interventions and improving their quality, strengthening environmental health programs, and

implementing institutional reforms to increase the effectiveness and efficiency of poverty alleviation efforts.

The Health Sector in El Salvador

The public, social security system and private subsectors provide health services to the Salvadoran population, which is estimated to consist of 6.4 million people in 2001. However only two-thirds of the population are estimated to have access to medical care, leaving about 2 million people with limited or no access to healthcare services. Underserved populations are concentrated in, but not limited to, the country's Northern Region. The population is young, with 46 percent being under the age of 19. Ten percent of the population is indigenous and lives mainly along the border with Guatemala, although this situation has changed somewhat as a result of the 2001 earthquakes. The MOH is a major player in the public health sector as a financier and provider of health care services. The social security system includes the Salvadoran Institute of Social Security (ISSS) and military health facilities. Private hospitals and ambulatory clinics are concentrated in large cities, mainly San Salvador and San Miguel. Approximately 30 NGOs provide basic health and nutrition services to populations with little access to private and public facilities.

National expenditures for health in 1997 were about 8 percent of GDP or US$153 per capita, which is below the Latin American average. Household expenditures for health represent 61 percent of total health expenditures, and the remainder is public expenditure. Sources of public funds are MOH (general revenue) - 39 percent, ISSS (payroll tax) - 45 percent, external funds - 9 percent, and others - 7 percent. Although ISSS accounts for 45 percent of public expenditures, it serves a beneficiary population of only 840,000 or 13 percent of the population. MOH on the other hand is nominally responsible for serving about 80 percent of the population with 39 percent of the public funds. The share of MOH in total health expenditures is 15 percent.

2. Main sector issues and government strategy

The health sector suffered extensive damage from the earthquakes of January and February 2001. The capacity of MOH to supply services and to respond to the health needs of its population has diminished significantly, particularly in the earthquake-affected Central Region of the country. There, many hospitals and ambulatory units have been evacuated or have significantly reduced operations. This situation is compounded by the populations' reduced access to functioning facilities due to the damaged road network. Moreover, facilities in adjoining departments, many of which were already overcrowded, have had to absorb demand from damaged facilities. This has placed additional pressure on the ability of the health network to respond to demand. Despite significant progress during the last decade, the performance of the Salvadoran health system is at risk of losing ground, threatening recent gains in health status.

El Salvador faces multiple challenges in the health sector. The earthquakes have compounded existing health issues. Most of the country's health indicators are below the LAC region's average; many concern preventable communicable and infectious diseases. Malnutrition is also highly prevalent among special population groups such as pregnant women and children under 5 years old. Diarrhea and respiratory infections figure predominantly among poor populations and disproportionately affect the young. More recently, and following the demographic transition, a different set of behavior-based diseases, such as HIV/AIDS, has emerged among highly urban and mobile adolescent and adult populations.

From the standpoint of infrastructure, poverty, and the health system, the most relevant sector issues are the following:

Emergency reconstruction of the public hospital network. On January 13 and February 13, 2001, El Salvador was rocked by two powerful earthquakes that destroyed 194,000 homes and killed 1260 inhabitants. Damage from both quakes was estimated at 12 percent of the country's GDP in 2000. Physical infrastructure losses were significant, particularly affecting schools, hospitals and health clinics, cultural heritage sites, and small and medium-sized enterprises. Social sector infrastructure was the most severely affected, representing about 40 percent of the losses. Damage from the first earthquake was greatest in the Departments of San Vicente, La Paz, and Usulután, while the second caused heavy damage in the Departments of La Paz, San Vicente, San Salvador, and Cuscatlán. Two MOH hospitals suffered severe damage, and another six hospitals bore sufficient impact to require full or partial evacuation. The most badly damaged hospitals continue to operate under large tents, in trailers, and in other provisional structures, while the rest have reduced their operations. Altogether, 113 of the 361 MOH health facilities were affected, representing 55 percent of MOH's supply of health care services. The second quake left more than 2,000 hospital beds out of service, reducing capacity by 25 percent. The latter figure does not reflect the overcrowding and pressure caused by the relocation of patients to nearby facilities on an already weakened delivery system.

Most tertiary and large secondary care hospitals are on average 75 years old and were built to less stringent seismic code standards than infrastructure that was constructed more recently. These structures contain sections built over a century ago alongside sections constructed as recently as three years ago. The often *ad hoc* nature of this piecemeal construction has resulted in several facilities having limited functionality. Furthermore, these structures were designed to a very different technological standard and are generally obsolete. Lack of maintenance over time has contributed considerably to the physical deterioration of infrastructure and equipment. The dysfunctional layout of older hospitals, combined with the outdated and damaged state of their equipment, pose a considerable risk to patients and reduce the unit's ability to respond effectively. Many facilities do not meet the minimal conditions required for performing standard treatments safely. The definition of a health network with clearly specified functions and missions for each hospital is lacking, contributing to a weak referral system. The proposed project will reconstruct and rehabilitate seven of the most damaged hospitals. Studies are being conducted for each hospital to assess its degree of internal functionality and its relationship to the health network. The results will help to redefine each hospital's role in the overall public health network.

Inequitable access and disparities in health outcomes. Despite recent progress in increasing health infrastructure and personnel in rural areas, tabulations of household data show considerable differences between the health outcomes of low-income groups and those of high-income groups. The 1998 El Salvador Rural Development Study (World Bank, Rep. No. 17686) found that children in the poorest quintile are three times more likely to be ill than were children in the highest quintile. Infant mortality in the poorest municipalities is over 60 percent higher than in the richest. Access follows a similar trend. Salvadorans in the highest income tercile are one-third more likely to receive medical care for an episode of illness than those in the lowest tercile. The incidence of poverty is higher in rural El Salvador than in urban areas, and this is reflected in nearly all health indicators. Government programs have significantly reduced urban-rural disparities regarding immunization coverage and use of oral rehydration solutions to treat diarrhea, but further efforts are needed to improve other basic services such as pre- and post-natal care, cervical cancer screening, and use of modern contraception. Unless addressed in a systematic and concentrated fashion, these disparities are likely to increase in the earthquake-affected areas of the Central and Para-Central Regions. Moreover, the ability of MOH providers to attend to the basic care needs of the most affected populations has been severely compromised in earthquake affected areas, since most facilities have suffered some damage.

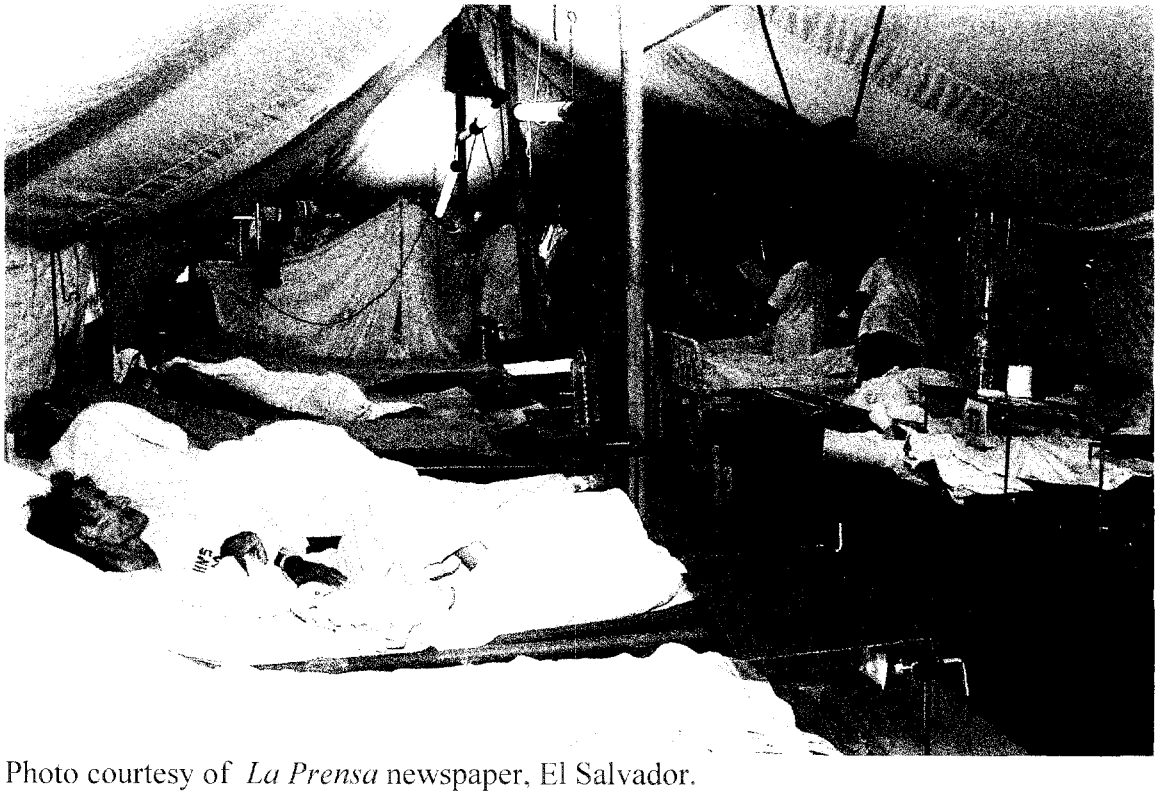

Photo courtesy of *La Prensa* newspaper, El Salvador.

Problems with the delivery of essential health and nutrition services. Previous efforts to reduce gaps in access to health services can provide lessons for crafting effective strategies to improve their delivery. These efforts focused mainly on improving infrastructure and hiring promoters to deliver preventive and curative services in rural areas. While some progress has been made, especially in terms of immunizations, future efforts should be geared towards ensuring greater consumption of health services by the poor.

Recent World Bank sector work[1] examining the provision of primary care services in rural El Salvador, combined with results from the 1993 and 1998 demographic and health surveys and from assessments of service provision, suggests that the MOH delivery strategy should be refocused since: (i) the expansion appears to have benefited the non-poor in rural areas more than the poor, and future efforts will need to emphasize greater access by the poor; (ii) demand for health care during an episode of illness by the poor remained unchanged during the 1990s; (iii) NGO providers are perceived by users to be of higher quality than MOH providers, in part because of the low and irregular availability of and long waits for medication; (v) NGO promoters are better supervised than MOH promoters; (vi) the presence of an MOH promoter in a community has no effect on the decision to seek care during an illness episode; and (vii) increasingly, MOH promoters appear to remain inside the health post to attend to demand, except for participating in periodic immunization campaigns. In recent years, however, the MOH has taken steps to improve the quality of services provided by MOH promoters. One important lesson culled from these analyses is the need for a population-based approach to address the health problems of the population through territorial planning, community outreach, and improved targeting.

Limited health ministry development of core functions and managerial constraints. The project completion report for the El Salvador Social Sector Rehabilitation Project (No. 16774; 1997) concluded that continued expansion of social services to cover low-income communities will depend not only on the availability of supply but, to a large extent, on developing stronger institutional capacity and improving management. MOH is oriented to the management of its input-based delivery system within a mostly centralized command structure. Current MOH authorities seek to develop the institutional and managerial capacity to assume critical functions associated with stewardship: policy guidance, regulation, financing of public goods, targeting public subsidies to the poor, and monitoring and evaluation. The following areas merit special attention:

Vector-borne diseases: Despite making some progress in controlling communicable diseases, El Salvador continues to suffer significant and recurring outbreaks of vector-borne diseases such as dengue and malaria. Dengue was first recognized in El Salvador in 1980, and epidemics subsequently occurred in 1993, 1994, and 1995. In 2000, the country experienced the largest and most severe epidemic of dengue in its history. There were approximately 17,000 dengue cases reported and 26 fatalities due to hemorrhagic dengue (DHF), in part due a highly virulent strain of dengue. An assessment of the 2000 epidemic suggested the need for community members to be actively involved in developing a strategy to eliminate and control larval habitats because of limits on MOH's resources.

HIV/AIDS and Sexually Transmitted Diseases (STDs): The HIV/AIDS epidemic in El Salvador is

[1] Maureen Lewis, Gunnar Eskeland, and Ximena Traa-Valerezo. 1999. Challenging El Salvador's Rural Health Care Strategy, DEC Working Paper.

concentrated in high-risk subpopulations (homosexual men and sex workers) but is starting to spread to the general population. This is evidenced by a 1 percent HIV prevalence rate among pregnant women. In 1999, the most common mode of transmission was heterosexual transmission, representing 64 percent of new cases. STDs, a primary risk factor for contracting HIV sexually, are also on the rise. Although HIV infection rates are low compared to elsewhere in the region, the epidemic is worsening, and El Salvador needs a more substantial and sustained effort to curtail the fast-growing epidemic.

The government has taken the lead in analyzing the HIV/AIDS situation, consulting with stakeholders, and approving a National Strategic Plan. However, political and financial support for implementation of detection and control actions has yet to materialize. The government now intends to put in place an official strategy to combat the epidemic. A rapid survey conducted by the Bank team showed that surveillance is irregular, communication strategies and campaigns are non-existent, and laboratories lack the capacity and inputs to perform tests on a sustained basis. Widespread cultural stigma and social discrimination hamper efforts to implement a large-scale response to the epidemic.

Environmental health: Central and local laboratories are responsible for testing and analyzing samples of food, water, toxic substances, and vectors quickly and reliably. The analytic capacity of the Central Laboratory requires strengthening and some functions should be decentralized to local laboratories for quicker results and actions. The country has an adequate legal and regulatory framework for managing toxic medical waste, but implementation could be improved. Toxic waste management in hospitals in the Metropolitan Area of San Salvador follows acceptable procedures. The challenge is to maintain an affordable program in San Salvador while expanding these procedures throughout the country.

Monitoring and evaluation: Monitoring and evaluation of services, costs, quality, and program implementation in the MOH needs strengthening. Most evaluation initiatives are driven by and performed for external agencies, focusing on activities that receive external funding. This is not conducive to good management practices. Information on results and performance is not utilized optimally. Facility program managers tend to see information generation as a burdensome requirement of central-level and external directives.

Information technology: Information is fragmented among several overlapping systems, making it difficult to consolidate reliable data. Most software applications need upgrading. The frequency of reporting does not support management decision-making. Emphasis needs to be given to staff training and technical support.

Sector Management: MOH seeks to give communities a voice in assessing the performance of health workers, but a viable model has yet to be developed. The health sector needs to define more clearly the responsibilities of decentralized units while ensuring that they do not function merely as intermediaries with ill-defined responsibilities *vis-à-vis* the central MOH or the territorial and facility providers that they supervise. Facility managers have little discretion over personnel and other inputs and have little incentive to improve quality, reduce costs, expand coverage, or raise patient satisfaction. Human resource management and supervision needs to be improved by formulating clearer policies, procedures, and regulations..

Government Strategy

A high priority program of the government is the reconstruction of the physical infrastructure in the earthquake-damaged areas. It has established a master plan to rebuild or rehabilitate MOH

facilities, including 23 of 30 national hospitals and 82 health centers, and to repair miscellaneous structures including departmental offices and labs. This includes eight large hospitals that have been totally evacuated or have significantly reduced their operations since the earthquakes. GOES has mobilized support for the reconstruction program from multilateral banks and governments. It will use its own funds for feasibility studies, small repairs, and counterpart funds for loans, leaving some of the larger civil works to multilateral institutions. Existing IDB loans and CABEI funds, are being utilized to cover the costs of provisional structures and for the rehabilitation of the 16 less badly damaged hospitals. Additional financing is being negotiated with the Government of Japan for US$20 million, and another US$10.1 million is being sought from other sources, and GOES itself has committed US$26.8 million of its own funds. To date, it has obtained $103.6 million of financing for reconstructing health sector infrastructure. This figure does not include financing sought under the proposed project to finance the reconstruction and rehabilitation of the seven largest hospitals.

The government also seeks to take advantage of the reconstruction effort to support broader changes in the organization and delivery of publicly financed health services. The strategy here is three-fold: (i) given that many ambulatory facilities have been destroyed or are only partially functional, the MOH seeks to establish an outreach or community-based approach to primary care provision while creating more effective targeting mechanisms to reaching poor and vulnerable populations; (ii) infrastructure activities will respond to a functional planning approach that specifies, and in some cases, redefines the functions (such as the projected volume of procedures, equipment requirements, patient flows, service definition, numbers and categories of staff, and inter-hospital referrals) that will take place in the proposed structures. The approach will also consider the introduction of new technologies (such as ambulatory surgery and "day" hospitals) to raise quality and efficiency and (iii) establishing closer ties between hospitals and primary care providers by decentralizing a subset of management functions, improving the referral system, and raising quality of care.

Other strategies addressed by the proposed project correspond closely with the government's National Program, known as the "New Alliance." Two overarching objectives of the National Program include increasing access to and raising the quality of basic services and developing more transparent and efficient public sector management and budgeting mechanisms that are oriented toward priorities, performance, and results. New Alliance operational objectives supported by the proposed project include: (i) extending and strengthening basic health services with a special focus on at-risk populations; (ii) strengthening public health programs oriented toward controlling transmissible diseases; (iii) developing and implementing community-based child health and promotion interventions in high-risk areas; (iv) introducing alternative and decentralized organizational and service delivery models; and (v) establishing strategic alliances with private sector.

3. Sector issues to be addressed by the project and strategic choices

The project aims to assist in the reconstruction and rehabilitation of the public hospital infrastructure and to improve the health status of the population living in the country's poorest socioeconomic regions and in areas affected by the recent earthquakes. The project will achieve its developmental objectives by reconstructing and rehabilitating seven of the most earthquake-damaged public hospitals; providing increased coverage of essential health and nutrition services in poor and earthquake-affected regions; and institutional strengthening of the MOH to develop and implement policies and priority programs for the health sector.

Emergency Reconstruction of the Public Hospital Network. The earthquakes damaged or destroyed 23 of 30 national and regional hospitals. Eight of the large hospitals sustained heavy damage, while the other 15 suffered minor damage requiring substantial repairs. The project will support the GOES reconstruction program by rehabilitating and reconstructing seven of the eight damaged hospitals (the reconstruction of the eighth is under negotiation with the Government of Japan). Damage was more extensive than expected because most public hospitals are old and deteriorating and were built with less stringent seismic code standards than infrastructure that was constructed more recently. This reconstruction and rehabilitation will upgrade the infrastructure to ensure that it complies with the current seismic code and will also improve the internal functionality and technology of hospitals. In order to design the improvements and to improve the referral system, functional analyses are being conducted to analyze the flows within the health network, taking into account demand for the different levels of services, the epidemiological profile, and existing supply to identify what services need to be delivered and where and how the three levels of care need to be linked. Also, the project will support a preventive maintenance program for infrastructure and equipment.

Targeting health interventions to the poor and vulnerable population groups. Consonant with government strategies and priorities, the proposed project will direct a share of investment to the country's poorest populations, particularly those living in the Northern Region. These areas include a high percentage of pregnant women and children under five years old without adequate access to care. The project will also increase access to cost-effective services such as basic health care and nutrition for at-risk populations living in municipalities of the Central and Para-Central Regions that suffered severe earthquake damage.

Strengthening public/private partnerships for the delivery of primary care. Non-governmental organizations have traditionally played an important role in the delivery of services. Until recently, there was little or no coordination between the MOH and private providers. The proposed project will contract with existing NGOs, foundations, and cooperatives and will support partnerships between NGOs, social security providers, and local governments to continue the expansion of services to the underprivileged areas. It will also bring these providers into a unified contracting scheme whereby all providers are obligated to provide basic health and nutrition services and to comply with a set of standardized performance indicators. The project will also support building the capacity of providers at the primary level to enhance the efficiency and quality of service provision.

Strengthening the stewardship functions of the Ministry of Health. The project will support strengthening the stewardship functions of MOH related to national priority programs and its core functions for supporting these programs. This will be achieved by: (i) addressing national priority programs of environmental health and control of vector-borne diseases (especially dengue) and of HIV/AIDS and STDs; (ii) strengthening the regulatory framework for environmental health, with a special focus on the management and disposal of toxic medical waste; and (iii) strengthening public health programs that entail the detection and control of vector-borne diseases and HIV/AIDS and STDs.

Strengthen the institutional capacity of the Ministry of Health. The project will support ongoing initiatives in the MOH to reorganize and strengthen institutional capacity. It will support these efforts in the areas of strategic planning, human resources, and information systems. The project will also aim to develop a results-oriented delivery system through the implementation of performance agreements as well as the establishment of purchasing and contracting functions within the MOH. The project will support MOH efforts to devolve decision-making authority from the central level to health district levels by supporting a performance-based delivery system and to

develop a feasible model to involve clients in assessing the performance of providers.

The design of the project has been developed based on the following **strategic choices**:

Support the government's Master Plan for Reconstruction of the Health Sector. GOES has obtained funding for the reconstruction of health sector infrastructure from numerous sources, including bilateral and multilateral loans and grants, and has provided US$26 million of its own funds. This comes to a total of $103.6 million. This figure does not include financing sought under the proposed project to finance the reconstruction and rehabilitation of the largest seven hospitals.

Ensure responsive management for rapid implementation of the reconstruction program: It has been noted that, in previous efforts at earthquake reconstruction and rehabilitation in El Salvador, there was very limited implementation and management capacity within the public implementing agencies, which, combined with extremely bureaucratic procedures, led to very delayed implementation. Based on recently approved legal frameworks in El Salvador and drawing on successful experiences in Honduras and education projects in El Salvador, the infrastructure component of the project will be implemented by a construction management firm external to the MOH to ensure fluid and timely implementation. To limit start-up delays, all damage assessments and rehabilitation designs will be completed prior to the project becoming effective.

Improve the functional design of each hospital and the hospital network: Hospitals in El Salvador have been designed to function with an outdated level of technology. Most were constructed in stages with inadequate planning. Each hospital functions independently with limited connections to the rest of the network. Functional analyses of the internal operation of the hospitals and of their relation to the network will provide the necessary inputs for restructuring and reallocating services within and between the seven hospitals to improve and rationalize service supply.

Develop an effective outreach-oriented delivery model: Previous MOH attempts to reach the poor have fallen short of the mark due to ill-defined benefits, poor training, lack of supervision, an absence of incentives, and an overemphasis on infrastructure. Drawing on successes in El Salvador (NGOs-PROSAMI) and elsewhere (NGOs in Guatemala, MOH in Honduras, and municipalities and NGOs in Brazil), the project will develop more effective outreach or "active provider" models that aim to increase the consumption of basic health and nutrition services by the poor at the community level.

Support a pluralistic provider market by scaling-up private sector and public contracting experiences: Private provision of essential health care to poor populations is well established in El Salvador. However, public contracting of health providers and forming partnerships is still in its infancy. During the early 1990s, the USAID-funded PROSAMI project developed a network of 36 NGOs to provide primary care to over 400,000 previously underserved populations. In independent assessments, most received high marks for delivering high-quality care and for their institutional capacity to manage and supervise basic services. Applying a rigorous assessment instrument, GOES, with the Bank's support, recently performed a market analysis that identified 15 NGOs with the capacity to deliver basic health and nutrition services. Most had participated in PROSAMI. GOES has also expressed interest in implementing partnerships between MOH providers and cooperatives, foundations, NGO, municipalities, and ISSS to provide basic care.

Initiate shift in institutional roles toward purchasing, oversight, and public goods: MOH is locked into the day-to-day administration of an input-based system in which public finance is tied to public provision. The Ministry's objective now is to develop the know-how to become a result-oriented institution. In order to accomplish this, MOH will develop a purchasing function (to contract NGOs, cooperatives, and foundations; to form partnerships with other government agencies; and to sign and manage performance agreements with MOH providers) while strengthening its capacity to monitor and evaluate. In the short and medium term, the project will aim to build up the capacity of the MOH to make effective purchasing decisions by contracting a number of NGOs, foundations, and cooperatives with experience in providing basic care to underserved populations. While MOH's purchasing capacity is being developed, there will also be an emphasis on ensuring better performance among existing MOH providers. In the long term, as capacity grows, the application of performance agreements and performance-based management will lead to the separation of the MOH's purchasing and provision functions. The aim throughout, however, is to ensure that the country's poor get the best possible health outcomes.

A key function that has not received sufficient institutional support is the production of public goods and services. The project will seek to strengthen MOH's capacity in environmental health, the control of vector-borne diseases (dengue, malaria, and Chagas), health promotion, the management and disposal of toxic medical waste, and the prevention, detection, and control of HIV/AIDS and STDs.

Set a roadmap for institutional modernization: The objective is to strengthen core functions of the MOH, including extending essential health care to low-income populations, improving the quality and efficiency of service provision, devolving responsibilities, developing a legal and regulatory framework, strengthening MOH's stewardship functions, and forming partnerships with NGOs. On these building blocks, the project will launch a change process for addressing broader sector issues. This will be achieved by establishing an Institutional Modernization Benchmark Matrix (See Annex 2b) to monitor and guide the institutional change process. By linking access to resources for a subset of investments to the achievement of modernization activities and performance benchmarks, the project will provide strong incentives for compliance that in turn will facilitate the development and implementation of MOH's core functions. The benchmark-driven investments are also a way for GOES and the Bank to track the change process, take stock of progress, and reflect on it before new disbursements are made.

C. Project Description Summary

1. Project components: (See Annex 2 for a detailed description of project components; Annex 2a for a detailed description, an analysis, and recommendations relevant to Component I of the Emergency Reconstruction of MOH Hospital Network in Earthquake-affected Areas; and Annex 3 for a detailed cost breakdown). The total costs of the project are US$165.7 million. The project's main objectives are to: (a) reconstruct and improve health sector infrastructure damaged or destroyed by the earthquakes; (b) extend the coverage of health and nutrition services; and (c) strengthen the institutional capacity of MOH to develop and implement policies and priority programs for the health sector. To meet these objectives, the project supports activities in four components.

At the time the earthquakes struck El Salvador, preparation work for proposed assistance in the health sector was well advanced. Because of the devastating impact of new earthquakes on health sector infrastructure, the government requested that the Bank's emergency assistance be concentrated on support for reconstructing and rehabilitating this infrastructure, while still focusing on the key priorities of expanding access to basic health and nutrition services and improving the quality of service provided to poorer groups. Several lending options were considered (Section D,

Project Rationale), but the government felt that a single project addressing health sector priorities was most appropriate. Hence, the proposed project comprises several separate but interrelated investment components: Component I: Emergency Reconstruction of MOH Hospital Network in Earthquake-affected Areas and Component II: Strengthening Essential Health and Nutrition Services in Earthquake-affected and Extremely Poor Areas. The project will also support institutional development through Component III: MOH Institutional Development for Policy Formation, National Priority Programs, and Support Systems and Component IV: Project Management.

Project Components:

Component	**Indicative Costs**	**% of total**	**Bank Financing**	**%**
I. Emergency Reconstruction	127.0	76.4%	109.2	76.6%
II. Health and Nutrition Coverage	16.5	9.9%	14.2	9.9%
III. MOH's Institutional Development	16.0	9.6%	13.8	9.7%
IV. Project Management, M&E	4.8	2.9%	4.0	2.8%
Total Project Costs	**164.3**	**99.0%**	**141.2**	**99%**
Front end Fee - 1%	1.4	1.0%	1.4	100%
Total Financing Required	**165.7**	**100%**	**142.6**	**100%**

** Figures include contingencies; figures may be rounded.*

Component I: Emergency Reconstruction of MOH Hospital Network in Earthquake-affected Areas ($127.0 million)

Replacement and Rehabilitation of Earthquake-Damaged Hospitals: This project will rehabilitate and/or replace seven of the largest hospitals damaged by the earthquake. Three of the seven hospitals (San Juan de Dios in San Miguel, San Pedro in Usulutan, and Santa Teresa in Zacatecoluca) will be rehabilitated and part of their equipment will be replaced. Four hospitals (Maternidad Nacional in San Salvador, Santa Gertrudis in San Vicente, Cojutepeque in Cuscatlán, and San Rafael Hospital in La Libertad) will be replaced. The hospitals in San Vicente and in Cuscatlán sustained somewhat less damage, but two separate assessments concluded that their functional obsolescence justifies replacing them. Alternative sites are being sought for two of the hospitals to be replaced (Maternidad Nacional and Cojutepeque), as the first is in a congested downtown area and the second is constructed on the slopes of a mountain. A third hospital (Santa Gertrudis in San Vicente) will be replaced in the original hospital campus. Should any of the sites currently being considered involve the resettlement of households, a comprehensive Resettlement Action Plan (RAP) will be prepared and implemented for each site (if needed) following a Resettlement Framework discussed during negotiations. Preparation and implementation of the RAP will be a condition of disbursement. An Environmental Action Plan was prepared during appraisal and confirmed during negotiations, which aims to: (i) strengthen the environmental capacity of MOH and MARN (Ministry of the Environment and Natural Resources) to supervise and monitor the construction and operation of the hospitals; (ii) ensure that the environmental

quality standards for the project's design and construction are met; (iii) follow current environmental legislation; and (iv) strengthen the participation of local governments and civil society throughout the implementation process. Rehabilitation will reinforce existing structures to ensure that they meet current earthquake construction codes, which have been found to be satisfactory. Replacement will occur in phases, which will make it possible for the facilities to be partially used at all times, minimizing the need to locate or construct alternative temporary structures. Functional analyses are being conducted to ensure that the replacement/ rehabilitation efforts improve the internal functionality of each hospital and the flows within the health network. Much of the medical and non-medical equipment will need to be replaced.

Corrective and Preventive Maintenance: MOH has designed an integrated maintenance program, but it has only just begun to be implemented. The project will support the strengthening and implementation of MOH's integrated preventive maintenance program by financing technical assistance for the preparation and testing of maintenance protocols and manuals for the three levels of care and training of staff. The project will also support a comprehensive preventive maintenance program for the hospitals being reconstructed under this component. Counterpart funding will finance the maintenance of buildings and equipment. New biomedical equipment will be under warranty and, upon expiration of the warranty period, will be under service contracts.

The project will also support the small unit (IEU) within the MOH that will oversee the implementation of this component, the monitoring of the component activities, and its supervision. Quarterly technical and financial audits (special audit reports) of Component I activities will also be supported.

Component II: Strengthening Essential Health and Nutrition Services in Earthquake-affected and Extremely Poor Areas (US$16.5 million)

This component aims to extend essential health and nutrition services to targeted geographical areas by contracting and forming partnerships with NGOs, foundations, cooperatives, and government agencies such as ISSS and municipalities, strengthening MOH providers, and developing the planning, contract management, and monitoring and evaluation capacity of the MOH. The quality and efficiency of publicly financed essential health and nutrition services will be improved and access to them expanded, with special emphasis on targeting low-income and underserved populations particularly in El Salvador's Northern Region as well as vulnerable populations living in municipalities of the Central and Para-Central Region that were affected by the recent earthquakes.

Extending coverage of essential health and nutrition services in impoverished rural areas: In the Northern Region, targeting mechanisms have initially identified the 73 poorest and most underserved municipalities in the region's six departments. The total beneficiary population will number about 150,000. Beneficiaries live in areas where no MOH providers are present and, thus, will be provided with essential health and nutrition services by NGOs, foundations and cooperatives through the development of public-private partnerships. This component will finance the per capita cost of providing essential health and nutrition services, estimated at $15 per year. The per capita payment is configured to cover salaries, supplies, minor equipment, pharmaceuticals, and transportation. The component will also support provider start-up costs related to training and consultancies.

Strengthening MOH's primary care delivery in earthquake-affected areas: By financing of minor equipment, essential drugs, and medical supplies, the project will support MOH care providers in delivering basic care to about 200,000 beneficiaries living in earthquake-affected areas of the

Central and Para-Central Regions. These beneficiaries live in approximately 26 municipalities in three Departments (Cojutepeque, La Paz, and San Vicente). These municipalities suffered major damage in the recent earthquakes, and the health of the population is at risk given the precarious housing conditions, damaged water supply, difficulties in access to care due to damage to the road network and to health infrastructure, and reduced economic means to obtain care due to the loss of productive activities in these areas. These populations will receive the same set of services provided to their Northern Region counterparts but by means of strengthening MOH's primary care provider network. The MOH has a strong presence in the Central and Para-Central Regions, but service provision has been weakened as the result of earthquake-related damage.

Strengthening MOH's capacity to plan coverage extension, manage contracts and performance agreements, and monitor and evaluate performance: The "downstream" success of the service delivery activities will also depend on "upstream" interventions that reorient the MOH incentive structure toward results. These interventions also represent an important first step in separating the purchasing and provision functions within the MOH. To this end (and through the financing of training, technical assistance, basic medical equipment, and instruments), the component will support the implementation of a series of activities through a four-pronged strategy:[2] (i) developing planning, purchasing, and contract management functions; (ii) testing a reformulated decentralization strategy and management model; (iii) strengthening MOH's monitoring and evaluation capacity; and (iv) developing and testing an incentive scheme for MOH primary care teams in the earthquake-affected areas and the Northern Region.

Component III: MOH Institutional Development for Policy Formation, National Priority Programs, and Support Systems (US$16.0 million)

This component seeks to strengthen the capacity of MOH to perform stewardship functions related to quality enhancement, health promotion, public health programs, disease surveillance, regulation, and performance-based monitoring and evaluation. This will be achieved by supporting investments linked to the adoption and implementation of an institutional strengthening and decentralization strategy. This component creates a financial instrument that will provide an incentive for modernizing the MOH's institutional capacity by linking compliance with two sets of institutional modernization performance benchmarks to the financing of corresponding sets of investments. Complying with a set of benchmarks will enable the Borrower to assess what resources are available for financing seven investment areas: (1) environmental health; (2) the management and disposal of hospital medical waste; (3) the control of vector-borne diseases; (4) the prevention and treatment of HIV/AIDS and STDs; (5) management systems; (6) information technology; and (7) communication strategies. The investments share a common framework with the objectives of the proposed project.

Institutional Modernization: The component will finance technical assistance, training, studies, and study tours to build capacity to develop and implement modernization policies, instruments, and strategies related to decentralization, health planning, community participation, the regulatory framework, resource allocation, and financial management. Progress in these areas will be gauged by compliance with a subset of benchmarks specified in the Institutional Modernization Benchmark Matrix (IMBM) (see Annex 2b). The IMBM details modernization objectives and corresponding implementation performance benchmarks agreed with the government in support of MOH's institutional strengthening and decentralization strategy. As part of normal project supervision, the Bank will review progress on complying with the IMBM benchmarks.

[2] An action plan for each activity supported by this subcomponent is available in the project files.

This institutional strengthening and decentralization strategy sets the long-term mission, vision, and objectives of a modernized MOH capable of carrying out core stewardship functions related to sector policy formation, regulation, public health, targeting subsidies to the poor, and monitoring and evaluation. From a more short-term, operational standpoint, the strategy contains the following elements: (i) adopting a decentralization strategy that includes replacing current departmental management units with health district units, known as SIBASIs, with clearly defined functions and without raising MOH's administrative costs; (ii) developing and implementing instruments such as performance agreements, contracts, and an incentive scheme to make health providers accountable to both the MOH and the clients they serve; (iii) establishing a unit within the MOH capable of monitoring and evaluating health services and programs systematically; (iv) creating a purchasing unit within the MOH with the capacity to draft, negotiate, and manage performance agreements (with MOH providers) and service contracts (with non-governmental providers); (v) establishing effective surveillance systems for vector-borne diseases and HIV/AIDS and STDs; and (vi) introducing community participation in basic health and nutrition service delivery. The benchmarks of the IMBM provide an implementation road map to guide the institutional modernization process and to keep it on course.

GOES agreed to adopt and implement the institutional strengthening and decentralization strategy. A draft strategy was discussed and reviewed during appraisal, and a final version is expected prior to effectiveness. As detailed below and in accordance with specific IMBM benchmarks, the adoption of the institutional strengthening and decentralization strategy is a condition for disbursing the Phase I investments supported through this component, and the implementation of the strategy is a condition for disbursing Phase II investments (described below).

The design contemplates two IMBM reviews, each corresponding to compliance with a subset of benchmarks therein. Compliance reviews and the corresponding release of resources will occur in two phases, and disbursements for each will be conditional upon compliance with activities detailed below. The Phase I review will occur in the first year of implementation, and the Phase II review will occur in the second year.

MOH and the Bank have agreed to include the following sets of investments as part of Phase I: Hospital and Medical Waste Management and Disposal (no. 2); Detection and Control of Vector-borne Diseases (no. 2); Prevention and Control of HIV/AIDS and STDs (no. 3); and Communication Strategies (no. 6). These were selected during negotiations on the basis of their current priority within the MOH's near-term horizon. As a condition for the disbursement of Phase I investments, MOH will formally adopt an institutional strengthening and decentralization strategy that: (i) contains the long-term mission, vision, and objectives of a modernized MOH; (ii) defines the roles and competencies of health districts (SIBASIs) and eliminates Departmental Offices; (iii) reassigns MOH staff to the to-be-established SIBASIs without increasing MOH's administrative budget; (iv) applies performance agreements between MOH and SIBASIs; (v) uses performance-based targets for MOH providers within SIBASIs; and (vi) prepares territorial health plans.

As a condition of disbursement for Phase II investments, three additional sets of investments, i.e. Environmental Health Capacity Building (no. 1), Human Resource Management Systems (no. 5), and Information Technology (no. 7), MOH will have to have implemented the institutional strengthening strategy, presenting evidence of: (i) service contracts signed with at least five non-governmental providers, covering approximately 75,000 people; (ii) completion of baseline surveys for monitoring and evaluating the extension of basic health and nutrition services supported by Component II; and (iii) at least 3 SIBASIs functioning in earthquake-affected areas supported by Component II, including the signing of performance agreements with MOH, the preparation and implementation of at least one territorial health plan, and agreement reached on terms and

indicators for the evaluation of SIBASIs.

Investments to strengthen MOH national priority programs: These investments include the following:

1. Environmental Health Capacity Building: The project will strengthen the institutional capacity of MOH's central department for managing environmental health and the central laboratory and assist in decentralizing some functions to the local level. The project will finance training, technical assistance, and basic equipment for the central level (communication and health education) and the local levels (information, radios, health education, transportation, food monitoring, and protective gear).

2. Management and Disposal of Hospital Medical Waste: The project will support developing regulations and norms to implement national laws and policies on managing toxic medical waste, assist in maintaining the waste management program currently applied in hospitals in the Metropolitan Area of San Salvador, and apply similar acceptable procedures in hospitals elsewhere. Financing will include technical assistance from international and national consultants, training of all health facility staff who are involved in the various aspects of waste production and management, and procuring and installing collection, treatment, and disposal equipment in the hospitals reconstructed under Component I.

3. Detection and Control of Vector-borne Diseases with Emphasis on Dengue: The project will help to develop a laboratory-based surveillance system as part of a national entomology surveillance and control program, foster community participation in the elimination or control of the larval habitats of the mosquito *Aedes Aegypti*, and train physicians and other health care providers in early recognition of the disease. Financial project support will include technical assistance by dengue specialists, basic laboratory equipment, vehicles, and training of health care providers, laboratory personnel, and community leaders.

4. Prevention and Control of HIV/AIDS and STDs: The project will support activities aimed at strengthening the country's capacity to detect, prevent, and control the transmission of HIV/AIDS and STDs. It will attempt to reach: (i) pregnant women in order to stress the importance of early diagnosis in preventing mother-to-child transmission; and (ii) high-risk groups (such as people with STDs, commercial sex workers, homosexuals, prisons, and street gangs). Support will also be provided for the establishment of confidential testing centers and a confidential registry of HIV cases and AIDS infections. The project will also support the installation of a national epidemiological surveillance system for HIV/AIDS and STDs. The project will finance technical assistance, training, minor rehabilitation of health facilities, the purchase of equipment, reagents, pharmaceuticals, and information, education, and communication inputs (except for national campaigns supported through investment no 6. below).

Investments to strengthen MOH support systems: These investments include the following:

5. Human Resource Management Systems: The institutional capacity of MOH will require strengthening to support the delivery and purchasing of health care services, decentralized management, monitoring and evaluation, and other changes in institutional roles. This will necessitate modifying the roles and functions of health professionals and of administrative support staff. The project will finance technical assistance in developing new and changed personnel functions as well as training workshops and materials. It will also procure some furniture and teaching equipment for training rooms in the hospitals and health centers.

6. Communication Strategies: A communication strategy will be designed and implemented using inputs from health promoters and project communities to support the extension of coverage. National multimedia campaigns on prevention and control of HIV/AIDS and STDs, dengue, and other communicable diseases will be designed and run and their efficacy periodically evaluated. The project will procure (by competitive bidding) the services of a specialized communication firm and a public relations firm, it will finance printed health education materials and radio and television spots, and will pay for meetings, workshops, transport, and other related expenses.

7. Information Technology: The project will define the information needs of the managers to make timely decisions, design a management information system accompanied by the necessary communication technology, define the responsibilities of the human resources needed, and develop the corresponding training plan. In support of the seven hospitals being replaced or rebuilt under Component I, it proposes computerized patient scheduling system, billing and collection systems, and cost accounting systems. The project will finance technical assistance and new and upgradeable hardware, software, and training.

Component IV: Project Management (US$4.8 million)

This component will support project management for Components II and III, including the design and implementation of a system to monitor and supervise these two components. This component will also support the impact evaluation of the project as a whole (including Component I), which will include baseline and endline household surveys and issue-specific studies seeking solutions to implementation problems, including qualitative as well as quantitative techniques. Monitoring and supervision of Component I will be financed through Component I. This component will also finance annual audits for the whole project on a declining basis.. It will also finance consultant services, facilities, and equipment for the maintenance of the PCU and *per diem* for supervision in the field.

2. Key policy and institutional reforms supported by the project

The project will help to:

(i) Rehabilitate damaged hospital infrastructure and improve functional designs with the aim of better integrating them into a health network and improving efficiency;
(ii) Implement a devolution policy that fosters autonomy in the management of resources at lower levels and facilitates a shift to output-based financing;
(iii) Introduce purchasing and contract management functions within MOH, augmenting the accountability of health providers for results;
(iv) Institute public-private partnerships for health by supporting MOH contracting of non-governmental providers;
(v) Strengthen regulations related to quality standards, toxic medical waste disposal, and other environmental issues; and,
(vi) Introduce an outreach model for delivering essential health and nutrition services to poor populations that is supported by organizational and delivery *modus operandi* that foster accountability for performance through the implementation of performance agreements and partnerships.

3. Benefits and target population

The benefits that are expected to result from the project include: (a) a reconstructed and improved hospital infrastructure in the earthquake-stricken areas; (b) effective extension of coverage of

essential health and nutrition services to poor and underserved populations leading to improved health and reduced overcrowding in facilities serving MOH users displaced by the earthquake; (c) increased quality and efficiency in the delivery of publicly financed health services; (d) increased GOES spending on health care for low-income populations; and (e) the establishment of a process of institutional change that strengthens key stewardship functions within the MOH. The number of people served by the seven hospitals included in the project is close to 3 million. Given that the hospitals have, for the most part, been evacuated, the project will re-supply services to a population that is currently underserved and will result in greater coverage, given the improved technologies and designs that will be introduced. The coverage extension effort supported through Component II will initially be targeted to 73 mainly rural municipalities located in the country's impoverished Northern Region and to 26 municipalities located in the Central and Para-Central Regions. It will benefit approximately 350,000 Salvadorans with an emphasis on women and children. Services will include well baby care including the promotion of growth monitoring, pre- and post-natal care, curative care, the provision of essential drugs, and the prevention of STDs. It is expected that child malnutrition will be reduced by 20 percent and effective coverage of pre-natal and well-baby care will increase by 20 percent in targeted communities.

Beneficiaries in the Northern Region will be targeted through a three-step process, combining geographical and household selection mechanisms. First, 73 poor and high-priority municipalities have been initially identified through composite poverty (MIPLAN, 1992) and "vulnerability" (food security, environment, education, and health) indices (PMA, 1999). Second, based on a recent population-based survey (MOH, 2000), the project will target municipalities with high indices of underweight children. These municipalities will be selected for the first "wave" of coverage extension. Finally, within the geographically targeted municipalities, households will be identified through a mapping exercise conducted by contracted providers. This exercise will identify "at risk" households as well as assess problems related to access and utilization of services. In the Central and Para-Central Regions, three mechanisms applied to target beneficiary municipalities include: indices of destroyed housing (averaging 70 percent of housing destroyed), incidence of malnutrition (high or very high), and location within catchment areas of hospitals that will be reconstructed with the support of project financing (Component I).

Turning to MOH modernization, the project will support the efforts of GOES to implement a gradual institutional modernization process. The project will avoid system-wide transformation and craft a more targeted approach aimed at strengthening the stewardship functions of the MOH. Strengthening the MOH's capacity to set and enforce minimum quality standards for health care providers, monitor and evaluate health programs, provide technology oversight, conduct effective disease surveillance and implement health promotion interventions will benefit the entire population, as well as pave the way for further improvements in the future. Contracting-out service delivery through competitive bidding and performance-based contracting will result in a more pluralistic provider market and contribute to improving the efficiency and quality of all health care providers. Finally, reorienting the decentralization process while implementing mechanisms such as performance agreements and information systems will strengthen the accountability and staff productivity of MOH health services.

4. Institutional and implementation arrangements

Implementation Period: Five years.

Executing Agencies: The Ministerio de Salud Pública y Asistencia Social (MOH) will have the overall responsibility for implementing the proposed project. MOH will establish two separate PCUs, one directly responsible for the implementation of Component I, hereafter referred to as the IEU (Infrastructure Executing Unit) to differentiate it from the PCU (as it will be referred to) for

Components II through IV. The IEU will have the responsibility for implementing Component I while the PCU will be responsible for implementing the remaining components. The IEU will coordinate closely with the PCU for Components II, III, and IV, and both will report directly to the office of the Ministry of Health. The two units will share a financial unit.

Infrastructure Executing Unit (IEU) for Component I: The IEU will represent GOES-MOH in any communications with the Bank and will supervise the legal, technical, and administrative aspects of construction as well as Construction Management Firm contracts. It will be an independent unit with separate reporting arrangements within the MOH. The IEU will consist of a high level, full-time civil engineer or architect or other professional with experience in managing construction contracts, with ample management and construction experience, and experience with Bank procedures. He/she will head the IEU and will be assisted by a part-time legal counsel (on retainer). Assigned staff within the project's financial unit will manage financial aspects. The staff will be hired with qualifications satisfactory to the Bank. The unit will be comprised of four staff to conduct procurement and financial management activities as described in Annex 6. The terms of reference for the head of the IEU and the head of the financial unit were agreed upon during appraisal.

In order to ensure fluid and opportune implementation of this component, agreement has been reached with GOES to subcontract out the implementation of the activities in Subcomponent I.a (Reconstruction and Rehabilitation of Hospital Infrastructure) to a private construction management firm (CMF). MOH will select and contract the CMF using Bank Consultant Guidelines under terms of reference previously agreed with the Bank during appraisal and confirmed during negotiations. The CMF will function as the implementing entity, preparing or providing recommendations in bid awards/contracting, drafting and processing construction contracts, and paying for contracts to MOH. The MOH will be responsible for appropriate decision making and final signature. MOH's counterpart, the IEU, will verify the CMF's compliance with its contract and maintain the flow of information with the Bank. The preparation of the shortlist and letter of invitation for contracting the CMF with qualifications satisfactory to the Bank is a condition of effectiveness. The advertising for the coordinator and financial specialist positions for the IEU was done prior to negotiations. The two staff members are expected to be under contract by the time of the Board presentation.

Agreement was reached at negotiations as to actions to be taken to ensure rapid start-up once the project becomes effective. Local procurement law does not permit the initiation of the bidding process for the contracting of the Construction Management Firm until the Project has been approved by the Assembly and signed. All that is permitted prior to effectiveness is the preparation of the short list of firms and the draft letter of invitation. GOES agreed these would be completed by effectiveness. They have also agreed to finalize preliminary designs and Environmental Impact Assessments for Santa Gertrudis Hospital (in San Vicente) and Cojutepeque Hospital (in Cuscatlán) by effectiveness, and that they would advance as much as possible on the activities on the other 5 hospitals. (Article 5.01(e) has been amended to reflect such requirements for at least two hospitals). Assurances were obtained that the necessary measures will be taken to ensure no unnecessary delays are experienced in the bidding process. An Action Plan outlining the timing, responsibility, source of funds and needed technical assistance that will be required to prepare the studies and activities that have to be completed prior to effectiveness was presented during negotiations and is included as an annex to the Minutes of Negotiations..

Project Coordination Unit (PCU) for Components II, III, and IV. A PCU will be created to coordinate and manage the activities of Components II, III, and IV. The PCU coordinator will be a Public Health Specialist with ample management and training experience and experience in

coordinating complex internationally funded projects. The Coordinator, reporting directly to the Minister of Health, will be assisted by at least four technical consultants in charge of coordinating activities for these components, including project monitoring and evaluation and administrative and financial management. Hiring the Coordinator and the four key technical staff is a condition of effectiveness. The Administration and Finance unit will include seven assistants who will be responsible for the budget (one person), accounting (two), and treasury/disbursements (two). In addition, the unit will have two full-time procurement specialists and at least three assistants to ensure that there are no delays in procurement processing. All technical staff will be contracted through a human resources evaluation firm. Administrative staff will be selected according to local procedures that have been assessed as acceptable to the Bank. Competent and experienced staff will be engaged in the administrative-financial areas of the PCU in financial management, procurement, and disbursements to ensure a high degree of performance and increased accountability in project management. (Annex 6b contains a diagram of the project's institutional arrangements).

Implementation Arrangements

Component I will have separate implementation arrangements designed to ensure the effective implementation of the project's reconstruction activities. The CMF will function as the implementing entity, leaving decision-making on bid awards/contracting, requests for disbursement, and payment for contracts to MOH. The firm will: (a) review final designs provided by MOH; (b) prepare a construction procurement plan; (c) prepare technical specifications; (d) prepare and conduct the bidding processes for the reconstruction and rehabilitation of the hospitals (a member of the IEU will be included in the evaluation committee to make an award recommendation to MOH); (e) verify the equipment inventory prepared by the MOH; (f) prepare an equipment procurement plan; (g) prepare technical specifications for equipment; (h) prepare and conduct the bidding processes for equipment (a member of the IEU will be included in the evaluation committee to make an award recommendation to MOH); (i) prepare contracts for contractors and supervise their work; (j) prepare payment orders and their documentation for contractors; (k) prepare contract amendments and the necessary documentation; (l) manage breach of contracts and contractor complaints; (m) maintain contract accounts and contract management reports in a manner acceptable to the Bank; (n) prepare periodic reports for physical/financial and procurement plan monitoring; and (o) prepare all technical and financial reports requested by GOES, MOH, and the Bank. The contract with the CMF will give it full responsibility for the quality of the construction and the opportune implementation of contract schedules. It will be responsible for contracting the necessary inspectors.

The role of the Infrastructure Executing Unit (IEU) in MOH will be to draft and process construction contracts, review documents prepared by the CMF for completeness, forward the necessary documentation to the Bank to ensure that it has no objection, and when necessary, to the Office of the Minister for signature, and organize consultations with relevant MOH staff.. The IEU will also spot check and verify the information provided by the firm in its technical and financial reports and also manage the project account of Component I.

For details on the steps and issues that need to be addressed in the implementation of this component, refer to "Component Implementation" in the Technical Annex (2A).

Components II-IV. The PCU for Project Components II, III, and IV will coordinate the contributions of the line departments in the MOH based on an Annual Action Plan (POA) agreed with the Bank, including having direct responsibility for preparing progress reports to support outcomes/results agreed in the Institutional Modernization Benchmark Matrix. The proposed

composition of technical and administrative-financial coordinating areas in the PCU will ensure a consistent and coherent implementation of the POAs, while avoiding the creation of parallel structures within MOH. The PCU's principal functions include: technical coordination, component supervision, procurement and financial administration, and technical assistance functions to line staff. Procurement for Components II, III, and IV of the project will be handled by the PCU as outlined above. Should major delays be experienced, MOH will seek the services of a Procurement Agent (PA) to handle all contracting and payments required for the implementation of Components II-IV. The PA will follow procurement and disbursement procedures agreed with the Bank.

Project Monitoring, Supervision, and Evaluation

A Technical and Financial Auditing Firm will be selected on a competitive basis to monitor the performance of the IEU and the CMF. In order to increase transparency of all activities, this firm will report directly to the Office of the Minister as reflected in the organization chart. TORs for this firm were presented during negotiations

A Monitoring and Evaluation (M&E) system will assess project performance in meeting project objectives and achieving the desired outcomes and outputs. It will collect and analyze data for the indicators in the logical framework and other variables needed to monitor project activities. To address these questions, the M&E system will consist of the following components: (i) M&E strategic plan; (ii) monitoring; and (iii) evaluation.

M&E Strategic Plan (see Annex 2e for a more detailed description of M&E system): During the first year of implementation, the borrower will prepare a framework and action plan for evaluating impact and monitoring program processes and outputs. It will detail the objectives and mechanisms for carrying out the monitoring and evaluation of each component. Monitoring will include: a computerized management information system to track progress on activities, community monitoring, and field supervision. Evaluation will include both a mid-term formative evaluation and an impact evaluation, including baseline and endline measures. The impact evaluation framework will specify expected outcomes, performance indicators, evaluation designs, data collection approaches, and analytical methods for evaluating project outcomes. Within one year of start-up, the borrower will have completed baseline surveys for all project-supported activities, according to the monitoring and evaluation plan. A monitoring framework will detail the management-oriented activities, processes, and products that project managers are accountable for delivering to target populations, MOH authorities, and the Bank. The aim of monitoring will be to make information collection, analysis, and feedback a systematic and routine activity. In addition to the above, sources of information will also include observations made during supervision field visits, existing and to-be-implemented management information systems, disease surveillance systems, and population-based surveys such as the Demographic & Health Survey. Qualitative methods will also be used to obtain information on beneficiary conditions and perceptions related to implementation processes and service quality.

Monitoring will be conducted separately by the PCU and IEU, and separate reports will be prepared and submitted to the Bank. Component I monitoring information will be gathered by the CMF implementing Component I, which will prepare and submit trimestral monitoring information to the IEU to send to the Bank. The PCU will prepare monitoring reports for the other components. Evaluation studies will be conducted by the PCU for the whole project.

Procurement Assessment

A preliminary capacity assessment was carried out during appraisal. It concluded that at present

the MOH does not have adequate institutional arrangements to carry out procurement in the IEU and in the PCU. Given that GOES has decided to have the PCU handle procurement for Components II-IV directly and build internal capacity, it has agreed to contract at least two highly capable procurement specialists and three assistants to handle the project's procurement needs. It will consider contracting a Procurement Agent (PA) should significant delays occur. It will contract the PA directly and is willing to cover the agent's fees with counterpart funds. The risk factor in the assessment is set at medium in view of the agreements reached regarding staffing and the qualifications of the CMF. Procurement arrangements are described in Annex 6.

D. Project Rationale

1. Project alternatives considered and reasons for rejection

The project preparation process has included discussion and analysis of a number of alternatives. Two key dimensions were considered. First, what is the appropriate lending instrument to be used? Second, what is the appropriate strategic focus for the project design? Subsequently, when GOES requested emergency support for the reconstruction of hospitals, the discussion centered on whether to prepare a separate emergency operation or to include an additional component in the health project that was already being prepared. The alternatives considered and the justification for accepting or rejecting them are outlined below.

Free-standing Emergency Project versus an Additional Reconstruction Component in Current Operation. Initially, the hospital reconstruction component was conceived as a free-standing emergency project to ensure faster processing and approval. The latter alternative was not selected to avoid de-linking reconstruction from other sector interventions supported by the project. For example, decisions regarding the nature and location of hospital services to be provided would depend on volume and quality of ambulatory services offered in each facility's catchment area. These latter services would be strengthened through project-financed activities. Excluding the primary care network from the functional definition of hospital activities could result in a mismatch between supply and demand for hospital services as well as disintegration of the broader delivery system.

Parallel versus Joint Financing: Parallel financing, rather than joint or pooled financing with other donors, has been chosen as the project's mechanism because, unlike sector programs elsewhere, moving toward budgetary support is not a main focus of this project. Also, the proposed project is more narrowly focused, requiring speedy disbursement to finance works, service delivery, and institutional strengthening. This would not be possible if joint implementation arrangements had to be developed and agreed upon with other donors. In the case of hospital reconstruction, parallel financing is also the most practical option, given the different processes, requirements, and timing that each of the bilateral funds will entail.

A Single Investment Project, Sector Adjustment Lending, or Program-based Lending: The project's objectives and design are sufficiently clear and focused that they can be tackled by a traditional investment operation. The need to support the rebuilding effort quickly and effectively, to extend basic care and nutrition services, and to initiate institutional modernization efforts aimed at strengthening MOH core functions signaled the need for the targeted focus that an investment loan offers. Program-based lending tends to deal with broader issues, and it was decided that an investment loan would provide strength and support for the effective implementation of institutional strengthening and decentralization strategies. At a later stage, once results have been demonstrated, program-based lending may be considered.

2. Major related projects financed by the Bank and/or other development agencies
(completed, ongoing, and planned)

Sector Issues	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Dev. Objective (DO)
Bank-financed			
Social Sector Rehabilitation	Social Sector (Loan 3348-ES) Project closed in September 1996	HS	HS
Earthquake Reconstruction	Multi-sector Earthquake Reconstruction (Loan 2873-ES) Project closed June 30, 1996	U	S
Other development agencies			
GTZ	Health Sector Support (6.0 million DM)		
IDB	Modernization of MOH (US$28.5 million)		
PAHO	Health Systems Development and Modernization (US$4 million)		
	Health in Development (US$1.8 million)		
USAID	Healthy Salvador, SALSA (US$38.5 million)		

P/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

3. Lessons learned and reflected in the project design

The project's design incorporates lessons of experience from previous reconstruction projects and from health and broad social sector operations. Key lessons from a previous earthquake reconstruction project in El Salvador indicate that a strong implementation unit is key to success (Ln. 2873-ES). Effective implementation requires an effective coordinating entity with clear authority. Moreover, the project's design should be kept simple. Experience with other emergency operations elsewhere (OED Précis # 174, 1998) echoes the same lessons, stressing the need to ensure that all designs are reviewed by stakeholders (IEU/MOH and the CMF) prior to the bidding process to reduce variations in future contracts. To ensure timeliness, the implementing agencies should take into account the scope and complexity of the work, and the capacity of the local contractors in estimating construction periods for executing the project. Damage and needs assessments should be undertaken prior to effectiveness.

A review of supervision reports for El Salvador as well as the ICR for the Social Sector Rehabilitation Project (SSRP-1992-96) (Report No. 16774) sheds light on a number of important guidelines for optimizing the project's results. Uneven commitment to organizational change under the SSRP led to less than robust results in improving supervision, maintenance, and information

systems in the MOH. The review concluded that future expansion of services would require revamping the delivery system, including reorganizing the financing and management mechanisms that support service delivery.

In 1997, the Bank and IDB prepared a joint project oriented toward sector-wide reform, but because of weak leadership and lack of commitment among public health institutions, the project never came to fruition. The key lesson learned from the defunct project is that sector-wide transformation will not occur rapidly, in part because it is important to increase the institutional capacity of MOH before proceeding with reform. Nevertheless, the following lessons, which are critical to the loan, can be identified:

- **Flexibility.** Joint government/Bank annual reviews of project progress were found to be useful to maintain flexibility in implementation by adjusting components as well as to provide implementation support to achieve objectives.

- **Cost of transition.** Implementation is often the most difficult aspect of a reform, unwittingly reinforcing any possible internal opposition. The size of the loan and the nature of the IBRD's technical support - including needed technical assistance under this operation - provide El Salvador with a unique opportunity to overcome this obstacle.

- **Well-defined project benchmarks.** Institutional modernization performance benchmarks linked to the release of a subset of investments should be clearly defined so that the requirements are understood by all parties and can easily be monitored for compliance. The benchmarks should lead the client along the critical path of institutional modernization by encouraging the development and implementation of institutional modernization and decentralization strategies.

- **Develop sufficient technical and administrative capacity of the implementing agency to facilitate adequate implementation.** In previous projects, it was found that it was critical to assess the implementing agencies' commitment and capacity prior to defining the project's complexity. PCU personnel will be trained and closely supervised by the IBRD.

- **Technical assistance can be improved by early preparation of terms of reference and expert contributions to defining scope and products.** A review of previous projects shows that projects have often suffered from slow implementation due to disagreement over the terms of reference and contracting of consultants. Under this project, detailed action plans have been prepared and agreed with the government. These action plans specify critical actions, expected results, and a timeline for each investment activity. They will provide a valuable input into the preparation of annual implementation plans, procurement plans, and terms of reference.

- **Develop an adequate monitoring and evaluating system for the project.** Projects benefit greatly from baseline and follow-up surveys for evaluating achievements and performance. During the first year of implementation, the project will develop an effective monitoring and evaluating system, including the application of baseline household and provider surveys. The objective is to have a system that will facilitate ongoing project management, as well as the measurement of project outcomes and impact at completion. (See Annex 2e for the monitoring and evaluation plan.)

4. Indications of borrower commitment and ownership

The government's commitment to and ownership of the project is very high. The government has requested that the Bank concentrate its new lending for reconstruction assistance on restoring operations in seven major hospitals by complete replacement, rehabilitation, or partial reconstruction. Prior to the earthquakes, the Minister of Health had informed the Bank that the poverty alleviation focus of the proposed project would support the "cornerstone" of his five-year plan: the extension of essential health and nutrition services to areas of extreme poverty. The project combines the poverty-reduction and reconstruction requests from the government and has been prepared in consultation with a wide range of key sector players, including the Health Reform Commission and Congress. Inputs from different stakeholders, from within and outside the MOH, have been incorporated into project formulation. The proposed project fits in well with the government's operational objectives related to health, as stipulated in GOES policy documents.

5. Value added of Bank support in this project

El Salvador will benefit from the financial and technical assistance of the World Bank to rehabilitate and replace seven severely damaged public hospitals, some of which are quite old, functionally obsolete, and had already suffered substantial deterioration from earlier lack of maintenance. First, the Bank's standards are high requiring detailed assessments (environmental, financial, participatory, and the application of building codes). Second, building and equipping hospitals is capital-intensive, and the Bank will act as a lender of last resort. Third, the Bank's technical assistance will ensure that the rehabilitated and reconstructed facilities will have a high degree of functionality, will be built according to international norms, will incorporate design efficiencies that will reduce operating costs, and will assist in organizing programs of preventive maintenance.

El Salvador will also benefit from the Bank's technical assistance in the proposed strengthening and extension of essential health and nutrition services as well as institutional modernization. The Bank's technical contribution will be in the areas of strengthening of MOH's capacity to carry out core functions (such as public health programs, regulations, policy formation, and monitoring and evaluation), decentralization, public-private partnerships, service purchasing and contract management, development of equitable resource allocation formulas; economic and fiscal evaluation; and the implementation of new, performance-based management arrangements for public facilities.

Finally, the government will benefit from the Bank's experience in supporting reconstruction within the context an ongoing sectoral investment program.

E. Summary Project Analysis: (detailed assessments are in the project file, see Annex 8)

1. Economic (supported by Annex 4)

[x] Cost-Benefit Analysis: NPV=US$ 122.7 million; IRR= 33.5 percent
[ ] Cost Effectiveness Analysis
[ ] Other (specify)

Overall benefits outweigh investments nearly two to one. Over 10 years, the net present value of the project will yield benefits of approximately US$122.6 million. With the exception of the first several years, the project is expected to generate annual savings to the system that will outstrip the investment costs, thereby paying for them. The internal rate of return (IRR) for the project is

estimated to be 33.5 percent, reflecting the high benefits relative to project costs. The cost-benefit analysis, which gives the project a CBR of 1.76, will yield significant health benefits and economic benefits for the population of El Salvador primarily through reductions in hospitalization costs, mortality, morbidity, and the local resolution of patients' needs. Even when projected recurrent expenditures generated by the project are considered, the stream of benefits shows that the project will be deemed highly desirable and will be financially sustainable.

2. Financial (see Annex 5) NPV=US$ 1.9 million, first 5 years Million; FRR= %

GOES is committed to financing the proposed project's recurrent costs. Recurrent costs are estimated at an average of US$34.1 million per year once the project is fully operational. The project will also support the efforts of GOES to decentralize the MOH budget, to establish a more equitable allocation formula, and to test mechanisms that link performance to payments.

Fiscal impact

The project's fiscal impact was assessed by expressing the project costs that were expected to be financed by the GOES as a percentage of total MOH spending in the future. The project's fiscal impact appears moderate. By the end of the 10th year (2011), the expected incremental costs of the project will amount to only 3 percent of MOH spending. This figure could be significantly higher if the recurrent costs associated with the reconstruction of the seven project-supported hospitals were greater than just depreciation. It is assumed that this will occur only if the government decides to increase recurrent spending in these hospitals beyond the current levels and beyond those that prevailed before the latest earthquakes.

3. Technical

A series of studies have been completed (some financed under a PHRD grant) or are underway that will provide valuable inputs into the project's design. For the most part, these studies result in four types of products: assessment, strategy, design, and action plans. The studies include: i) assessments of infrastructure damage and the internal functionality of hospitals, rehabilitation designs, and a functional analysis of the health network; ii) the clinical, managerial, and financial capacity of health NGOs; iii) MOH decentralization strategies and practices; iv) MOH purchasing capacity; v) MOH monitoring and evaluation capacity; vi) the detection and control of vector-borne diseases; vii) the detection and control of vertical transmission of HIV/AIDS, viii) toxic waste management in hospitals; ix) the reorientation of MOH's primary care delivery model.

4. Institutional

Executing agencies. MOH has very limited implementation and project management capacity. To ensure fluid execution, two project implementation units will be established: (a) an Infrastructure Executing Unit (IEU) for Component I and (b) a PCU for the other components. Component I will be implemented by a construction management firm (CMF) selected competitively by MOH following the Bank's guidelines. The IEU will represent the MOH during the execution of this component under a Construction Management Agreement. The PCU will assume similar responsibilities for managing the other three components. Given MOH's limited purchasing capacity as evidenced by the procurement assessment, a Procurement Agent may be contracted if significant delays are experienced during the first year. GOES prefers to contract capable procurement staff for the PCU and slowly build internal capacity. Monitoring and evaluation of the coverage extension effort and the project as a whole will be contracted out and subsequently

transferred to the MOH once such capacity is established. The firm will also be responsible for building MOH's capacity for monitoring and evaluation.

Project Management. The project will be managed by two distinct units, IEU and PCU, as outlined above. In view of the intensity of activities and efforts required in Component I, GOES agreed to strengthen project management with the assistance of a CMF that will be responsible for the implementation of Component I. Terms of Reference for the CMF have been agreed with GOES at appraisal, as has the staffing of the IEU. The IEU staff will have a minor role in implementation, basically functioning as MOH's representative to the Bank and as the technical and financial link between the CMF and the Bank. A financial and technical audit firm reporting to the Minister will be contracted to conduct trimestral audits of the work conducted under all components. The PCU, in contrast, will be heavily involved in coordinating and managing Components II-IV, with full responsibility for project outcomes in these components, together with MOH's compliance with the IMBM.

Procurement Issues. Procurement capability in MOH is very weak and limited to standard purchasing activities of a public entity through its institutional procurement unit. In view of these limitations, the PCU will be staffed with at least two very capable procurement specialists. MOH has agreed to contract a PA if project activities become significantly delayed. In the case of the IEU, most documentation will be prepared by the CMF and thus no procurement problems are expected.

Financial management issues.

Country Financial Management (FM) issues relevant to the project. The GOES faces various obstacles that prevent operational efficiency and sound personnel management. This situation, in addition to the limitations of MOH to implement procurement actions (see Annex 6 of the PAD - Procurement), has led to the proposed arrangements in which two specialized units within MOH will be created for implementing the project sharing the same financial unit.

Audit compliance. As of the date of appraisal, there was only one project with an overdue audit report in the country portfolio. No audit compliance issues relevant to the proposed project have been identified.

Assessment. Since the project FM unit had not been established at the time of appraisal, the Bank's FM assessment concluded that the MOH did not have an adequate FM system specific to the project in place. Implementation of the FM action plan will result in proper financial management arrangements in place by the effectiveness date. Further details are found in Annex 6 of the PAD - Financial Management.

Flow of funds

Loan. Loan funds will be disbursed to a Special Account that, as is the current practice in El Salvador, will be opened by the General Treasury Directorate (DGT) of the MOF for the MOH and maintained in the Central Bank.

- Once a week, the treasurer of the project financial unit (USEFI) will send Fund Requirements through MOH's financial unit (UFI) to the DGT in accordance with the amount of documents pending payment ("Accrual Report"). Fund Requirements and Accrual Reports are identified by particular numbers.

- Special Account funds will be transferred to the USEFI's Operational Account through MOH's institutional account (this is a "bridge" account from which electronic transfers are made to the operational account on the same day of - or the day after - receipt). Each transfer is identified with a Fund Requirement and Accrual Report.
- The operational account will be used to issue checks or transfers to the providers of goods and services identified in the Accrual Report.
- Under the described arrangement, it is expected that the time lapse between withdrawal from the Special Account and payments made to providers will be less than a week. In any case, transfers from the Special Account can only be outstanding for a limited period of 30 days.
- The monthly requests for disbursement submitted to the Bank will be accompanied by bank statements of both the special and operational accounts in order to document the timely transfer of resources.
- Procedures for loan disbursements are summarized in Annex 6 of the PAD - Financial Management.

Counterpart. As it was agreed in the Education Reform Project (Loan 4320-ES), the USEFI will, until the completion of the Project, operate and maintain a revolving fund with a quarterly balance equivalent to the counterpart funding requirements for the next three months of project activities as provided in the annual budget.

The revolving fund will be used to issue checks or transfers to the providers of goods and services in accordance with the counterpart financing percentages agreed.

Cost Sharing Issue: Because of the emergency nature of this operation, and the potential impact of the Government's reconstruction expenditures on the provision of counterpart funding, the proposed loan will finance 86% of project expenditures (or 53% of the Government's reconstruction expenditures). This is above the normal cost sharing for El Salvador, but follows the provisions of OP6.30, which allows for increased cost sharing under emergency operations.

Project financial reporting arrangements. The quarterly financial statements will include the Statement of Sources and Uses of Funds and the Special Account Reconciliation Statement. These project financial statements, along with the physical progress and procurement sections of the Project Monitoring Reports (PMRs), will be submitted to the Bank no later than 45 days after the end of each reporting quarter. PMRs will be used for reporting, not disbursement, purposes.

For the purposes of the Bank, the annual financial statements will include, in addition, the schedule of Statements of Expenditure (SOEs) presented during the year in support of Withdrawal Applications.

Audit arrangements. Annual project financial statements will be audited in accordance with International Standards on Auditing by an independent firm and in accordance with terms of reference (TORs), both acceptable to the Bank. In addition to the audit opinions on project financial statements, Special Account, and Statements of Expenditures (SOEs), special purpose reports will be required to deal specifically with: (i) the observance of the procurement and consultants' services provisions of the Loan Agreement; and (ii) the physical inspection of the reconstruction/ rehabilitation works.

The memorandum on internal controls ("management letter") and the special reports mentioned above will be issued on a quarterly basis and submitted to the Bank no later than three months after the end of the quarter.

The project annual audit reports will be submitted to the Bank no later than six months after the end of the reporting period (which coincides with the calendar year). The cost of all audits will be financed under the loan on a declining basis.

5. Social

Three social development issues deserve special attention: (a) the extreme vulnerability of the country to natural disasters such as hurricanes, floods, droughts, and earthquakes; (b) inequality of access to health services and, hence, unequal health status; and (c) growth in behavioral-based diseases in adults, such as HIV/AIDS. Social development outcomes will include: (a) a reduction in poverty as a result of increased access to health interventions; (b) the strengthening of civil society as a result of allowing NGOs to become service providers and the enhancing women's health status as a result of the expansion of reproductive health services and HIV/AIDS prevention; and (c) the enhancement of social risk management by strengthening informal and formal health care. The design of Components II-IV of the project benefited from extensive consultation with focus groups in 23 communities complemented by interviews with key leaders and community health stakeholders, including health promoters, NGOs, teachers, and institutional stakeholders. Stakeholder participation in the preparation of the project will benefit its implementation. The involvement of communities and NGOs will be crucial especially as community participation is intrinsic to the success of the Basic System for Comprehensive Healthcare (SIBASI) model. Health NGOs will be partners in the main activities designed to expand coverage in the Northern Region. The M&E system includes all key performance indicators. Beneficiary assessments and surveys on users' satisfaction in the Northern, Central, and Para-Central Regions will be part of a baseline evaluation and will be updated periodically. There are no indigenous people living in the project areas.

Annex 2c presents additional details on social assessment.

6. Environmental assessment

Environmental Category [ ] A [X] B [ ] C

Given that compliance with many of the requirements of the Bank's Environmental Assessment Policy (OP 4.01, Para. 13) prior to effectiveness will prevent the timely achievement of its emergency objectives, this policy will be complied with as part of project implementation. All issues that will need to be addressed and their timing are reflected in a detailed framework and action plan for dealing with environmental and related social issues. This plan was agreed with the government. To ensure compliance, all necessary Environmental Impact Assessments and associated studies are conditions of disbursement for Component I.

Potential environmental impact is expected from this project in two general areas: (i) management and disposal of medical waste and (ii) the reconstruction process, including resettlement. Both areas were assessed through field surveys and a review of relevant legislation. The first issue will be addressed by implementing a waste management program in each of the seven hospitals that will be financed under Component I. As described below, only about 36 percent of hospital waste is currently managed adequately and thus, the project is rated a B. The steps to be taken to ensure that environmental and resettlement issues are adequately addressed are outlined in Annex 2d, Part 2.

Medical Waste Management: The project preparation team reviewed the country's existing legal instruments and regulatory framework for managing medical waste and found that they support the national policies on environmental protection. The team also assessed current practices through a national survey of hospitals and health centers using a systematic sample of 19 facilities. (See Annex 2d for detailed survey results.) Hospitals in the metropolitan area of San Salvador (AMSS) have an adequate hospital waste disposal system. Toxic medical waste is separated, collected, packaged, internally and externally transported, centrally stored, disinfected thermally by autoclave, and disposed of according to acceptable procedures. There is no program to manage toxic medical waste outside AMSS. Estimates of the quantity of toxic medical waste generated in the country are 5.8 tons per day (using an average rate of 0.65 kg per bed per day) of which 45 percent corresponds to the AMSS, which is estimated to treat 80 percent of its waste correctly. This means that only about 36 percent of the toxic medical waste generated in El Salvador is managed adequately. Therefore, the project is rated B. All hospitals reconstructed under Component I will follow the acceptable AMSS model, but close attention will be paid to its affordability as cost is estimated at between US$0.40 and US$0.60 per kilogram, resulting in a cost of $720 to $920 per ton collected, treated, and properly disposed of in a sanitary landfill.

The action plan for implementing a national program for managing hospital medical waste and disposal (copy in project files) proposes a short-term, medium-term, and long-term strategy. The short-term strategy (one to three years) will consolidate the waste management program already in place in the AMSS and will complete the existing regulatory framework with the drafting of appropriate implementation norms as well as regulations for private sector companies that manage and dispose medical waste. The medium-term strategy (three to five years) will install proper medical waste management systems in the two hospitals to be rehabilitated and the five hospitals to be replaced under Component I of this project. Technical assistance will also be provided to the environmental health unit (GAISA) of MOH to assist hospitals that are not directly benefiting from investments under this project in installing adequate waste management systems. The long-term strategy will aim to put in place a toxic medical waste management system for the whole country.

Specific activities supported through the proposed project Include:

- **Revision of the waste management manual for hospital workers.** The manual will address procedures for hospital staff with regard to the handling, transport, treatment, and final disposal of medical waste, as well as with regard to required equipment and inputs, with special attention to the handling of sharp and pointed objects that are the main risk of viral contamination inside hospitals.
- **Training.** The survey showed that the medical and technical staff of health facilities outside the AMSS view medical waste management as the responsibility of the housekeeping staff. Therefore, training will be provided to all staff who are involved in the various aspects of waste production and management.
- **Developing/revising/updating MSPAS norms governing medical waste in health facilities.** There are legal instruments and an official policy regarding the hazardous waste generated in health facilities. **However, the implementation of [check]** regulations and norms governing the various steps in the process of managing medical waste needs to be developed and revised.
- **Provision and upgrades of equipment.** The project will purchase new waste management equipment, if none exists, and replace outdated, inefficient, or unsafe equipment with safer, more efficient kinds of equipment. The project will rehabilitate malfunctioning or inoperative basic systems for water, electricity, and air conditioning, thus providing a healthier environment inside the health facilities.

Hospital Reconstruction Process: The project will rehabilitate three hospitals and reconstruct/replace four hospitals. Of the latter, two will require re-siting and a third will be rebuilt on the same lot, next to the current structure. A field survey conducted during appraisal noted that resettlement issues might need to be addressed in at least one of the cases. Should this be the case, a Resettlement Plan based on the guidelines presented in the Resettlement Framework, as agreed between GOES and Bank during appraisal (See Annex 2D-Part 2) and confirmed during negotiations, will be prepared. During negotiations, GOES agreed that any resettlements precipitated by project activities will comply with Bank policies as stated in Operational Directive 4.30 "Involuntary Resettlement." In addition, all hospitals will require environmental impact assessments (EIAs), satisfactory to the Bank, indicating the measures to be taken to mitigate adverse situations. These will have to be included in the final designs for each hospital rehabilitation/replacement. Construction costs will include environmental mitigation measures that address the direct effects of construction on the environment. Design costs will include the cost of local consultations. Activities defined in each Environmental and Social Action Plan will be financed by GOES. Thus, an EIA will have to be prepared for all seven hospitals, but these will be tailored to each hospital. Also, those requiring re-siting will have to provide all of the necessary information to address the issues outlined in the guidelines for environmental review included in Annex 2D-Part 2, along with the Environmental-Resettlement Action Plan for the project. In addition to securing the Bank's approval of the EIA and ensuring that it is consonant with current environmental legislation in El Salvador, each of the seven reconstruction projects will need to secure an environmental license as a condition for bidding for the construction of each facility.

The Environmental-Resettlement Action Plan (see Annex 2d Part 2) includes the preparation of: (i) an EIA according to the guidelines and terms of reference agreed between the GOES and the Bank for the environmental screening of sites for reconstruction hospitals; (ii) a resettlement plan according to the guidelines agreed between GOES and Bank (see below); (iii) systems for the management and disposal of medical wastes; and (iv) environmental specifications to guide the application of environmental measures during construction. These specifications will be incorporated into bidding documents for each facility, and their implementation will be financed as part of construction. MOH, with the support of the Infrastructure Executing Unit (IEU), will be responsible for the implementation of the Environmental-Resettlement Action Plan identified during the first stage of project implementation.

GOES has developed guidelines for resettlement that are less strict that those adopted by the Bank. However, should the need arise to resettle households or commercial entities, GOES has agreed to prepare a Resettlement Plan according to the Bank Resettlement Policy. The Bank team committed itself to assist the Borrower in the preparation of this plan. The Borrower has agreed to follow Bank environmental and resettlement policies as per Bank Operational Policies 4.01 and 4.12 whenever policies are applicable. Each Resettlement Plan will include the following aspects: (i) a justification for resettlement; (ii) the identification and socioeconomic assessment of affected populations, including the extent of resettlement needed and the characteristics of the settlers who need to be resettled (households, businesses, etc); (iii) a topographic analysis of the proposed site; (iii) a review of land titling issues (if any); (iv) an assessment of the legal and regulatory framework to support and justify proposed actions for each site; and (v) procedures for site purchasing, site improvements, and (if necessary) site expropriation. The IEU will be responsible for preparing these plans and ensuring that the Bank has no objections, as a condition for bidding for the construction of each facility. MOH/IEU will monitor the implementation of the resettlement plans, submitting monthly reports to the Bank that highlight progress and the timetable for completion. MOH/IEU will also submit a final report with an analysis of the data contained in the social-site data sheets resulting from the resettlement process. MOH/IEU will notify the Bank each time there is a need to purchase new sites, attaching the corresponding purchase or resettlement

plan. IEU, in coordination with the MOH's Legal Department, will ensure that compensation to those identified as part of the resettlement assessment process for each hospital will be established, negotiated, and implemented as part of each hospital's Resettlement Action Plan, when required. Before presenting each EIA, the IEU will inform the Bank of the minimum compensation value considered and how that value was determined. GOES will be responsible for costs incurred in the course of the implementation of the resettlement framework. The EIA that will be presented as condition of disbursement for each hospital will include the funding allocation for the implementation of the plans, including the handling of medical waste and the resettlement framework.

7. Participatory approach

Hospitals will be understood to be community centers that include community involvement, communication, and outreach activities. During the feasibility stage, the community's characteristics and utilization patterns will be assessed. The results of this assessment will used in the functional planning and service redefinition of each facility. During the design phase, communities, local officials, and staff will be consulted in a systematic fashion to elicit opinions on the proposals under consideration and to explain the rationale for the functional layout and service definition of the proposed rehabilitated and reconstructed facilities.

The participation of stakeholders in the project's preparation and how they will participate in the project's implementation are described above in the social assessment section. The project team has consulted with all major donors through the Interagency Committee in Support of Health Sector Reform and Modernization. It has also consulted with professional organizations, community groups, NGOs, members of Congress, and the mayors of cities where the rehabilitation and reconstruction activities will take place. The project will support consultations with community members and health staff regarding the design of the rehabilitated and reconstructed facilities supported through Component I. Also, the project will support the development and implementation of a community oversight system to allow communities to participate in the planning of services and in assessing the performance of providers. This system will be applied to the coverage extension efforts supported through Component II.

A major operational objective of the project is to establish MOH-NGO partnerships as a means to extend basic care to poor and underserved populations. The terms of MOH-NGOs contracts will stipulate that the NGOs will establish links to community groups. Also, communities will form watchdog organizations that will participate in monitoring and assessing NGO providers.

F. Sustainability and Risks

1. Sustainability:

The project will be sustainable because it enjoys support at the highest political levels and its formulation is a direct response to requests made by the government. Major sectoral stakeholders have been involved in the project's preparation and will participate in the project's implementation, thus ensuring country ownership. The fiscal impact of the investments has been calculated and appears to be moderate; by the end of the 10th year (2011), the expected project incremental costs will amount to only 3 percent of MOH spending. Agreement has been reached with GOES to subcontract out the reconstruction of the seven hospitals to a private construction management firm to be selected competitively.

There are risks in attempting to reorient the MOH's internal structure and policies. The purchasing of NGO services and establishing a purchasing unit in MOH will initiate a move toward separating financing and delivery. This will require a different set of financial management structures, instruments, and skills, and will transfer responsibilities away from the MOH provider network. This represents change, which is often politically and administratively difficult. Another major risk could be possible delays in Congressional approval of the loan. The project has already initiated dialogue with several representatives in Congress to seek their input into the project's design. A communication strategy has been developed for the project.

3. Critical Risks (reflecting assumptions in the fourth column of Annex 1)

Risk	Risk Rating	Risk Minimization Measure
From Outputs to Objective		
Contracting of management firm is delayed	H	Provide close follow-up to selection process
IEU not given sufficient independence to move rapidly.	H	Ensure IEU financial processes are given adequate priority in MOH's UFI.
Inability to increase budgetary allocations	M	Configure incremental steps for transferring financial responsibility for care extension.
Sufficient implementation capacity to move modernization process forward.	M	Contract firms and institutions that will "partner" with MOH units to develop capacity
Stakeholders willing to accept new delivery model and MOH institutional reforms.	M	Communication strategy under implementation. Dialogue with congressional opposition and professional associations already initiated.
Sufficient leadership, oversight and technical support within MOH	M	Establish an Executive Committee consisting of MOH authorities involved in institutional modernization and coverage extension.
From Components to Outputs		
Election results do not result in sharp change in policy direction.	M	Maintain dialogue with key stakeholders.
Sufficient capacity to coordinate and manage new delivery model	M	Contracting of consulting firms to assist in implementation of delivery model.
Delays in start-up due to long Congressional approval process.	H	Dialogue established with congressional opposition and mayors of cities where infrastructure activities will take place. Communication strategy under implementation to garner congressional support.
Overall Risk Rating	M	

Risk Rating - H (High Risk), S (Substantial Risk), M (Modest Risk), N (Negligible or Low Risk)

3. Possible Controversial Aspects:
Location of hospitals that need to be re-sited.

G. Main Loan Conditions

Conditions of Effectiveness

Appointment of the external auditors under TORs satisfactory to IBRD to carry out annual audits for the entire project.
Definition of shortlist of firms and preparation of letter of invitation to hire the construction management firm with qualifications satisfactory to the Bank.
Completion of the environmental impact assessment and preliminary designs for at least two hospitals, in accordance with the procedures set forth in the Operational Manual.

Staffing:

- The coordinator, the heads of Components II, III, monitoring and evaluation, and the full financial/procurement unit will need to be contracted with qualifications satisfactory to IBRD, to be considered adequately staffed by effectiveness
- Establishment of financial/administrative unit (USEFIs) for the project and its financial management system for each part of the project (Component I and Components II-IV).

Establishment of the counterpart revolving fund and first deposit of $1 million.
Final version of the Operational Manual satisfactory to IBRD and its official adoption as a Guide to Project Execution

Conditions of Disbursement

Disbursements for expenditures in Categories Goods and Works for construction and/or reconstruction in Component I shall not be made unless:
(i) the Borrower has engaged the services of a Construction Management Firm;
(ii) the Bank is satisfied with: (a) the respective technical, economic, and financial feasibility studies for such hospital and (b) the Borrower's compliance with the environmental impact assessment and involuntary resettlement requirements set forth in the Operational Manual in respect of such a hospital;
(iii) the hospital design has been granted the required environmental license; and (iii) the land required for the construction of new hospitals is owned by the MOH and is free of occupants.

Disbursements for expenditures under Component IIb b.1 of the Project shall not be made unless the respective Health Service Provider Agreements with NGOs and other entities have been signed;

Disbursements for expenditures under Component IIIb of the Project shall not be made unless the Institutional Improvement and Decentralization Strategy has been adopted by MOH in form and substance satisfactory to the Bank; and, disbursements for expenditures under Component IIIC of the Project shall not be made unless the following actions have been taken in form and substance satisfactory to the Bank:
(i) the Borrower has furnished to the Bank the results of the monitoring and evaluation project activities carried out under Component IIC of the project, including the results of the household survey included therein;
(ii) the Borrower has signed at least five Health Service Provider Agreements to provide health and nutrition services to at least 75,000 people in the aggregate;
(iii) at least three SIBASIS in earthquake-affected areas are operating in accordance with the terms of the Institutional Improvement and Decentralization Strategy, and the related performance agreements or arrangements have been signed between MOH's authorities at the central level and the directors of SIBASIS;

(iv) MOH has adopted indicators satisfactory to the Bank to evaluate the performance of its SIBASIS; and
(v) at least one regional plan has been prepared for the delivery of coordinated health services within a cluster of departments and/or SIBASIS has been prepared and is being implemented in accordance with the requirements of the Institutional Improvement and Decentralization Strategy.

Loan Covenants

- The Borrower shall not commence works for each hospital under Component I of the Project unless and until the environmental impact assessment and the involuntary resettlement plan (if needed), prepared pursuant to the Operational Manual, have been approved by the Bank, and the actions provided therein have been adequately implemented for the relevant activities.

- Adopt and implement an institutional improvement and decentralization strategy satisfactory to the Bank, which shall consist, *inter alia*, of measures: (a) to gradually reduce MOH's departmental offices; (b) to define the allocation of the existing administrative staff of MOH to the SIBASIS without any increase in MOH's administrative budget; (c) to monitor the performance of the services provided by the SIBASIS including, *inter alia*, entering into performance agreements or arrangements with the SIBASI directors that specify quality and coverage benchmarks; (d) to evaluate the performance of Health Service Providers; (e) to develop and carry out health plans by regions or clusters of departments and/or SIBASIS; and (f) to set and use benchmarks for the implementation of all such measures.

- Maintain policies and procedures adequate to enable it to monitor and evaluate on an ongoing basis, in accordance with the Performance Indicators, the implementation of the project and the achievement of the objectives.

- Enter into an agreement with each Health Service Provider under terms and conditions satisfactory to the Bank and substantially in accordance with the terms of the Model Health Service Provider Agreement set forth in the Operational Manual that shall include, *inter alia*, the performance indicators and other requirements applicable to the implementation of Component II of the Project.

- Operate and maintain, until the completion of the project, under terms and conditions satisfactory to the Bank, in a commercial bank acceptable to the Bank, a revolving fund in US dollars with a quarterly balance equivalent to the counterpart funding requirements for the next three months of project activities as provided in the annual budget and require sufficient annual budgetary allocations for external and local funds needed for the project.

- Contract a technical and financial audit firm to conduct quarterly audits on physical and financial progress in Component I. Special purpose audit reports are required to deal specifically with: (i) the observance of the procurement and consultant services provisions of the Loan Agreement and (ii) the physical inspection of the reconstruction/ rehabilitation works.

- The annual audit reports will be given to the Bank not later than six months after the end of each year. The quarterly special purpose audit reports will be given to the Bank within two months after the end of the reporting quarter.

2. Other : (classify according to covenant types used in the Legal Agreements)

H. Readiness for Implementation

[ ] 1.a) The engineering design documents for the first year's activities are complete and ready for the start of project implementation.
[X] 1.b) Not applicable.
[ ] 2. The procurement documents for the first year's activities are complete and ready for the start of project implementation.
[X] 3. The Project Implementation Plan has been appraised and found to be realistic and of a satisfactory quality.

I. Compliance with Bank Policies

[X] 1. This project complies with all applicable Bank policies.

Co-Team Leader: Gerard Martin La Forgia

Co-Team Leader: Sandra Rosenhouse

Sector Manager: Charles Griffin

Country Director: Donna Dowsett-Coirolo

Annex 1: Project Design Summary

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
Sector-related CAS Goal Minimize losses in health status to vulnerable population living in the country's earthquake-damaged Central and Para-Central Regions, and improve health status of undeserved populations elsewhere, with special emphasis on the poverty stricken Northern Region.	**Sector Indicators:** • 10% reduction in percent of underweight children (weight-for-age in children under 2 falling below -2Z) compared to baseline in targeted communities. • Out-of-pocket spending by poor for basic care reduced by 20% in targeted communities of Northern Region.	• Ministry of Health statistics • Pre-post HH surveys • Evaluation of expansion of coverage efforts • Poverty reports/assessments	**(from Goal to Bank Mission)** • Consistency and continuity of the government's complementary social policies and programs • HH behaviors and other factors influence

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
Project Development Objective: 1. Restore hospital infrastructure and equipment damaged in the earthquakes through rehabilitation and reconstruction of infrastructure and its preventive maintenance 2. Improve health status of targeted vulnerable populations in earthquake-affected areas and poor populations in the Northern Region and elsewhere through extending basic health and nutrition services through community-based, outreach programs	**Outcome/Impact Indicators:** Seven rehabilitated and reconstructed hospitals functioning fully. Improved Hospital quality as perceived by users Seven hospitals with a functioning maintenance program. Length of stay in rehabilitated and reconstructed hospitals reduce by 10% Vaccination coverage (DPT) for children under two years increased by 20% over baseline in targeted communities; • Number of pregnant women receive at least 2 prenatal checkups, iron supplements and tetanus vaccination increased by 20% over baseline in targeted communities. • Per capita contacts with health care providers increased by 50% over baseline in participating communities. • 150,000 people in Northern Region and 200,000 in earthquake-affected areas reached by basic health and nutrition services. • Attendance at growth promotion sessions of at least 90% of eligible children in participating communities in the last month.	**Project Reports: Project Reports:** Field visits, progress reports MOH statistics Rapid patient surveys MOH statistics • Pre-post HH surveys • Project evaluation studies • Nutrition surveys. National census;	**(From Objective to Goal)** Sustained economic growth Consistency and continuity of the government's social and poverty reduction policies and programs

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
3. Strengthening capacity of MOH to perform stewardship functions related to quality enhancement, health promotion, disease surveillance, public health programs, regulation, and performance-based monitoring and evaluation	• Implementation of total quality improvement strategy in obstetrics, gynecology and pediatrics in at least 5 hospitals • Community knowledge of Aedes Aegypti mosquito breeding control mechanisms increased 25% over baseline. • Solid waste management and disposal policy approved and implemented in at least 7 hospitals and seven primary care units. • Draft of reformulated health code prepared. • Strategy for human resource management approved and implemented. • 25% of pregnant women identified as infected receive treatment • Voluntary HIV testing for 50% of women seeking STD treatment	• Project evaluation studies • Outputs of functioning epidemiological surveillance system • Published regulations on facility licensing, toxic waste disposal, and water management strategies. • MOH statistics Pre-post household survey	

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
Output from each Component:			**(From Outputs to Objective)**
1. Restoring hospital infrastructure and equipment through reconstruction/ rehabilitation and a preventive maintenance program	• Proportion of hospital designs completed. • Proportion of hospitals undergoing construction. • Proportion of civil works completed. • Number of hospitals that have purchased equipment. • Proportion of contracts that have been amended for more than 15% of original cost. • Number of hospitals that have trained specialist staff to conduct maintenance.	Project progress reports.	• A capable engineering consulting firm is selected. • The government's current investment program in primary care and expansion of primary care maintained in time • State governments' spending in health increased in time • No labor strikes by health personnel opposing to the new contracting of NGOs and performance contracts with MOH public facilities
2. Basic health and nutrition coverage extension in poor areas of the Northern Region and Strengthening of MOH primary care network in earthquake affected areas of the Central and Para-Central Regions.	• Increased government financing of basic health services to cover costs of basic health extension in the Northern Region. • Government and non-government providers fully trained and equipped in delivery of basic health and nutrition services in targeted communities. • Purchasing of basic services implemented through the signing of contracts with NGOs, foundation and cooperatives in Northern Region. departments to cover at least 150,000 people with basic health and nutrition services. • Performance agreements signed with at least 6 districts (SIBASIs) in the earthquake-affected areas of the Central and Para-Central Regions to implement outreach program to provide basic health and nutrition services to 200,000 beneficiaries.	• Signed performance agreements. • Analysis of MOH budget and Ministry of Finance transfers to MOH from 1998 to end of project progress reports • Project's MIS • Supervision reports • Project evaluation studies • Quarterly and annual management reports; • Semi-annual supervision reports; Mid-term reports; Project completion reports.	

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
3. Strengthening capacity of MOH to perform stewardship functions related to quality enhancement, health promotion, disease surveillance, public health programs, regulation, and performance-based monitoring and evaluation	• Investment prepared and executed for hospital waste management and disposal, environmental health, information technology, communication strategies and management systems. • Management information system fully functioning to provide integrated health information systems • At least 3 SIBASI functioning according to strategy agreed with Bank. • Two additional voluntary testing and counseling center HIV/AIDS. • National surveillance system established, and program to prevent dengue transmission implemented with capacity to measure changes in the geographic and distribution and density of the vector. • Implementation of communication strategy on the prevention and control of HIV/AIDS and STDS and dengue. • Monitoring and evaluation unit established inside MOH with capacity to monitor/evaluate basic health services and at least two priority national programs. • Purchasing and financial management unit inside MOH established with capacity to prepare, issue and manage contracts and performance agreements.		

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
	• Adoption and implementation of an institutional strengthening and decentralization strategy that (i) contains the long-term mission, vision and objectives of a modernized MOH; (ii) the definition of roles and competencies of health districts (SIBASIs) and the elimination of Departmental Offices; (iii) reassignment of MOH staff to the to-be-established SIBASIs without increasing MOH's administrative budget; (iv) at least 3 SIBASIs functioning in earthquake-affected areas supported through Component II, including the signing of performance agreements with MOH (see above), preparation and implementation of at least one territorial health plan, use of performance-based management and supervision for MOH providers within these SIBASIs; and definition of methodologies and indicators for their evaluation.		

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
I. Emergency Reconstruction of MOH Hospital Network in Earthquake-affected Areas. • Reconstruction and Rehabilitation of Earthquake Damaged Hospitals • Corrective and Preventive Maintenance	$127.0	• Project MIS • Quarterly and semi-annual reports.	• Capable engineering consulting firm is selected • High Quality PCU staff are hired • MOH allocates sufficient funds for maintenance in regular budget.
II. Strengthening Essential Health and Nutrition Services in Earthquake-affected and Extremely Poor Areas • Coverage extension through contracting with NGO providers • Strengthening MOH's primary care provider network. • Strengthening MOH capacity to perform planning, purchasing, contract management and evaluation functions	$16.5	• Project progress reports • Project's MIS • Semi-annual supervision reports; Mid-term reports; Project completion reports.	• Sufficient and timely budget allocation • MOH enhanced technical and administrative capacity • Timely execution of strategy to contract with NGO providers • Stakeholders inside and outside the system are open and receptive to new management arrangements for public facilities

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
III. MOH Institutional Development for Policy Formation, National Priority Programs, and Support Systems. • Institutional Modernization • Investments to strengthen MOH national priority programs. • Investments to strengthen MOH support systems.	$16.0		
IV. Project Management	$4.8		

Annex 2: Detailed Project Description

To meet the stated development objectives, the proposed project consists of four components:

1. Emergency reconstruction of MOH hospital network in earthquake-affected areas;
2. Strengthening essential health and nutrition services in earthquake-affected and extremely poor areas;
3. Strengthening MOH institutional capacity for policy formation, national priority programs, and support systems;
4. Project management and monitoring and evaluation.

Component I: Emergency Reconstruction of MOH Hospital Network in Earthquake-affected Areas
(US$127.0 million). (See Annex 2a for a detailed description, analysis, and recommendations relevant to this component). This component also includes operational costs for the IEU unit in the amount of US$1.2 million) and for technical and financial audit services in the amount of US$0.9 million.

Subcomponent I.a.: Replacement and Rehabilitation of Earthquake-Damaged Hospitals ($122.7 million): The project will rehabilitate and/or replace seven of the largest hospitals damaged by the earthquake. (See Tables 1 and 2 for summary information on these hospitals.) The two earthquakes caused damage to 23 of 30 public hospitals. Fifteen suffered minor non-structural damage while the remainder will require rehabilitation or replacement. This project will rehabilitate three facilities (San Juan de Dios in San Miguel, San Pedro in Usulutan, and Santa Teresa in Zacatecoluca) and reconstruct four hospitals (Maternidad Nacional in San Salvador, Santa Gertrudis in San Vicente, Cojutepeque in Cuscatlán, and San Rafael Hospital in Santa Tecla). Although two of the aforementioned hospitals (Santa Gertrudis in San Vicente and Cojutepeque in Cuscatlán) sustained somewhat less damage, two separate assessments have concluded that their functional obsolescence poses a greater danger to patients than the damage caused by the earthquakes and consequently necessitates their replacement. The National Maternity hospital and the Cojutepeque hospital will be rebuilt but not necessarily on the same sites. Alternative sites will be identified prior to negotiations, and assessments on the adequacy of the sites will be completed by effectiveness.

Rehabilitation will reinforce existing structures to ensure that they meet current seismic construction codes. Hospitals will be reconstructed in phases so as to permit partial use of facilities at all times, reducing exposure to precarious temporary facilities and eliminating the need to locate or construct alternative, less permanent structures. Functional analyses are being conducted to ensure the replacement/rehabilitation improves the internal functionality of each hospital and the flows within the health network.

Much of the medical and non-medical equipment in the seven facilities will need to be replaced. Equipment will include cabling needed to install computerized management information systems and the equipment needed to dispose of medical waste. The component will finance technical assistance for the preparation of damage assessments, environmental impact studies, topographical analyses, functional planning, and space programming as well as architectural and engineering drawings. In addition to physical construction, the project will also finance medical and non-medical equipment and furniture.

Table 1: Public Sector Hospitals to be Replaced/Rehabilitated

Hospital	Age (in years)	Degree of Damage*	Action Recommended	Pre-earthquake # of Beds	Sq. Meters Built	Population Served (2001)
San Juan de Dios in San Miguel	25	Médium	Rehabilítate	540	19,586	331,683
San Rafael in La Libertad	25-113	High	Partial rehab & replace	240	15,902	702,340
Santa Teresa in Zacatecoluca	35	Med/High	Rehabilitate	175	10,300	296,145
San Pedro in Usulután	28	Medium	Rehabilitate	253	10,300	195,242
Santa Gertrudis in San Vicente	3-153	Med/High	Replace on same site	215	16,530	164,670
Cojutepeque in Cuscatlán	35-175	Med/High	Replace and re-site	105	3,380	182,602
Maternidad Nacional in San Salvador	20-48	Med/High	Replace and re-site	344	13,163	National – only OB/GYN

*Degree of Damage as reported by WHO/PAHO

Table 2: Hospital Statistics 1999

Hospital	Total Staff	Dis-charges	Number of Patient Days	Medical Outpatient Visits	Emergency Room Visits	Percent Occupancy	Average Length of Stay
San Juan de Dios in San Miguel	945	26,854	142,225	146,998	76,095	97	5
San Rafael in La Libertad	449	18,289	74,004	71,995	53,513	89	4
Santa Teresa in Zacatecoluca	372	11,982	45,789	43,021	50,956	77	4
San Pedro de Usulutan	337	11,658	44,140	51,344	66,764	87	4
Santa Gertrudis in San Vicente	394	10,275	38,003	44,980	35,081	80	4
Cojutepeque in Cuscatlán	184	7,028	24,727	40,396	17,853	75	4
Maternidad Nacional in San Salvador	728	30,665	109,111	81,882	37,022	98	3

Source: MOH – Planning Directorate – Health Information Management Unit

Subcomponent I.b: Corrective and Preventive Maintenance ($ 3.1).

Poor maintenance of buildings combined with failure to apply strict construction standards during the original building phases contributed to the extent of damage caused by the earthquakes. MOH has designed an integrated maintenance program to address some of these deficiencies. This program will be implemented in five phases: (a) training to sensitize staff who will be involved in maintenance activities; (b) preparing an inventory of buildings and equipment; (c) training all generalist staff working on maintenance; (d) training equipment operators; and (e) organizing the maintenance program, including the preparation of protocols and manuals for the three levels of

care. The maintenance department in each hospital is in charge of the planning, management, and supervision of the program, but complex maintenance activities will be contracted out. However, the program has only just begun to be implemented. To date, only the second phase and part of the first have been completed, but supplies needed to repair and maintain equipment have not been provided.

The project will support the strengthening and implementation of MOH's integrated preventive maintenance program by financing technical assistance for the preparation and testing of maintenance protocols and manuals and staff training for the three levels of care. The project will also support a comprehensive preventive maintenance program for the hospitals being reconstructed under this component. Financing for building and equipment maintenance will be provided by counterpart funding.

Component II. Strengthening Essential Health and Nutrition Services in Earthquake-affected and Extremely Poor Areas (US$16.5 million):

This component aims to extend essential health and nutrition services to targeted geographical areas by contracting **[and/or?]** forming partnerships with providers affiliated with NGOs, foundations, cooperatives, ISSS, and municipalities, by strengthening MOH providers, and by developing the planning, contracting, management, and evaluation capacity of the MOH. The quality and efficiency of and access to publicly financed essential health and nutrition services will be increased, with special emphasis on targeting low-income and underserved populations in El Salvador's Northern Region as well as populations living in municipalities affected by the recent earthquakes in the Central and Para-Central Regions.

Service delivery will integrate health and nutrition services and will use a team approach with outreach programs to the communities. The services to be delivered will focus on women and children and will address a large share of the health needs of this population. MOH hospitals in the area will provide required inpatient services to referred patients. In the Central and Para-Central Regions, the project will support the development of management reforms in the reconstructed/ rehabilitated hospitals that will seek to complement activities aimed at strengthening the primary care network. Here, the focus will be on establishing stronger links between hospitals and primary care facilities.

This component takes into account the synergistic relationship between nutrition and health and will integrate nutrition and health interventions to address the health problems of the beneficiary populations more effectively. Health services will be provided to the entire population and will consist of essential curative care, reproductive health and pre-natal care, and health promotion. Nutrition will consist of growth monitoring and promotion activities directed to all children under the age of two. Counseling will be directed to mothers and based on messages already being developed in El Salvador. Services will be provided at different levels: health centers, referrals to a backup hospital, and a community-based outreach model combining itinerant professional personnel and community-based promoters.

Interventions to extend and improve the delivery of basic health services will be complemented by activities aimed at establishing a management and accountability system that promotes and demands accountability of health providers. Activities include establishing planning and purchasing functions in the MOH, implementing a reformed decentralization strategy and management model, and strengthening MOH monitoring and evaluation capacity.

Subcomponent II.a: Coverage extension of essential health and nutrition services in impoverished rural areas ($8.2 million)

The basic health and nutrition package (BHNP) will be provided through community-based implementation arrangements involving the contracting and partnering of "service providers" – NGOs, foundations, cooperatives, and ISSS - with experience in providing health care. These service providers will be responsible for a defined number of communities within specified geographical areas. All providers will give assistance, training, and supervision to their personnel who are delivering services. Most providers will be contracted to provide the BHNP in targeted communities located in the Northern Region. These services will be financed pursuant to a service contract or partnering agreement. Contracted service providers will be selected through competitive least-cost (price and quality) bidding in accordance with Bank procurement guidelines as well as procedures set forth in the recently approved law N° 868 *Ley de Adquisiciones y Contrataciones de la Administración Pública (LACAP)*, the national procurement law. Based on an in-depth assessment of institutional capacity of potential service providers including their health service delivery experience and financial and human resource management capabilities, MOH has prepared a short-list of 15 qualified service providers that will be invited to participate in these implementation arrangements. MOH will sign service delivery contracts with selected service providers to provide the BHNP.

Targeting mechanisms have initially identified the 73 poorest and most underserved municipalities among the region's six departments. The total beneficiary population will number about 150,000. The beneficiaries live in areas where MOH providers are not present and will be provided with essential health and nutrition services by service providers through the development of public-private partnerships.

This subcomponent will finance the per capita cost of providing a package of health and nutrition services, estimated at $15 per year. The per capita payment is configured to cover salaries, supplies, minor equipment, pharmaceuticals, and transportation. The subcomponent will also support provider start-up costs related to training and consultancies. The training element will support the preparation of health personnel contracted to delivery the BHNP, while consultants will assist in the establishment of supervisory and reporting systems. To ensure the financial sustainability of the extension effort upon the completion of the project, financing will be transferred to GOES incrementally during the life of the project.

In an effort to hold contracted service providers accountable for their performance, the project will reimburse them (using a combination of withholdings and bonuses) according to performance benchmarks specified in the service contract with MOH. Service providers will assume (partial) financial risk for reaching (or exceeding) the benchmarks and as such, will have strong incentives to improve management, to innovate, and to increase their responsiveness to the clients. This will help to shift their focus from expenditure or inputs to achieving results. As mentioned below in the section describing Subcomponent II.c, implementing this mechanism will require the creation of strong contracting, monitoring, and evaluation capabilities within MOH.

Subcomponent II.b: Strengthening MOH's primary care service delivery in earthquake-affected areas ($5.4 million)

By financing minor equipment, essential drugs and medical supplies, technical assistance, and training, the project will support strengthening MOH care providers to deliver the BHNP to about 200,000 beneficiaries living in earthquake-affected areas of the Central and Para-Central Regions, focusing initially on 26 municipalities in three Departments (Cojutepeque, La Paz, and San

Vicente). These municipalities suffered major damage in the recent earthquakes, and the health status of the population is at risk given the recent reduction in economic activity, the precarious housing conditions, and the decline in access to health services. Mechanisms applied to target beneficiary municipalities include: indices of destroyed housing (averaging 70 percent of housing destroyed), the incidence of malnutrition (high or very high), and the location within the catchment areas of hospitals that will be reconstructed/rehabilitated under Component I. These populations will receive the same set of services provided to their Northern Region counterparts but through a strengthened MOH's primary care provider network. Unlike in the Northern Region, the MOH has a strong presence in the Central and Para-Central Regions; however, their service provision has been weakened as the result of earthquake-related damage.

This subcomponent aims to change the way in which populations receive essential health and nutrition services through MOH providers. First, rather than be delivered in a fragmented and uneven manner through vertical programs, the BHNP will be provided in an integrated fashion. Second, rather than relying on a physician as the principal care giver, a team approach will be developed. Third, rather than depending on facility-based provision, an outreach model will be introduced that takes the services to the communities. Rather than using abstract norms to guide clinical practice, feasible protocols will be applied. Implementation of activities will form part of a broader initiative, supported through Subcomponent II.c, to implement a reformulated decentralization strategy and management model aimed at establishing an incentive structure to improve MOH primary care provision.

Subcomponent II.c: Strengthening MOH capacity to plan coverage extension, to manage contracts and performance agreements, and to monitor and evaluate performance (US$2.9 million)

The "downstream" success of the service delivery activities supported in Subcomponents II.a and II.b will also depend on "upstream" interventions that reorient the MOH incentive structure toward results. These interventions also represent an important first step to separating the purchasing and provision functions within the MOH. To this end, this subcomponent will support a series of activities through a four-pronged strategy:[1] (i) developing planning, purchasing, and contract management functions; (ii) testing a decentralization strategy and management model; (iii) strengthening MOH's monitoring and evaluation capacity; and (iv) piloting an incentive scheme for MOH primary care teams.

First, through technical assistance and training, the project will support the development of planning, purchasing, and contract management functions within the MOH to oversee contracts with service providers as well as performance agreements issued to public providers. Here, the focus will be on developing the processes and procedures for responsible purchasing, charting plans and progress, selecting and evaluating providers, resolving conflicts and disputes, designing and issuing contracts (for private providers) and performance agreements (for public providers), and conducting financial reviews. These functions will be developed and implemented in the MOH through a "partnering" modality. This will consist of hiring a private firm or institution to perform these functions during the early stages of implementation while strengthening MOH capacity.[2] Through technical assistance and training, the firm will be responsible for establishing the organizational structures and fashioning the know-how to perform the functions within the MOH.

[1] Action plans for each activity supported by this Subcomponent are available in the project files.
[2] The team contemplates a firm for planning, purchasing, and contract management and another for monitoring and evaluation.

Gradually, responsibilities will be transferred to the MOH as the firms take on an oversight and technical backstop role. Considerable emphasis will be placed on increasing accountability and transparency within the MOH.

Second, MOH and the Bank have agreed to an overall decentralization strategy and management model to improve the organization and provision of MOH-provided primary care services. This strategy will be piloted in the Central and Para-Central Regions in support of activities to strengthen MOH primary care services there (Subcomponent II.b). It will consist of the following elements: (i) the development of region-specific health plans that prioritize health needs and corresponding activities, specify regional objectives, define institutional responsibilities for meeting the objectives, delineate referral systems, set clear and feasible performance indicators, and guide the design of performance agreements; (ii) the decentralization of managerial responsibility to organized and area-specific networks of primary care provider units that are accountable (to the MOH and clients) for the provision of BHNP; (iii) each network will be headed by a small management unit in which administrative costs will not exceed 2 percent of territorial expenditure; (iv) the introduction of performance agreements between MOH and these provider management units that set forth feasible and measurable performance benchmarks regarding coverage extension, efficiency, technical quality, and patient satisfaction; (v) the linking of the provision of equipment to progress in developing and implementing the management and delivery model; (vi) rewarding health teams for high performance through the introduction of a team-based incentive scheme; (vii) the development of community participation mechanisms that specify the role, responsibilities, accountability, and rules of interaction between community and provider; and (viii) continuous monitoring of performance-based targets set forth in the performance agreements. The project will support the implementation of this pilot through financing technical assistance, training, materials, and study tours.

The third strategy aims to strengthen the MOH's capacity to monitor and evaluate health programs and health service provision. This will involve an incremental, scale-up approach. Through training and communication activities, demand will be created within MOH and among universities and NGOs for developing monitoring and evaluation capacity. Similar to the development of planning, purchasing, and contract management functions described above, implementation will involve a "partnering" modality involving the contracting of and establishing collaborative links with local and international institutions to perform monitoring and evaluation functions during the early stages of implementation while strengthening MOH's monitoring and evaluation capacity. At first, the emphasis will be placed on implementing the project's evaluation and monitoring plan (see Annex 2e), including monitoring and evaluating the performance of contracted (private) and commissioned (public) providers supported through Subcomponents II.a and II.b. This will involve defining tracer indicators as well as planning for and implementing a baseline household survey in targeted catchment areas in the Northern, Central, and Para-Central Regions. In a subsequent stage, capacity will be developed and applied to other MOH activities such as public health programs and policy reform. Financing will support technical assistance, training, study tours, and development of information systems.

The fourth and final strategy involves piloting an incentive scheme for MOH primary care teams in the Northern, Central, and Para-Central Regions. To support quality improvement and performance monitoring, the project will develop and test and an incentive scheme for teams of MOH primary care workers providing basic health and nutrition services in the Central and Para-Central Regions under Component II. Primary care teams consisting of physicians, nurses, and community health workers will be the beneficiaries of the scheme. The awarding of incentives will be closely tied to achieving performance objectives as specified in performance agreements signed between the team, SIBASI management units and the MOH. The incentives will consist of training, technical

assistance, basic medical equipment, and instruments. The scheme will not award monetary incentives. The processes and criteria for selecting and awarding the incentives will be specified in the operation manual.

Component III: MOH Institutional Development for Policy Formation, National Priority Programs, and Support Systems (US$17.0 million)

This component seeks to strengthen the capacity of MOH to perform stewardship functions related to quality enhancement, health promotion, public health programs, disease surveillance, regulation, and performance-based monitoring and evaluation. This will be achieved by supporting investments linked to the adoption and implementation of an institutional strengthening and decentralization strategy. This component creates a financial instrument that provides an incentive for modernizing the institutional capacity by linking compliance with two sets of institutional modernization performance benchmarks to the financing of corresponding sets of investments. Complying with a set of benchmarks, will enable the borrower to access resources for financing seven investment areas: (1) environmental health; (2) hospital medical waste management and disposal; (3) control of vector-borne diseases; (4) the prevention and treatment of HIV/AIDS and STDS; (5) management systems; (6) information technology; and (7) communication strategies. The investments share a common framework with the objectives of the proposed project.

Subcomponent III.a: Institutional Modernization(US$1.1 million)

This subcomponent will finance technical assistance, training, studies, and study tours to support capacity building for the development and implementation of modernization policies, instruments, and strategies related to decentralization, health planning, community participation, the regulatory framework, resource allocation, and financial management. Progress in these areas will be gauged through compliance with a subset of benchmarks specified in the Institutional Modernization Matrix (IMBM) (see Annex 2b). The IMBM details modernization objectives and corresponding implementation performance benchmarks agreed with the government in support of MOH's institutional strengthening and decentralization strategy. Six functional areas are specified in the matrix: coverage extension, financing and resource allocation, regulation, public health programs, institutional strengthening, and community supervision. As part of normal project supervision, the Bank will review progress on complying with IMBM benchmarks.

This institutional strengthening and decentralization strategy sets the long-term mission, vision, and objectives of a modernized MOH capable of carrying out core stewardship functions related to sector policy formation, regulation, public health, targeting subsidies to the poor, and monitoring and evaluation. From a more short-term, operational standpoint, the strategy contains the following elements: (i) the adoption of a decentralization strategy that includes the replacing of current departmental management units with health district units, known as SIBASIs, with clearly defined functions and without raising MOH administrative costs; (ii) the development and implementation of instruments such as performance agreements and contracts to make health providers accountable to both the MOH and the clients they serve; (iii) the establishment of a unit within the MOH capable of monitoring and evaluating health services and programs systematically; (iv) the creation of purchasing unit within the MOH with the capacity to draft, negotiate, and manage performance agreements (with MOH providers) and service contracts (with non-governmental providers); (v) the establishment of effective surveillance systems for vector-borne diseases, HIV/AIDS, and STDS; and (vi) the introduction of community participation to support the delivery of basic health and nutrition services. The benchmarks of the IMBM provide an implementation road map to guide the institutional modernization process and keep it on course.

The government has agreed to adopt and implement the institutional strengthening and decentralization strategy. A draft strategy was discussed and reviewed during appraisal, and a final version is expected prior to effectiveness. As detailed below and in accordance with specific IMBM benchmarks, the adoption of the institutional strengthening and decentralization strategy is a condition for the disbursement of Phase I investments supported through this component, and the implementation of the strategy is a condition of the disbursement of Phase II investments (see below).

The design contemplates two IMBM reviews, each corresponding to compliance with a subset of benchmarks therein. Compliance reviews and the corresponding release of resources will occur in two phases, and the disbursements for each will be conditional upon compliance with the activities detailed below. The Phase I review will occur in the first year of implementation, and the Phase II review will occur in the second year. However, upon presentation of evidence satisfactory to the Bank of compliance with the benchmarks specified for each review, the disbursement conditions will be lifted. As described below, the disbursement conditions for each review will be placed in the Loan Agreement.

MOH and the Bank have agreed to include the following sets of investments as part of phase I: Hospital and Medical Waste Management and Disposal (no. 2); Detection and Control of Vector-borne Diseases (no. 2); Prevention and Control of HIV/AIDS and STDs (no. 3); and Communication Strategies (no. 6). These were selected during negotiations on the basis of their current priority within the MOH's near-term horizon. As a condition for the disbursement of Phase I investments, MOH will formally adopt an institutional strengthening and decentralization strategy that: (i) contains the long-term mission, vision, and objectives of a modernized MOH; (ii) defines the roles and competencies of health districts (SIBASIs) and eliminates Departmental Offices; (iii) reassigns MOH staff to the to-be-established SIBASIs without increasing MOH's administrative budget; (iv) applies performance agreements between MOH and SIBASIs; (v) uses performance-based targets for MOH providers within SIBASIs; and (vi) prepares territorial health plans.

As a condition of disbursement for Phase II investments, three additional sets of investments, i.e. Environmental Health Capacity Building (no. 1), Human Resource Management Systems (no. 5), and Information Technology (no. 7), MOH will have to have implemented the institutional strengthening strategy, presenting evidence of: (i) service contracts signed with at least five non-governmental providers, covering approximately 75,000 people; (ii) completion of baseline surveys for monitoring and evaluating the extension of basic health and nutrition services supported by Component II; and (iii) at least 3 SIBASIs functioning in earthquake-affected areas supported by Component II, including the signing of performance agreements with MOH, the preparation and implementation of at least one territorial health plan, and agreement reached on terms and indicators for the evaluation of SIBASIs.

The program review will be carried out by the Bank with the assistance of independent evaluators. MOH's oversight of compliance with the IMBM and disbursement conditions will the responsibility of the MOH Executive Committee. Headed by the Vice Minister, the Executive Committee comprises four Department and six Program directors. It is the principal decision making body in the MOH.

Subcomponent III.b: Investments to Strengthen MOH National Priority Programs (US$8.7 million)

Investments in MOH priority programs will support activities to assist MOH in implementing strategies related to environmental health including: institutional strengthening, toxic medical waste control, vector-borne diseases, and HIV/AIDS. Each investment was defined and agreed during project preparation. Detailed annual action plans have been prepared for each category of activities and are part of project files. The content of each is described below.

1. Environmental Health: The activity will support MOH's strategies aimed at strengthening the institutional capacity of MOH's key department for managing environmental health, *viz.*, the "*Gerencia de Atencion Integral de Salud Ambiental*" or GAISA, including (i) strengthen the policy, regulatory, and consulting role of the central level of GAISA and (ii) develop and nurture the capacity of local authorities to provide services efficiently using the a decentralized organizational structure. The restructuring of GAISA will change the functions of the staff of the department. The technical skills of the staff at the central and local levels and the qualifications of the sanitary inspectors will require adjustments and upgrading. The project will also strengthen the network of MOH laboratories and extend its coverage by increasing its capacity to obtain epidemiological information from testing and monitoring and to analyze samples of food, water, toxic substances, and vectors quickly, reliably, and with a high degree of specificity. It will finance technical assistance on supervisory functions, laboratory regulations and norms, training of laboratory technicians and sanitary inspectors, and procuring laboratory equipment as well as the basic office equipment needed at the central and local levels to implement health education and sanitary inspection activities.

2. Management and Disposal of Hospital Medical Waste: The project preparation team reviewed and analyzed the country's existing legal and regulatory framework for managing medical waste. There are legal instruments and an official policy to regulate the hazardous waste generated in health facilities. However, regulations and norms to implement the various steps in the process of managing medical waste need to be developed and revised. The MOH is assigned responsibility for applying the policy and law governing hospital waste, but enforcement is irregular. The preparation team also assessed current practices through a survey of hospitals and health centers using a systematic sample of 19 facilities (nine hospitals, nine health centers, and the central laboratory) and a semi-closed questionnaire. The results show that medical waste management and disposal outside of the metropolitan area is limited. Hospitals in departmental capitals have some mechanisms for separating, collecting, and packaging medical waste, but transport, treatment, and final disposition are unsatisfactory. Estimates of the quantity of toxic medical waste generated in the country are 8.5 tons per day (using an average of 0.65 kg per bed per day), of which 45 percent corresponds to the metropolitan area, which is estimated to treat 80 percent of its waste correctly. This means that only about 36 percent of the toxic medical waste generated in El Salvador is managed adequately.

Through financing technical assistance, the proposed project will support: (i) developing and applying technical norms and standards on handling and collecting medical waste inside health facilities and on transporting, treating, and disposing of the collected waste and (ii) developing a manual to describe the proper handling and disposal of medical waste in the seven hospitals in Component I and in the health centers in Component II. It will support providing training in the management of medical waste within the hospitals to medical staff and paramedical staff, not just to the personnel who work in the waste collection, removal, and storage process. Training in the operation and maintenance of the medical waste incinerators will be provided to at least three

people per hospital. The project will also finance the basic equipment required for waste management inside the hospital, including receptacles, containers, and autoclaves.

3. Detection and Control of Vector-borne Diseases with Emphasis on Dengue: Dengue was first recognized in El Salvador in 1980, and epidemics have occurred in 1993, 1994 and 1995. The most severe epidemic of dengue and of its severe form, dengue hemorrhagic fever (DHF), occurred in 2000. About 17,000 cases were reported, of which 3,248 were laboratory confirmed. Of these, 411 were DHF cases and 26 fatalities were reported. The existing weak dengue surveillance system leads to believe that many additional thousands of cases of dengue occurred but were never detected. The principal vector of the dengue virus is the mosquito *Aedes Aegypti*. Since there is no vaccine or other prophylactic measure for preventing dengue, it is necessary to control the mosquito vector or use personal protective measures.

By financing of technical assistance, training, laboratory equipment, and vehicles, the project will support the implementation of a three-step detection and prevention program: (i) laboratory-based surveillance for early diagnosis and treatment of dengue and DHF cases; (ii) the active participation of community members in the elimination and control of the larval habitats; and (iii) educating a group of health workers who in turn will train other health workers in early recognition of dengue activity. The national entomology program based in the Central Laboratory will be responsible for the epidemiological surveillance program.

4. Prevention and Control of HIV/AIDS and STDS: The country has initiated the implementation of a national strategy to prevent and detect HIV/AIDS and STDS that was developed in consultation with civil society. A treatment program including the provision of anti-retroviral drugs has been initiated. The limited resources made available for implementing the program have constrained its impact. This activity aims to improve the problem-solving capacity of the health services system and will support activities aimed at strengthening the country's capacity to detect, prevent, and control the transmission of HIV/AIDS and STDS. By financing technical assistance, training, minor rehabilitation of health facilities, the purchase of equipment, reagents, and pharmaceuticals, and of information, education, and communication inputs (except for national campaigns supported through investment no. 6 below), the project will support, (i) the training of health workers; (ii) the establishment of counseling and confidential testing centers; (iii) the creation of a confidential registry of HIV infections and AIDS cases; and (iv) the installation of a national epidemiological surveillance system. A National Human Rights Network will be established to promote non-discrimination in workplaces and schools and in terms of access to care, including confidentiality of the medical information of people with HIV/AIDS. Targeted information and education campaigns will be directed to high-risk groups (such as people with STDs, commercial sex workers, and homosexuals). These campaigns will enlist the support of NGOs to produce educational materials in cooperation with members of the target population and to distribute these educational materials. National media campaigns will be supported through investment no. 6, Communication Strategies (see below).

Health workers will be trained in how to change high-risk behaviors, prevent mother-to-child transmission through application of anti-retroviral therapy, case management and the needs of people living with HIV/AIDS, and preventive interventions targeting young people in high-risk environments such as prisons and street gangs. The project will also support the establishment of five counseling and confidential testing centers in MOH facilities located in urban and rural settings as well as one STD detection and treatment center in San Salvador.

A national epidemiological surveillance system for HIV/AIDS and STDS will: (i) improve HIV case detection by expanding sentinel sites (using prenatal clinics) and using a STD notification

system as a routine surveillance activity; (ii) establish a confidential registry of HIV infections and AIDS cases; (iii) monitor the behavior of high-risk populations; and (iv) produce annual prevalence studies. It will also support the production of a periodical HIV/AIDS epidemiology bulletin that will include in-depth epidemiological analysis and behavioral data and a training program for health workers to ensure a safe environment in health facilities.

Subcomponent III.c: Investments to strengthen MOH support systems (US$7.2 million)

One of the three development objectives of the proposed project is to extend the coverage of essential health and nutrition services by contracting with non-government organizations (NGOs) and by enhancing the quality, accessibility, and effectiveness of the services provided by MOH. It is critical to strengthen the MOH's support systems in order to achieve that objective. The project will help to strengthen the management systems of MOH that deal with people, information, and communication. Each investment was defined and agreed during project preparation. Detailed annual action plans have been prepared for each category of activities and are part of project files. The content of each is described below.

5. Human Resource Management Systems. The country has put into motion a new model of organizing and providing health care services that emphasizes decentralized management, community participation, purchasing, and accountability. These important structural and functional changes require a review of the role of the health professionals to ensure that their role adapts to changes in working conditions. By financing technical assistance, training, teaching materials, and furniture, the project will assist MOH in developing and/or adjusting the following personnel functions:

- Defining a human resources strategy that takes into account the objectives of a decentralized community-based service delivery model;
- Adjusting the legal framework for managing staff under a new service provision model;
- Designing and implementing a human resources management by redefining jobs and by developing instruments, norms, and procedures to be applied at the central, hospital, and decentralized levels;
- Updating and transferring personnel files to an electronic database;
- Developing and improving the management capabilities of managerial and supervisory staff and of management teams; and
- Implementing a continuing education program for managers at all levels in how to manage technical and non-technical staff and how to increase productivity.

6. Communication Strategies: A communication program was carried out during project preparation for the purposes of informing key stakeholders about the objectives, scope, and benefits of the proposed project. Specific targets of this communication were representatives in Congress to build understanding and consensus for the project's objectives. The design and implementation of a communication strategy for the proposed project has five activities:

- Preparing a strategy using inputs from health promoters and project communities;
- Designing an information campaign to inform potential project beneficiaries about the benefits and logistics of the project;
- Strengthening the social organization of project communities to promote knowledge, understanding, and ownership of the project;
- Designing and running national multimedia campaigns on the prevention and control of

HIV/AIDS and STDS, dengue, and other diseases; and

- Ongoing monitoring and periodic evaluation of the efficacy of the communications strategy and taking corrective measures to adjust strategies, plans, and actions.

Regarding the transmission of HIV/AIDS and STDs, communication strategies and corresponding media campaigns will be aimed at the general population to raise awareness and understanding of HIV/AIDS and STDs transmission. The messages of the first year of the campaign will be skewed towards pregnant women in order to stress the importance of early diagnosis to prevent mother-to-child transmission. The first year will also include information and education campaigns targeted to high-risk groups (such as people with STDs, commercial sex workers, and homosexuals) to increase their awareness of risk and how to prevent HIV infection.. These campaigns will enlist the support of NGOs to produce and distribute educational materials in cooperation with members of the target population.

The project will procure (by competitive bidding) the services of a specialized communication firm and a public relations firm, it will finance printed health education materials and radio and television spots, and will pay for meetings, workshops, transport, and other related expenses.

7. Information Technology: An international consulting firm carried out a diagnostic analysis and a needs analysis for the design and implementation of an integrated information system for the health sector. Using the information contained in that study and adapting it to the needs of the present project and to the financial constraints, the project preparation team has developed a coherent strategy that defines: (i) the communication technology requirements in terms of compatible hardware and software needs; (ii) a phased implementation program with anticipated results; (iii) a design of a management information system; and (iv) the human resources required to operate the communication and information systems, including a definition of their major responsibilities.

A communication system with its hardware and software, its cabling, emergency generators, hubs, and routers is a means to build a management information system that helps managers to make timely decisions to achieve the country's health sector objectives of extending coverage to the poor and underserved population, improving health conditions by reducing preventable mortality and morbidity, containing costs, increasing the allocation efficiency of limited financial resources, and enhancing the quality of services provided. The management information system for the six hospitals being replaced or rebuilt under Component I proposes a computerized patient scheduling system, billing and collection systems, and cost accounting systems.

The project will finance investments in new and upgradeable hardware, software, and training. Estimates of the number of workstations, printers, LAN and Wan equipment, and staff to be trained have been made during project preparation, and the associated costs are included in the financing plan.

Component IV: Project Management (US$4.8 million)

This component will finance part of the project management costs incurred by the PCU, the fee for the procurement agent for Components II, **III,** and IV should one be contracted, and for the design and implementation of the monitoring and evaluation system. The costs of monitoring Component I are included in Component I. The impact evaluation will be conducted for the project as a whole and thus will be financed out of Component IV. It will also finance annual audit reports for the full project on a declining basis.

Annex 2a: Detailed Description of the Emergency Reconstruction Component

(A Gantt chart is available upon request)

This annex consists of two sections. The first summarizes the overall damage caused by the two earthquakes, their impact on the Salvadoran economy, and the response of the government and donor community. The second section addresses the damage to the health sector, the response of the donor community and of the Bank to the earthquake's damage on the health sector, states the case for the Bank's involvement, and describes the proposed program for reconstructing seven of the most damaged public hospitals. The program description details what will be done, at what cost, how it will be financed, and what are the institutional arrangements for implementing the program, for procuring goods and works, and for monitoring and evaluation progress and outcomes.

A. Earthquake damage background

1. Overall damage caused by the two earthquakes

Located between three different continental seismic plates, Central America has been subject to frequent seismic and volcanic activity throughout its history. On January 13 and February 13, 2001, El Salvador was rocked by two powerful earthquakes followed by thousands of strong aftershocks. The first quake, measuring 7.6 on the Richter scale, occurred off the southern Pacific coast of El Salvador and was felt from Mexico to Panama. It was the strongest earthquake in El Salvador since the 1915 quake, with a magnitude of 7.9. The second quake, although lower in magnitude (6.6), was centered about 30 km southeast of San Salvador, causing further damage in an already serious situation. A previous earthquake in 1986 had killed 1,200 people.

The first earthquake's damage was greatest in the Departments of San Vicente, La Paz, and Usulután. The earthquake destroyed an estimated 150,000 homes, damaged another 170,000, and killed about 950 inhabitants. By the time the second large quake struck, the number of deaths increased to 1,260, and the number of homes destroyed reached 194,000. The second earthquake was more localized, causing heavy damage in the Departments of La Paz, San Vicente, San Salvador, and Cuscatlán. Some of the buildings that were partially damaged in the first earthquake were destroyed by the second. It is estimated that about one-fifth of the Salvadoran population was directly affected by the quakes by loss of life, the destruction of their homes, or the loss of their sources of income. Landslides and collapsed hillsides blocked the Pan American highway at two points and caused major damage in the coffee-growing areas. Physical infrastructure losses were significant, particularly affecting schools, hospitals and health clinics, cultural heritage sites, and small and medium-sized enterprises. With the exception of the coffee-growing areas, the country's agricultural production capacity was unharmed.

According to estimates prepared by the United Nations Economic Commission for Latin America and the Caribbean (ECLAC), the total amount of damage and loss, both direct and indirect, from the January 13, 2001 earthquake is estimated at US$1,255.4 million. Two-thirds of the damage incurred was direct. Direct costs or losses refer to the destruction of physical infrastructure (public and private) and equipment. Indirect losses or costs refer to losses in wages, production, market share, sales, tax revenue, and the actual cost of relief efforts and insurance compensation. Two-thirds of the damage was borne by the private sector. The earthquake damage was concentrated among the lower-income strata, but it did not affect the departments with highest poverty indicators.

The February 13, 2001 earthquake produced additional damages of more than US$348.5 million, increasing the damage caused by the first earthquake by 28 percent. About half of the damage was direct and also had a greater impact on the private sector. Altogether, damage from both quakes represented about 12 percent of the country's GDP in 2000.

Assessments of the damage indicate that the **social sectors** were the most severely affected (representing 40 percent of losses), with large losses in housing and social infrastructure. Housing was particularly affected in smaller urban centers and rural areas where low-income housing tends to be made of adobe and bahareque (plaited straw and mud panels on a wooden frame), neither of which are earthquake resistant. The earthquake magnified pre-existing housing disparities by level of income. It is estimated that approximately 1.6 million were left homeless. In rural and semi-urban areas where many families use the home for productive activities, the impact was greater. Particularly affected were female-headed households, which make up 28 percent of households.

The **health care** service suffered extensive damage. Altogether, 113 of the 361 MOH health facilities were affected, including 23 of 30 national hospitals, 82 health centers, and numerous other structures including departmental offices, labs, etc. Eight of the largest hospitals sustained important damage, while the remaining 15 will require less substantive repairs. The more damaged hospitals continue to operate under large tents, in trailers, and in other provisional structures while others have considerably reduced operations in the sections that were less damaged. Damaged health facilities account for 55 percent of health care delivery capacity. By the end of the second quake, more than 2,000 hospital beds were out of service, reducing capacity by 25 percent in a time of crisis. (See next section for details on the health sector)

The **education** sector also suffered significant losses. A total of 1,366 public facilities suffered damages, representing 28 percent of all facilities, of which 287 were either destroyed or suffered severe damage. Losses in the private sector were lower, with 55 (of 1,058) schools destroyed or suffering severe damage. Most of the damage occurred in San Salvador, Usulután, and La Paz. ECLAC estimates that nearly 430,000 students were affected by the damage to infrastructure, by not having access to a facility and by frequent suspension of classes and shorter sessions. **Cultural heritage** was also affected, including historical buildings, museums, archeological sites, valuables, archives, and private heritage facilities such as churches, libraries, and collections.

Infrastructure including transport and communications, water and sanitation, and energy sustained about 32 percent of the overall damage. Landslides affected more than 500 roads and highways, including the Pan-American highway, the main road across the country and the region, affecting regional trade and transportation and cutting off access to affected communities. Damage to roads increased the costs of trade and commerce. The **telecommunications** sector was interrupted due to a lack of electricity and a huge increase in demand. These problems, however, were resolved relatively quickly. **Water and sanitation** was most affected in the rural areas. About 8 percent of the 400 rural water and sanitation systems were damaged, mainly from the rupture of pipelines and destruction of well walls. The main damage to potable water systems in urban areas was storage and distribution tanks and supply lines. About 500,000, or 15 percent of urban residents connected to a supply of potable water were left without water. **Electricity** in the most severely affected areas was cut after both quakes (*as a precautionary measure*). Power was restored relatively quickly. Only minor damage was sustained by generating plants, and did not affect production capacity.

Productive Sectors suffered more limited losses, accounting for 20 percent of all damage. Small industries located in small towns and rural areas were the most severely affected. Only about 6

percent of facilities of medium and large-scale industries and the *maquila* industry were affected during the first earthquake, compared with more than 10,000 micro, small, and medium enterprises. Another 2,500 micro enterprises were damaged or destroyed during the second earthquake. A significant number of women employed in the informal sector in micro or small enterprises lost their jobs, in part because they head 71 percent of these enterprises. Damage to **agriculture** was more limited and affected primarily the coffee-growing region. Those suffering production and stock losses were mainly the smaller-sized enterprises, while larger enterprises were unaffected. All but 15 percent of the coffee had been harvested when the earthquake struck, but what remained unharvested was the higher quality, shade-grown coffee grown for export. Less than 3 percent of this high-grade coffee was recovered.

Environment and Vulnerability. As a result of the earthquakes, topsoil erosion from landslides and mudflows was significant and numerous slopes are now unstable. The main environmental effects of the January earthquake were loss of vegetation and forest cover, loss and degradation of soil, damage to basins and ravines from disposal of debris, salinization of soils and water tables, decrease in fishing catches along coastal areas, increase in vulnerability in event of new earthquakes and in the rainy season, and sedimentation in bodies of water during the rainy season. After the February earthquake, there was some environmental damage in the central areas of the country, which aggravated problems from the first event.

Summary of the Damages Caused by the January 13th and February 13th Earthquakes in El Salvador
(in million USD)

Sectors	Damage		
	Total	**Direct**	**Indirect**
Total	**1,603.8**	**938.8**	**665.0**
Social Services	616.7	496.4	120.3
Education	210.5	190.4	20.1
Health	72.4	55.9	16.5
Housing and settlements	333.8	250.1	83.7
Infrastructure	472.3	96.7	375.
Electricity	16.4	3.2	13.2
Water and sanitation	23.1	18.7	4.4
Transportation	432.8	74.8	358.0
Production	339.3	243.7	95.6
Agriculture and fishing	93.1	38.5	54.6
Industry, trade, tourism	246.2	205.2	41.0
Environmental Damages	102.5	102.0	0.5
Other damages and expenses	73.0	--	73.0

Source: ECLAC estimates, *The January 13, 2001 Earthquake in El Salvador. Socioeconomic and Environmental Impact*, ECLAC *and El Salvador: Evaluación del Terremoto del Martes, 13 de Febrero de 2001.*

2. Impact of the earthquakes on the economy

El Salvador's economy suffered a slowdown for the third consecutive year in 2000 with only a 2 percent GDP growth rate. There was a slowdown in the construction, agriculture (internal consumption), and trade sectors. In 2001, El Salvador introduced the U.S. dollar as legal tender,

and expected inflation to decline from 4.3 percent in 2000 to 2.5 percent beyond 2002, as Salvadoran and U.S. inflation rates converged as a result of monetary integration. Strong growth in maquila exports were expected as a result of the increased access to US markets through the Caribbean Basin Initiative, the current account deficit was expected to widen to about 3.5 percent due to reduced coffee exports and increased oil prices, and the central bank was planning to increase further the cushion of reserves in excess of base money. Fiscal measures were to be introduced to reduce the public deficit from 2.8 percent to 1.5 percent of GDP by 2003, and the regulation of the financial sector was to be strengthened.

In fact, El Salvador began 2001 with low inflation, relatively low public debt and net international reserves slightly in excess of base money, and there were reasonable prospects for a recovery in growth. However, the earthquakes clearly changed the improved economic outlook. Excluding the cost of reconstruction, the effect of the earthquakes was to reduce real economic growth to below 3.0 percent. Nevertheless, inflation is still projected to fall to its expected 3.0 percent. There is a risk, however, that a deterioration in social conditions could weaken confidence and impair prospects for economic growth. The key to this is the definition and establishment of an effective reconstruction plan. The total cost of reconstruction, as estimated by ECLAC, is more than US$1.9 billion, placing even greater pressure on already stretched public finance and domestic capacity for investment and saving. Together, the damage from both earthquakes represents about 12 percent of the country's GDP in 2000. El Salvador will have to finance the public sector deficit through loans from multilateral institutions and an international bond issue.

3. Government and donor response

The Government's emergency and reconstruction strategy and response

Measures taken by GOES during the Relief Phase: Emergency response to the earthquakes was relatively rapid and coordinated, due in part to the recent experience from Hurricane Mitch. El Salvador's National Emergency Committee (COEN) coordinated the overall response, compiling and conducting needs assessments, setting priorities, and coordinating with the Salvadoran Armed Forces and other national and international rescue organizations. The private sector established the National Solidarity Commission (CONASOL) to manage the distribution of foreign and domestic assistance (cash and in kind), ensuring transparency in the handling of assistance. Civil society also participated actively in the emergency work. The SUMA (Supply Management) data processing system was employed to track the inflows of assistance. Given that PAHO had already trained 40 staff to operate the system in response to the disasters suffered in the previous two years (Hurricane Mitch in 1998, droughts caused by El Niño in 1997 and 1998, and floods in the Lempa and Paz rivers in 1999), the distribution system was set up overnight. By mid-March, a total of 14,000 tons of in-kind donations had been received and distributed.

GOES response during the Reconstruction Phase. Soon after the first earthquake, all levels of government were mobilized to deal with the disaster. The Minister of the Economy was appointed to coordinate the reconstruction efforts. A *Plan for Recovery of the Damage Caused by the Earthquakes* was prepared by GOES and presented on March 7, 2001, at the IDB-convened Consultative Group Meeting for the Reconstruction of El Salvador in Madrid, Spain. The government's plan stresses transparency of assistance management, economic and political decentralization to ensure local needs are met, civil society participation in decision-making and oversight to increase accountability, risk management and strengthening capacity to deal with emergencies, and income generation for those affected. The plan foresees three phases, including: an Emergency Phase covering the period up to October 2001 when the rainy season ends and there will be no more risk of landslides nor floods; a Rehabilitation Phase extending from January to

May 2001 in which the effects of the earthquakes will be mitigated through the normalization of activities; and a Reconstruction Phase, which in the short run will focus on priority projects that also allow for the recuperation of the national and local economy.

Thus, the plan called for municipal governments to be responsible for distributing needed items to the affected population. The Social Investment Fund for Local Development (FISDL) managed the demand for temporary shelter modules. Government assistance focused on the shelters with support from international organizations and NGOs. The Salvadoran community outside El Salvador was generous and provided about US$500,000. In addition to providing emergency treatment to victims with its limited capacity, MOH distributed potable water, buried the dead and introduced preventive measures to prevent the spread of disease. The participation of CONASOL and the use of the SUMA system ensured transparency of operation.

In total, GOES has allocated US$241.2 million of its own funds to deal with the emergency and reconstruction. US$172.6 of this amount represents supplemental budget and US$50 million are emergency bonds. In addition, GOES requested multilateral Banks to reallocated funds from existing loans and has requested new lending to cover their reconstruction needs. A total of US$642.3 million was available for reconstruction as of June 2001. This excludes new lending from the World Bank.

Donor response. Immediately following the earthquakes, multilateral and bilateral donors mobilized to provide emergency relief supplies, search and rescue assistance, temporary shelter materials, water and sanitation assistance, medical care and supplies, and technical assistance. International assistance (more than US$4.5 million) arrived quickly with most of it channeled through bilateral organizations, NGOs, or directly to the affected communities. Temporary housing was provided for 33,000 people. The World Food Program (WFP) purchased supplies for provision of emergency food assistance and PAHO provided assistance for basic sanitation needs. USAID provided US$18.2 million for reconstruction, including US$2.8 for health, US$2.3 for education, US$1.3 for FISDL for reconstruction, and US$11.8 for housing.

Multilateral Banks redirected funds from ongoing operations and provided new lending. The Inter American Development Bank (IADB) reallocated a total of US$79.1 million and provided additional lending of US$180.9 million, for a total of US$260 million. Forty-one percent of financing was for FISDL and the Ministry of Public Works, and another 20 percent for education. The Central American Bank for Economic Integration (CABEI) provided US$87.7 million in new lending, of which US$35.0 was to cover housing needs, and another US$11.1 million for the reconstruction and repair of health facilities.

The Bank's response: The World Bank reallocated US$31.9 million in loan funds from the ongoing Secondary Education (Ln. 4224-ES) and Education Reform Loans (Ln. 4320-ES) to assist with the immediate reconstruction needs in the education sector. The Bank also reallocated US$3.3 million from the ongoing Agriculture Sector Reform and Investment Project (Ln.3576-ES) to assist in the reconstruction of small rural productive infrastructure and the reconstruction and repair of the Ministry of Agriculture infrastructure.

The government requested financial support from the Bank in June 2001 to reconstruct seven hospitals damaged in the earthquakes. The Bank has responded favorably and agreed to channel its support through a reformulation of the Health Services Extension Project that was already under preparation. The following adjustments were made: (a) incorporating the reconstruction and rehabilitation of seven heavily damaged hospitals and (b) expanding the scope of the primary health care extension component to include the central part of the country where the earthquake

had its major effects. The following section describes the proposed Bank program for reconstructing the seven hospitals.

B. The health sector reconstruction program

Government and donor response. The health sector sustained substantial damage: 113 of the 361 MOH health facilities were affected, including 23 of 30 national hospitals, 82 health centers, and repairs on miscellaneous structures including departmental offices and labs. Eight large hospitals sustained important damages and 15 require less substantive repairs. GOES has obtained funding for reconstruction from numerous sources, including IDB (US$20.7 million), CABEI (US$26.0 million), US$20.0 million from the Government of Japan, and approximately US$10.1 million from other sources. In addition, it is contributing about US$26.8 million of its own funds, including proceeds from the sale of Antel, treasury funds and Government bonds. The total US$103.6 million will finance the reconstruction of the Rosales Hospital, regional hospitals, health centers and other smaller health sector structures. The IDB operation will provide resources for the rehabilitation and reconstruction of the MOH primary care network (including 49 health centers) and general earthquake relief in the Central and Para-Central Regions, and will seek to "modernize" service in primary care facilities and in a limited number of MOH hospitals. With the exception of the Rosales hospital, which is to be financed by the Japanese Government, GOES has sought Bank financing for all of the major hospitals.

This figure does not include financing sought from the World Bank to finance the reconstruction and rehabilitation of the largest seven hospitals, and extend health services in earthquake affected Regions and the Northern Region for a total of US$165.7 million (with a loan amount of US$142.6 million, including the front-end fee), bringing the total for the reconstruction program to approximately US$270 million. The Bank will finance about 53 percent of the reconstruction program.

Rationale for Bank involvement: El Salvador will benefit from the financial and technical assistance of the World Bank to rehabilitate and replace seven severely damaged public hospitals, some of which are quite old, functionally obsolete, and had already suffered substantial deterioration from earlier lack of maintenance. First, the Bank's standards are high and require detailed assessments (of environmental, financial, participatory aspects and of the application of building codes). Second, building and equipping hospitals is capital-intensive and the Bank will act as a lender of last resort. Third, the Bank's technical assistance will ensure that the rehabilitated and reconstructed facilities will have a high degree of functionality, will be built according to international norms, will incorporate efficiencies in their designs that will reduce their operating costs, and will assist in organizing programs of preventive maintenance.

1. **The Bank's Country Assistance Strategy**: The new CAS takes into consideration the economic disruption caused by the earthquakes in January and February 2001and their devastating impact on health infrastructure and the redrawing of the poverty map. The CAS has an overriding reconstruction-cum-poverty reduction objective, aiming to reduce national poverty to 30-35 percent by year 2005, despite heavy losses due to earthquakes. The proposed project is the center piece of the Bank's emergency reconstruction assistance. First, the project will reconstruct seven large hospitals in earthquake-affected areas, render them more functional and make them more efficient and patient-friendly. Second, it will strengthen essential health and nutrition services in earthquake-affected and extremely poor areas by expanding coverage of essential services for the poor, supporting cost-effective health and nutrition interventions and improving their quality, strengthening environmental health programs, and implementing institutional reforms to improve the effectiveness and efficiency of poverty alleviation efforts.

2. **Lessons Learned From Previous Operations**: Key lessons from a previous earthquake reconstruction project in El Salvador indicate that a strong implementation unit is key to project success (Ln. 2873-ES). Effective implementation requires a strong coordinating entity with clear authority. Moreover, project design should be kept simple. Experience with other emergency operations elsewhere (OED Précis # 174, 1998) echoes the same lessons, and notes the need to ensure that stakeholders (IEU/MOH and the CMF) review all designs prior to entering the bidding process to reduce the quantity of future contract variations. To ensure timeliness, implementing agencies should take into account the scope and complexity of work, and the capacity of the local contractors in estimating construction periods for project execution. Damage and needs assessments should be undertaken prior to effectiveness.

3. **Proposed Project Component: Emergency Reconstruction of MOH Hospital Network in Earthquake-affected Areas** (US$127.0 million).

Objectives of the Component:

a) Rehabilitate/Reconstruct seven hospitals, in line with current seismic codes;
b) Make the seven hospitals more functional and integrate them into a health network; and
c) Develop and implement a preventive maintenance program for buildings and equipment

Project Design Alternatives Considered: Initially the hospital reconstruction component was conceived as a free-standing emergency project to ensure faster processing and approval. However, it became clear that it will not be wise to de-link it from other health sector interventions under preparation as the decisions regarding the nature and location of services to be provided depends on the state of both primary and higher levels of care. The current project will be analyzing the functionality of the health care network with the objective of identifying where services should be strengthened and what they should consist of. Excluding the primary care network from the analysis and interventions could result in rebuilt hospital infrastructure without an adequate attention to improving the system of health costs of which they represent a substantial part.

Component Description:

Subcomponent I.a: Reconstruction and Rehabilitation of Seven Earthquake-Damaged Hospitals ($122.7 million)

Public Hospitals in El Salvador

Prior to the earthquakes, the public sector in El Salvador had 30 MOH managed hospitals with a total of 4,843 beds. This network of publicly financed hospitals mainly serves the poor as better-off Salvadorans tend to seek care in the private sector and most salaried workers have access to the health care facilities of the Social Security Institute. These 30 hospitals are supposed to provide secondary and tertiary level care although most also provide primary and first contact level care and the equipment and supplies for tertiary care level are quite minimal. They range in size between 100 and 500 beds. Together they employ 11,424 people or 2.4 staff per bed. On average, about 93 percent of operating costs were financed with public funds, and 7 percent through cost recovery initiatives. About 74 percent of the operating budget was spent on personnel in 2000 versus 63 percent in 1997. The proportion spent on drugs also increased from 12 to close to 16 percent, leaving only 10 percent for other expenditures such as maintenance, transport, medical supplies, and equipment.

Public Hospitals included in the Project

The two earthquakes caused damage to 23 of the 30 public hospitals that ranges from minor non-structural damage to fifteen of them to medium and high damage in the others requiring rehabilitation or replacement. This project will rehabilitate three and partially or fully replace four of the most heavily damaged hospitals (Table 1):

a) Three of the seven hospitals (San Juan de Dios in San Miguel, Santa Teresa in Zacatecoluca and San Pedro in Usulután) will be rehabilitated and part of the equipment replaced.
b) The tower of San Rafael Hospital will be rehabilitated and the rest of the hospital replaced.
c) Two hospitals (Santa Gertrudis in San Vicente and Cojutepeque in Cuscatlán) while sustaining somewhat less damage, will be replaced because their functional obsolescence poses a greater danger to patients than the damage caused by the earthquakes. Cojutepeque will also be re-sited.
d) The National Maternity sustained considerable damage and will be rebuilt but not necessarily on the same site.

Rehabilitation will reinforce existing structures to ensure that they meet current seismic construction standards. Hospitals will be reconstructed in phases so as to permit partial use of facilities at all times, reducing exposure to precarious temporary facilities and eliminating the need to locate or construct alternative less permanent structures. Much of medical and non-medical equipment will require replacement. Equipment will include cabling needed to install computerized management information systems, and equipment needed to dispose of medical waste.

The project will finance the preparation of damage assessments, and rehabilitation and replacement designs in the amount of US$2.8 million, the replacement of approximately 65,650 square meters, and the rehabilitation of approximately 57,700 square meters, for a total of approximately US$123 million. The project will also finance medical and non-medical equipment for a total of US$34.1 million. The project will also finance quarterly technical and financial audits (special audit reports) in the amount of $0.9 million. The details of the pre-earthquake capacity and current status of each hospital are included below.

Statistical Profile of the Seven Hospitals

These hospitals have been constructed over a long time period, with the first of them having been constructed as much as 175 years ago and the most recent addition only three years ago. All seven hospitals show good inpatient utilization figures with short lengths of stay and high occupancy levels (Table 3). Outpatient and emergency departments also indicate high utilization. Emergency visits in two hospitals are higher than outpatient visits suggesting an inappropriate use of the emergency rooms. Most hospitals have 1.5 to 2 nurses per physician (Table 2) which is a much more favorable ratio than the one often found in most LAC countries. Also all hospitals appear adequately staffed with a range of 2.2 to 3.5 staff per occupied bed. Thus utilization and staffing of the seven hospitals prior to the earthquakes are satisfactory.

Table 1: Public Sector Hospitals to be Replaced/Rehabilitated

Hospital	Age (in years)	Degree of Damage*	Action Recommended	Pre-earthquake # of Beds	Sq. Meters Built	Population Served (2001)
San Juan de Dios in San Miguel	25	Medium	Rehabilitate	540	37,126	331,683
San Rafael in La Libertad	25-113	High	Partial rehab & replace	230	15,902	702,340
Santa Teresa in Zacatecoluca	35	Med/High	Rehabilitate	175	10,300	296,145
San Pedro in Usulután	28	Medium	Rehabilitate	130	10,300	195,242
Santa Gertrudis in San Vicente	3-153	Med	Replace on same site	130	16,530	164,670
Cojutepeque in Cuscatlán	35-175	Med	Replace and resite	90	3,380	182,602
Maternidad Nacional in San Salvador	20-48	Med/High	Replace and resite	398	15,900	National – only OB/GYN

*Degree of Damage as reported by WHO/PAHO:

Structural and Functional Assessment of the Seven Hospitals

The seven hospitals are deficient in three areas: earthquake damage, functional obsolescence, and lack of maintenance. All hospitals suffered some degree of structural damage. How much damage the earthquakes caused in each hospital is described in detail below. Functional shortcomings derive from two sources: obsolescence of design and of flows of patients, staff and materials, and earlier construction not applying international standards regulating the hospital environment in terms of asepsis, ventilation, and patient and staff safety. Maintenance budgets have traditionally been low and have decreased even more as personnel costs and the cost of pharmaceuticals have taken a larger bite out of the budget. These two expenditure categories accounted for 90 percent of a typical hospital budget in 2000. The combined impact of the earthquake damage, functional obsolescence, and gradual physical deterioration for lack of maintenance is such that the degree of reconstruction and rehabilitation required exceeds the net effects of the January and February 2001 earthquakes. Therefore, the outcome of the proposed emergency reconstruction program will not be a replica of the facilities that existed before the earthquakes. Instead, it will produce a set of hospitals that will possibly have fewer beds, larger and more patient-friendly outpatient areas, new and more efficient technologies including the provision of ambulatory surgery and "day" hospital care, and have a functional design that takes into account efficiencies in operating cost.

Table 2: Staffing of Project Hospitals, 1999

Hospital	Physicians	Nurses	Other	Total	Staff per occupied bed
San Juan de Dios in San Miguel	213	353	379	945	2.5
San Rafael in La Libertad	71	157	221	449	2.2
Santa Teresa in Zacatecoluca	73	93	219	372	3.0
San Pedro de Usulutan	48	127	162	337	2.8
Santa Gertrudis in San Vicente	48	143	203	394	3.5
Cojutepeque in Cuscatlán	30	48	106	184	2.7
Maternidad Nacional in San Salvador	181	306	241	728	2.4

Source: PAHO/WHO except last column from World Bank calculations

Table 3: Hospital Statistics 1999

Hospital	Discharges	Number of Patient Days	Medical Outpatient Visits	Emergency Room Visits	Percent Occupancy	Average Length of Stay in days
San Juan de Dios in San Miguel	26,854	142,225	146,998	76,095	97	5
San Rafael in La Libertad	18,289	74,004	71,995	53,513	89	4
Santa Teresa in Zacatecoluca	11,982	45,789	43,021	50,956	77	4
San Pedro de Usulutan	11,658	44,140	51,344	66,764	87	4
Santa Gertrudis in San Vicente	10,275	38,003	44,980	35,081	80	4
Cojutepeque in Cuscatlán	7,028	24,727	40,396	17,853	75	4
Maternidad Nacional in San Salvador	30,665	109,111	81,882	37,022	98	3

Source: MOH – Planning Directorate – Health Information Management Unit

Hospital-Specific Descriptions and Evaluations

San Juan de Dios in San Miguel

The service area of this tertiary care referral hospital is about 1.4 million people. Construction of this six-story building on a large lot (70,000 square meters) was finished in 1975, and it took 10 years to reach full operation. The hospital houses 540 beds, of which 120 are rented to the ISSS; 18 specialty and four general clinics with 22 consulting rooms; six major and three minor operating theaters; five delivery rooms; and diagnostic support services consisting of imaging, blood bank, clinical and anatomo-pathological laboratories, ultrasound, pharmacy and physiotherapy. Its biomedical equipment is technologically of low complexity, insufficient and cannot meet the service provision objectives of a tertiary-level care referral hospital. The degree of earthquake damage is judged to be medium. Currently only the two lower floors are being used and the number of beds in use has been sharply reduced. This hospital will be rehabilitated

San Rafael in La Libertad

This hospital was built over a period of 100 years and serves a population of about 700,000. The 16,000 square meters of constructed area on a 20,000 square meter lot consists of a five-story tower built in 1976, and one two-story and three one-story older buildings of which the original one was built in 1860. Service complexity is between a secondary and tertiary-level care facility with 240 beds, four general and 18 specialty clinics, four delivery rooms, five major and one minor operating theaters supported by basic diagnostic services such as radiology, clinical laboratory, ultrasound, blood bank, pharmacy and physical therapy. Earthquake damage is estimated to be high with the older buildings requiring replacement and the tower requiring substantial rehabilitation. Presently hospitalization and surgical services are provided in temporary facilities on an emergency basis, and mobile units may be needed to restore some of the services while reconstruction takes place. Furthermore, the physical separation between the older buildings and the tower with the consequent need of transporting patients on stretchers and in wheelchairs between buildings makes the current layout quite dysfunctional. The project will rehabilitate the five-story tower and replace the other buildings according to a functional program that will link the old and new facilities more efficiently.

Santa Teresa in Zacatecoluca

The hospital was finished in 1971 and opened its doors in 1972 to serve the 300,000 people in the Zacatecoluca Department. This is a secondary-level care hospital of 175 beds with two six-story towers and a built area of about 10,000 square meters on a large lot of 34,200 square meters. The bed capacity supports two delivery rooms and five major operating rooms and one minor operating room. It has four general and 12 specialty clinics in 12 consulting rooms and diagnostic support with radiology, endoscopy, clinical laboratory, blood bank, pharmacy, and physiotherapy. Earthquake damage was substantial, and the two towers have been evacuated for safety reasons. Outpatient care and some diagnostic services are provided currently on the ground level. The hospital is located on the slopes of a volcano and its safety can be improved by simple drainage of rainwater in already identified ravines. This hospital will be rehabilitated.

San Pedro de Usulutan

A smaller (130 beds and 10,000 square meters of built space) and more recently constructed (1972) hospital, it serves the 300,000 people in the Usulutan Department. Its service complexity varies between secondary and tertiary-level care with four general clinics and five specialty clinics (Cardiology, Neonatal, ENT, Orthopedics and Plastic Surgery), and two delivery rooms and four operating rooms. Its diagnostic support equipment is quite standard for a secondary-level care hospital (radiology, EKG, ultrasound, clinical laboratory, blood bank, pharmacy and physiotherapy). Earthquake damage is moderate but here, too, the towers have been evacuated for safety reasons and only the ground floor is used for pediatric inpatients, offices, stores and minor service units. Rehabilitation could, therefore, be done quickly without the complications of the building being occupied.

Santa Gertrudis in San Vicente

This is also one of the smaller hospitals (130 beds) serving the population of the San Vicente Department (165,000) that was built in a pavilion style design (six one-story buildings) over a period of more than 100 years on a large lot of 67,000 square meters. Its service complexity is similar to other departmental hospitals with four general and 10 specialty clinics, one delivery room, five operating rooms and the usual secondary level diagnostic equipment. Its pavilion design protected the hospital from major earthquake damage and most services are operating in their original space with a few minor exceptions. However, the very design that protected the hospital against major earthquake damage makes it a highly dysfunctional health care facility and replacement is recommended for functional obsolescence and high operating cost reasons. The hospital will be replaced on the same site.

Cojutepeque in Cuscatlán

The smallest of the seven hospitals (90 beds) serves a slightly larger population (240,000) than the inhabitants of the Cuscatlan Department (182,000). Its 3,400 square meters of built area are one one-story building and two two-story buildings. One of these constructions was erected in 1827. Its clinical problem solving capability is one of secondary care level with a delivery room, two operating rooms, 10 consulting rooms, and the usual low level diagnostic support. About half of the services are functioning today. As in the case of the San Gertrudis hospital, its low-level design protected the hospital from major earthquake damage but these same design features - as well as its age and its location on a mountain slope - require replacing it for functional and operational cost saving reasons on a different site.

Maternidad Nacional in San Salvador

The National Maternity Hospital is a specialized obstetric and gynecology referral hospital located in the downtown area of the capital city of San Salvador. One three-story building was built in 1954, one two-story building was erected in 1960, and a gynecology clinic was added in 1982. Its bed capacity is listed as 404 beds, but this number includes 60 beds for newborns so its actual bed capacity is 344. Of the seven hospitals, it has the least square meters per bed (about 40 square meters per bed) and the smallest site (7,000 square meters). Utilization is very high with a close to 100 percent occupancy level that leaves no margin for peaks, and it has a short three-day average length of stay. It has eight delivery rooms, 10 operating rooms, some advanced imaging equipment (tomography), and other diagnostic support services such as blood bank, clinical and anatomo-pathological laboratories, ultrasound, and pharmacy.

This national specialty hospital faces several issues. First, earthquake damaged was substantial and several services have been shut down: the number of beds has been reduced to 225, several operating rooms are closed, and support services are housed in temporary buildings. Second, there is general agreement that the design is not functional as the hospital was not conceived as one facility but is an aggregation of buildings assembled over a 30-year time span. Third, services provided at a national referral hospital should be at the highest level of clinical problem solving. Yet the hospital receives and treats patients with all levels of complexity, thereby negating its mission as a specialized facility. On the positive side, its downtown location offers good accessibility to patients (but not to staff).

The Maternidad Nacional Hospital is the most complex case among the seven hospitals and proposed siting, functions, and relationships with other health facilities will require careful consideration.

Subcomponent I.b: Corrective and Preventive Maintenance (US$3.1 million).

As part of the decentralization of health services, MOH has designed an integrated maintenance program for all levels of care with support from GTZ. The integrated maintenance system (IMS) incorporates all members of the healthcare community, from beneficiaries to providers, in the maintenance program. The community is organized to care for the exteriors (such as the garden and painting) of facilities and some of the interior cleaning. Volunteer hospital staff take care of the less complex functions and all operators of equipment are responsible for the proper maintenance and care for their equipment. The maintenance department in each hospital is in charge of the planning, management and supervision of the program. More complex maintenance activities are contracted out. The community and non-specialists will be involved in the lower levels of care. At the hospital level, much of the maintenance will be subcontracted out. Implementation of the program, however, has just begun. Implementation is to be done in five phases: (a) sensitization of all staff that will be involved in maintenance activities; (b) preparing an inventory of buildings and equipment; (c) training of all generalist staff working on maintenance; (d) training of equipment operators; and (e) organizing the maintenance program, including the preparation of protocols and manuals for the three levels of care. To date, only the second phase and part of the first have been completed, and the supplies needed for repairing and maintaining equipment have not been provided. The project will support the strengthening of MOH's integrated preventive maintenance program by financing technical assistance for the preparation and testing of maintenance protocols and manuals for the three levels of care and training of staff (approximately US$1.0 million). The project will also support a comprehensive preventive maintenance program for the hospitals being reconstructed under this component. Financing for building and equipment maintenance will be provided by counterpart funding for a total of US$2.1 million. New biomedical equipment will be

under warranty and, upon expiration of the warranty period, will be under service contracts.

This component will also finance a small unit (IEU) within the MOH which will oversee implementation of this component, the monitoring of the component activities and its supervision. Quarterly technical and financial audits (special audit reports) of component I activities would also be supported.

Component Costs and Financing:

The total costs of GOES's reconstruction program are estimated at approximately US$270 million. The loan will finance 53 percent of the program or US$142.6 million.

HOSPITAL	Civil Works	Equip	Consultants	Grand total
San Juan de Dios, San Miguel	5.5	11.0		16.5
Santa Teresa, Zacatecoluca	2.7	3.0		5.7
San Pedro, Usulután	2.2	2.6		4.8
San Rafael, La Libertad	1.7	3.5		15.2
Cojutepeque, Cuscatlán	6.1	2.0		8.1
Maternidad, San Salvador	21.2	8.7		29.9
Santa Gertrudis, San Vicente	10.0	3.0		13.0
SubTotal	59.4	33.8		93.2
Designs (3.0%)			2.8	
Management (5%)			4.7	
Supervision (6%)			5.6	
Technical/Financial Audits (1%)			0.9	
Price Contingencies 6%				6.2
Physical Contingencies 10%				9.3
Grand total				122.7

Institutional Arrangements and Project Implementation

Institutional Arrangements

Executing Agencies: MOH will have the overall responsibility for implementing the proposed component. This responsibility will fall on the PCU for this component, hereafter referred to as the IEU (Infrastructure Executing Unit). MOH will select and contract a Construction Management firm (CMF), using Bank Consultant Guidelines, to execute Component I. The cost of the IEU and the will be financed by the project. Responsibilities of the IEU for Component I and the PCU for Components II and III are described separately, given the different nature of their activities.

Infrastructure Executing Unit (IEU): The IEU will coordinate closely with the PCU for Components II and III and will report directly to the Minister's office. It will be an independent unit with separate reporting arrangements within the MOH. The IEU will consist of a high level, full-time civil engineer or architect, with ample management and construction experience, and experience with Bank procedures, who will head the IEU and will be assisted by a part-time legal

counsel (on retainer). The IEU will share a financial unit with the PCU, and will have staff within the financial unit assigned specifically to manage finance and administration for Component I.

In order to ensure fluid and opportune implementation of this component, agreement has been reached with GOES to subcontract out the implementation of the activities in Subcomponent I.a to a private construction management firm. The construction management firm (to be selected using Bank Consultant Guidelines and under terms of reference previously agreed with the Bank) will function as the implementing entity, leaving only decision making on bid awards/contracting, requests for disbursement and payment for contracts to MOH. The construction management firm will function as the implementing entity, leaving only decision making on bid awards/contracting, requests for disbursement and payment for contracts to MOH. The firm will: (a) review final designs provided by MOH; (b) prepare a construction procurement plan; (c) prepare technical specifications; (d) prepare and conduct the bidding processes for the reconstruction and rehabilitation of the hospitals (a member of the IEU will be included in the evaluation committee to make an award recommendation to MOH); (e) verify the equipment inventory prepared by the MOH; (f) prepare an equipment procurement plan; (g) prepare technical specifications for equipment; (h) prepare and conduct the bidding processes for equipment (a member of the IEU will be included in the evaluation committee to make an award recommendation to MOH); (i) prepare contracts for contractors and supervise their work; (j) prepare payment orders and their documentation for contractors; (k) prepare contract amendments and the necessary documentation; (l) manage breach of contracts and contractor complaints; (m) maintain contract accounts and prepare contract management reports in a manner acceptable to the Bank; (n) prepare periodic reports for physical/financial and procurement plan monitoring; (o) prepare all technical and financial reports requested by GOES, MOH and IBRD, and, (p) prepare SOEs for replenishment of the Special Account. The contract with the CMF will give it full responsibility for the quality of the construction and the opportune implementation of contract schedules. It will be responsible for contracting the necessary inspectors.

The role of the Infrastructure Executing Unit (IEU) in MOH will be limited to a review of documents prepare by the contract management firm for completeness to ensure that they are complying with agreed procedures, draft and process construction contracts, prepare SOEs, and send the necessary documentation for the Bank's no objection and when necessary, to the Office of the Minister for signature and the IEU will also spot check and verify the information provided by the firm in its technical and financial reports. It will also manage the project account for the Component through the Project financial unit.

(For a detailed description of the roles of the construction management firm vis-à-vis MOH Infrastructure Executing Unit, and their staffing see Table below).

Functions of Firm vis-à-vis MOH Infrastructure Executing Unit

	Construction Management Firm	MOH/Infrastructure Executing Unit
	Financial	
Info System for Project/IBRD needs	Set up and maintain financial and management information system independent of its own operations to follow up on contract execution, and to be able to provide IBRD with timely information on component accounts and contract progress.	Will have access to the MIS when necessary.
Reports		Prepare PMRs and send to IBRD
Payment	Prepares payment orders and their documentation for review and signature of Ministry	Reviews completeness of payment orders and makes payments
Replenishment of Special Account		Prepares SOEs and send to IBRD
Auditing		Prepares TORs for auditing—contracting will be done from the PCU.
	Procurement	
Planning	Prepare annual procurement plan for component for the year.	Review and submit Procurement Plan to IBRD for n.o.
Bidding	Prepares procurement notices, bidding documents, and conducts bidding process, making recommendation to MOH	Reviews completeness of bidding docs, sends to IBRD for n.o., participates in bidding committee, presents results to Minister and obtains clearance for drafting of contract
Contracts	Prepares contracts (for MOH) for construction firms and equipment providers	Obtains n.o. from IBRD, obtains contract signature by Minister (a maximum of 8 contracts are foreseen)
	Supervision/Implementation	
Planning	Carries out all preparatory activities to initiate contract, prepares supervision plan for each contract, prepares contract resolution procedures, agrees on reporting arrangements with MOH/IBRD.	Reviews supervision plan and agrees on reporting arrangements in consultation with IBRD
Supervision	Supervises physical and financial execution of each contract (quantity, quality)	Conduct spot checks of information reported by Firm
Construction Management	Manages contractor breach of contract or contractor complaints	
Reporting	Prepare reports on contract management for MOH, IBRD, GOES as needed (monthly for MOH, quarterly for IBRD)	Reviews and submits reports to GOES/IBRD

	Disbursement	
Setting up Special Account		Ensure MOF sets up Special Account
Open Project Account		Open Account in Commercial Bank to receive S.A. transfers
Planning	Prepare annual disbursement projections for the year.	Include disbursement projections in annual implementation plan
Replenishment of Special Account		Prepare SOEs and withdrawal applications for replenishment of SA
	Staffing for CMF	**Staffing for IEU**
	Unit Manager (unit dedicated to the component)	Civil Engineer, Architect
	Civil Works Specialist Part-time Equipment Specialist	Legal Counsel (on retainer)
	Finance and Administration Specialist	Financial Unit (USEFI)
	Legal Counsel (part time)	

Professional Profile of Construction Management Firm

At least five years of legal existence, including necessary permits, etc. as construction management firm working in the preparation, supervision and management of civil works projects.
At least three years experience in the preparation, supervision and management of construction of large high complexity buildings, such as industrial buildings, hotels, or hospitals.

Demonstrate an accumulated experience in the preparation of engineering and architectural projects of at least 20,000 square meters including works of at least 3,000 square meters each.
Demonstrate experience in the supervision of construction contracts (US$30 million in the last three years).
Should have some experience, preferably, with the management of infrastructure projects as a coordinating or technical unit.

Component Implementation

The reconstruction and rehabilitation of hospitals entail at least three phases: feasibility, design and construction. These are described below. (Refer to Gant Chart for overall time frame for implementation).

Feasibility Phase (to be completed mostly during project preparation and all prior to effectiveness):

This phase includes the analysis of the structural damage and internal functionality of the each hospital and an analysis of the functionality of the hospitals within the context of the overall health network. The final product will be a master plan for the hospital network, outlining what services will be delivered where, the level of technology that will be sought, and how the different facilities and levels of care are linked with one another.

As part of project preparation, an initial detailed analysis of the damage suffered by each hospital was conducted to determine the feasibility of rehabilitating each structure, and the estimated cost of rehabilitating versus reconstructing it. In addition, the Pan American Health Organization

conducted two assessments of the damage (without cost estimates). The conclusions of the analyses were similar although the estimated costs of reconstruction varied. Overall, the reports generally agreed on the recommendations.

Rehabilitation: All reports have agreed that the San Juan de Dios Hospital in San Miguel, San Pedro Hospital in Usulután, the central tower of the San Rafael Hospital in La Libertad, and the Zacatecoluca hospital should be rehabilitated.

Replacement: There was agreement that the rest of the San Rafael Hospital and the Maternidad Nacional in San Salvador should be replaced due to the damage suffered. In addition, there was agreement that the Cojutepeque Hospital in Cuscatlán and the Santa Gertrudis Hospital in San Vicente should be reconstructed due not just to the damage suffered but to the dysfunctional of the current structures, as the conditions of the hospitals pose an even greater threat to patient's health than the damage caused by the earthquake.

A study under way as part of preparation functional analysis of the health network will propose a strategy and a plan to improve the functionality of the MOH hospital network to: (i) redefine the match between services, human resources, infrastructure and technology; and (iii) propose an orderly distribution of facilities and services based on functional criteria, demand and referral flows with special focus in seven hospital facilities. This study will identify the service needs of each hospital, leading to changes in technology with a likely greater emphasis on ambulatory care and day hospitals, and possibly reducing the number of needed beds. The results will be reflected in a Master Investment Plan for the health network in the project area. This study is being conducted simultaneously with the detailed structural analyses but will provide key inputs for the proposals derived from the structural studies. This master plan will become a policy document to guide MOH. This study will be completed by November, and the Master Plan before December 1, 2001.

Detailed structural analyses are being conducted in the two of he three hospitals to be rehabilitated (San Miguel and Usulután). These studies will provide detailed analyses of what was damaged, an internal functionality analysis, and provide solutions to their rehabilitation, bring them up to current seismic code standards and estimate costs. . The final designs will take into account results of the functional analysis of the health network (described above) to ensure that functionality of the network is improved. Together with the results of the functional analysis, these will specify the equipment to be purchased. Final lists of eligible equipment will be completed by end of November 2001 and will be reviewed by the Bank.

A final activity under the feasibility stage is the identification and evaluation of alternative sites for the three hospitals that GOES wants to relocate. Site selection will take into account the size, site configuration, access by public transportation, cost, topography, water quality, soil quality, readiness for construction, and environmental aspects (pollutants, noise, congestion). GOES has agreed to complete site selection by end of November 2001. The selection will imply the previous topographical and general environmental studies have been conducted so that there are assurances the hospital will not have to be re-sited again. The detailed environmental impact analysis will be conducted during the detailed design phase. GOES will send the site selection for each of the hospitals to be relocated with the necessary assessments to the Bank by November. The locations of the sites being considered were submitted to the Bank during negotiations and were visited during appraisal.

Design Phase:

The design phase includes the preparation of design briefs on each hospital, containing details of the requirements for each hospital (as identified in the master plan), the preparation of design proposals and schematic designs of the selected proposal, and finally, the detailed design. As part of the design phase, technical environmental specifications for construction management will be prepared that will be applied to all works.

Rehabilitation: Design briefs for the three hospitals to be rehabilitated will be prepared, indicating what modifications need to be introduced to improve the internal functionality of the hospital, reinforce the structure so that it meets current seismic code standards, and so that it is well integrated into the health network. Design briefs will also indicate whether or not the hospitals are to be rehabilitated in stages so as to permit partial use of facilities at all times. Design briefs will be reviewed and approved by MOH and validated by the CMF and sent to the Bank to ensure that it has no objection.

Once design briefs are finalized, focus group discussions will be held with groups of users of the hospitals to inquire as to their perceptions regarding the pre-earthquake structures, and reaction to the proposed modifications to the previous structure and services. Results of these focus group discussions will feed in to the designs and ensure acceptability.

Based on these design briefs, designs for the three structures to be rehabilitated (San Miguel, Zacatecoluca and Usulután) will be finalized. These will be reviewed both by MOH/IEU and the CMF. This will help to minimize any amendments to the original designs. It is expected that these designs will be finalized by mid-January 2002. Should any of these hospitals require an extension, an environmental impact assessment will have to be conducted before the designs are finalized. Simultaneously, and based on the inventory of equipment, equipment needs will be identified. The CMF will be responsible for preparing a plan for the procurement of equipment.

In the case of San Rafael, the structural analysis of the damage to the remaining building and the design of the new structure will be handled by the same engineers/architects, and will not be commissioned until the master plan is close to being finalized.

Bidding documents for the rehabilitation of the three hospitals will be prepared by the CMF, reviewed by the IEU and sent to the Bank for no objection. Bidding will be conducted—awards are to be expected within eight months, including pre-qualification, and four months without pre-qualification.

Replacement: Design briefs for the four hospitals to be reconstructed will be prepared based on the Functional Design Plan. These will include a detail of the services to be provided in each hospital, and the space requirement for each, and areas of circulation. Design briefs will give the detail architects/civil engineers need to prepare preliminary designs (schematic designs), which, once discussed with MOH/IEU, can proceed to detailed design, including architectural, structural and mechanical aspects, and will include technical specifications, an estimated detailed budget and an implementation plan. As indicated above, topographical, soil, and general environmental assessments will be conducted early on to ensure proper sites were selected to relocate the new hospitals. Detailed environmental impact assessments will be conducted early on during the detailed design stage. They will be sent to the Bank for no objection prior to the finalization of designs

As in the case of the hospitals to be rehabilitated, focus group discussions will be held with groups of users of the hospitals to be reconstructed to inquire as to their perceptions regarding the pre-earthquake structures, and reaction to the proposed new structures and services. Results of these focus group discussions will feed in to the designs and ensure acceptability.

Once detailed designs are finalized and agreed upon by the MOH/IEU, they will be reviewed and validated by the CMF. Any modifications that are deemed necessary will be introduced prior to the preparation of bidding documents. The CMF will prepare the bidding documents for review by the Bank. The CMF and IEU will conduct the bidding process jointly. The bidding process will take between 4 and 8 months. Bidding for the equipment will be done separately, and will be done jointly for more than one hospital where feasible. It will be based on needs specified in the design briefs. The CMF will prepare the technical specifications and bidding documents for the procurement of this equipment.

Construction. Construction contracts will be managed by the CMF. The contract with the CMF will make them responsible for the quality of the construction and its timeliness. The CMF will maintain an MIS to keep track of subcomponent costs and physical advance. The sites will be handed over to each contractor awarded a contract. The CMF will assign teams to supervise each of the works during the full construction period. It will supervise construction advance and prepare the necessary documentation and payment orders to pay contractors as specified in the individual contracts. It will also contract inspectors to assess the quality of building materials employed and ensure they are complying with agreed standards. The IEU will make the payments from the project account. The CMF will also administer contractor complaints and prepare amendments to contracts. The CMF will prepare bidding documents for the purchase of equipment and conduct the bidding process with the IEU once construction is under way. Only equipment contained in a predefined list will be eligible for funding. Upon completion of a construction, the CMF will conduct an inspection of the building, drawing up a list of defects and unfinished products. The contractor will address and fix the defects. A similar inspection will be made of the installed equipment. The facility will be inspected to ensure defects were addressed and it will be handed over to MOH.

Operation. Training on the use of new equipment will be provided to staff before the facility is opened. The maintenance program will be implemented.

Monitoring and Evaluation:

A Technical and Financial Auditing Firm will be selected on a competitive basis to monitor the performance of the IEU and the CMF. In order to increase transparency of all activities this firm will report directly to the Office of the Minister as reflected in the organization chart. TORs for this firm will be prepared and reviewed during loan negotiations and selection of the firm will be a condition of effectiveness.

The CMF will maintain a detailed MIS to monitor construction execution. In addition, the MIS will contain indicators agreed upon with the Bank. The IEU will visit the CMF on a weekly basis to review progress and discuss pending issues. It will also conduct frequent spot checks on hospitals to verify the progress reported and check on the quality of the construction.

The CMF though the IEU, will send information from the MIS to the Bank on a quarterly basis and agreed indicators on a semi-annual basis. The Bank will visit project sites at least twice a year.

An external impact evaluation will be conducted to assess the effects of overall project

interventions using the indicators of the logical framework as a reference. Specific indicators will be included to examine the impact of functional improvements in the operation and utilization of hospitals, level of intrahospital infection rates, etc. The impact evaluation will use household-based data and facility-based data.

Annex 2b: Institutional Modernization Benchmark Matrix (IMBM)

Strategic Area	Objective	First Program Review	Second Program Review
Strengthening of Essential Health and Nutrition Services in earthquake-affected and extremely poor areas.	Increase access and coverage for low-income populations living in the Northern Corridor Departments and for populations living in earthquake-affected areas.		Alternative delivery model under implementation by MOH primary providers in earthquake-affected areas that includes: integration of nutrition and essential health services, establishment of a team approach to care delivery and application of an outreach model for service provision. Contracts signed with at least five NGOs to provide basic health care to approximately 75,000 people.
Monitoring and evaluation	**Strengthen MOH monitoring and evaluation capacity**	Presentation to Bank of action plan for monitoring and evaluation of project-financed activities and strengthening MOH monitoring and evaluation capacity approved by MOH.	Action plan for strengthening monitoring and evaluation unit under implementation including: (i) contracting of a "partner" firm or institution to support capacity building activities; (ii) presentation to Bank of results of baseline survey for monitoring and evaluation of project outcomes, including results from a household survey in regions where basic health and nutrition services are supported.
Financing and Resource allocation	Augment public financing for extension of basic health care in poor areas and improve equity in MOH budgetary allocations.	Additional financial resources allocated in the MOH 2002 budget to finance NGO contracts currently financed by USAID through SALSA.	Additional financial resources allocated in the MOH 2003 or 2004 budget to finance extension of essential health and nutrition services according to plan agreed to with Bank. Strategy document, allocation formula and implementation plan approved by MOH to increase funding to underserved areas.
Legal and regulatory framework	Improve the quality of care in public and private facilities by introducing stronger and more effective regulations		Approval by MOH of strategy and corresponding instruments to assess and implement "licensing" standards for public and private medical facilities Approval by MOH of total quality improvement strategy for obstetric and prenatal, care in MOH hospitals. Draft strategy for hospital management improvement presented to MOH and Bank.

Strategic Area	Objective	First Program Review	Second Program Review
	Strengthen legal framework for MOH as regulatory agency	Regulation restructuring MOH approved by GOES.	Draft of strengthened version of Health Code submitted to MOH that includes, *inter alia,* provision to define competencies of institutions within the health sector and integrate currently separate laws.
Public health competencies of MOH	Improve results of national priority programs in public health.	Approval by MOH of strategy and action plan that includes: (i) establishment of effective entomological surveillance system for high prevalence communicable diseases, (ii) strengthening of environmental health functions; and (iii) improving toxic waste management and disposal in MOH facilities.	Dengue detection and control program implemented in five urban municipalities, according to action plan agreed with Bank, including, *inter alia*, collection of base line data on prevalence. MOH approval of solid and toxic waste management and disposal policy and plan. Implementation of action plan in at least two hospitals and four basic health units.
MOH Institutional Strengthening	To strengthen the capacity of MOH to formulate and implement institutional development policies.	MOH formally adopts an institutional strengthening and decentralization strategy that (i) contains the long-term mission, vision and objectives of a modernized MOH; (ii) the definition of roles and competencies of health districts (SIBASIs) and the elimination of Departmental Offices; (iii) reassignment of MOH staff to the to-be-established SIBASIs without increasing MOH's administrative budget; (iv) application of performance agreements between MOH and SIBASIs; (v) use of performance-based targets for MOH providers within SIBASIs; and (vi) preparation of territorial health plans.	MOH will have implemented the institutional strengthening strategy presenting evidence of: (i) at least three SIBASIs functioning in earthquake-affected areas supported through Component II, including the signing of performance agreements with MOH, preparation and implementation of at least one territorial health plan, and agreement reached on terms and indicators for evaluation of SIBASIs; and (ii) health services purchasing department established.
	To strengthen management systems of MOH	Approval by MOH of personnel management strategy and action plan.	Approval by MOH and Bank of strategy and action plan to strengthen financial management functions. Implementation of personnel management strategy and action plan according to approved action plan. Strategic plan approved by MOH on the implementation of health information system, including the prioritization of modules

Strategic Area	Objective	First Program Review	Second Program Review
Community participation in supervision of health care quality	To strengthen the role of community participation in the oversight of clinical management and delivery of services	MOH approval of strategy and action plan on the introduction of community participation mechanisms in support of the extension and strengthening basic health and nutrition services.	Implementation of community participation mechanisms in the same communities where essential health and nutrition service extension is implemented, according to strategy and action plan approved by MOH.

Annex 2c: Social Assessment
(for Components II-IV)

Background

Objectives. The main objectives of the social assessment are to: (a) identify the key social development issues and social actors involved in the project's design; (b) provide inputs to the design of the project's outputs and outcomes; (c) understand the institutional arrangements that prevail in the health sector and promote those that will allow for a closer partnership with civil society organizations, communities, and beneficiaries; and (d) suggest processes and indicators for monitoring and evaluation.

A two-phase social assessment. The social assessment (SA) is organized in two phases. The first, to which this annex refers, addresses the magnitude of social development issues in the health sector, dealing mainly with how the poor are being reached and how do they react to some arrangements and programs addressed to them. The second phase should take place at the outset of project implementation, as part of the set of baseline studies needed for the M&E, including a household survey. It will also support the design of services and institutional arrangements that are needed by the poor. It will undertake: (a) an evaluation of benefits and problems faced by the SALSA program in the Northern Region, which will be the basis for monitoring the proposed model for contracting services with NGOs and other private providers in order to expand coverage; (b) a beneficiary assessment in the Central area, updating a previous assessment whose focus was the role of health promoters (this one will focus on the SIBASI model); and (c) an assessment of the adequacy of the type of services provided by the hospitals to be reconstructed, based on the perception by the beneficiaries of their needs. This annex refers to some of the achievements of the first phase. Most of the recommendations are part of the project's final design and implementation arrangements or will be integrated into the operational manual of the project. This annex summarizes some of this information. The main background documents from which this annex draws are in the project files.

Data source. This annex drew upon several sources. The first is the official report of the *1998 Encuesta Nacional de Salud Familiar (FESAL 1998)*. This survey, which has a sample size of 25,269 households, is the seventh of a series conducted by the Salvadoran Demographic Association since 1973, and since 1985 it has included indicators of maternal and children's health. The second source is a series of interviews conducted, specifically for the social assessment] with the staff of the MOH. The third source is the 2001 report *Evaluación Rápida de Capacidad de ONGs para Prestar Servicios Básicos de Salud en Áreas Rurales de El Salvador* by Hedi Deman and Margarita Montey. This report is based on fieldwork by 17 NGOs that work in the rural health field. The fourth source is the 1990 report *Challenges in El Salvador's Rural Health Care Strategy*, by Maureen Lewis, Gunnar S. Eskeland, and Ximena Traa-Valerezo. This report is based on: (i) a national multipurpose household survey; (ii) focus group surveys in 23 rural villages with 351 women and with groups of men in 10 villages and interviews with health promoters and community leaders in these villages; (iii) a survey of the 315 women who participated in the focus groups; and (iv) several MOH reports on health indicators using information collected in public and private health facilities.

Social development issues and outcomes

The proposed project covers two areas that have been affected by physical and military shocks during the last 20 years, impairing their demographics, economic survival, and social fabric, and consequently the health status of the population, the availability of services, and shrinking access to those services that are in existence. In the North, the project will be facing the challenge of expanding coverage to an area that was heavily fought over during the last civil war; whereas in the Central or Para-Central regions, it will be facing the challenge of the aftermath of a natural disaster. The Northern region has been traditionally

isolated, with precarious access to health care and with the population very often excluded from basic services and from formal medical and health arrangements. During the war, health care was provided via informal arrangements provided by national and international NGOs, all of which left the area once the war was over, withdrawing the financial support of many local organizations. In early 2001, the Central and Para-Central regions suffered two major earthquakes that destroyed material and productive capital, infrastructure, and public assets such as health facilities, hospitals, and educational institutions. As a consequence, there are reports that in municipalities almost the entire adult male population has out-migrated.

Since 1992, while El Salvador has experienced economic progress (but with a succession of setbacks), health indicators have lagged behind. Life expectancy is 69.4 years (figures from 1998), maternal mortality is 120 per 100,000 (figures from 1993-1998), and infant mortality is 35 per 1,000 live births (figures from 1993-1998). Meanwhile, the number of hospital beds per inhabitant is 1.2 per 1.000, and there are only 11.7 physicians and 4.4 certified nurses per 10,000 inhabitants. In 1998, 25 percent of all births in health facilities were by cesarean section, and 34 percent of mothers were in the 10-19 age group. Although the fertility rate has declined (to 3.6 for women aged 15-39 in the period 1993-1998) to become the second lowest rate in Central America (higher only than Costa Rica), it is still too high, particularly in the case of women with low formal education and/or living in rural areas who often have as many as five children. The median age of woman's first childbirth is 20.5 years, and this has remained unchanged in the last 25 years. Thirty-five percent of births were unplanned in 1998, with 15 percent of them being unwanted. Indeed, although almost 80 percent of married women aged 15-44 declared in 1998 that they did not want to be pregnant, 40 percent of this group does not use any contraception.[1]

Children's health status is poor particularly in rural areas and in the less developed Northern region, bordering Honduras. Only one in three children has had its first checkup during the first month of its life, and this is also the maximum proportion of babies who benefit from newborn health services. No department in the country has succeeded in reaching an acceptable level of coverage for this service. Although immunization has increased substantially, particularly in rural areas, 20 percent of children younger than five have not been immunized with **[all of** the six main vaccines (BCG against tuberculosis, poliomyelitis against polio, DPT against diphteria-pertusis-tetanus, and measles.) One out of every three children younger than 5 years old had had a respiratory infection in the two weeks previous to the FESAL 1998 survey. Twenty percent of children whose mothers were interviewed for the same survey had had diarrhea during the two weeks previous to the survey (25 percent in rural areas). In the departments of Ahuachapán, Sonsonate, and Chalantenango, severe dehydration was found in 8.5 percent, 14.7 percent, and 10.6 percent of children respectively during the two weeks before their mother was interviewed. Overall, diarrhea was more common among children younger than 2 years of age when they are more vulnerable.

The health care system is overloaded by having to deal with illnesses that most of the time could have been prevented. Respiratory infections, parasites, diarrhea, and skin infections are four of the five diseases with the highest incidence in El Salvador, while respiratory diseases, parasites, abortions, and premature deliveries account for four of the most frequent reasons for hospitalization.

HIV/AIDS. There is a growth in behavior-based diseases among adults, such as HIV/AIDS, particularly in urban areas. Results of the FESAL 1998 survey of women of reproductive age indicate that 91 percent know about the existence of HIV/AIDS, but 15 percent are unaware that there is no known cure for this disease (this number jumps to more than 20 percent in the department of Chalatenango). Women who have better knowledge about HIV/AIDS are those who are single, aged 15-24 years, have 10 or more

[1] The contraceptive prevalence rate in El Salvador is 15 percent lower than the rate in Costa Rica, is similar to the rate in Nicaragua, and is 10 percent and 28 percent higher than the rates in Honduras and Guatemala respectively.

years of education, belong to a well-off socioeconomic group, and are either currently using contraception or have never had sexual intercourse. One can conclude that knowledge is weaker among those whose risk is greater. Women who are willing to use condoms if their partner suggests it are urban, have 10 or more years of education, belong to a well-off socioeconomic group, and perceive themselves to have little risk of acquiring HIV/AIDS.

Access to services. As indicated by Lewis, Erkeland, and Traa-Velarezao, there is extensive knowledge about the availability of health care services, and preventive health care is, in theory, readily accessible in most villages. However, demand is minimal and rural households visit health facilities only for serious illnesses. The reality is that access is constrained by several factors such as convenience (the days and hours involved in operations and waiting time), quality, and costs (of services, transportation, and sometimes lodging). Also, distances can be deceptive; sometimes, although the worst-off households may not live further than 12 kilometers from a health provider, getting there may take two or three days.

In general, participants in the survey conducted by these authors made more positive comments about health centers and hospitals than lower levels of care because of they have longer hours, they provide emergency service, and they have a more adequate supply of medication, staff, and specialists. If they have a choice, people will choose these facilities over health posts and health units. Drug availability often appears to be a determining factor for choosing a facility. The general perception throughout the country is that health posts and health units do not have as much medication as they used to, and people are reluctant to go to facilities where there is a low probability of having adequate stocks of medication. Medication is believed to be more readily available at health centers and hospitals, at prices significantly below those at pharmacies. If drugs are not included in the consultation fee, they are dispensed from the pharmacy inside the facility at nominal costs. Most patients walk out of a health facility with at least one prescription in hand. As mentioned by a participant in a focus group for that study, *"If I have money for the bus, it is better to go to the hospital. They have medicine."*

Lack of Convenience as an impediment to access

- *"Health posts operate only twice a week. Consultation is only until noon. The doctor is not always there. Sometimes only the nurse assistant is present. Waiting time is three hours on average. Only those who arrive by 8 get a consultation."*
- *"Health units operate only 5 days a week. Although hours of operation should be until 3 or 4 p.m., consultations are not available after 1 p.m. That is not enough. Waiting time is 3.5 hours on average. Health units also lack medication."*
- *"The post here is useless because there is no doctor or nurse, and it is only open two days a week until noon."* (Potrero Sula)
- *Source: Lewis, Ekeland, and Traa- Velarezao.*

For the rural poor, the most common modes of transportation for medical assistance include: on foot (with patients sometimes being carried by family members), by horse or mule, on foot on the way to catch a bus, and by commercial pick-up truck. For emergencies during off-hours (between 5pm and 5am), hiring a pick-up truck to transport a patient to a health center or hospital around 20 kilometers costs between US$12- $60. In communities without electricity and with poor roads, pick-up trucks often refuse to accommodate such requests due to the risks associated with eroded roads and the risk of being assaulted. Alternatively, families transport patients in a hammock carried by two or four men: *"In case of emergency we carry the sick in a hammock. The road is so bad that even trucks refuse to drive on it"* (San Antonio de Opico). Indeed, the lack of accessible roads was stressed by focus groups as the single biggest deterrent to seeking health care services. Private vehicles are unaffordable for most of the sampled communities. A bus service exists directly to some villages but typically making only two round trips per day. In 18 of the communities interviewed for the fieldwork, people walked for between 30

minutes and two hours to a bus stop or walked for one or two hours to the facility. In short, facilities exist but they are often difficult to reach.

Institutional issues

Ministry of Health and Social Assistance: Institutional Modernization. The MOH is the institutional leader of the health sector in El Salvador. Its main responsibility is to provide preventive and curative health services. It defines, coordinates, and executes the national health policy. To enhance essential health services, the Ministry has proposed a new organizational and decentralization model, known as the *Basic System for Comprehensive Health (Sistema Básico de Salud Integral – SIBASI)*. Its main objective, for the period 2000-20001, is to provide primary (preventive and curative) health care to the most vulnerable groups. This target population has been identified at three different levels: individual, family and households, and community and environment.[2] The main components of SIBASI are: (i) comprehensive health care; (ii) targeting (of vulnerable regions and groups, including by gender and age); (iii) the provision of health services; and (iv) financing of health and social involvement in health programs. The system has been strengthened by a revision of the organizational structure, norms, and procedures, by research, and by an attempt to increase coverage by developing infrastructure and providing equipment.

Programs to the Poor: Nutrition and SALSA . Currently, two initiatives of the Ministry of Health are worth noticing and are relevant to the health project. The first initiative, currently being designed, aims to diminish the alarming rate of malnutrition in the rural areas. The second, now being implemented, aims to provide basic health care to the poorest populations by contracting NGOs. Together, they provide insights into the strengths and weaknesses of policymaking by the Ministry of Health.

(i) Nutrition. The nutrition program targets pregnant women and children under two years old. This program produced a guide for improving the diet and nutrition of families and households to be disseminated in coordination with the Ministries of Education, Agriculture, and Economics. The operational strategy is to use the guide to train Voluntary Nutrition Counselors to work at the community level as itinerant workers who travel across communities measuring children, keeping records, and advising on nutrition. The health network developed under the SIBASI program aimed to provide primary health services to the families and households covered by AIN. Evaluations of this model in Honduras have shown that it has increased child nutritional status at a sustainable cost.

Although it has several merits, the model could be improved in the following areas. First, it must address gender bias, in the sense that promoters are always women and only women are involved in the households that are assisted by promoters. As a result, this reinforces the cultural norms of not involving men in childcare while at the same time increasing still further the workload of poor women. Second, the criteria for selecting promoters could be improved, and third, monitoring and evaluation could also be improved.

(ii) SALSA Program: Experiences with NGOs. The SALSA program is implemented by the Ministry of Health with support from USAID. It covers rural areas of 13 municipalities across the country. According to official documentation, its main objective is to build models of integral health care through a partnership among the Ministry of Health, NGOs, and communities, particularly by: (a) promoting participatory citizenship; (b) contributing to the integral health of individuals with efficiency, efficacy, and equity; (c) promoting actions that minimize

[2] These groups were defined taking into account the following variables: age, morbidity, mortality, nutrition, reproductive and sexual health, sanitation, and environment.

environmental risks; (d) strengthening the coordination among the Ministry of Health, the Church, and the police; (e) delivering health services; and (f) promoting health and basic environmental education.

The main achievement of SALSA was to integrate NGOs into the institutional arrangements of the Ministry of Health – paving the way for the proposed health project. This is not trivial in a society that is strongly centralized and is emerging from a long and violent civil war. Nonetheless, there are many lessons to be learned from the program. In particular, the criteria for selecting beneficiaries and NGOs was unclear, the program was poorly integrated into the structure of the Ministry (there was particularly poor interaction between the SALSA head unit and others unit of the Ministry that also deal with rural communities), and there was no clearly defined monitoring and evaluation system to track the program's performance, financing, and accountability.

Promoters. MOH promoters focus on health care promotion and education through "chats," mostly on issues of hygiene. They check records on immunizations, baby care, pre/post natal care, and follow-up health facility consultations. In addition to these functions, NGO providers offer antibiotic treatment for acute respiratory infection (ARI) and enteric diarrhea infection (EDI), and supply contraceptives.

A recent study found that MOH promoters have inadequate equipment (such as first aid kits, stethoscopes, measuring tapes, and thermometers) and medication (such as ORS, acetaminophen, analgesics, and parasite pills). Some admit they have nothing to offer other than a referral. NGO promoters usually carry or at least have in their home or office a stethoscope, a tensiometer, a first aid kit, acetaminophen, antibiotics (Amoxicillin, Bactrim, and Salbutanol), prenatal vitamins, iron supplements, a thermometer, and an adult and a baby scale. These basic complementary inputs, which give NGO promoters credibility and something to offer their patients other than admonishments, are typically not available to MOH promoters.

Role of intermediary associations: NGOs

NGOs. During project preparation, an NGOs assessment was carried out to analyze their organizational capacity, particularly of those who might eventually be involved in the project. The assessment studied a sample of 17 NGOs providing services in rural areas, six of which have not participated in previous activities carried out by the MOH.[3] Many of them receive grants from international donors, and many of them work for different governmental institutions. Most of the NGOs in the assessment have worked in the geographical areas where the project will be implemented. Particularly, the objective was to examine NGO's capacity to: (a) deliver services; (b) supervise, monitor, and evaluate; and (c) manage finances. To analyze each of these areas, the team selected a set of indicators that were ranked to obtain an organizational capacity indicator.[4] As a result, the assessment identified the NGOs with the highest ranking in each of the areas and determined their years of experience, their skill-mix composition, and the areas in which they would need training to increase their capacities.

Fields of expertise. The assessment identified each NGO's main focus. Apart from SSL, which is devoted to research and education, all stated that providing basic and primary health services is one of their core working areas, together with micro-credit and nutrition. Twelve of the 16 identified health as

[3] During 1986 to 1999, 36 NGOs worked on the project Maternal Health and Children Survival (PROSAMI). In 1996, 18 participated in SETEFE, and the rest participated in SALSA, established in 1998.

[4] The ranking methodology is explained in "*Evaluación rápida de capacidad de ONGs para prestar servicios básicos de salud en areas rurales de El Salvador*" by Heidi Deman and Margarita de Monroy. MOH and World Bank. 2000. For the purpose of this document, results are classified in order of importance.

one the main areas, 10 identified education, seven identified micro-credit, and four identified nutrition. Reproductive health, training, sanitation, environment, community development, and intra-family violence are some of the other areas identified as key.

Thirteen of the 17 NGOs that were studied have programs that provide primary health services. The services include care for children under five years old and students, maternal delivery assistance, family planning, basic health care, sanitation, immunization, and physical rehabilitation. All of the NGOs recognized the importance of training for their staff but few had the resources to do it. Regarding monitoring and evaluation, although some of the NGOs keep registers of deaths and of the incidence of diseases, the effort is not continuous and there is insufficient information with which to assess the impact of their actions or the relationship between their actions and results. The absence of this information is due to a lack of training, resources, and demand from the Minister of Health rather than to a lack of willingness or to negligence. All of the NGOs have some kind of auditing and some kind of simple computerized financial management in place, although it is unclear how this system links administration, procurement, disbursement, and accounting.

Table 1 summarizes the services provided by NGOs. It shows that the NGOs with the highest ranking have the greatest experience in most of the areas included in the project's components. It also shows that none of the assessed NGOs have experience in providing services on HIV or in organizing activities to assist populations affected by natural disasters.

NGOs and beneficiary participation. Paradoxically, NGOs suffer from the same lack of participatory approaches as the government in delivering services. Beneficiaries interviewed for the study agreed that they received services but that was all. Except for cleaning the facilities (women) or behaving as their guards for security purpose (men), nothing else was expected from them. On the other hand, they were aware of the importance of targeting, and some had designed *a mapa de riesgo* pointing out which households should be visited and those which should be frequently visited and for what type of interventions.

Conclusions.

- Health indicators show that the strengthening of the health sector must be a priority for El Salvador. They also indicate that there are specific vulnerable groups in both urban and rural areas: women, children aged 0-4; and young people. *Women*, particularly in rural areas, have their first pregnancy at a very early age (about one third of deliveries are for women between 10-19 years), the intervals between pregnancies are too short, and fertility rates are too high. Abortions account for one of the five most frequent causes for hospitalization. Twenty-three percent of *children* suffer from malnutrition. Among *young people*, unsafe sex has led to pregnancies and AIDS, particularly for those with less income and education.

- Access is constrained by several factors: working schedules (days and hours of operations and waiting time), the quality of human resources and the limited supply of drugs, costs (of services, transportation, and sometimes lodging), and distances.

- In theory, the health system is well structured to reach the population, including those at risk. However, in practice, there are too many isolated programs that do not interact. SALSA illustrates many of their problems: financed through grants, with doubtful accountability, limited coverage, unclear targeting, and an impact that cannot be measured.

- The interaction among departments of the Ministry of Health is weak - the staff members who were

interviewed did not know what others were doing in the same area of primary care.

- Community participation – and not only in El Salvador – seems to be the new panacea for solving problems. In the case of SIBASI, SALSA, and the new nutrition proposal, it is unclear whether this is an approach or a goal. The roles, responsibilities, accountability, and interaction of communities with government health institutions have not been specified in any of these cases.

Recommendations: The following are the principal recommendations resulting from the social assessment. They have been discussed with the project team and are integrated into the project design or are contemplated as project-financed activities:

- Define those groups that are most vulnerable and revise the targeting criteria accordingly. Define a package of priority interventions to the most vulnerable for the main areas of the project.

- An integral health approach should include men in all its activities, including childcare, nutrition, and reproductive health.

- Establish mechanisms to link the activities, projects, and programs carried out within the Ministry to allow for information to be shared, lessons to be learned, and overlapping and cumbersome procedures be eliminated. Build trust and teams.

- Revise the community participation approach to make it a useful instrument for linking civil society organizations and government institutions. Define a clear role for these organizations.

- Design clear criteria for identifying and contracting intermediate service suppliers, including NGOs. Define a process for monitoring and evaluating their performance and a system of incentives and penalties in the contracting system.

- Prepare baseline information taking into consideration at least the following issues: (a) basic socio-demographic indicators; (b) specific vulnerable groups by age and gender in the areas covered by the project; (c) nutritional patterns; (d) habits, ideas and beliefs that are health risks; (e) key elements in a campaign to modify cultural factors that are increasing health risks; (f) household practices for pooling resources and other forms of private and informal arrangements (some of which were used after the earthquakes); (g) elements that increase the impact of natural risks; and (h) formal and informal health resources. The results should be used to strengthen health and social risk management by: (i) matching instruments to risks; (ii) matching supply and demand; and (iii) involving stakeholders in design and implementation of health activities.

Table 1. Summary of the Services provided by NGOs

NGO	Household or facilitator	Community		
		Physician	Nurse	Health facilitator
ADHU [1] AGAPE *, [1] AMS* FUSAL*, [1] OEF*, [1] CALMA * ASAPROSAR*	Health care, medical supplies	Supervision, children and maternal care, education	Supervision of health status, Children and maternal control, education	Health care, education, medical supplies
MDS [1] SERAPHIM ASPS CIRES	Health care, medical supplies, family planning	Supervision		Health care, education, medical supplies, family planning.
ADS	Family planning	Supervision		Family planning
CONAMUS		Does not have a program		Family planning
FUMA ORMUSA	Does not have a program			
FUNDESO	Services provided to a Municipal clinic (health care)			
SSL	Does not provide direct services			

❖ Teams include experts on children and maternal control, nutrition, social workers, educators on health and psychologists among others.

[1] Provide and deliver food.

Annex 2d – Part 1: Assessment of Hospital Medical Waste Management and Disposal Practices
Detailed Results of Survey Conducted during Project Preparation

Background

The Pan American Health Organization (PAHO) formulated a project for all the capital cities of the six Central American countries in 1990 that was adopted by the European Union in 1991 and ratified by Central American governments between 1993 and 1994. The Program was known as ALA 91/33 and its objective was to install a hospital waste collection and treatment system in the six capital cities. The ALA 91/33 Program marked the beginning of an awareness and training process. Today there are medical units with professional skills to deal with the issue of toxic medical waste. Hospitals in the Metropolitan Area of San Salvador (AMSS) have equipment, trained people and a budget to pay for external service. Hospitals with an adequately installed system in the AMSS handle over 80 percent of hospital waste in the AMSS.

Guided by the ALA 91/33 Program, the Ministry of Health and Social Assistance (MOH) installed a three phase system for the collection and final disposal of infectious biological waste beginning October 1, 1997, in the eight hospitals run by MOH, plus the Military Hospital and the ANTEL Hospital (now ISSS) located in the AMSS.

The **first phase** of the hospital waste management system operated from October 1, 1997 to May 31, 1999, under the concept of a safe separation and packaging system which ensures that, once generated, waste does not again come into contact with anyone, and utilizes selective transportation with daily collection, carrying waste to the AMSS controlled landfill, where it is buried in a ditch, a method known as co-disposal. The San Salvador City Hall, which administered the Apopa controlled dump, used machinery to excavate a ditch far away from trash scavengers, and then re-covers it with dirt three times a week.

The **second phase** took place from June to December of 1999, when, with the opening of the AMSS Sanitary Landfill, it was agreed that this landfill will be equipped with a safety cell. This landfill is operated by the Canadian-French consortium CINTEC - TREDI, as a joint venture with 10 municipalities of the AMSS (14 municipalities comprise the AMSS), called MIDES S.E.M de C.V., which proposed closing the ditch and switching to a treatment system. This situation obliged the Ministry of Health to seek the best treatment alternative, and a Colloquium was held to discuss alternatives. Beginning January 1, 2000, MIDES introduced a treatment system using thermal disinfecting (autoclave), which is the start of the **third phase** of the development of the Infectious Biological Waste Management System.

In the AMSS, there are currently four transportation entities, a public one administered by the MOH and three private ones which provide service to 6 ISSS hospitals and to most private hospitals as well as to several clinical laboratories. MOH transportation serves its 8 hospitals, plus the Military Hospital and the Red Cross medical assistance unit. The transportation units meet basic requirements such as exclusive use, identification and closed compartments (similar to a boxcar), they are authorized by the Ministry of Environment and the Ministry of Health, the system is complete, waste receives treatment by thermal disinfecting (autoclave) and final disposal in the sanitary landfill which serves the 10 municipalities of the AMSS.

Survey of Toxic Medical Waste Management in El Salvador

This reports describes the results of a survey to obtain primary source data and to understand the current management of infectious biological waste in the country. The universe of the survey consisted of health facilities administered by MOH. The nine hospitals surveyed represent 30 percent of the total number managed by MOH. Nine ambulatory health units were surveyed, including one administered by an NGO, as well as the Central Health Laboratory for a total sample of 19 health facilities.

The study included some of hospitals that are part of the proposed project. The two hospitals surveyed in the AMSS represent 25 percent of the hospitals managed by MOH in the AMSS. In the interior, three hospitals were surveyed in the Central and Para-Central Regions and two in the eastern part of the country. To have a broader national view, two were also selected in the western part of the country. These seven hospitals represent about 32 percent of the 22 in the country's interior.

1. Hospital solid waste management in the AMSS

The following description of how waste is currently managed in the AMSS health care facilities is based on survey results, field visits and information provided by the MOH Environmental Health Office.

Separation: Waste is separated in three categories: (i) all materials that have been in contact with patients known to be infected; (ii) organic tissue from surgery and childbirth; and (iii) sharp and pointed objects such as needles, scalpels, razor blades and broken glass.

Packaging and accumulation: Red plastic bags are used for the first two categories. For sharp and pointed objects, plastic containers with lids, or cardboard boxes are used and then sealed and placed in a stackable, standardized red plastic receptacle with a lid; this reusable receptacle is used to remove waste from each department for treatment. In the outpatient departments, trash is stored in small plastic containers, with their respective red bag, located in each clinic as well as in hospital areas. In the delivery and operating rooms, waste is stored in round-conical stainless steel containers with their respective red bags, which are used only in the delivery and operating room, while in the labor room and nursing station there are plastic containers with their respective red bag. In the kitchen area, containers for trash storage are plastic or metal, holding 100 to 200 liters.

Internal collection: Collection in outpatient clinics is done two to three times a day; trash is collected from containers in a red plastic bag, likewise in other areas (emergency, laboratories, X-ray, pharmacy, female wards, pediatrics, male wards, private rooms, sterilization center and others). In operating and delivery rooms, placentas and organic tissue are separated from the rest of the waste and here the frequency of collection will depend on the frequency of births and of the number of surgeries performed.

Internal transportation: This function is performed by the general services worker in each area. The red bag is removed and deposited in the container and then transported manually or in a cart depending on the size of the facility.

Central storage: Hospitals have a restricted area where containers are stored in a roofed area until they are collected. Because of small quantities this is no the case in health centers.

External transportation: There are four transportation modes. Public hospitals have MOH delivery trucks. The larger health units pay a private firm for this service as do ISSS and private hospitals. It is estimated that 26 of the 33 hospitals registered in the AMSS, plus 30 units such as clinical laboratories and outpatient centers are part of the selective collection and treatment system. Together they account for over 85 percent of the infectious biological waste generated in the AMSS.

Treatment: The only treatment system in operation is the autoclave installed by MIDES, although there are 4 incinerators in good working order, two in the Bloom and Zacamil Hospitals, another one in the Military Hospital and the fourth one in the ISSS Specialized Hospital. However, they stopped operating due to complaints from neighbors. The Hazardous Waste Regulation of the Environmental Law currently prohibits the operation of incinerators in urban areas.

Final disposal: Hospital waste treated in the autoclave is deposited in the sanitary landfill. The waste that is still not separated is being handled as common waste and is deposited in the same landfill since the 10 largest municipalities of the AMSS handle all their waste in the sanitary landfill.

Table 1 presents the health care facilities that generate infectious biological waste using the number of beds as an indicator of waste generation. In the case of health units, 200 daily consultations are estimated to be the equivalent of 20 beds, i.e., 10 consultations are the equivalent of one hospital bed.

Table 1 – Hospitals and Health Centers in the AMSS and Number of Beds

Public	N° of	Private	N° of beds	ISSS	N° of beds
Rosales Hospital	554	Pro-Family Hospital	78	Medical-Surgical H.	340
Maternity Hospital	401	Diagnostic Hospital	62	Specialized Hospital	320
Psychiatric Hospital	376	Divine Providence Hospital	60	1 de Mayo Hospital	248
Pulmonary Hospital	304	Baptist Hospital	55	Psychiatric Hospital	135
Military Hospital	302	Gynecological Hospital	55	Pulmonary Hospital	98
Bloom Hospital	324	Baldwin Hospital	50	Roma Hospital	85
San Rafael Hospital	230	Women's Hospital	50	Oncology Hospital	60
Zacamil Hospital	255	Metropolitan Hospital	30	8 ISSS Clinics	160
Psychiatric H. Annex	66	Central Hospital	30		
San Bartolo Hospital	65	Pediatric Center Hospital	30		
22 health units	440	Salvadoran Hospital	20		
		Emergency Center Hospital	16		
		Climosal Hospital	15		
		Eye, Ear and Nose Hospital	14		
		Farela Gynecological H.	10		
		Mater Clinic Hospital	10		
		Flor Blanca Hospital	10		
		Eye Institute Hospital	10		
		International Eye Hospital	2		
Subtotal beds	**3,317**		**607**		**1,446**
Total beds	**5,370**				

Source: Environmental Health Office, MOH.

2. Hospital solid waste management in the country's interior

This section describes waste management practices in 12 of the 14 Departments. Two of the 14 Departments are La Libertad and San Salvador that are part of the AMSS. Hospitals are located in the 12 departmental capitals and in the 10 largest cities. None of these cities has a plan for the management of hazardous hospital waste. Hospitals have implemented some measures to improve internal management as described below.

Separation: All health facilities separate waste, but not in a reliable manner, and the waste that receives greater attention includes sharp and pointed objects and organic tissue from surgery and delivery.

Packaging: Plastic bags, in some cases red, are used for packaging, and lidded plastic containers or cardboard boxes are used for sharp and pointed objects and then sealed. In outpatient areas, trash is

stored in small plastic containers located in hallways. In delivery and operating rooms, storage is done in round-conical stainless steel containers which are only used in delivery and operating rooms, while in labor rooms and nursing stations there are plastic containers. In the kitchen area, containers to store trash are plastic or metal, holding 100 to 200 liters.

Internal collection: Trash collection in outpatient clinics is done at the end of the consultation, when trash is collected from containers in plastic bags. This is done once a day, while in other areas (emergency, laboratories, X-ray, pharmacy, female and male wards, pediatrics, private rooms, sterilization center and others) it is done twice a day. In operating and delivery rooms, placentas and organic tissue are separated from the rest of the trash and here the frequency of collection will depend on the volume of childbirths and the number of surgeries performed.

Internal transportation: This function is performed by the general services worker in each area. Trash is collected and deposited in a plastic bag and transported manually to the container. Collected placentas are transported in containers where they are stored and carried manually to a cesspool on hospital grounds used specifically for this purpose. Hospitals have a four-wheel cart to transport such waste.

Central storage: In the best of cases, trash is finally stored in a fenced place with no roof, and most trash is disposed of in barrels together with common waste.

External Transportation: In most cases waste is collected three times a week by the municipal sanitation truck. Trucks enter hospital grounds and remove all waste. These are open trucks and collect household waste on their route.

Treatment: There are no treatment systems and when incinerators are available they are not always in use due to maintenance problems. None of them have gas treatment systems. Some health care centers have cesspools to deposit organic tissue and sharp/pointed objects. Materials that have been in contact with patients are burned out in the open.

Final disposal: In the case of municipal collection, waste is deposited in the open dump managed by the municipality. There is no contingency plan if the trash truck fails to collect. Centers that have an incinerator bury their ashes on hospital grounds.

2. Cost of Toxic Medical Waste Management

This Section deals with financial aspects, specifically the actual cost for service and medical centers' willingness to pay.

Metropolitan Area of San Salvador (AMSS): Costs were collected up to June 2001. Cost is US$0.32 per kilogram treated by autoclave and disposed of in the sanitary landfill (including taxes). When the service consists of collection and final disposal at the sanitary landfill then cost was $20.00 per ton.
As of January 1, 2000 the service includes thermal disinfecting of infectious biological waste at the site of the MIDES sanitary landfill increasing the cost of treatment and final disposal to $226.00 per ton (including 13 percent tax). Beginning January 1, 2001 it increased to $320 per ton and a decision has been made that it will increase each year until reaching $500 per ton. To this must be added the cost of transportation. The cost of collection and transportation in the case of MOH hospitals located in the AMSS is absorbed by the central level of MOH because the transportation units and staff belong to this institution. In the case of private and Social Security hospitals, the cost is between US$0.40 and US$0.60 per kilogram, resulting in a cost of $720 to $920 per ton collected, treated and disposed of in the sanitary landfill.

Outside the AMSS: No cost data are available for collecting and treating infectious biological waste. Hospital with incinerators could calculate the cost of fuel and equipment maintenance.

3. Willingness to Cooperate

The survey asked respondents about the willingness of the medical facilities to collaborate in solving the problem of hospital and common waste management. The results are very positive with 94.7 percent stating their willingness to cooperate for proper medical waste management. As to what form cooperation could take, 84.2 percent recommended awareness programs, 78.9 percent information programs, 36.8 percent programs to reduce waste generation, and 84.2 percent treatment of infectious biological and other hazardous waste. When asked if medical institutions should cooperate with the country and the local government in waste management, 100 percent answered "yes."

Respondents are now aware of the cost of waste management with 36.8 percent thinking that costs have increased very much and 31.6 percent consider it a normal increase. This is understandable, as until two years ago, no one knew the cost of waste management. Measuring the importance attached to proper management of toxic medical waste, 47.4 percent of the respondents stated that waste management should be given greater priority; 42.1 percent call for normal priority; and the remaining 10.5 percent give it a low priority. When asked what kind of assistance is needed most, 89.5 percent stated the need for financial and technical support.

4. Estimates of Generation of Toxic Medical Waste in El Salvador

Prior to this survey, four attempts have been made to calculate the rate of hospital waste generation. The results are expressed in kg/bed/day, which is the internationally adopted unit of measurement and comparison.

- Rosales Hospital /pilot project 0.29 kg/bed/day 12/1996
- 1° de Mayo Hospital /pilot project 0.58 kg/bed/day 12/1996
- Study of 10 Hospitals 0.34 kg/bed/day 03/1997

- The Japanese cooperation agency carried out the "Study of Regional Management of Solid Waste for the Metropolitan Area of San Salvador," with results shown in Table 2.

Table 2. Results of Study of Hospital Waste Generation 1999-2000 (kg/bed/day)

Category	Hospital	MOH	JICA Study
I	> 200 beds	0.652	0.553
II	50 - 200 beds	0.699	0.675
III	< 50 beds	0.465	0.329

Source: Kokusai Kogyo Co., Ltd., JICA.

For this study records of the MOH Environmental Health Office were examined for the first seven months of 2001. Data are taken from the daily records of the truck drivers collecting medical waste from eleven health facilities and are confirmed by the daily weight receipts issued by MIDES. Table 3 shows the volume of medical waste generated in these eleven facilities.

Table 3. Waste production expressed as kg/ bed/day in 11 MOH Health Facilities (7 months 2001).

	Health care facility	Daily average (kg)	Monthly average (kg)	Number of beds	Production kg/bed/day
1	Maternity Hospital	178.85	5,366	414	0.43
2	Rosales Hospital	229.68	6,890	554	0.41
3	San Rafael Hospital	227.54	6,826	230	0.99
4	Bloom Hospital	192.77	5,783	291	0.66
5	Zacamil Hospital	218.26	6,548	255	0.86
6	Psychiatric Hospital	62.86	1,886	426	0.15
7	San Bartolo Hospital	63.74	1,912	65	0.98
8	Military Hospital	55.08	1,653	302	0.18
9	Pulmonary Hospital	72.73	2,182	304	0.24
10	Red Cross	15.70	471		
11	M. Bloch Laboratory	7.95	239		
	Total	**1,325.16**	**39,754.90**	**2841**	**0.46**

Interhospital comparisons show large variations due to the general or specialized nature of the facility . For example, the production at the Psychiatric and Pulmonary Hospitals is small, and bed occupancy at the Military Hospital is only about 40 percent. These hospitals depress the weighted average value of 0.46 kg/bed/day. Removing these hospitals from the calculation, the weighted average value is 0.61 kg/bed/day.

Reviewing the methodologies of the four earlier studies it is noted that the values of the pilot project at the 1° de Mayo Hospital are considered more valid because it had greater participation by all medical services. Data from the system installed in October 1997 in 10 hospitals are less reliable. We therefore conclude that the rate of 0.65 kg/bed/day of hazardous hospital waste is more conservative and closer to reality. This is the value used in a recent study carried in El Salvador by the IDB, in the formulation of the Program for Decontamination of Critical Areas, in the Sectoral Analysis of Solid Waste carried out by PAHO/WHO and is very close to the value found by the JICA study.

Using the 0.65 kg/bed/day rate we can now project in Tables 4 and 5 the volume of medical waste produced in the health facilities in the AMSS and in the non-AMSS area.

Table 4: Production of Medical Waste in AMSS Health Facilities

Hospitals	No. Beds	Daily Production (ton)	Annual Production (ton)
Public	3,317	2.16	786.96
Private	607	0.39	144.01
ISSS	1,446	0.94	343.06
Total	**5,370**	**3.49**	**1,274.03**

The production factor of the AMSS hospitals is applied to non-AMSS hospitals to calculate the amount of hazardous hospital waste produced per day in each city (Table 5). Based on survey results, these values will represent over 90 percent of each city's real waste generation, since doctor clinics, clinical

laboratories and veterinary clinics represent less than 10 percent of the waste generated. The total amount of infectious biological waste generated in the country is estimated at 5.8 tons per day or about 2,117 tons/year.

Table 5: Production of Medical Waste in non-AMSS Hospitals

N°	Cities	No. Beds	Daily Production (ton)	Annual Production (ton)
1	Santa Ana	752	0.489	178.412
2	Chalchuapa	79	0.051	18.743
3	Metapan	43	0.028	10.202
4	Sonsonate	287	0.187	68.091
5	Ahuachapan	188	0.122	44.603
6	Chalatenango	120	0.078	28.470
7	Nueva Concepción	48	0.031	11.388
8	San Vicente	179	0.116	42.468
9	Cojutepeque	105	0.068	24.911
10	Suchitoto	28	0.018	6.643
11	Zacatecoluca	183	0.119	43.417
12	Sensuntepeque	62	0.040	14.710
13	Ilobasco	59	0.038	13.998
14	Usulután	208	0.135	49.348
15	Santiago de Maria	44	0.029	10.439
16	Jiquilisco	50	0.033	11.863
17	San Miguel	772	0.502	183.157
18	Nueva Guadalupe	60	0.039	14.235
19	Ciudad Barrios	45	0.029	10.676
20	San Francisco Gotera	73	0.047	17.319
21	La Unión	113	0.073	26.809
22	Santa Rosa de Lima	57	0.037	13.523
	Total	**3,555**	**2.31**	**843.42**

Recommendations:

The action plan for implementing a national program for managing hospital medical waste and disposal (copy in project files) proposes a short-term, medium-term and long-term strategy. The short-term strategy (one to three years) will consolidate the waste management program already in place in the AMSS, complete the existing legal and regulatory framework with the appropriate regulations and implementation guidelines, and regulate the private sector companies that manage toxic hospital waste as well as introducing a greater degree of competition. The medium-term strategy (three to five years) will install proper medical waste management systems in the two hospitals to be rehabilitated and the five hospitals to be replaced under Component I of this project. Technical assistance will also be provided to the environmental health unit (GAISA) of MOH to assist hospitals that are not directly benefiting from investments under this project in installing adequate waste management systems. The long-term strategy will aim to put in place a toxic medical waste management system for the whole country.

Annex 2d: Part 2
Environmental Assessment of Reconstruction Process and Environmental Action Plan

The environmental assessment consisted of:

a) visits to four sites proposed by MOH for relocation of hospitals, with the objective of determining whether the proposed sites offer acceptable environmental conditions for the proper operation of these facilities, as well as to identify the need for and scope of the resettlement/relocation of those affected;

b) review of applicable environmental legislation in the country, including environmental categorization and licensing;

c) identification of significant environmental impacts that could affect the design and operation of centers;

d) identification of actions needed to mitigate such impacts through an Environmental Action Plan and a Frame of Reference for Population Resettlement, if necessary; and

e) discussion of actions identified with the MOH counterpart team.

The Environmental Action Plan resulting from the survey seeks to address the following objectives: (i) strengthen MOH capacity to carry out environmental assessments of existing sites as well as identify, select and assess new sites for hospitals to be reconstructed; (ii) support coordination between MOH and the Ministry of Environment and Natural Resources (MARN); (iii) build MOH capacity to design, monitor construction, operate and maintain hospitals, including environmental and environmental engineering aspects related to hospital waste management; and (iv) incorporate the participation of beneficiaries and municipal governments in the project cycle through community consultations regarding the design and location of reconstructed hospital centers and, if necessary, in the resettlement of persons affected by the construction and operation of these new centers.

The Environmental Action Plan discussed with the Project's counterpart team includes: (i) environmental guidelines for the identification and selection of new sites and for the preparation of terms of reference for the environmental impact assessments of hospital constructions; (ii) guidelines for the preparation of resettlement plans for each hospital; (iii) environmental specifications for construction, to be incorporated in bidding documents for civil works; and (iv) action plan for the management of solid hospital waste in each hospital (See annex 2d: Part 1).

GOES has developed guidelines for resettlement that are less strict that those adopted by the Bank. However, should the need arise to resettle households or commercial entities, GOES has agreed to prepare a Resettlement Plan according to the Bank Resettlement Policy. The Bank team committed itself to assist the Borrower in the preparation of this plan. The Borrower has agreed to follow Bank environmental and resettlement policies as per Bank Operational Policies 4.01 and 4.12 whenever policies are applicable.

MOH, with the support of the Implementation Executing Unit (IEU), shall be responsible for the execution of the Environmental Action Plan and for each Resettlement Plan identified at project outset. For this purpose, monitoring and evaluation indicators identified as part of the Environmental Action Plan will enable the proper monitoring of actions and expected outcomes related to project objectives. The completion of the activities defined in the Environmental and Resettlement plans are conditions of

disbursements for each hospital.

Commitments agreed during the appraisal mission and confirmed during negotiations.

The Environmental Action Plan together with the framework for dealing with potential resettlement issues was discussed with the counterpart teams within MOH, Secretariat of the Presidency and Ministry of Finance. While there is no legislation applicable to resettlement, the government has developed norms and guidelines for the management of resettlement which have been implemented to relocate families affected by the earthquakes. GOES presented the guidelines to the Bank for its review, and noted that the sites selected are public property and that they do not contain any settlements. The Bank noted that the guidelines are less strict that those adopted by the Bank and that, should the need arise to resettle households or commercial entities, the Borrower will prepare, if needed, a Resettlement Plan according to the Bank Resettlement Policy the Bank team committed itself to work with the Borrower on this Plan. The Borrower has agreed to follow Bank environmental and resettlement policies as per Bank Operational Policies 4.01 and 4.12 whenever policies are applicable. It was agreed that an Environmental Impact Assessment, including a resettlement action plan, if necessary, would be a condition of disbursement for each hospital. The Salvadoran delegation confirmed the existence of national environmental legislation applicable to health facilities and have presented the law for review by the Bank during negotiations. All MOH hospitals have been licensed as of May 2001 and licenses are in the process of being extended.

Assessment of sites under consideration for Hospitals to be financed through the Project.

As part of the Project's environmental assessment, the preparation team visited three of the seven facilities that are the object of financing under the Emergency Reconstruction of the Public Hospital Network Component. The objectives of the field visit were to: (i) evaluate the sites initially proposed by MOH for the location of the hospital facilities to be reconstructed; (ii) assess the possibility of resettlement of families affected by the relocation of these facilities; (iii) identify significant environmental impacts to be expected as a result of the construction and/or identify ex ante their environmental impact assessment needs; (iv) assess technical assistance requirements related to environmental issues, including training needs of hospital staff related to their operation; and (v) evaluation of MOH capacity to identify and assess new sites and coordinate with MARN for securing an environmental license for each facility, in accordance with the country's current legislation.

The field evaluation focused on four sites proposed by GOES for relocation. The sites initially identified meet the minimum requirements needed to relocate the evaluated centers. However, environmental impact assessments are needed; these will indicate the mitigation measures that should be incorporated in each hospital's final design.

Regarding the environmental legislation in effect in El Salvador, each of the constructions to be financed with project financing should secure and environmental license prior to commencing construction. Likewise, three of the four sites inspected will require the preparation of a Resettlement Plan based on the guidelines presented in the Frame of Reference (see annex 2d part 2). The following tables identify in greater detail the environmental problems identified in each of the inspected sites.

Quick Environmental Assessment of Proposed Sites

Reconstruction of National Maternity Hospital, San Salvador.

Baseline information: This is a reference hospital specializing in obstetrics and gynecology, and is located in one of the most congested areas of San Salvador. Complex built in 1954, with expansions in 1960 and

1982. Capacity for 404 beds, including 60 beds for newborns. Usage rate at 100 percent, with no margin for usage in peak cases, and an average stay of at least three days per patient. Eight delivery rooms, 10 operating rooms, scanning, and additional support services such as blood bank, clinical and pathology laboratories, ultrasound and pharmacy. Damage caused by earthquakes considered between moderate and severe. Recommended actions include Replacement and Relocation.

Assessment of site proposed by MOH for relocation of Hospital:

- Proposed site in an estimated area of 16.9 blocks (approx. 12.0 Ha), apparently owned by the Ministry of Public Works and Housing.
- Preliminary proposal includes the relocation of Rosales Hospital and MOH offices.
- Significant urban settlements, with access to public water supply, sanitary sewer, lighting and telephone services (this will indicate that these are legal or legalized settlements since they have this type of services).
- Soil use including coffee plantations and semi-pristine, humid tropical forest.
- Adjacent to private farms and military school, with access to boulevards through narrow streets that will need to be modified.
- Infrastructure initially proposed will significantly affect soil use, bodies of water, forest, wildlife and property value of the area of influence.

Recommendations: It will be necessary to:

- incorporate access, residual and rain water.
- define a Resettlement Plan.
- prepare an Environmental Impact Study, considering the proposed infrastructure as a whole (HMN, MOH, and Rosales).
- obtain an environmental license.

Reconstruction of Cojutepeque Hospital, Department of Cuscatlán.

Baseline information: Hospital center measuring 3,400 square meters, population coverage estimated at 240,000 inhabitants; comprised of two buildings, one having a single story and the other having two. Second-level hospital, with delivery rooms, two operating rooms, and ten consulting rooms. Since the February earthquake only 50 percent of the services offered are functioning (however, it is operating with very low quality standards for hospital services due to its overcrowded infrastructure). One of the hospital's wings, built in 1827, was damaged during the earthquake due to its adobe construction. According to hospital technicians, the deficit in the cost of operation and maintenance in relation to the transfer obtained from MOH is 40 percent.

Assessment of site proposed by MOH for relocation of Hospital

- Proposed site with estimated area of 7 hectares, apparently owned by the Ministry of Defense or the Ministry of Finance (?).
- Site suitable for relocation of hospital center. Proposal includes leaving existing installations for prevention work and new center for treatment activities.
- Site with access to public water supply, lighting and telephone services. However, it will be necessary to build rainwater and wastewater collectors, prior to treatment.
- Site used by army for training exercises and military instruction.
- Adjacent to private farms and military school, with access to boulevards by means of narrow streets that will need to be modified.
- The infrastructure initially proposed will significantly affect soil use, bodies of water, forest, wildlife and the property value of the area of influence.

Recommendations: It will be necessary to:

- incorporate accesses, wastewater and rainwater collectors.
- evaluate the need to prepare a Resettlement Plan for market vendors who are temporarily located on the southern access to the grounds.
- prepare an Environmental Impact Study.
- obtain environmental license.

Reconstruction of Santa Gertrudis Hospital, San Vicente

Baseline information: Hospital center occupying 50 percent of a 67,000 square meter lot owned by the Hospital. Population coverage estimated at 165,000 inhabitants; second-level hospital, with four general and ten special clinics, one delivery room, five operating rooms, and respective equipment. According to local technicians, the second earthquake damaged the administrative areas, with these being declared as "red flag" areas. The damaged areas are over forty years old. Structural damages, although severe, apparently have not affected the center's principal structures. According to hospital technicians, the deficit between the demand for operation and maintenance and the amount of the transfer received by MOH is 80 percent.

Assessment of site proposed by MOH for relocation of Hospital

- Relocation/repair will be done on existing site.
- Site suitable for relocation of hospital center
- Site with access to with access to public water supply, lighting and telephone services. However, it will be necessary to evaluate the capacity of rainwater and wastewater collectors in the context of the new installations to be carried out.
- A school has been installed temporarily on hospital grounds, which must be relocated as part of the hospital construction's Resettlement Plan.

Recommendations: It will be necessary to:

- prepare an Environmental Impact Study.
- obtain environmental license.

Reconstruction of San Rafael Hospital, La Libertad

Baseline information: Hospital center located on a 20,000 square meter lot. Serves a population of 700,000 inhabitants. The five-story central tower was built in 1976. The rest of the buildings are over 60 years old (part of the buildings was initially constructed in 1860). Third-level hospital center with 4 general and 18 specialty clinics, four delivery rooms, clinical laboratories, ultrasound, blood bank, therapy, pharmacy and four operating rooms. The February earthquake significantly damaged the central tower. It is hoped that by December of this year at the latest, structural studies will define the feasibility of rebuilding the central tower.

Assessment of site proposed by MOH for relocation of Hospital

- Relocation will be done on the existing site.
- Site suitable for relocation of hospital center.
- Site with access to public water supply, lighting and telephone services.

Recommendations: It will be necessary to:

- evaluate the capacity of rainwater and wastewater collectors in the context of the new installations to be carried out.
- prepare an Environmental Impact Study and a Reconstruction Management Plan, as part of the

design. The Plan will make it possible to coordinate vehicular traffic and the generation and management of construction waste during peak hours and with fewer problems for the nearby population.

- obtain environmental license.

Environmental Action Plan

The Environmental Action Plan addresses four main objectives: (i) strengthen MOH capacity to carry out environmental assessments of existing sites as well as identify, select and assess new sites for hospitals to be reconstructed; (ii) support coordination between MOH and the Ministry of Environment and Natural Resources (MARN); (iii) build MOH capacity to design, monitor construction, operate and maintain hospitals, including environmental and environmental engineering aspects related to hospital waste management; and (iv) incorporate the participation of beneficiaries and municipal governments in the project cycle through community consultations regarding the design and location of reconstructed hospital centers and, if necessary, in the resettlement of persons affected by the construction and operation of these new centers.

The Environmental Action Plan discussed with the Project counterpart team includes:

a) development of terms of reference for the environmental impact evaluations of hospitals;
b) guidelines for the development of resettlement plans for each hospital;
c) environmental specifications for construction to be incorporated in the civil works bidding documents to be acquired with financing from the Loan
d) action plan for the management of hospital solid wastes in each hospital.

MOH, with the support of the IEU will be responsible for the implementation of the Environmental Action Plan and each Resettlement Plan that is identified during the first stages of Project implementation. The monitoring and evaluation indicators identified as part of the Environmental Action Plan will allow for appropriate monitoring of the actions and expected products related to the project objectives. The duration of the proposed Plan of Action will depend on the project duration, an estimated time of three to four years. The estimated cost of the Action Plan is US$180 thousand in addition to the cost of the individual environmental action plans that will be identified during the design phase. The $180,000 are expected to cover the costs of environmental and social impact assessment and its monitoring. The costs of the initial environmental assessment will be financed as part of the design stage and the costs of implementing environmental mitigation measures addressing direct impacts will be part of construction costs. The costs of implementing the Environmental and Social Plans will be financed with counterpart funds. The following matrix shows the Environmental Action Plan agreed with all the project counterparts.

Synthesis of Project Environmental Action Plan

Activity: Environmental Action Plan		Outcome Indicator	Means of Verification	Implementation Period		Cost (US$x1,000)	
Component	Result			Begin	End	Unit	Total
Environmental Review/Evaluation of the hospital constructions (civil works and equipment for waste management)	Designs are environmentally acceptable to GOES and the World Bank	Environmental Impact Studies developed or environmental revisions of the studies	7 reports with no objection by the World Bank	11/01	4/02	15.0	120.0
Development of Resettlement Plan for each hospital (Maternidad, Gertrudis)	Hospital construction to be financed follows legal policy and those affected are found to be in agreement with the agreed resettlement actions.	Resettlement Plans developed	Reports (see Resettlement Framework)	11/01	2/02	20.0	40.0
Obtain Environmental Licenses from MARN	Hospitals have the environmental license for operation, in accordance with the environmental legislation in force.	Environmental Licenses	Environmental Licenses granted by MARN.	11/01	11/02	0.0	0.0
Environmentally acceptable civil works	Hospital Centers constructed include the environmental considerations and specifications in the Mitigation Plans of each hospital.	[1][2]Environmental Action Plans completed in each hospital.	Environmental Supervision Reports from each hospital.	4/02	Completion of each hospital	Lump sum[3]	20.0
		Construction guidelines incorporate applicable environmental criteria (see annex 2d Part 2).	Supervision reports completed by the World Bank.	6/02	Completion of component		
Total							180.0

[1] The cost of each Environmental Action Plan, including the cost of the Resettlement Plan will be identified during the design phase of each hospital. The financing of each of these plans will be the responsibility of GOES, for which MOH, through the Monitoring Unit, will present the financing plan and identification of necessary funds.
[2] The Environmental Action Plan should include measures necessary for the management of solid wastes in agreement with the Action Plan identified in the Project Appraisal Document (see PAD).
[3] During the appraisal, it was agreed that the Monitoring Unit will have specialists assigned for the coordination of activities related to the environmental supervision of the works and implementation of the Plan, as well as, it was agreed that the engineering firm to be contracted for the supervision of the works, will include in their functions, the environmental supervision of the works.

Guidelines for selection of sites for location of Hospital Centers and Preparation of Terms of Reference for Project Environmental Assessments.

Framework of Reference. The Government of the Republic of El Salvador has received a Loan from the World Bank for the implementation of the Emergency Reconstruction and Extension of Health Services Project. The Project seeks to improve the health conditions of the population, attending principally to the population located in the areas affected by the earthquakes of January and February 2001. Both earthquakes caused considerable cumulative damage to 23 of the 30 public hospitals in the country. The majority of structural failures were in buildings with more than 50 years of operation, including in buildings constructed at the end of the XIX century, a time when seismic specifications did not exist in El Salvador.

The Project includes a component for the reconstruction and/or repair of the damaged hospital infrastructure in the Northern area of the country, affected by conditions of poverty and in the Central area destroyed by the recent earthquakes. According to statistical information provided by MOH, together, the hospital network to be reconstructed with financing from the World Bank, provides attention to at least 1.9 million people, an infrastructure estimated to be no less than 89 thousand square meters of construction. This component will finance the re-location and equipping of five hospitals and the rehabilitation/partial reconstruction of three hospital centers, at an estimated cost of US$157 million.

The Project has been classified as an Environmental Category B, based on the Operational Directives of the World Bank since each one of the hospital centers to be financed will generate specific environmental impacts and due to this, will require an environmental review of the design of each of the hospitals. The environmental review of each hospital will include: (i) environmental review of the sites selected by MOH for the re-location of the centers to determine if the proposed sites offer acceptable environmental conditions for the adequate operation of the centers and identify the need and extent of resettlement/relocation of those affected; (ii) evaluation of the designs (at level of draft) of the hospital infrastructure and proposed equipment for the management of hospital waste and the need/extent of the civil works, equipment, and training for the adequate management of this type of waste; (iii) identification of the significant environmental impacts that will affect the design and operation of the centers; (iv) definition of the necessary instruments for the environmental categorization and environmental licensing in agreement with the environmental legislation in force in El Salvador; (v) identification of necessary actions for the mitigation of these impacts through an Environmental Action Plan for each hospital and a Framework for Population Resettlement, if necessary; and (vi) cost estimate and necessary specification for the implementation of the identified plans.

Objective of the Environmental Review of each hospital. Through the environmental review of each hospital, the Government of El Salvador seeks to ensure that the options selected for the relocation/reconstruction of each hospital center, financed with funds from the Loan, are environmentally appropriate, with timely identification of any significant environmental and social problems, and the alleviating or compensatory measures needed to mitigate the identified impacts.

Study Area. Insert a short description of the hospital center, location, services, advances, infrastructure proposed based on the studies currently in preparation

Advances of the Study. The study includes the following activities:

Description of proposed hospital construction[1]. Description of the specific scope of each hospital construction, include maps or availability of maps, general disposition, capacities, areas, neighboring areas, current status of the design and requirements for construction if there is available information, those responsible for coordination and monitoring.

Environmental Description of the Location of Project. Description of the physical, biological, and sociocultural environment of the study area. Compile, evaluate, and present baseline information on pertinent and relevant features of each area.

Physical Environment: geology, topography, soils, climate, air quality (especially in urban sites), superficial and subterranean hydrology, water catchment, existing public services related to waste management.

Biological Environment: presence of fragile habitats, significant natural sites, vectors

Sociocultural Environment: population and social structure in the direct and indirect area of influence of the project, use of soil, development activities in the context of the selected site (see guidelines of the Resettlement Framework), existing goods and services.

Legislative Considerations and Applicable Norms. Define the pertinent regulations and norms related to environmental legislation in El Salvador that regulate environmental quality, health and occupational security, the protection of fragile areas (municipal ordinances including such as the case of the site selected for the Maternity Hospital in San Salvador), and use of land.

Description of the potential environmental and social impacts of the proposed hospital construction. Define the significant positive and negative, direct and indirect, immediate and long-term impacts identified that are related to the proposed project. Identify the inevitable or irreversible impacts. Describe, when possible, the impacts quantitatively, defining environmental costs and benefits, and the degree to achieve the quality norms related to waste discharge of the Center and in the catchments, and the anticipated benefits for cleanliness and public health in the area affected by the Center. Characterize the quantity and quality of the available information, the significant deficiencies in the unproven or uncertain information associated with the prediction of each impact.

Propose Design Alternatives. Describe the alternatives considered during the design, including location, architectural and functional design, technologies for waste management of each center, techniques and phases of construction in the context of location of the proposed center.
Incorporate in the process of selection of location alternatives, public consultation through focus groups involving the organized civil society, beneficiaries, those immediately affected, and institutional staff involved in the hospital construction.

Environmental Action Plan for Mitigation of Impacts. Develop an action plan for mitigation or prevention of signification impacts identified to acceptable levels, calculate the cost of these measures and the respective indicators of monitoring and impact. If the project will result in involuntary resettlement, incorporate a resettlement plan (see guidelines in Framework). Incorporate an implementation timetable and those responsible for each of the activities identified in the Plan. Incorporate mechanisms and procedures for public consultation for monitoring of the plan.

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[1] MOH, through the Project Monitoring Unit, will be responsible for topographic information on the selected sites and the availability of the functional studies of each center.

Preparation of necessary documentation for requesting Environmental Permit. As part of the evaluation process and preparation of reports, the consultant will provide technical assistance to the Monitoring Unit during the Implementation of the Project (USI) on the development of instruments, requests, and necessary reports to obtain the respective environmental permit.

Reports. A draft report, a final report. The contents of the report will include: executive summary, legal framework, description of proposed project, environmental description of site, identified impacts, alternatives considered, Environmental Management Plan, Monitoring Plan, References, and Appendices.

Coordination and Monitoring. Insert who will be responsible for the coordination and monitoring for MOH and MARN.

Team of Consultants/Level of Effort (considering each hospital)

Aspects to consider	Specialist	Consultant Level of Effort (weeks)
Social	Sociologist Urban Planner Economist	3 2 2
Natural Resources	Civil or Chemical Engineer Geologist	2 2 1

Duration of Study
Define, according to each construction, an estimate of three months.

Draft Frame of Reference for the preparation of Resettlement Plans in sites selected for Construction of Hospital Centers

Introduction. The objective of the proposed Frame of Reference is to define the guidelines, methodologies and general procedures related to the legal clearance of sites selected for the location of hospital centers to be reconstructed with project financing, as well as to appropriately handle the resettlement of persons and economic activities caused by project activities.

According to the results of the field visit to sites initially identified for the relocation of hospital centers, the appraisal mission detected that the ownership of sites initially identified depends on different government agencies. According to the authorities of other centers visited, in some cases the sites selected belong to MOH or the Ministry of Finance and Public Credit, the Ministry of Public Works and Housing, or the Ministry of Defense. From the above, the review of guidelines and procedures outlined in this document shall be part of the activities of the IEU which should coordinate with the MOH Legal Department and the Legal Department of each government unit involved regarding the procedures outlined in this Frame of Reference. Each project in which the need for population resettlement is identified should have its own Resettlement and Social Management Plans. The IEU shall be responsible for preparing each of these plans and sending them to the World Bank's Project Officer for review and no-objection, as part of the disbursement requirements.

Likewise, for monitoring and evaluation purposes, MOH, with the IEU's support, shall submit a monthly report to the World Bank, from the date of the start-up of the execution of the Resettlement Plan for each hospital center that so requires, in which progress made should be recorded with regard to the proposed plan and its execution timetable. Furthermore, it shall submit a final report with a family by family comparison of the data contained in the social-site data sheets contained in this report and the final data, resulting from the resettlement process, together with photographic records, and shall notify the Bank each time there is a need to purchase new sites, in each case attaching the corresponding purchase or resettlement plan.

Guidelines for preparation of resettlement and social management plans. Each Resettlement Plan should include the following sections: (i) socioeconomic diagnostic of those affected; (ii) topographic definition of area affected; (iii) the applicable Legal Framework which justifies specific actions to be taken in each site; (iv) procedures to be used to purchase the affected site(s) in each project, the acquisition of improvements, and forced expropriation; and (v) the Social Management Plan (including the organizational structure for the execution of the plan and budget) and measures to prevent new settlements.

Objectives:

- To identify those sites that will be affected by the acquisition of areas required by the project, their location, to what degree they are affected, possible use of remaining areas and tenure.
- To determine the socioeconomic and cultural characteristics of the owners and holders of the affected sites, their places of residence, their sources of income and means of subsistence, and the degree of dependence of the site affected, and to analyze impacts due to the loss of the affected area.
- To identify and evaluate the social, economic and cultural impacts that owners, holders and/or residents of affected sites will face.
- To describe existing procedures for the negotiation and acquisition of required areas.

- To formulate a social management plan for the resettlement of the population that must be displaced and for the socioeconomic re-establishment of the entire affected population.

Methodology

Preliminary evaluation of site. The IEU technician, the MOH legal-technical representative, the technical representative of the local government (as the case may be), and the legal technical representative of the owner entity(ies), shall travel to the selected site to observe the degree to which sites and homes are affected. During this trip designs will be reviewed (at least for the first draft) in order to analyze the relevance of how sites are affected, taking into consideration the stages and implications during the construction and operation of the hospital center under evaluation.

Based on this trip, the necessary recommendations and guidelines will be prepared and serve as terms of reference for the preparation of the Site Resettlement Plan, including, if necessary, the review of architectural and engineering designs.

Determination of degree to which people will be affected and their vulnerability. The technical staff responsible for preparing the Resettlement Plan should determine the degree to which people will be affected and their vulnerability, taking into account possible alternatives regarding the draft project's scale:

- To determine the degree to which people will be affected, technical staff shall identify the effects of works on the following elements: land, dwelling, business, access to public services such as electricity, telephones, drinking water supply, sewers, education, health, recreation, transportation, green areas, and effects on family income.

- Lot: The lot may be totally, partially, temporarily or definitively affected. In cases where it is only partially affected, one should consider the possibility of using the remaining area to determine the degree to which it is affected.

- Dwelling: This may be totally, partially, temporarily or definitely affected. The latter may imply moving the family group to a different community, in the same community or on the same lot.

- Businesses: A business may be totally or partially, temporarily or definitively affected. The latter may imply moving to a different community, in the same community or on the same lot.

- Access to services: Access to one or several services may be temporarily or definitively affected, and the possibility of using the lot, dwelling or business may be totally or partially affected.

- Family income: Family income may be totally, partially, temporarily or definitively affected.

- Vulnerability: To identify the vulnerability of those affected, indicators will be used, measured by means of localized surveys to define the degree of vulnerability in an indirect manner. These indicators may be age, gender, physical capacity (non-existence of handicaps), economic capacity, length of occupation on the site without changes, length of time carrying out the same activity, studies, knowledge of other activities different from current one. Based on these indicators, three degrees of vulnerability may be determined: high, medium and low.

Once the lots and dwellings affected by construction, road access and the operation of the hospital center are identified, a survey will be designed to collect data on lots affected and to obtain a characterization of

the population to be displaced. After data is collected, the results will be analyzed to identify the impacts caused by displacement in each case and thus determine resettlement solutions.

To determine resettlement solutions, technical staff shall design an appraisal methodology based on procedures existing in the Ministry of Public Works and Housing, municipalities, their property records, as well as other entities in El Salvador's construction field, to make it possible to define the values of construction, improvements and lands, and prepare acquisition budgets.

Topographic scaling. In parallel, technical staff shall proceed to prepare the topographic survey of affected areas and the design of how these will look at the end of project construction. The designs should be in accordance with the specifications identified in the draft project (road access, connections to public services, green areas, etc.); identifying in each plan the affected areas and lots. Topographic plans should be made at a scale of 1:500 or the appropriate scale for urban surveys.

Applicable Legal Framework. For each hospital, the technical staff responsible for documenting presidential or ministerial laws, regulations, ordinances and/or agreements applicable to procedures for the legal clearance of each site, or the proposed presidential or ministerial ordinances and/or agreements, as the case may be, in accordance with the World Bank's Operational Directive 4.30, whose objective is the improvement or at least the establishment of the affected population's socioeconomic conditions.

Final identification of persons affected and alternative solutions to be taken. From the outcome of the determination of the affected population, the degree to which they are affected and the topographic scale, the technical staff shall submit results to the IEU for approval. The actions to be taken regarding lots may be acquisition of sites, acquisition of improvements or forced expropriation. Table 1 below presents a tentative format for presentation.

Table 1. Results presentation model

What is affected	Person affected (list each person affected)	Quantity (example)	Alternative solutions	Type of proposed acquisition*
Partial lot	name	1	• Appraisal for replacement	AT
Partial dwelling	name	1	• Appraisal for replacement • Counseling for remodeling of dwelling. • Social consultation and follow-up	
Total dwelling	name	1	• Appraisal for replacement • Counseling for new housing construction • Counseling for lot acquisition and housing construction, in the case of displacement outside the site. • Social consultation and follow-up	
Dwelling-business	name	1		
Partial business	name	1		
Other construction (recent illegal occupation, empty dwellings)	name	1		
School	name	1	• Relocation Compensation measures	
Market	name	100	• Relocation • Compensation measures	
Municipal Green Area	Square meter		• Compensation measures	

*AT: acquisition of land; AM: acquisition of improvements

Description of alternative solutions

Appraisal for replacement. Definition of the value at which a similar property could be purchased, in another site, with the same conditions as that which one wishes to appraise. In addition to the value of the lot, constructions and improvements, under these similar conditions one must take into account factors such as the availability and proximity of services such as electricity, aqueduct, sewers, telephones, recreation, transportation, the site's commercial potential, area, materials, how well the property has been maintained, and factors dealing with income generation as related to the property.

Depending on the degree to which they are affected, the following compensation subsidies may be considered:

1. Subsidy for temporary closure of business: This is applied in those cases when the business must be closed and moved, for an estimated period of one month. In this case the subsidy to be given will be the equivalent of one month of fixed costs plus utilities for the same period.

2. Subsidy for moving expenses: This is applied in those cases when it will be necessary to haul furniture and goods, or materials resulting from demolition, with a single payment being established, for an amount to be determined according to diagnostic of the property register.

3. Resettlement subsidy: This is applied when the family must move from the site where it resides, and an amount is given for the head of the household, the spouse and each underage child or student who is economically dependent on the head of the household.

4. Subsidy for loss of income: This is applied when some revenue or income is lost due to moving. This subsidy shall be estimated on the value of income lost for six months.

5. Subsidy for legal expenses: In those cases when it is necessary to transfer a property to the State, the cost of legal expenses incurred in this transaction shall be covered.

Form of payment. In the case of partially affected lots and of unoccupied construction, 100 percent of the value of the appraised replacement shall be paid at the time the site is delivered to MOH, from the time of payment, so that people can build their replacement house or shop.

- Counseling for the construction or remodeling of dwellings or shops
- MOH shall assign an engineer and an architect to help families with designs and offer them assistance during the construction process. Together with the social expert, families will be given counseling so that they can finish their replacement houses or shops within the delivery deadline agreed with MOH.

- Counseling for acquisition of lot
- For a family who cannot be relocated on its same lot, counseling should be provided for the purchase of the lot, which shall consist of information on existing offers, analysis of the socioeconomic suitability of each and the legal paperwork for purchase of the lot.

- Social counseling and follow-up
- MOH shall have an expert in social sciences to coordinate all activities inherent to the execution of the plan, with all the entities and agencies intervening, to ensure their timely compliance and to carry out the social management that allows families to re-establish their living conditions.

- Solutions under local government responsibility
- MOH shall follow up and advise the local government on compliance with commitments agreed upon by the person affected, the local government and MOH.

Procedure for acquisition of lots. Based on the indications proposed by the technical team and approved by the Ministry of Health, the MOH Legal Department shall begin the procedures to acquire lots and improvements:

1. Notification given to owner and request for authorization to execute the work, subject to explanation of his benefits and rights in order to receive compensation.

2. Traverse survey of area to be affected in each lot.

3. Appraisal and negotiation of affected area. The appraisal for replacement shall then be made, in accordance with criteria established in the diagnostic of the property register. This appraisal must have the approval of government entities responsible for State assets, for which the MOH Legal Department should call for the establishment of an Official Appraisal Commission for this purpose, having legal power for the corresponding negotiation.

4. Once the negotiation is completed, an appraisal report shall be signed by both parties (affected person/MOH Legal Department and/or the affected person/Appraisal Commission).

5. The appraisal and traverse reports, the title deed, evidence of value and personal documents should be attached to a compensation agreement that the corresponding authorities should sign so that it can be processed, according to El Salvador's legal framework (the Ministry of MOH and the President of the Republic).

6. Once the agreement is returned and signed, it shall be sent to the Attorney General's Office with all pertinent documents, at which time a lawyer shall be appointed to record the lot to be compensated in favor of the State.

7. When this document is duly recorded, the respective payment order should be prepared.

Acquisition of Improvements. This shall be done in the same manner as items 1 to 5 listed in the previous section (in item 3 the affected improvements are appraised).

- The payment order for the negotiated amount shall then be prepared.

Forced Expropriation. If no agreement is reached for negotiation, it will be necessary to resort to the sections corresponding to forced expropriation specified in the country's legal and regulatory framework (see Legal Framework).

Presentation of Resettlement Plan. Taking into account types of persons and lots and the degree to which they are affected, as well as the degree of vulnerability of the affected population, presenting the alternative solutions considered, cost, resolutions taken, agreements reached and the implementation period for each Plan.

The process of acquiring lots and the building of solutions will require 5 months from the date of start-up, provided that those cases requiring construction processes begin this process with the payment for improvements, i.e., beginning the third month.

Environmental Guidelines for Construction and Supervision of Civil Works to Minimize Environmental Impacts during Hospital Construction/Rehabilitation

Introduction. The construction specifications described below are meant to complement the environmental impact mitigation or prevention activities resulting from the construction of hospital centers to be financed by funds from the World Bank Loan. These specifications shall form an integral part of the civil works construction contracts signed by MOH and contractors for the execution of works, and should thus be including the respective bidding documents.

General aspects of environmental protection

General. The objective of the implementation of environmental specifications during the construction of the financed hospital centers is to prevent significant, negative environmental changes as a consequence of the construction of each hospital.

The Contractor and his personnel should avoid introducing unnecessary modification to habitats, parks, recreation areas or nearby urban areas where the hospital will be located. The supervisor of the work should certify that these specifications have been satisfactorily implemented.

Environmental monitoring of civil works. The construction of civil works defined in the bidding documents should be carried out in accordance with work quality specifications and environmental specifications, to the satisfaction of MOH and MARN which shall have free access for inspection during the execution of these works.

Contractor's responsibility. The Contractor is obliged to construct civil works in accordance with the design and environmental plans prepared by MOH and according to instructions indicated by the supervisor during construction. If the Contractor, without the consent of the supervisor or the IEU, makes changes to the original design in additional works that may arise during construction, he must remove from the work site what has been built but not approved, without right to claims or compensation for costs or time in relation to the service contract.

When work is performed in zones that are potentially hazardous to operators or neighbors affected by the construction of works, as in the case of zones prone to landslides, cave-ins, removal of rubble, or sensitive areas, the Contractor must take the necessary measures to ensure the safety of his operators and of those affected, including communications and placement of necessary signs.

During the winter, the Contractor should prevent soil erosion resulting from the runoff of rainwater from affecting the area of influence of its work areas. He should also leave the filling of executed works well compacted, to the supervisor's satisfaction, as well as install works to reduce the erosion of soils, slopes or landfills.

Until MOH receives definitive information on the works carried out by the Contractor, the latter shall be responsible for providing and using the necessary safety measures to prevent or counteract the damages that rain, wind or dust may cause to the work or the equipment installed, and also provide necessary surveillance during the reception process.

Regarding the protection of private and State property, the Contractor shall be responsible for adopting the necessary measures to prevent and avoid any damage to private and public property, including services, buildings, fences, paths and groves of trees located within or near the construction site. The Contractor shall be responsible for keeping affected neighbors informed about possible damages that may occur and about measures taken to prevent such damages.

It shall be the Contractor's responsibility to repair any damage attributable to the work carried out or as a consequence thereof.

Safety and Signs. During the construction stage, the contractor must take necessary measures and precautions for the traffic of equipment, machinery, vehicles and pedestrians in the project area, providing adequate daytime and nighttime signs and when necessary temporarily closing off traffic.

Transportation of Materials. The transportation of materials for the work should be scheduled and carried out so as to avoid damage to roads, streets and public and private highways, public services, construction, crops or any type of public or private good. Transportation costs for this type of work should be included in the respective unit prices.

The transportation of construction material, rubble, cleared vegetation and other materials should be done in covered vehicles; the material should be sprinkled with water if necessary and appropriate. The Contractor shall be responsible for removing concrete rubble, rocks and cleared vegetation, without the right to receive additional payment since the cost of this activity should be included in the unit value of the activity.

Environmental specifications

Pollution control in bodies of water. The Contractor shall protect surface and ground water runoff or any other type body of water within the work's area of influence against accidental oil or fuel spills or from the transportation of construction or waste materials. Should an accidental or premeditated spill occur, the Contractor must inform the supervisor and take the necessary measures to counteract the pollution that occurred.

The Contractor shall place sediment collectors for water used in washing aggregates and setting concrete, oil and grease traps, or any other type of appropriate device downstream from the sources of production of this water, collecting them before they are dumped into the final bodies of water.

The Contractor may not dump mud or rubble into bodies of water; this type of material may only be dumped in dry areas not prone to flooding.

The use of equipment and machinery in natural channels must be approved by the supervisor and by the respective local government.

The Contractor must keep any toxic elements safely protected to avoid the possibility of their being intercepted or conducted to natural networks of surface or underground drainage.

The Contractor may not dump fuel or lubricants on the ground or in existing bodies of water.

The agreed unit price shall include the defined necessary measures and thus shall not be measured or paid during the construction of works.

Noise pollution control. The Contractor shall be responsible for maintaining permissible levels no higher than 80db (what a human ear can withstand and allowing a person to speak without raising his voice), incorporating in his machinery and equipment exhaust silencers, closed spaces for machinery maintenance, or alarm devices or vehicle horns in accordance with the specified level.

The agreed unit price shall include the defined necessary measures and thus shall not be measured or paid during the construction of works.

Air pollution control. The Contractor shall be responsible for controlling the quality of emissions, odors and smoke related to his machinery and equipment, as well as to dust and the burning and use of toxic and volatile chemical products. Operators should keep the lids of fuel, chemicals and paints closed and also keep them in isolated areas.

Likewise, the Contractor shall be responsible for proper maintenance of his fuel-based machinery in order to control the emission of gases, odors or smoke.

The Contractor may not burn out in the open any type of waste, trees or bushes, tires, rubber, plastics or any other product that is hazardous to human health. These may be deposited in the sanitary landfill identified during the design stage and duly authorized by the Supervisor and the corresponding local government.

To avoid generating dust, the Contractor shall sprinkle water on surfaces exposed to vehicular or pedestrian traffic, avoiding the creation of puddles or mud. Likewise, if necessary, canvas should be used to keep construction materials covered.

The agreed unit price shall include the defined necessary measures and thus shall not be measured or paid during the construction of works.

Occupational health and hygiene. The Contractor shall adopt the necessary occupational safety measures in each of his job sites, giving staff the necessary accessories such as protective helmets, dust masks, steel-toed rubber boots, etc. When there are five or more workers, the Contractor shall provide adequate, transportable sanitary facilities for feces disposal. If it is necessary to build a septic tank, the Contractor shall ask the supervisor to approve the site, and the Contractor shall be responsible for filling the ditch once the work is completed and for returning the selected site to its original conditions.

Pavement removal and replacement. The Contractor shall be responsible for depositing the removed pavement (asphalt, stone, hydraulic concrete) to sites away from roads and in places selected by the supervisor. The replaced pavement should be of equal or higher quality than the previous one.

Dump. The Contractor shall ensure that the area utilized has proper drainage to avoid soil erosion. Before beginning to dispose of materials, the Contractor shall remove trash dumped at the site as well as construct drainage ditches in the necessary sites identified by the Supervisor.

Annex 2e: Monitoring and Evaluation

A Monitoring and Evaluation (M&E) system will assess project performance in meeting project objectives and achieving the desired outcomes and outputs. It will collect and analyze data for the indicators in the logical framework and other variables needed to monitor project activities. The M&E system aims to answer the following questions: (i) Does the project achieve its development objectives? (ii) Can variations in outcome indicators be explained by project-financed interventions or are they the result of other factors unrelated to the project; (iii) What will have happened in the absence of the project? (iv) Do project outcomes vary across groups of intended beneficiaries across regions? If so, what factors contribute to this variation? (v) Are there unintended effects of the project, either positive or negative? (vi) Can project design be altered to improve impact? and (vii) Did the project justify its cost?

To address these questions the M&E system will consist of the following components: (i) M&E strategic plan; (ii) monitoring, and (iii) evaluation.

M&E Strategic Plan. Within one year of project start-up the borrower will prepare a framework and action plan for evaluating impact and monitoring program processes and outputs. It will detail the objectives and mechanisms to carry out the monitoring and evaluation of each component. Monitoring will include: a computerized management information system to track progress on activities, and community monitoring, and field supervision. Evaluation will include both a mid-term formative evaluation and impact evaluation, including baseline and endline measures. The impact evaluation framework will specify expected outcomes, performance indicators, evaluation designs, data collection approaches and analytical methods to evaluating project outcomes. A monitoring framework will detail the management-oriented activities, processes and products that project managers are accountable for delivering to target populations, MOH authorities and to the Bank. Monitoring will aim to make information collection, analysis and feedback a systematic and routine activity. In addition to the above, sources of information will also include observations made during supervision field visits, existing and to-be-implemented management information systems, disease surveillance systems and population based surveys such as the DHS. Qualitative methods will also be used to obtain information on beneficiary conditions and perceptions related to implementation processes and service quality.

Monitoring. The project will support the design and implementation of a computerized management information system (MIS) to track progress on activities, products and expenditures during implementation. Drawing on the logical framework and Institutional Modernization Benchmark Matrix, the MIS will collect data on key indicators, processes and outputs. It will also track compliance with targets set for coverage of beneficiaries established for basic services extension and improvement, prevention and treatment of HIV/AIDS and prevention and control of dengue. Project-based data will also draw on MOH information systems, statistical registers and MIS maintained by external agents active in the types of activities supported by the project. Inputs from field visits will also be included. The firm to be contracted to execute Component I (hospital reconstruction) will design its own MIS and provide monthly feedback to the MOH. The indicators to be included in the Component I MIS will be agreed with the MOH and the Bank.

Community Monitoring. Community monitoring of the delivery of basic health services and HIV/AIDS interventions will be an integral part of the monitoring of the project. A system will be created to allow for the channeling of complaints and suggestions from beneficiary communities to program managers, and addressed in a timely manner. Information will also be gathered through simple, exit surveys of beneficiaries, spot interviews and focus groups. These data will be consolidated and reviewed on a regular basis by the PCU.

Evaluation

Formative Evaluation. Within one year of start-up, the borrower will have completed baseline surveys for all project-supported activities, according to the monitoring and evaluation plan. Within two years of project start-up, an external agent will conduct a formative evaluation to assess progress toward achieving project objectives and outcomes. The purpose is to provide insight into the problems related to the implementation of each intervention and ways to overcome them. It will consider each of the project's components, focus on delivery of programmed activities and products, and recommend adjustments to project design, delivery systems and implementation plans. The formative evaluation will involve document analysis and make use of qualitative methods such as focus groups, interviews with key informants and rapid assessments of beneficiaries' experience with the project. These will be applied to small samples of beneficiaries, project staff and MOH personnel involved in project implementation.

Impact Evaluation. An external impact evaluation will be conducted to assess the effects of project interventions using the indicators of the logical framework as a reference. The impact evaluation will be based mainly on the use surveys applied to households, providers, MOH personnel and other beneficiaries of project-financed activities. Evaluating the impact of interventions of basic services extension and improvement and prevention and treatment of HIV /AIDS will involve non-experimental designs consisting of baseline and follow-up surveys applied to both treatment and comparison groups. The project will also support the design and implementation of baseline and end-line population-based surveys to measure multi-sector knowledge, attitude, practices and behaviors (KAPB) related to control of mosquito vectors and HIV/AIDS. Measuring the impact of institutional and organizational interventions will involve gathered data through pre-post surveys, structured interviews and focus groups. Where possible, existing survey programs such as the Demographic and Health Surveys (DHS) will be used.

Annex 3: Estimated Project Costs

El Salvador: Earthquake Emergency Reconstruction And Health Services Extension Project

Project Cost By Component

Project Cost By Component	US $million – Local	US $million Foreign	US $million - Total
I. Emergency Reconstruction Health Policy Design and Implementation	42.6	63.9	106.5
II. Health and Nutrition Coverage Extension in the Earthquake Affected Areas	5.6	8.4	14.0
III. MOH's Institutional Development	2.7	10.9	13.6
IV. Project Management	2.0	2.0	3.9
	-	-	-
Total Baseline Cost	**52.9**	**85.2**	**138.0**
Physical Contingencies 10%	6.3	10.1	16.4
Price Contingencies 6%	4.9	4.9	9.8
Total Project Costs:	**64.1**	**100.2**	**164.3**
Front End Fee 1%		**1.4**	**1.4**
Total Financing Required	**64.1**	**101.6**	**165.7**

Project Cost by Category of Expenditure

Project Cost by Category of Expenditure	Local	Foreign	Total
1. Works (Comp.I)	**34.5**	**34.5**	**69.0**
2. Goods	**1.6**	**29.8**	**31.3**
(a) Component I	1.5	29.2	30.7
(b) All others	0.0	0.6	0.6
3. Consultants' Services	**10.4**	**10.4**	**20.8**
(a) Component I	6.4	6.4	12.9
(b) All others	4.0	4.0	7.9
4. Training	**0.54**	**0.54**	**1.1**
(a) Component I	0.11	0.11	0.2
(b) Components II and IV	0.4	0.4	0.8
5. Health Service Providers (Comp. II)	**3.6**	**2.4**	**6.1**
6. Investments Areas (Comp.III)	**2.2**	**8.8**	**11.0**
(a) Institutional Improvement and Descentralization (Programs)	0.9	3.7	4.7
(b) MOH Strengthening	1.3	5.0	6.3
7.Grants (Fund)	**0.1**	**0.4**	**0.5**
8. Pharmaceuticals and materials	**1.2**	**4.7**	**5.9**
(a) Component II	0.7	2.9	3.6
(b) Component III	0.5	1.8	2.3
9. Audits	**0.2**	**0.8**	**1.0**
(a) Component I	0.2	0.7	0.9
(b) All others	0.0	0.1	0.1
10. Incremental Operating Costs	**0.5**	**0.5**	**1.1**
(a) Component I (IEU)	0.1	0.1	0.3
(b) All others (PCU and Component III)	0.4	0.4	0.8
Total Baseline Cost (*)	**54.9**	**92.8**	**147.6**
11. Front-End Fee (1%)	**0.0**	**1.4**	**1.4**
12. Unallocated	7.5	7.5	15.0
Total Project Costs:	**64.1**	**101.6**	**165.7**

Annex 4: Economic Analysis Summary

El Salvador: Earthquake Emergency Reconstruction and Health Services Extension Project
This annex presents the summary results of: (i) the cost-benefit analysis; (ii) the sensitivity analysis; and (iii) the fiscal impact and sustainability analysis.

A. Cost-Benefit Analysis. Measurable economic benefits and costs are quantified, in present value terms, of implementing a project of this magnitude. The economic analysis was conducted on the three project components:

1. Cost/Benefit Analysis of Component I (Emergency Reconstruction): Direct benefits were quantified based on cost savings from the expected reduction in average length of stays (ALOS) as well as achieving greater efficiency through strengthening hospital management of the hospitals to be rehabilitated. Indirect benefits were estimated based on the reduction of maternal and general inpatient mortality rates. In the case of new hospitals, no direct benefits were considered since in the situation "without the project" the hospitals do not exist. Direct benefits and costs were conservatively assumed to net each other out. Therefore only indirect benefits were considered, based on the positive impact on productive life years saved through the expected reduction of mortality and morbidity.

2. Cost/Benefit Analysis of Component II (Strengthening MOH Primary Care Provider Network and Contracting NGO Providers): Direct benefits were estimated based on cost savings generated by the project through improving the health conditions and the health services network. Indirect benefits were estimated based on productivity improvements in the labor force through reduced morbidity and mortality expected from this project.

3. Cost/Benefit Analysis of Component III (MOH Institutional Development for Policy Formation, National Priority Programs and Support Systems): The analysis only measured the direct benefits of reducing the number of AIDS and related cases and the indirect economic benefits estimated from productive life years saved.

The overall project will produce a number of additional and important indirect benefits that will be measured by the monitoring and evaluation system to allow for ex post evaluation, but will not be assumed ex ante. The time span used to assess the project's attractiveness was ten (10) years. To determine the overall cost-benefit of the proposed investment, the economic analysis includes a total investment cost of US$145.0 million, plus nearly US$37.1 million in recurrent expenditure per year related to the ongoing costs associated with improving access to primary health care services in the target regions, managing and operating the new hospital infrastructure network and managing the AIDS Detection and Control Program.

Assumptions

The following parameters are considered relevant in estimating the economic benefits of the proposed project: the length of the project horizon and the time to impact the health system performance, the existing patterns of expenditure in each category and existing levels of hospital utilization and of morbidity and mortality. A discount rate of 10 percent is used in line with the Bank's 10-12 percent recommendation for discount rates in economic analysis. Given the medium-to-long-term effect of the changes, the estimates assume a project horizon of 10 years.

The analysis uses the following assumptions to measure the direct and indirect benefits:

For contracting of NGOs to extend coverage of basic health services:

(i) A 10-year time horizon was used to estimate benefits;
(ii) Benefits arise from reductions in mortality and morbidity rates by type of case; these reductions are estimated based on observed results from similar studies in other Latin American countries;
(iii) The cost per hospital admission was estimated at US$187.03 for projections starting in 2000 to estimate savings in hospitalizations;
(iv) The investment in the Project corresponds to the financing made available; the investment is distributed throughout the first four years; as of the fifth year the MSPAS will assume the total recurring costs;
(v) Per capita costs for the extension of basic health services was estimated at US$15;
(vi) Direct benefits are generated through the reduction in hospital admissions;
(vii) Indirect benefits are generated through the gain of productive years through reductions in mortality and morbidity;
(viii) A discount rate of 10 percent was used to discount future project cash flows.

For hospitals to be rehabilitated:

(ix) Maternal mortality rates will drop by 20 percent;
(x) General inpatient mortality rates will drop by 20 percent;
(xi) Reductions in mortality and morbidity rates will occur gradually over five years, achieving the target at the end of year five;
(xii) Average LOS will drop by 20 percent;
(xiii) Operating efficiency improvements will generate 10 percent savings through stronger management;
(xiv) The reduction in LOS and efficiency improvements will be achieved in three years;
(xv) The indirect benefit attributable to a reduction in the transport time for patients as an indication of the opportunity cost to the patient; the indirect benefit is therefore the savings for patients due to the reduction in travel time;
(xvi) Recurring costs for hospitals is estimated at 24 percent per year;
(xvii) A discount rate of 10 percent was used to discount future project cash flows and a discount rate of 4 percent was used to discount future benefits from saved lives.

For hospitals to be replaced:

(i) Maternal mortality rates will drop by 20 percent;
(ii) General inpatient mortality rates will drop by 40 percent;
(iii) Reductions in mortality and morbidity rates will occur gradually over three years, achieving the target at the end of year three;
(iv) Direct benefit from a reduction in transport costs for the patient
(v) Indirect benefit for the reduced time in the patient transport reflected as savings in opportunity cost;
(vi) Benefits begin to show as of the third year since during the first two years only investments are made to construct the hospitals;
(vii) Recurring costs for hospitals is estimated at 24 percent per year;
(viii) A discount rate of 10 percent was used to discount future project cash flows and a discount rate of 4 percent was used to discount future benefits from saved lives.

In the fiscal impact section, these assumptions will also be used to assess, from an economic perspective, the impact of the project on public finances. All target reductions in morbidity and mortality will be

reached after three years.

Summary of Costs and Benefits

The project will yield a net present value (NPV) of benefits, after investment and recurrent costs, of US $108 million and produce an internal rate of return (IRR) of 28 percent over 10 years. The main results are shown in Table 1. Assuming the cost and benefit measures were estimated conservatively, then NPV > 0, CBR >1 or IRR > discount rate (10 percent) will automatically imply that the project is worth supporting. Several factors indicate the present analysis is more likely to underestimate the full value than to overestimate benefits. For example, the presence of hospital renewed infrastructure in the target regions will allow patients to be treated locally, rather than having to travel while sick to receive treatment outside their community. The local treatment of patients, therefore, eliminates these travel costs and generally allows for better care of patients in their own communities.

Table 1: Estimated Costs and Benefits

	5 years	10 years
NPV (US$ millions)	(1,925,461)	122,671,944
IRR		33.5%
Cost Benefit Ratio (CBR)		1.76

Note: NPV Benefits is equal to the direct and indirect benefits, minus total project costs (in US$ millions)
Benefit: Cost is equal to total benefits divided by total costs
IRR was calculated based on a ten year time horizon

The project will produce benefits and savings for the health sector and El Salvador in general, primarily through reductions in hospitalization costs, mortality, morbidity and the local resolution of patients needs. The cost-benefit analysis, which gives the project a CBR of 1.76, will yield significant health benefits and economic benefits for the population of El Salvador. Even when projected recurrent expenditures generated by the project are considered, the stream of benefits shows that the project will be deemed highly desirable and will be financially sustainable.

The quantified estimated benefits for the three components are presented in Table 2. Overall benefits outweigh investments nearly two to one. Over 10 years, the net present value of the project will yield benefits of approximately US$122.7 million. With the exception of the first several years, the project is expected to generate annual savings to the system that outstrip the investment cost, thereby paying for them. The internal rate of return (IRR) for the project is estimated at 33.5 percent, reflecting the high benefits relative to project costs. This ratio can be used to demonstrate the value of this project relative to other projects in other sectors; any number lower than the discount rate (10 percent) will imply that the project should not be carried out.

The benefits from strengthening the primary care network arise from two reasons. First, the project is expected to generate a positive impact through a greater resolution of cases at the local level, thus reducing patient hospital referrals, and second, by reducing risk factors in the community that increase hospital demand. As a starting point, the volume of hospital discharges in the target regions was estimated using information from similar regions and populations. Feasible hospitalization targets were set based on this estimated current demand. The gradual realization of these targets was then used to quantify the economic benefit from reduced hospitalizations. The study estimated savings of roughly $12.7 million in present value terms through the reduction of 112,554 hospital admissions. Additional benefits arise from the increase in productive years for the labor force through improved health indices. In addition, the project promotes greater equality in access to health care services in underserved areas.

The benefits from the extension of basic health services in underserved areas are significant. This component of the project involves the contracting of NGOs to provide health services in the near term, without having to invest significant resources in infrastructure. For a ten-year time horizon the present value of the costs is approximately US$23.6 million, while the present value of the benefits is approximately US$52.1 million, thus justifying the implementation of the project. The IRR for this component of the overall project is 62.5 percent while the CBR is 2.6. Therefore, the Extension of Essential Health and Nutrition Services component of the project will have a high positive impact in the target communities.

Table 2: Summary of Costs and benefits over 10 years
[US millions (in constant 2000 dollars]

Year	Project Costs	Direct Benefits	Indirect Benefits	Total Benefits	Total Net Benefits	Net Present Value (5 and 10 years)
2002	56,603,994	1,762,064	6,339,760	8,101,824	(48,502,169)	
2003	68,600,684	3,759,323	15,200,829	18,960.152	(49,640,531)	
2004	37,224.173	5,043,852	36,920,444	41,964,296	4,740,124	
2005	30,286,775	5,827,209	59,365,087	65,192,296	34,905,521	
2006	29,730,157	5,932,849	73,833,691	79,766,541	50,036,384	(29,311,910)
2007	29,730,157	6,052,253	75,690,392	81,742,645	52,012.488	
2008	29,730,157	6,185,795	77,549,179	83,734,974	54,004,817	
2009	29,730,157	6,333,860	79,471,447	85,805,307	56,075,150	
2010	29,730,157	6,496,844	81,397,241	87,894,085	58,163,928	
2011	29,730,157	6,675,155	83,387,983	90,063,138	60,332,981	
Total	**371,096,566**	**54,069,204**	**589,156,054**	**643,225,258**	**272,128,693**	**114,964,459**

Component I will have a highly positive impact due to the large number of lives covered by the reconstruction/substitution of seven hospitals. The seven hospitals cover a population of over three million persons. This component of the project is estimated to have a net present value of US$86.2 million over ten years, after investments and recurring costs are taken into account. This high net present value is achieved despite the fact that direct benefits were not considered in its calculation. The hospitals were valued operating at cost, since they are public hospitals. Therefore, net costs and benefits were assumed to cancel themselves out. In this manner, on indirect benefits were considered, such as reductions in the mortality and morbidity rates, translated into productive life years saved. The value of these productive life years was estimated from the projected future income generated by them.

The third component of the Project involves the detection and control of HIV/AIDS and STDS. Since information on the state and scale of the AIDS crisis in El Salvador was not available, projections were made based on a similar program evaluated in Russia by SANIGEST. The direct benefits from this program stem from the number of AIDS cases prevented. The annual benefits amount to US$ 2.2

million, assuming an annual cost for the care and treatment of AIDS of US$4,000, not including anti-retroviral medications. This program is estimated to save 303 lives over ten years, representing economic savings of approximately US$19.7 million.

In terms of the total costs of implementing the entire project, the analysis considers two basic elements: (i) the external investment costs of the World Bank project; and (ii) the recurrent costs. The total project cost amounts to roughly US$351 million over ten years. The World Bank will finance $144 million and local funding sources will finance roughly $207 million in recurrent costs. The recurrent costs reach $34.1 million per year after the fourth year, once the project is fully operational. This amount includes the recurrent and incremental costs of investments in equipment and maintenance, as well as the cost of increasing the coverage of basic health services through the primary care network and the operating costs of the proposed hospitals.

B. Sensitivity Analysis: Risk Analysis

While the above results are conservative, it is important to test the robustness of the results with regard to potential delays or reductions in benefits. Sensitivity analysis explores how plausible changes in assumptions about uncertain variables affect conclusions regarding the project. Uncertainty in the three main assumptions is reflected by using sensitivity analysis to test the impact of delays of 2 and 3 years, as well as a reduction in benefits of 20 percent, and 40 percent (Table 3).

Table 3 shows the effect of delays and lower than expected benefits on the NPV and IRR. Overall, the project will remain justifiable even assuming a 3 year delay in project benefits or a 20 percent reduction in the benefits received, assuming the traditional parameters which dictate that annual rate of return earned should be greater than or equal to the discount rate of the project, to maintain an efficient allocation of Bank resources. The high IRR also underscores the cost-effective nature of the program. A significant reduction in benefits of 40 percent will no longer justify the project, assuming no additional benefits are generated other than those estimated conservatively in this study. However, the conservative nature of the estimates makes it possible that even at a 40 percent reduction in benefits, unaccounted for benefits could still make the project justifiable.

Table 3: Sensitivity Analysis

Type of sensitivity	NPV (US$ million)	IRR (%)
Base Case	114,964,459	28.9%
2-year delay	49,289,350	22.7%
3-year delay	22,062,102	17.3%
20% reduction in benefits	38,017,744	17%
40% reduction in benefits	-85,096,999	-10%

The present economic assessment only values benefits, and does not implicitly value social benefits. Evaluations based solely on economic values can lead to market failures, especially in poverty stricken regions. Such market failures usually necessitate government intervention to remedy the situation. Therefore, it is important for the present study to be judged not only on its quantifiable economic merits but also on its unquantifiable and tangential social benefits to the populations of the target regions in El Salvador. One such intangible benefit is the promotion of

greater equality in access to public health services in El Salvador, a country where the poor, rural and indigenous populations have traditionally had lower health indices and poorer access to health services.

C. Fiscal Impact and Sustainability

This section examines the financial impact that the overall Project has or the fiscal burden resulting from project implementation (during project execution and recurrent costs).

The first step in the analysis of the project sustainability is to establish the base level expenditures prior to the implementation of the project. To the baseline expenditure for project investments, estimates are made on the recurrent costs over a five-year period following project completion. These expenditures are then compared with the projected expenditures of the public sector institutions, and in particular the MSPAS, to determine if the burden of recurrent expenditure is reasonable in the context of the MSPAS' financing capacity and its mission.

In 2000, total public health expenditures in El Salvador accounted for roughly 3.2 percent of the GDP, or approximately $67 per capita. The MSPAS is one of the dominant financiers in the health sector. Based on the observed pattern of expenditure, projections are estimated at an annual growth rate of 2 percent for both the MSPAS and the public health sector as a whole. This is compared with the projected expenditure schedule for the project and the estimated recurrent costs to determine the overall financial sustainability of the project.

Based on the current conservative projections for health expenditures, the cost of implementing the project will represent approximately 15.4 percent of the total MSPAS expenditure on health care services in El Salvador and approximately 7.2 percent of total public health expenditures, after the fourth year of the project, which is the starting point to analyze the sustainability of the project. Despite these relatively high percentages, it is important to consider that the project will cover primary care and hospitalizations for approximately 3.7 million lives in the target regions, thus representing roughly one third of the total population of El Salvador. Therefore, given the social need to cover the target populations it is reasonable to project MSPAS expenditures that take into account the current project's recurrent costs. The alternative of not including the recurrent costs of this project in the MSPAS budget will leave the target population largely uncovered by health services after the devastating earthquakes of early 2001.

Annex 5: Financial Summary

El Salvador: Earthquake Emergency Reconstruction and Health Services Extension Project

Years Ending 2007
(In Thousands)

Project Costs	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
Total Project Financing	8,439	38,039	89,481	20,966	6,964	163,89
Investment Costs	8,017	36,138	85,007	19,918	6,615	
Recurrent Costs	422	1,902	4,474	1,048	348	8,194
Total Project Costs *	8,439	38,039	89,481	20,966	6,964	163,890
Interest during construction						
Front-end Fee	1,427					1.427
Total Financing Required	9,866	38,039	89,481	20,966	6,964	165,700

Annex 6: Procurement, Financial Management and Disbursement Arrangements

Procurement Arrangements

Procurement for the proposed project would be carried out in accordance with World Bank "*Guidelines: Procurement Under IBRD Loans and BANK Credits*", published in January 1995 (revised January/August 1996, September 1997 and January 1999); and "*Guidelines: Selection and Employment of Consultants by World Bank Borrowers*" published in January 1997 (revised in September 1997 and January 1999), and the provisions stipulated in the Loan Agreement.

Procurement methods. The methods to be used for the procurement described below, and the estimated amounts of each method, are summarized in **Table A**.

Procurement of Works. Works to be procured under the Loan and totaling about US$76.7 million equivalent (including contingencies) are the following: (i) rehabilitation of three hospitals and (ii) construction of four hospitals. The construction and rehabilitation of hospitals under Bank financing, costing US$5.0 million equivalent or more per contract and an estimated US$59.1 million in aggregate, would be procured following International Competitive Bidding (ICB) and using Bank-issued Standard Bidding Documents (SBDs). Pre-qualification of bidders shall be required for construction contracts costing US$10.0 million or more per contract. Provided that operational and construction standards satisfactory to the Bank are available, hospital facilities may be constructed on the basis of turn-key basis following two-stage bidding procedures. Under the first stage unpriced technical proposals on the basis of a conceptual design and performance specifications are invited, subject to technical and commercial clarifications and adjustments. On the basis of these proposals the bidding documents are amended. At the second stage, bidders are invited to submit final technical proposals and priced bids. Contracts for rehabilitation costing less than US$5.0 million per contract, up to an aggregate amount of US$8.3 million, may be procured using National Competitive Bidding (NCB) procedures with standard bidding documents to be agreed in advance with the Bank. It is proposed that works contracts will be advertised, bid, contracted and supervised by the Construction Management firm (CMF).

Procurement of Goods. Goods procured under the project may include medical instruments and equipment for new and existing medical facilities, pharmaceuticals, computer equipment, software licenses, general office and medical furniture, totaling US$47.6 million equivalent. To the extent possible, contracts for goods procured will be grouped into bidding packages of more than US$250,000 equivalent and procured following ICB procedures, using Bank-issued Standard Bidding Documents (SDBs). Contracts for medical instruments and equipment and other goods with estimated values below this threshold per contract, up to an aggregate amount of US$6.1 million, may be procured using National Competitive Bidding (NCB) procedure and standard bidding documents agreed in advance with the Bank. Contracts for equipment, furniture and other goods which cannot be grouped into larger bidding packages and estimated to cost less than US$50,000 per contract, up to an aggregate amount of US$2.6 million may be procured using shopping (National/International) procedures, using a model request for quotations acceptable to the Bank.

Selection of Consultants. Consulting services will be contracted in the project for the provision of technical assistance in the following areas construction management of the civil works component, civil works design and supervision, policy design and implementation, health sector regulatory framework, restructuring and human resources planning and reengineering, institutional strengthening (including the organization, operation and procurement of the MIS system for the MOH), studies and assessments, training, project monitoring, supervision. These services are estimated to cost US$35.2 million equivalent and would be procured using the Bank's Standard

Request for Proposals (RFP) document whenever advertisement for Expressions of Interest in Development Business (DB) is required. For consultant service contracts with an estimated price below the threshold of US$200,000 equivalent, standard RFP agreed in advance with the Bank will be used.

Firms:
All consulting services with contract values above US$100,000 will be procured using the QCBS procedure, using Bank RFP, with an estimated aggregate value of US$18.0 million equivalent. Other consulting services of a routine nature, such as, technical assistance, supervision, and training activities and for project periodic and annual audits, with contract values estimated to cost less than US$100,000 equivalent, may be contracted following Least-Cost selection procedures, as described in paragraph 3.6 of Guidelines, up to an aggregate amount of US$12.2 million equivalent. All terms of reference (TORs) for consulting services in this category would be subject to prior review of the Bank. For contracts valued at more than US$100,000, Bank's prior review would apply also to short lists, criteria for selection and contracting documentation.

Individuals:
Specialized advisory or technical assistance and project administration services, including long-term staff in the Project Coordinating Unit (PCU) and the Infrastructure Executing Unit (IEU), would be provided by national and international individual consultants selected by comparison of qualifications of at least three candidates and hired in accordance with the provisions of paragraphs 5.1 through 5.3 of the Consultant Guidelines, up to an aggregate amount of US$5.0 million equivalent. All PCU key staff and IEU staff positions should be advertised on the basis of the expected total duration and value of the assignment. Contracts will be annual to comply with local laws and renewed annually.. All TORs would be subject to prior review by Bank, and for contracts valued above US$50,000, Bank prior review would apply to the personal information (CVs) and honoraria of all proposed candidates.

Training. The project will finance activities related to the delivery of training seminars and workshops, production and printing of training materials, and logistics costs related to transportation, housing and subsistence of trainees and trainers, national and international study tours to foster professional development of MOH staff in hospital management, essential health and nutrition services delivery, health policies, and implementation. Contracting of these activities will be done according to the procedures and contract value thresholds agreed for the procurement of other consultant's services in the project.

Operational Costs. These costs include consumable goods required to operate the PCU and other expenditures related to contracts of administrative (support) staff, office rentals and utilities, maintenance of office equipment and consumable office supplies and per diems, transportation and logistic expenditures to conduct supervision.

Prior review thresholds. The proposed thresholds for prior review are summarized in **Table B**.

Assessment of the Agency's capacity to implement procurement

Since neither the proposed PCU nor the IEU was in place at the time of appraisal, the assessment of these units was not possible. However, the Ministry has an existing unit for routine procurement (UACI). This unit manages all MOH procurement with 36 staff under a qualified Director. The unit follows the new National Procurement Law for local contracting using an Operation Manual which contains all the requirements included in the new law. The law is generally consistent with Bank Procurement Guidelines. Where conflict exists (see Special Provisions in Procurement), Bank procedures will be employed. The good performance of UACI indicates that the MOH has the capacity to undertake procurement on a systematic basis. To ensure adequate capacity at

project start-up, the PCU coordinator, the heads of Components II, III, and monitoring and evaluation, and the full financial/procurement unit will need to be contracted, with qualifications satisfactory to the Bank, prior to effectiveness. The initiation of the selection process for the head of the IEU was a condition of negotiations and it has been complied with.

Organization. The PCU will be responsible for components II through IV, comprising: (i) coordination of all project activities; (ii) implementation of procurement activities, as included in the GPP and its annual updates, with the assistance of consultants or, if decided, of a procurement agent (PA), (iii) coordination of the Action Plan with MOH technical units, (iv) giving no objection to all procurement activities, which fall below thresholds for prior review by the Bank, as agreed in the legal documents, (v) conducting budgeting, monitoring and supervision, and disbursement activities, and (vi) maintenance of all records required for the project.

The IEU will be responsible for component I, comprising: (i) coordination of all project activities, as included in the GPP and its annual updates; (ii) supervision of contract activities carried out by the CMF; (iii) supervision of the budget; (iv) monitoring and submission to the Bank of all documents subject to prior review, disbursement requests and progress reports and, (v) maintenance of all records required for the project.

PCU and IEU Staffing. For successful operation of the project, it is proposed that the PCU and IEU be staffed with an adequate number of staff who should be skilled to perform key roles in technical, financial, procurement, disbursement and administrative activities. Five staff are required by the PCU to manage all procurement activities, comprising two procurement specialists and three procurement assistants. In addition, the PCU will have a small group of technical staff assisting Project Component Coordinators (II through IV) as "change agents" who will be responsible to assist MOH managers in advancing project implementation. It is noted that a successful operation of the PCU would demand a strong role of the Project Coordinator to coordinate project activities, while also ensuring that activities on monitoring and evaluation deliver consistent, timely and substantive information/reports to ensure coherence and responsiveness of project implementation activities during its life. The selection process for the Coordinator for the IEU. For the IUE two high level staff are required, one engineer or architect to cover technical aspects and manage the unit and a legal counsel on retainer. The selection and contracting of the head of the PCU is a condition of effectiveness. Financial aspects of procurement would be handled by the financial unit shared with the PCU

Procurement Agent (PA). It was also agreed during negotiations that if for any reason the PCU procurement team cannot be established or fails to perform as expected, MOH will engage the services of a PA that would be responsible for carrying out procurement management of components II to IV. GOES has opted for direct contracting and will be responsible for paying for the PA's management fees with counterpart funds.

Construction Management Firm (CMF). A Construction Management firm shall be contracted for implementation of Component I. Terms of reference for the CMF have been prepared and were agreed with GOES during appraisal and confirmed at negotiations. It is proposed that a public notice for expressions of interest will be published in the DB prior to Board presentation . The preparation of the short list and letter of invitation for the selection and contracting of the firm will be condition of effectiveness. Contracting of the CMF is a condition of disbursement.

Monitoring and Supervision of the Procurement Function. The Director of the PCU and the IEU would be responsible to assist the MOH to achieve a timely and quality delivery of the infrastructure and the other components included in the emergency reconstruction initiative with the assistance of the CMF.

The overall project risk for procurement is high . Once the PCU and the IEU are functioning and the CMF for Component I has been contracted, this rating could be improved. An Action Plan has been prepared and discussed during appraisal, and will be agreed at negotiations. A draft Operational Manual (OM) will be prepared for Negotiations, to be finalized prior to Effectiveness.

The following is the proposed Action Plan to be agreed with MOH at Negotiations. An updated Action Plan to include any necessary activity for the strengthening of procurement activities of the CMF will be prepared once the firm has been contracted.

ACTION PLAN	
PLANNING	
❑ Completion of GPP for the project, and the detailed procurement plan for the first year of the project implementation	❑ By appraisal
❑ Annual Procurement Plans	❑ Ongoing. Report to Bank delays above 15 calendar days of agreed procurement schedule.
POLICY & PROCEDURES	
❑ Preparation of chapter in the Operational Manual (OM) regarding (i) procurement covenants, (ii) detailed procedures for approval and contracting of all contracts, (ii) detailed definition of responsibilities between MOH and CMF, and (iv) monitoring of procurement via PMR-3 (SAFF)	❑ Draft by negotiations for Bank's prior review. ❑ Adoption by effectiveness
TRAINING	
❑ Periodic participation of PCU specialized staff in procurement workshops, as they become available during the life of the project.	❑ Review with Bank during annual evaluations, or earlier as training is available.
❑ Project Launch Seminar –Workshop on Project procurement. Participants will include staff of the PCU, legal unit in MOH, and selected officials in the *Corte de Cuentas*.	❑ TBD
CONSULTANT SERVICES	
❑ Hiring of (a) Procurement Agent (PA*), if required;* (b) the PCU and IEU Coordinators, the financial and procurement staff for each, and the three key technical staff for the PCU (heads of components II, III and an M&E specialist	❑ If necessary, by effectiveness
❑ Hiring of the Construction Management Firm (CMF) for Component I.	❑ Advertisement of Expressions of Interest in DB by Board presentation, preparation of short list and letter of invitation for the hiring the firm by effectiveness.
❑ Develop a system of identification including a data base of specialized consultant firms that may be required to provide technical assistance in critical areas, publishing requests for expressions of interest at least every six months.	❑ Publish by Jan 30 of each year, a notice of Requests for "Expressions of Interest in Development Business, and national press, yearly plans of contracting technical assistance. ❑ Update notice no later than July 30 each year.
❑ Require use of a project control system (e.g. MS Project) by all technical staff in PCU and IEU.	❑
❑ Bi-annual review by the Bank of contracting programs of consultants' services for contracts below US$100,000 for firms and US$50,000 for individual consultants.	❑ Beginning first semester after effectiveness.
PROCUREMENT RECORDS	
❑ Maintain in one archive all documentation related to the selection, contracting and results for each contract in the project.	❑ By effectiveness, or earlier, if retroactive financing is used.

Procurement Plan: A general procurement plan (GPP) for Components I through IV has been prepared during appraisal. In the case of consultants in Components II to IV, a specific technical

assistance plan was prepared. It has been agreed that the PCU and the IEU would update and finalize the Procurement Plan for the first year of project implementation at project start-up and update it annually.

Advertising. A General Procurement Notice including works, goods and consultants services, is scheduled to be published in the DB before Board presentation. Specific Procurement Notices will be published, either in the DB, or regionally or locally according to the procurement method used for that particular acquisition.

Procurement Records. Detailed Procurement records, reflecting the acquisition of works, goods and consultant services, including the time to complete key steps in the process and procurement activities related to supervision, review and audits, will be maintained by both the PCU and the IEU. These records will be maintained for at least two years after project closing date. The records for works and goods will include public notices, bidding documents and addenda, bid opening information, bid evaluation reports, formal appeals by bidders and outcomes, signed contracts with related addenda and amendments, records of claim and dispute resolution, and any other relevant information. The records for consultants services will include public notices for expression of interest, requests for proposals and addenda, technical and financial reports, formal appeals by consultants and outcomes, signed contracts, addenda and amendments, records of claims and dispute resolution, and any other relevant information.

Monitoring and Progress Reporting. Beginning with the completion of each fiscal year of project implementation, the PCU and the IEU will prepare annual implementation reports (achievements, component implementation status and possible issues with remedial actions). These reports will include an updated Annual Operation Plan for the implementation of the project components during the corresponding fiscal year. The plan will be in turn the basis for the preparation and submission of the procurement schedule.

Frequency of Procurement Supervision. In addition to the prior review to be carried out by the Bank, two supervision missions will be required during the first year of implementation, one of which will carry out the post-review. Based on the overall risk assessment, the ex-post review analysis should cover a sample of not less than 1 in 10 contracts signed.

Special Provisions in Procurement. There is no updated Country Procurement Assessment Report (CPAR); the latest was prepared by the Bank in December 1990. It is recommended that the Bank prepare a new report taking into consideration the new procurement law, Decree No. 868, June 2000, which provides the basic rules for procurement of works, goods and services and constitutes the country's regulatory framework for procurement. During Negotiations, special provisions were agreed so that the principles indicated below will govern all procurement of works, goods and services:

A. For the procurement of works and goods under International Competitive Bidding and National Competitive Bidding:

1. Bids for works and goods shall be:

(a) submitted in a single envelope. The procedure with two envelopes is not allowed.

(b) the bidding documents shall specify the relevant factors in addition to price to be considered in bid evaluation and the manner in which they will be applied for the purpose of determining the lowest evaluated bid.

(c) there is no obligation for contractors or suppliers to be locally registered as a condition of

participation in the selection process.

(d) The bidding process shall not be discontinued upon the filing of administrative complaint procedures requesting the review of bidding decisions.

2. In Art. 77 of the Borrower's procurement law the wording which refers to the suspension of the contract process in the event of a complaint, will not apply.

B. For the procurement of consultants services:

1. Foreign consultants shall not be required to:

(a)be locally registered as a condition of participation in the selection process;

2. Short lists shall comprise three to six firms.

Table A: Project Costs by Procurement Arrangements (US$ Million)					
Expenditure Category	Procurement Method [1]				
	ICB	NCB	Other [2]	NBF	Total Cost
1. Works	68.4	8.3	0.0	0.0	76.7
	(59.1)	(7.0)	(0.0)	(0.0)	(66.1)
2. Goods					47.6
					(40.9)
(a) Components I, II & 4	27.8	5.2	2.0	0.0	35.0
	(24.0)	(4.5)	(1.7)	(0.0)	(30.2)
(b) Component III	4.6	0.9	0.6		6.1
	(4.0)	(0.8)	(0.5)		(5.3)
(c) Pharmaceuticals and materials	6.5	0.0	0.0	0.0	6.5
	(5.4)	(0.0)	0.0	(0.0)	(5.4)
3. Consultants' Services					35.2
					(30.2)
(a) Components I, II & IV	0.0	0.0	23.3	0.0	23.3
	(0.0)	(0.0)	(20.0)	(0.0)	(20.0)
(b) Component III	0.0	0.0	3.9	0.0	3.9
	(0.0)	(0.0)	(3.4)	(0.0)	(3.4)
(c) Health Service Providers (Comp. II)	0.0	0.0	6.8	0.0	6.8
	(0.0)	(0.0)	(5.8)	(0.0)	(5.8)
(d) Technical and Project Audits	0.0	0.0	1.2	0.0	1.2
	(0.0)	(0.0)	(1.0)	(0.0)	(1.0)
4. Training					3.4
					(2.9)
(a) Components I, II & IV	0.0	0.0	1.2	0.0	1.2
	(0.0)	(0.0)	(1.0)	(0.0)	(1.0)
(b) Component III (IIDS)	0.0	0.0	2.2	0.0	2.2
	(0.0)	(0.0)	(1.9)	(0.0)	(1.9)
5. Incremental Operating Costs	0.0	0.0	1.2	0.0	1.2
	(0.0)	(0.0)	(1.0)	(0.0)	(1.0)
6. Front-End Fee (1%)	0.0	0.0	1.4	0.0	1.4
	(0.0)	(0.0)	(1.4)	(0.0)	(1.4)
Total	107.3	14.4	43.8	0.0	165.7
	(92.5)	(12.3)	(37.7)	(0.0)	(142.6)

(1) Figures in parenthesis are the amounts to be financed by Bank. All costs include contingencies
(2) Procurement methodologies, where applicable, in this column include: (i) for goods: national or international shopping;(ii) consulting services: procedures described in respective Section A of this Annex 6, (iii) for training (logistic of events) national shopping procedures, and study tours; and (v) for incremental operational costs for PCU and IEU office space rentals, communications, utilities, etc.), national shopping for other consumable office materials, and O&M of equipment or vehicles financed with proceeds from loan.

Table A1: Consultant Selection Arrangements
(in US$ million equivalent, figures include contingencies)

Consultant Services/Training Expenditure Categories	Selection Method							Total Cost
	QCBS	QCQ	SFB	LCS	CQ	Other	N.B.F.	
A. Firms	18.0 (15.7)	N/A		12.2 (9.9)	N/A			30.2 (25.6)
B. Individuals						5.0 (4.6)		5.0 (4.6)
Total								35.2 (30.2)

Note: QCBS = Quality- and Cost-Based Selection
Note: QCBS = Quality- and Cost-Based Selection
QBS = Quality-based Selection
SFB = Selection under a Fixed Budget
LCS = Least-Cost Selection
CQ = Selection Based on Consultants' Qualifications
Other = Selection of individual consultants (per Section V of Consultants Guidelines), Commercial Practices, etc.
N.B.F. = Not Bank-financed.
Figures in parenthesis are the amounts to be financed by the Bank loan.

Table B: Thresholds for Procurement Methods and Prior Review

Expenditure Category	Contract Value (Threshold)	Procurement Method	Contracts Subject to Prior Review
	US $ thousands		US $ millions
1. Civil Works			
	More than $10,000,000	ICB Mandatory Prequalification	All
	More than $5,000,000	ICB	All
	Less than $5,000,000	NCB	First 2 contracts
	Less than $350,000	3 Quotations	None
2.. Goods			
	More than $250,000	ICB	All
	Less than $250,000	NCB	First 2 contracts
	Less than $50,000	Shopping	None
3.. Consulting Services			
(a) Firms	More than $200,000	QCBS, Mandatory Publication	All
	Less than $200,00 and more than US$100,000	QCBS	All
	Less than $100,000	LCS	TORs
(b) Individual.	Less than $50,000	Section V	TORs
		Total value of contracts subject to prior review:	**120.0 million**

Overall Procurement Risk Assessment:

High	X
Average	
Low	

FINANCIAL MANAGEMENT

Implementing Entities

The Ministry of Health (MOH) will be the implementing entity. With the objective of overcoming the GOES' institutional inefficiencies while ensuring compliance with its regulatory framework, two project units reporting directly to the Minister will be created within the MOH: the Infrastructure Execution Unit (UEI) for Component I and the Project Coordination Unit (UCP) for Components II and III.

For financial management purposes, the MOH will create a Secondary Financial Unit (USEFI), a figure contemplated in the norms to the Financial Administration Law (Ley AFI). USEFI staff will interact with MOH's Institutional Financial Unit (UFI) for matters of consolidation of budgetary and accounting information, and flow of funds.

The contract management entity (EAC) will administer the reconstruction component and thus will need a sound contract management system. Payments, however, will be made by the USEFI upon receipt of documentation reviewed by the EAC.

Staffing

The USEFI would be headed by a Financial Manager reporting directly to the Project Coordinators, and would include as minimum a Budget Specialist, a Treasurer, and an Accountant. The contracting of consultants for these positions will follow the pertinent Bank Guidelines.

Assistants may be hired as needed for swift project execution.

Funds Flow

Loan. Loan funds will be disbursed to a Special Account that, as is the current practice in El Salvador, will be opened for MOH by the General Treasury Directorate (DGT) of the MOF and maintained in the Central Bank.

Once per week, the treasurer of the project financial unit (USEFI) will send Fund Requirements through MOH's financial unit (UFI) to the DGT in accordance with the amount of documents pending payment ("Accrual Report"). Fund Requirements and Accrual Reports are identified by particular numbers.

Special Account funds will be transferred to the USEFI's Operational Account through MOH's institutional account (this is a "bridge" account from which electronic transfers are made to the operational account on the same day of -or the day after- receipt). Each transfer is identified with a Fund Requirement and Accrual Report.

The operational account will be used to issue checks or transfers to the providers of goods and services identified in the Accrual Report.

Under the described arrangement, it is expected that the time lapse between withdrawal from the Special Account and payments made to providers would be less than a week. In any case, transfers from the Special Account can only be outstanding for a limited period of 30 days. The monthly requests for disbursement submitted to the Bank will be accompanied by bank statements of both the special and operational accounts in order to document the timely transfer of resources.

Procedures for loan disbursements are summarized in below under "Disbursements".

Counterpart. As it was agreed in the Education Reform Project (Loan 4320-ES), the USEFI would, until the completion of the Project, operate and maintain a revolving fund with a quarterly balance equivalent to the counterpart funding requirements for the next three months of project activities as provided in the annual budget.

The revolving fund will be used to issue checks or transfers to the providers of goods and services, in accordance with the counterpart financing percentages agreed.

Accounting Policies and Procedures

Administrative procedures will be in place to ensure that financial transactions are made with consideration to safeguarding project assets and ensuring proper entry in the accounting/ monitoring systems. The project accounting system will have the capacity to record assets, liabilities and financial transactions of the project, and produce financial statements useful to project management and meeting IBRD's fiduciary requirements.

Segregation of duties. The USEFI will channel financial transactions through the organizational structure and procedures established in the norms to the Ley AFI and computerized via the Integrated Financial Management System (SAFI). Said procedures support an adequate segregation of procurement, budgeting, payment and recording activities.

Budgeting. The loan agreement and cost tables will be the main input for the project budgets. The MOH will establish a budgetary unit (Unidad Presupuestaria) for the USEFI. Following local requirements, the USEFI would prepare at least:

- The annual work plan classified by work lines, with goals/objectives, physical and financial programs;
- the budget proposal specifying the sources of funds, the summarized and detailed expenditures by major areas, accounts, and specific objects;
- after approval by Congress: the budget execution program (PEP) broken down monthly, and the quarterly document of budgetary commitment authorization (DACP);
- the monthly report on budgetary execution to be issued within 5 days after the end of each month; and
- the quarterly report on evaluation of budgetary execution to be issued within 10 days after the end of the quarter.

Payments and operation of bank accounts. Before payments for acquisition of goods and services can be processed, a purchase order or contract must exist. On the basis of these documents, budget commitments (Previsión Presupuestaria) are issued, provided that there's available budget.

After the vouchers received are matched with the authorized budget commitment, the USEFI Treasurer will prepare the detailed fund requirement on a weekly basis. The requirement is submitted via the UFI to the DGT, which deposits the funds in the MOH's institutional account. The UFI immediately transfers the funds to the USEFI's operational bank account.

The payments -by check or transfer- will be processed by SAFI against the recorded vouchers. The checks will contain two signatures: the Treasurer and the Coordinator or Financial Manager. Payments will be delivered against the voucher receipt form (Quedan) that is given to each provider.

Bank account reconciliations will be prepared on a monthly basis by the Accountant and will be Available within 8 days after the end of the month.

Accounting. Accounting and budgetary records will be maintained in accordance with the GOES' procedures and system (SAFI). However, for Bank monitoring purposes the USEFI needs to report on certain information not handled by SAFI *at project level*, specifically the deposits to the special account and the expenditures classified by subcomponent and disbursement category.

The USEFI will design and operate a chart of linkages between the budgetary unit's chart of accounts and the subcomponent/disbursement categories of the loan agreement.

Accounting documentation will be filed by the USEFI and maintained for a minimum of five years.

Policies and procedures. As Government unit, the USEFI will function in accordance with the Ley AFI and all related norms and procedures. Specific aspects of the management of IBRD loan funds will be documented in the financial management section of the Operational Manual.

Safeguard over assets. Assets acquired by the project will be in the custody of the respective institutional departments of the MOH. For the proposed project, the USEFI will keep detailed subsidiary records of plant and equipment acquired. The amounts in this register will be reconciled monthly against the respective accounting balances. At least one annual physical inspection will be undertaken by USEFI staff, preferably with the participation of staff from MOH's Asset Management Unit and the external auditors.

Internal Audit

The USEFI will be subject to review by the MOH's Internal Audit Department and the country's supreme audit institution (Corte de Cuentas). Although no internal auditor will be assigned specifically to the project, the external auditors will perform visits on a quarterly basis (see next section).

External Audit

Audit compliance. As of the date of appraisal, there was only one project with an overdue audit report in the country portfolio. No audit compliance issues relevant to the proposed project have been identified.

Audit arrangements. Annual project financial statements will be audited in accordance with International Standards on Auditing, by an independent firm and in accordance with terms of reference (TORs) both acceptable to the Bank. In addition to the audit opinions on project financial statements, Special Account and Statements of Expenditures (SOEs), special purpose reports will be required to deal specifically with: (i) observance of the procurement and consultants services provisions of the Loan Agreement; and (ii) physical inspection of the reconstruction/ rehabilitation works.

The memorandum on internal controls ("management letter") and the special reports mentioned above will be issued on a quarterly basis.

The USEFI will appoint the auditors prior to loan effectiveness, with an annual contract to be renewed during the first quarter of each subsequent year.

The USEFI will prepare, if needed, an action plan to address any issues and recommendations contained in the audit reports. The action plan and follow-up activities would be communicated to the Bank.

The table below summarizes audit requirements:

Audit Report	*Due Date*
Project financial statements	6 months after the end of the reporting period (coincides with CY)
SOE	same as above
Special Accounts	same as above
Special purpose	2 months after the end of each quarter

Reporting and Monitoring

Financial statements and reports will be prepared in formats satisfying the Government and IBRD's monitoring and fiduciary purposes.

SAFI will be used for producing the budgetary unit's balance sheet, statement of economic performance, flow of funds, and budgetary execution. This information must be made available by the USEFI within 10 days after the end of the month.

On a quarterly basis (at least), the USEFI will prepare the project's Statement of Sources and Uses of Funds, a matrix classifying receipts by financing source and expenditures by financing source, subcomponent and disbursement category. The expenditures would be compared to the projected figures per the quarterly budgets prepared as indicated in the Budgeting section above.

In addition to the Statements of Sources and Uses of Funds, the quarterly financial reports will include the Special Account Reconciliation Statement. Any difference in the amount of expenditures reported under the two financial statements must be clearly explained. The project financial statements, along with the physical progress and procurement sections of the Project Monitoring Reports (PMRs), will be submitted to the Bank no later than 45 days after the end of the reporting quarter. For Bank purposes, the annual financial statements will include, as well, the schedule of Statements of Expenditure (SOEs) presented during the year in support of Withdrawal Applications.

Information Systems

As described previously, SAFI will be used for keeping the project's project budgeting, treasury and accounting records, but some additions are needed in order to produce the financial statements required specifically for Bank monitoring purposes.

Strengths and Weaknesses

In SAFI, the MOH has a sound financial management system. However, its contributions to the project's implementation and monitoring will be in effect when qualified staff are assigned to the project, the USEFI is properly established under the organizational arrangements described previously, and arrangements for producing certain information relevant to the Bank are in place. The Action Plan (below) aims at addressing these issues.

Financial Management Action Plan

Action	Responsible Entity	Completion Date
1. Establish the USEFI: legalization, staffing, office, equipment and software.	MOH	Before effectiveness
2. Set up the CMF's contract management system .	CMF	Before effectiveness
3. Approve the budgetary unit in the National Budget.	MOH/MOF	Before effectiveness/ Before commencement of each year of project implementation
4. Establish the counterpart revolving fund and deposit first quarterly quota.	MOH/MOF	Before effectiveness
5. Set up the system to classify SAFI's information by project disbursement categories and subcomponents.	MOH	Before effectiveness
6. Establish a subsidiary register of assets acquired by the project, and reconcile on a monthly basis the total cost shown by the register with the respective accounting balances.	MOH	Ongoing through project implementation
7. Perform physical inventories, at least annually, of the project's register of assets.	MOH, with the participation of the external auditors	Ongoing through project implementation
8. Finalize financial management section of the Operational Manual	MOH	Before effectiveness
9. Submit audit TORs and short list of firms for approval	MOH/WB	Before effectiveness
10. Appoint the external auditors	MOH	Before effectiveness
11. Submit draft Project Monitoring Reports (PMRs).	MOH	Before effectiveness
12. Submit first PMRs	MOH	45 days after the end of the quarter in which effectiveness takes place

Supervision Plan

A financial management supervision mission prior to effectiveness is needed. After effectiveness, a FM Specialist must review the annual audit reports and should perform one supervision mission per year.

Disbursement Arrangements

Method and allocation of loan proceeds (see Table C). The proposed loan would be disbursed over an implementation period of about five years; the loan closing date would be April 30, 2007. Disbursements would be in accordance with guidelines set out in the World Bank's Disbursement Handbook (i.e., "traditional" disbursement procedures).

Disbursements would be made against the following categories of expenditure:

Table C – Allocation of Loan Proceeds

Expenditure Category	Amount in US$ Million	Financing Percentage
1. For Component I		
(a) Works	60.1	90%
(b) Goods	26.7	100% of foreign expenditures, 87% of local expenditures
(c) Incremental Operating Costs	0.1	50%
(d) Consultants' Services (excluding audits), including Contract Management fees	11.2	100% of foreign expenditures, 87% of local expenditures
(e) Technical Audits	0.8	80%
(f) Training	0. 2	87%
2. For Components II, III and IV of the Project		
(a) Goods	0.5	100% of foreign expenditures, 87% of local expenditures
(b) Pharmaceuticals and materials		
(i) Component II	3.1	100% until aggregate amount reaches $1,030,000, 60% until aggregate amount reaches $2,070,000, and 30% thereafter
(ii) Component III	2.0	100% until aggregate amount reaches $666,660, 60% until aggregate amount reaches $1,333,340, and 30% thereafter
(c) Incremental Operating Costs, other than under subcategory 1(c) above	0.7	50%
(d) Consultants' Services (excluding audits), for Component II	6.9	100% of foreign expenditures, 87% of local expenditures
(e) Health Service Providers	5.3	80%
(f) Training for Component II	0.7	87%
(g) Consultants' Services, training and goods (Comp. III C.1)	4.1	80%
(h) Consultants' Services, training and goods (Comp. III C.2)	5.5	80%
3. Project Audits	0.15	100% until aggregate amount reaches $50,000, 60% until aggregate amount reaches $100,000, and 30% thereafter
4. Goods, consultants' services and training for Performance Incentives	0.4	80%
5. Front-End Fee (1%)	1.4	100%
6. Unallocated	12.8	
Total Proceeds:	142.6	

Incremental Operational Costs includes maintenance of office equipment, phone, fax, email, water, electricity and office supplies. Health service provider fees cover: salaries, supplies, minor equipment, pharmaceuticals and transportation. No food is included.

Profile of Disbursements
Table D

	Period	Disbursement Estimate	Cumulative Disbursement	%
FY2002	March-June 2002	5.1	5.1	4%
FY 2003	June 2002- June 2003	23.2	28.3	20%
FY 2004	July 2003-June 2004	54.5	82.8	58%
FY 2005	July 2004-June 2005	42.8	125.6	88%
FY 2006	July 2005-June 2006	12.8	138.3	97%
FY 2007	July 2004-Feb. 2007	4.2	142.6	100%

Retroactive financing. Eligible expenditures can be financed for a maximum of US$14.0 millionoan retroactive up to 12 months before the loan signing date but after September 24, 2001.

Cost Sharing Issue: Please refer to section E.4. for details.

Special Account. To facilitate project implementation, the GOES would establish, maintain and operate a Special Account to be opened in US Dollars at the Central Bank.

The Special Account is only to be used for eligible expenditures under the loan (under no circumstances may funds in the Special Account be used to cover the share of expenditures corresponding to the counterpart). Transfers from the Special Account to other bank accounts will only be permitted to meet eligible expenditures for a limited period of less than 30 days.

Total advances to the Special Account at any given time would not exceed the "authorized allocation" specified in the Loan Agreement.

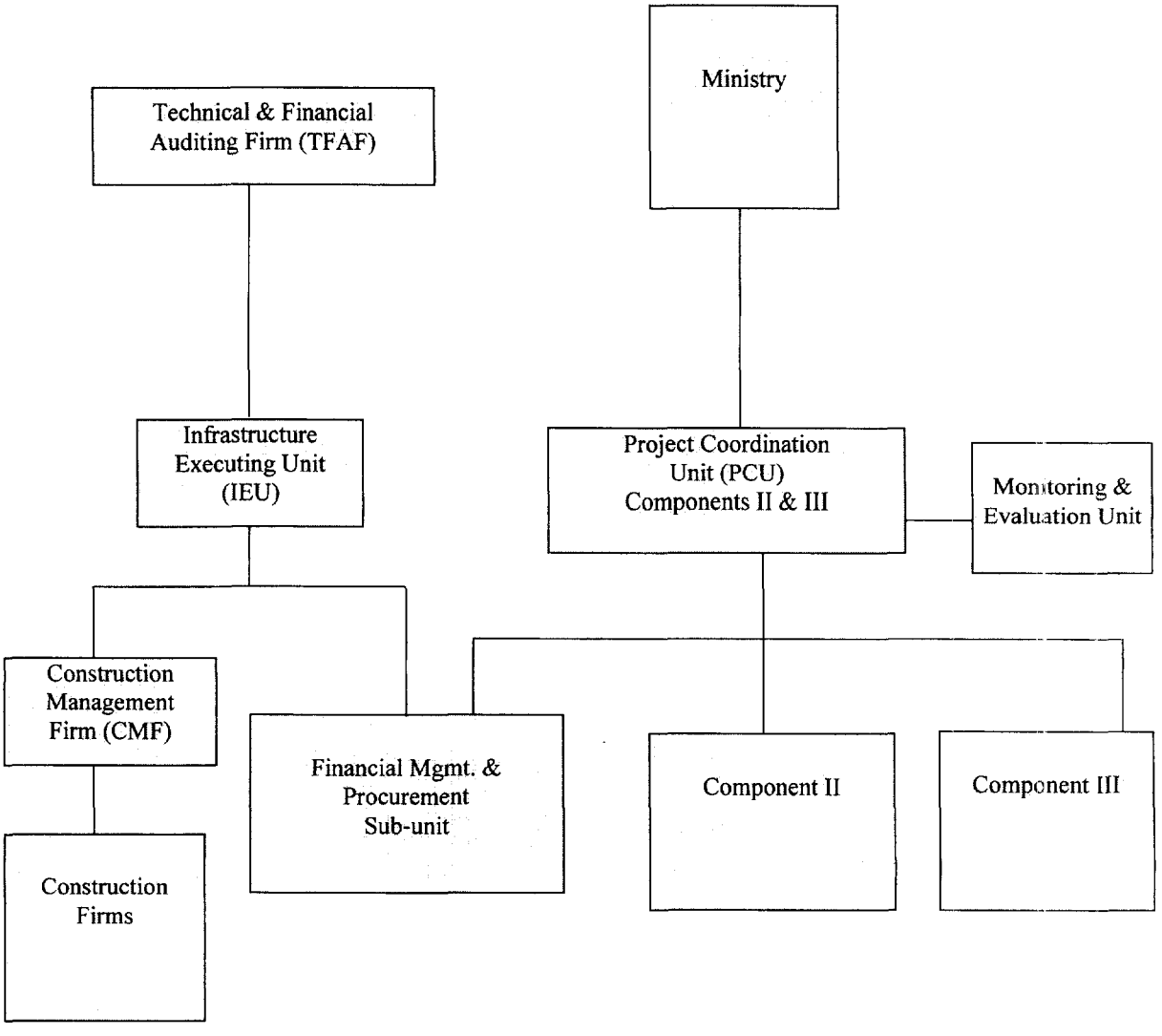
For replenishment of the advance, the USEFI will prepare monthly (in any case, no more than quarterly) requests for reimbursement of expenditures made.

Use of statements of expenditures (SOEs). Loan withdrawal applications can be supported by SOEs for expenditures relating to contracts that are not subject to the Bank's prior review (see Table B). Reimbursement of other expenditures would require submittal to the Bank of full supporting documentation.

Documents in support of SOEs must be maintained by the MOH at least until one year after the Bank has received the audit report for the fiscal year in which the last loan withdrawal was made. Such documents must be available to review by the external auditors and Bank staff.

Other procedures. Upon request from the Borrower and subject to the Bank's approval, payments may be made: (i) directly to a third party (supplier or consultant) for goods, works, and services; (ii) to a procurement agent; or (iii) to a commercial bank for expenditures against a World Bank Special Commitment covering a commercial bank's letter of credit.

Annex 6a: Proposed Organizational Chart MOH/World Bank



Annex 7. Project Processing Budget and Schedule

El Salvador: Earthquake Emergency Reconstruction and Health Services Extension Project

Project Schedule	Planned (At final PCD stage)	Actual
Time taken to prepare the project (months)	12/2000	12/2000
First Bank mission (identification)	09/22/1999	9/22/1999
Appraisal mission departure	9/16/2001	9/24/2001
Negotiations	9/23/2001	10/12/2001
Planned Date of Effectiveness	03/30/2001	

Prepared by: [name of Government agency]

Preparation assistance:
PHRD TF025836 Social Sector Reform Program

Bank staff who worked on the project included:

Name	Specialty
Gerard La Forgia	Co-Task Manager
Sandra Rosenhouse	Co-Task Manager
Willy De Geyndt	Consultant
Jaime Roman	Lead Procurement Specialist
María Lucy Giraldo	Sr. Procurement Specialist
Rosita Estrada	Procurement and Implementation Specialist
Martín Ochoa	Consultant
Sonia Levere	Program Assistant
Marta Molares-Halberg	Legal Counsel
Manuel Vargas	Financial Management Specialist
C. Mónica Rojas de Arnez	Disbursement Officer
Maureen Lewis	Peer Reviewer
Adam Wagstaff	Peer Reviewer
Kees Kostermans	Peer Reviewer
Juan Quintero	Lead Environmental Specialist
Charles Griffin	Sector Manager
Donna Dowsett-Coirolo	Central America Country Director
Helena Ribe	Sector Leader
Suzana Augusto	Lead Operations Officer
Maria Valeria Pena	Lead Sociologist

Annex 8: Documents in Project File*

A. Project Implementation Plan

B. Bank Staff Assessments

Financial Assessment. Report: World Bank - LCR Financial Management Team (LCOAA). "El Salvador – Earthquake Emergency Reconstruction and Health Services Extension Project: Financial Management Assessment Report" October 5, 2001

Technical . Action Plans by Subcomponents

Procurement Assessment. -Plan de Adquisiciones y Contrataciones

Environmental Assessment

- Environmental Assessment Report
- Ley del Medio Ambiente
- Leyes relacionadas al Medio Ambiente
- Reglamento Aguas Residuales
- Reglamento Desechos peligrosos
- Reglamento General

C. Other

1.Sistemas Básicos de Salud Integral (SIBASI). El Salvador
2.Modelo del Sistema Inegrado de Mantenimiento para los SIBASI. Ministerio de Salud El Salvador
3.Encuesta de actividades y Recursos de los Hospitales Públicos de El Salvador. OPS
4.Terremoto Físico y Social. La cooperación técnica en Salud de la OPS-OMS durante los terremotos de principios del 2001 en el Salvador
5.Informe Danos observados en los hospitales de la Red Asistencial de Salud de El Salvador en el terremoto del 13 de enero del 2001. Centro Colaborador de la OPS/OMS, Chile
6.Análisis Físico Funcional de los hospitales. Propuesta de Acciones. OPS
7.Definición de la misión de la estrategia de la gerencia de Salud Ambiental y Preparación de un Plan de Acción con programas y proyectos específicos. Ministerio de Salud de El Salvador
8.Estudio Preliminar de los Costsos de reparación de la Red Hospitalaria de El Salvador. Banco Mundial
9.Informe de la reunión del Grupo Consultivo para la Reconstrucción de El Salvador. BID

*Including electronic files.

Annex 9: Statement of Loans and Credits

Status of Bank Group Operations (Operations Portfolio)

If Date 09/10/

Closed Projects **26**

IBRD/IDA *

Total Disbursed (Active)	168.30
of which has been repaid	11.07
Total Disbursed (Closed)	461.70
of which has been repaid	336.00
Total Disbursed (Active + Closed)	629.98
of which has been repaid	347.06
Total Undisbursed (Active)	183.73
Total Undisbursed (Closed)	0.00
Total Undisbursed (Active + Closed)	183.73

		Last PSR SPN Rating			Original Amount in US$ Millions					Expected and Actual Disbursements a/	
Project ID	Project Name	DO	IP	FY	IBRD	IDA	GRANT	Cancel.	Undisb.	Orig.	Frm Rev'd
P007167	AG SCTR REFORM & INV - PRIS.	S	S	1993	40	0	0	0	5.5	5.5	1.5
P040824	COMPETITIVENESS ENHA	S	S	1996	16	0	0	0	6.2	6.2	0
P007173	ENERGY SECTOR MODERNIZAT	S	S	1996	65	0	0	23	15.1	38.1	36.5
P007174	LAND ADMINISTRATION	S	S	1996	50	0	0	0	26.6	22.8	22.1
P007164	SV PUBLIC SECTOR MODERN	S	S	1997	24	0	0	0	13.1	13.1	0
P007169	SV- BASIC EDUCATION	HS	HS	1996	34	0	0	0	0.3	0.3	0
P050612	SV- EDUCATION REFORM	S	S	1998	88	0	0	0	73.7	67	0
P041680	SV/SECONDARY EDUCATION	S	S	1998	58	0	0	0	43.2	38.2	0
Overall result				Result	375	0	0	23	183.7	191.3	60.1

CAS Annex B8 (IFC) for El Salvador

El Salvador
Statement of IFC's
Held and Disbursed Portfolio
As of 7/31/2001
(In US Dollars Millions)

			Held				Disbursed			
FY Approval		Company	Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
	1998	AFP Crecer	0	1.2	0	0	0	0.78	0	0
1997/00		CESSA	0	0.37	0	0	0	0.37	0	0
	1998	CUSCATLAN	25	0	0	0	25	0	0	0
	1998	SEF Baterias	2	0	0	0	2	0	0	0
1997/99		SEF IMACASA	0	0.2	0	0	0	0.2	0	0
1994/96		TELEMOVIL	3	0	0	4.5	3	0	0	4.5
	Total Portfolio:		30	1.77	0	4.5	30	1.35	0	4.5

Approvals Pending Commitment

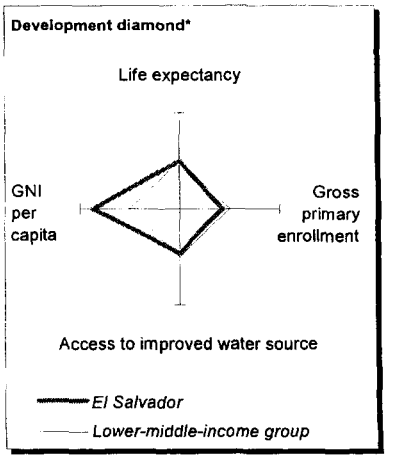
		Loan	Equity	Quasi	Partic
2001	CAESS/EEO	45000	0	0	75000
Total Pending Commitment:		45000	0	0	75000

Annex 10: Country at a Glance

El Salvador at a glance

9/13/01

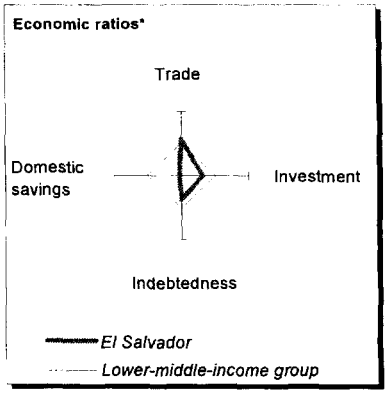
POVERTY and SOCIAL	El Salvador	Latin America & Carib.	Lower-middle-income
2000			
Population, mid-year *(millions)*	6.3	516	2,046
GNI per capita *(Atlas method, US$)*	1,990	3,680	1,140
GNI *(Atlas method, US$ billions)*	12.6	1,895	2,327
Average annual growth, 1994-00			
Population *(%)*	2.1	1.6	1.0
Labor force *(%)*	3.4	2.3	1.3
Most recent estimate (latest year available, 1994-00)			
Poverty *(% of population below national poverty line)*	..	..	..
Urban population *(% of total population)*	47	75	42
Life expectancy at birth *(years)*	70	70	69
Infant mortality *(per 1,000 live births)*	30	30	32
Child malnutrition *(% of children under 5)*	12	9	11
Access to an improved water source *(% of population)*	74	85	80
Illiteracy *(% of population age 15+)*	21	12	15
Gross primary enrollment *(% of school-age population)*	97	113	114
Male	98	..	116
Female	96	..	114



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

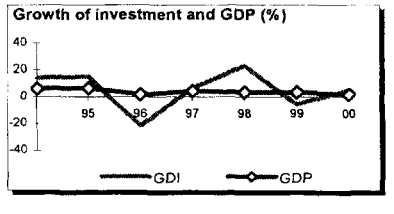
	1980	1990	1999	2000
GDP *(US$ billions)*	3.6	4.8	12.5	13.2
Gross domestic investment/GDP	13.3	13.9	16.3	17.0
Exports of goods and services/GDP	34.2	18.6	25.1	27.6
Gross domestic savings/GDP	14.2	1.2	4.2	1.8
Gross national savings/GDP	12.3	6.7	14.0	13.8
Current account balance/GDP	0.0	-7.4	-2.5	-3.7
Interest payments/GDP	1.0	1.6	1.5	1.9
Total debt/GDP	25.5	44.7	32.2	32.6
Total debt service/exports	7.5	16.6	7.5	7.1
Present value of debt/GDP	..	..	30.1	..
Present value of debt/exports	..	..	79.7	..

	1980-90	1990-00	1999	2000	2000-04
(average annual growth)					
GDP	0.2	4.7	3.4	2.0	4.3
GDP per capita	-0.8	2.6	1.4	0.0	2.2
Exports of goods and services	-3.4	13.4	6.7	15.8	9.9

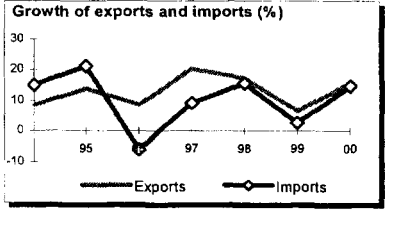


STRUCTURE of the ECONOMY

	1980	1990	1999	2000
(% of GDP)				
Agriculture	38.0	17.1	10.7	10.1
Industry	21.9	26.2	29.1	30.2
Manufacturing	16.5	21.7	22.5	23.4
Services	40.1	56.6	60.1	59.6
Private consumption	71.8	88.9	85.7	88.0
General government consumption	14.0	9.9	10.1	10.2
Imports of goods and services	33.2	31.2	37.3	42.7



	1980-90	1990-00	1999	2000
(average annual growth)				
Agriculture	-1.1	1.3	6.9	-0.8
Industry	0.1	5.3	3.4	3.4
Manufacturing	-0.2	5.3	3.7	4.5
Services	0.7	5.4	2.7	1.9
Private consumption	0.8	5.1	3.9	3.6
General government consumption	0.1	3.0	2.8	0.3
Gross domestic investment	2.2	7.1	-5.6	5.3
Imports of goods and services	0.4	11.3	2.7	14.8

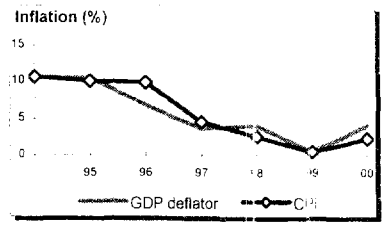


Note: 2000 data are preliminary estimates.

* *The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.*

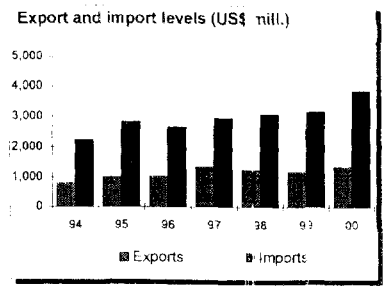
PRICES and GOVERNMENT FINANCE

	1980	1990	1999	2000
Domestic prices				
(% change)				
Consumer prices	17.4	24.1	0.5	2.3
Implicit GDP deflator	17.0	22.5	0.5	4.0
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	..	11.2	11.3
Current budget balance	..	..	0.1	-0.4
Overall surplus/deficit	..	..	-2.4	-3.0



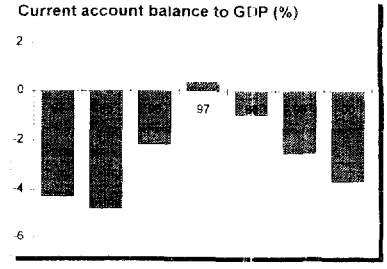
TRADE

	1980	1990	1999	2000
(US$ millions)				
Total exports (fob)	..	582	1,190	1,356
Coffee	..	260	245	298
Cotton	..	20	37	40
Manufactures	..	173	568	621
Total imports (cif)	..	1,262	3,192	3,873
Food	..	361	837	1,041
Fuel and energy	..	122	115	211
Capital goods	..	235	816	961
Export price index *(1995=100)*	..	73	49	47
Import price index *(1995=100)*	..	88	80	87
Terms of trade *(1995=100)*	..	83	61	54



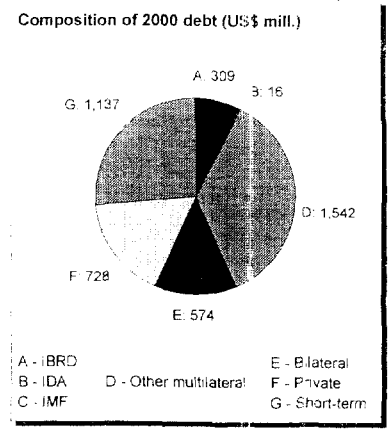
BALANCE of PAYMENTS

	1980	1990	1999	2000
(US$ millions)				
Exports of goods and services	1,252	861	3,135	3,646
Imports of goods and services	1,187	1,462	4,651	5,642
Resource balance	66	-601	-1,516	-1,997
Net income	-84	-102	-331	-289
Net current transfers	17	345	1,529	1,801
Current account balance	-1	-358	-317	-484
Financing items (net)	-246	475	519	435
Changes in net reserves	246	-117	-202	49
Memo:				
Reserves including gold *(US$ millions)*	..	399	2,004	1,922
Conversion rate *(DEC, local/US$)*	2.5	7.6	8.8	8.8



EXTERNAL DEBT and RESOURCE FLOWS

	1980	1990	1999	2000
(US$ millions)				
Total debt outstanding and disbursed	911	2,148	4,014	4,306
IBRD	87	140	293	309
IDA	27	23	17	16
Total debt service	96	208	353	389
IBRD	10	29	37	41
IDA	0	1	1	1
Composition of net resource flows				
Official grants	31	160	95	28
Official creditors	73	-17	54	56
Private creditors	1	6	129	218
Foreign direct investment	6	2	231	221
Portfolio equity	0	0	0	0
World Bank program				
Commitments	0	0	0	0
Disbursements	13	3	23	34
Principal repayments	3	16	18	18
Net flows	10	-13	6	16
Interest payments	7	14	21	24
Net transfers	3	-28	-15	-8



MAP SECTION


EL SALVADOR
SELECTED CITIES AND TOWNS
DEPARTMENT CAPITALS
NATIONAL CAPITAL
PAVED ROADS
SECONDARY ROADS
RAILROADS
MAIN PORTS
RIVERS
DEPARTMENT BOUNDARIES
INTERNATIONAL BOUNDARIES
GUATEMALA
HONDURAS
PACIFIC OCEAN
SANTA ANA
AHUACHAPAN
SONSONATE
CHALATENANGO
CUSCATLAN
LA LIBERTAD
SAN SALVADOR
CABAÑAS
LA PAZ
SAN VICENTE
USULUTAN
SAN MIGUEL
MORAZAN
LA UNION
Metapán
Lake Güija
To Guatemala City
To San Jacinto
To Puerto Barrios
To Santa Rosa
San Ignacio
Tejutla
Dulce Nombre de María
El Carrizal
Nueva Concepción
Texistepeque
Candelaria de la Frontera
Concepción Quezaltepeque
Chalatenango
Cerron Grande Reservoir
Río Lempa
Santa Ana
Atiquizaya
Chalchuapa
San Pablo Tacachico
Coatepeque
Lake Coatepeque
Ahuachapán
Tacuba
Concepción de Ataco
San Francisco Menéndez
To Escuintla
San Juan Opico
Quezaltepeque
Apopa
Izalco
Armenia
Santa Domingo de Guzmán
Sonsonate
Jayaque
Nueva San Salvador
Ayutuxtepeque
San Martín
San Salvador
Cojutepeque
San Rafael Cedros
San Sebastián
San Ildefonso
Soyapango
Lake Ilopango
San Marcos
Apastepeque
San Vicente
Acajutla
Los Cóbanos
Teotepeque
Olocuilta
La Libertad
Santiago Nonualco
Zacatecoluca
San Juan Nonualco
San Luis Talpa
San Marcelino
La Herradura
Guadalupe La Zarra
Jiquilisco
Puerto Avalos
Puerto El Triunfo
Puerto Parada
Usulután
Jucuapa
Chinameca
Santiago de María
Santa Elena
Ozatlán
San Rafael Oriente
El Tránsito
El Delirio
San Miguel
San Alejo
Río Grande de San Miguel
Jucuarán
Olomega Lagoon
Chirilagua
Intipucá
El Cuco
Gulf of Fonseca
La Unión Bay
La Unión
Puerto Cutuco
Conchagua
Ciudad Barrios
5 de Noviembre Reservoir
Sensuntepeque
Ilobasco
Charrera del Guayabo
Perquín
Osicala
Corinto
San Francisco de Gotera
Guatajiagua
Santa Rosa de Lima
To Tegucigalpa
Río Lempa
90°00'
89°30'
89°00'
88°30'
88°00'
14°00'
13°30'
UNITED STATES OF AMERICA
ATLANTIC OCEAN
Gulf of Mexico
THE BAHAMAS
CUBA
DOMINICAN REP.
HAITI
MEXICO
BELIZE
HONDURAS
JAMAICA
Caribbean Sea
GUATEMALA
EL SALVADOR
NICARAGUA
COSTA RICA
Panama Canal
PANAMA
PACIFIC OCEAN
VENEZUELA
COLOMBIA
GUYANA
BRAZIL
0 10 20 30 40 50
KILOMETERS
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