SUPPORT FOR MINSA HOSPITAL MODERNIZATION
(NI-0024)
EXECUTIVE SUMMARY

BORROWER:	Government of Nicaragua	
EXECUTING AGENCY:	Ministry of Health (MINSA)	
AMOUNT AND SOURCE:	IDB (FSO):	US$48.6 million
	Local counterpart funding:	US$ 5.2 million
	Total:	US$53.8 million
FINANCIAL TERMS AND CONDITIONS:	Amortization period:	40 years
	Disbursement period:	4 years
	Interest rate:	1% during the first 10-year period, 2% thereafter.
	Inspection and supervision:	1%
	Credit fee:	0.5% annually on undisbursed balance

OBJECTIVES: The objective is to raise the health status of low-income Nicaraguans by improving the efficiency, quality and equity of the health system. This will be accomplished by: (i) modernizing management structures, support systems and clinical practices while upgrading infrastructure and equipment in hospitals; (ii) strengthening MINSA's institutional capacity to manage and allocate its financial resources, collect and analyze information, and provide technical and managerial support to its hospital network; (iii) extending maternal-child care to populations with little or no access to basic services; (iv) revamping MINSA staffing patterns and supporting performance-based incentive pay for health teams; and (v) supporting the efficient procurement and distribution of drugs and medical supplies.

DESCRIPTION: The project consists of four components:

1. <u>Hospital Management Modernization and Infrastructure</u>. Upgrading: (US $16.9 million) aims to transform two MINSA hospitals into model facilities that are autonomously managed and employ modern management tools and technologies. Through the financing of consultant services, training, workshops, special studies and study tours, this subcomponent will support interventions in several functional and programmatic areas to improve financial management, governance, administration, support systems, clinical organization, and quality of care. Based on a functional plan that specifies the role of each hospital within a regional network

and defines services to be provided given space, human resource and other limitations, this component also will support investments in rehabilitation and equipment. Investments in rehabilitation and medical equipment are tied to management reforms and to improvements in financial and clinical systems.

2. Strengthening of Health Ministry Capacity to Support Hospital Operations (US$15.9 million) will strengthen the "up stream" institutional, regulatory, and managerial functions within central-level MINSA that will support and facilitate the development and implementation of the "down stream" interventions in the hospitals supported through the previous component. These include: financial and human resource management, supervision and evaluation, establishment of an accreditation process and corresponding regulatory framework, implementation of information systems, and development of communication and promotion strategies. This will be achieved through the financing of consulting services, training, workshops, study tours, and equipment and materials for the information system. The component also will streamline staffing patterns, contributing to a more optimal skill-mix among professional personnel and to the reduction of personnel-related costs. This will be done through supporting a voluntary severance pay scheme that finances the monetary compensation of redundant physicians, administrative personnel and non-professional workers.

3. Fund for Safe Motherhood and Childhood (FONMAT) (US$9.2 million) implements a pilot program that provides an integrated and cost-effective package of services to targeted low-income pregnant women and children while introducing a results-oriented payment system that provides incentives to access hard-to-reach population, deliver quality care and establish strong referral linkages between primary care units and hospitals. The component will finance three sets of activities: (i) the per case cost of the package; (ii) provider start-up costs; and (iii) technical assistance and training directed at providers and MINSA territorial units ("Local Integrated Health Care Systems" or "SILAIS") responsible for monitoring and supervision.

4. Support for the Supplementary Social Fund (FSS) (US$9.2 million) will support government efforts to raise per capita health spending through financing three specific activities through the government-managed FSS: (i) an incentive pay scheme directed at

teams of health workers in hospitals, central ministry units and other facilities participating in modernization activities supported by the project; (ii) incentive bonuses and training involved in the redeployment of nurses to under-served rural areas; and (iii) the purchase of basic medicines and supplies through a restructured and demand-driven acquisition and distribution system. The component also will finance consultancy services and training in support of these activities.

RELATIONSHIP OF PROJECT IN BANK'S COUNTRY AND SECTOR STRATEGY:

Improving human capital and reducing poverty are priorities of the Bank's strategy for Nicaragua. The project also advances the Bank's agenda in strengthening the legal and institutional frameworks, providing continuity to MINSA's modernization program and supporting preventive health care with public-private participation (par. 1.22).

ENVIRONMENTAL/ SOCIAL REVIEW:

The infrastructure activities of the project are limited to rehabilitation and equipping of two hospitals, and are expected to have no negative environmental impact. Hospitals receiving project financing will be required to establish systems and training programs for waste management. Given that municipal systems lack infrastructure for adequate treatment, the project finances the rehabilitation of infrastructure and installation of equipment and systems for the "self-contained" treatment of liquid and solid wastes (par. 4.4).

MINSA is the dominant provider of care in Nicaragua, especially for the poor. Low-income users of MINSA facilities will also benefit from project investments in hospitals and drugs. FONMAT (Component III) targets pregnant women and infants residing in 46 municipalities where over 80 percent of the population lives in conditions of extreme poverty.

BENEFITS:

The health benefits include the reduction of maternal and infant mortality by the an estimated 40 percent for the direct beneficiaries of FONMAT in the targeted municipalities. Coverage for prenatal, maternity and infant care in targeted municipalities will increase to 70 percent from their current levels of 30, 22 and 38 percent respectively. Coverage for prenatal and maternity care for targeted indigenous populations will increase from 10 to 40 percent. All beneficiaries of FONMAT will be pregnant women and infants less than one year of age. Economic benefits include greater efficiency in the production of services and decreased financial burden on poor families. Decreased personnel costs resulting from

the implementation of the Severance Pay Fund will free scarce MINSA resources for the purchase of needed goods and services for the extension of coverage. Benefits related to improved quality will result from establishing an accreditation process, implementing clinical protocols, applying quality assurance programs and introducing incentives that reward providers for raising quality and patient satisfaction.

RISKS:

Several risks threaten the effectiveness and viability of the project: (i) weak institutional capacity and high turnover of staff can impede project implementation; (ii) chronic budgetary shortfalls can jeopardize government assumption of recurrent costs and financial responsibility for direct service provision; (iii) failure to implement hospital management interventions and autonomous governance structures can reduce the useful life of infrastructure and equipment investments; and (iv) opposition from organized health workers can threaten the effectiveness of the broader modernization program. The project incorporates a number of features and measures that aim to minimize these risks. These include: (i) integration of project coordination and technical assistance into the line units of MINSA and introduction of an incentive pay units of MINSA and introduction of an incentive pay scheme for health teams; (ii) application of a severance pay fund; (iii) linking of investments in infrastructure and medical equipment to the implementation of hospital management reforms; and (iv) participation of worker unions and professional associations in the development and implementation of MINSA's Modernization Program. (par. 4.15).

SPECIAL CONTRACTUAL CLAUSES:

As conditions prior to first disbursement of financing, the Borrower will present:

Prior to first disbursement of the financing, the Borrower will present evidence to the Bank that it has created under the Office of the Vice Minister the Technical Secretariat (CDT) and the Financial Administrative Unit (UFA), and has staffed these units as agreed with the Bank (par. 3.9).

The final version of the Operational Manual of the project, which consists of the operational regulations for each of the project components except for the second phase of the Severance Pay Fund. The Operational Manual also will describe all of the functions, activities and procedures of the CDT and

UFA as well as component - specific, decision-making committees (par. 3.13).

Component-specific conditions:

The Bank will disburse financing to cover expenses incurred in compensating personnel separated through the Severance Pay Fund, only upon presentation by the Borrower of evidence that the separations took place in accordance with operating regulations and any modifications previously approved by the Bank. This provision will also apply to the amounts which may be made available for this purpose on a retroactive basis as stipulated in par. 3.23.

POVERTY-TARGETING AND SOCIAL SECTOR CLASSIFICATION: This project qualifies as a poverty-targeted investment as stipulated in the Eighth Replenishment document (GN-1964-3). The program supports basic health services targeted to women and infants in municipalities in which over 80 percent of the population live in conditions of extreme poverty. It also targets impoverished indigenous communities in the North Atlantic Special Region. Low-income households will benefit directly from project interventions aimed at improving the quality of MINSA hospital services, given that MINSA attends to over 80 percent of the demand for inpatient care. Improvements in the supply of drugs and medical supplies will reduce the financial burden of poor families (par. 4.8-4.11).

EXCEPTIONS TO BANK POLICY: None.

PROCUREMENT: Public international bidding will be required for goods over US$250,000 and for works over US$1.0 million. Consulting services over US$200,000 must be published in Development Business. Procurement of consulting services for hospital management (Component Ia); MINSA restructuring and management strengthening (Component IIa); and FONMAT (Component III) will be done in accordance with Bank procedures applying the mechanism of Standing Offer Arrangements. (par. 3.15).

I. HEALTH SECTOR BACKGROUND 1/

A. Introduction

1.1 **Health Conditions**. Nicaragua is the second poorest nation in Latin America. Its high morbidity and mortality rates among children and women are a reflection of this poverty. The epidemiological transition is in its early stages in Nicaragua. The major burden of disease is still produced by infections compounded by under nutrition, affecting the very young and resulting in an infant mortality rate of 60 per 1,000 live births. Maternal mortality, currently at 163 per 100,000 births, is the highest in the region with the exception of Haiti. Together, infant and maternal mortality contribute 55% of premature deaths in the country. Another third is due to chronic ailments and the rest to accidents, violence and other social problems. Emerging chronic diseases are concentrated in urban areas, while rural areas, where about three-quarters of the extremely poor live, are still burdened by preventable, infectious ailments.

1.2 **Organization of the Sector**. The health ministry (MINSA) is the main provider of health care in Nicaragua. With a sizeable network consisting of 29 hospitals, 166 health centers and 690 health posts, MINSA provides nearly 60 percent of ambulatory health services and 80 percent of hospital services demanded by the population. In many rural areas MINSA is the sole provider of health services, attending over 90 percent of the demand. The Nicaraguan Social Security Institute (INSS) covers about 2.3 percent of the population but does not own or operate medical care facilities. Rather it contracts private and MINSA facilities to provide a standardized package of outpatient and inpatient services. Concentrated in urban areas, a fast-growing private sector provides about 20 percent of ambulatory care, but less than 10 percent of hospital services. Military providers attend to the rest of the population's demand for health care.

1.3 **Progress During MINSA's First Phase Modernization Program**. Since 1993 MINSA has implemented several reform measures aimed at decentralizing administrative and budgeting responsibilities to 17 Local Integrated Health Care Systems (SILAIS). SILAIS and national hospitals are responsible for managing the goods and service portion of the MINSA budget, representing approximately 20 percent of spending. MINSA implemented a resource allocation formula to compute each SILAIS share of the goods and services budget. Discarding the centrally-determined extrapolations of the historical budget, MINSA defined an algorithm based on population size, access, utilization rates and epidemiological profiles to allocate these resources to the SILAIS. Each SILAIS is responsible for establishing its priorities and programs. These changes have

---

1/ The Technical Files contain a brief macroeconomic overview together with a more in-depth analysis of health conditions.

resulted in more efficient and equitable resource allocation, especially for primary care services.

1.4 Despite these impressive changes, much remains to be done to improve and consolidate resource planning, allocation and use. Alternative resource allocation mechanisms for hospitals and medical supplies are less robust or only partially implemented. The Government still retains central control of most functions including human resources which represents nearly two-thirds of spending. More importantly, the resource allocation system is not tied to outputs. Finally, legislative support for the decentralization initiative is absent raising doubts about the sustainability of this reform.

1.5 This chapter describes the major structural and organizational factors that generate disincentives for institutions and individuals within the system to provide quality services efficiently, and ultimately, impede the Governments ability to address the health conditions outlined above. These factors are categorized in three areas: (i) policy framework and institutional settings; (ii) financing and resource allocation; and (ii) health care delivery system.

B. Policy Framework and Institutional Setting

1.6 **Fragmented Policy Formation and Overlapping Responsibilities.** Policies and reform initiatives are developed and implemented in an ad hoc manner. Since lines of authority as well as divisional competencies are ill-defined within MINSA, policy initiatives take on an independent and often territorial nature resulting in fragmented and sometimes overlapping programs. Duplication of functions across central-level units is common. But responsibility within MINSA for overseeing or integrating the development and implementation of modernization processes affecting key delivery systems is diffuse. For example, at least three MINSA units together with the SILAIS and the Finance Ministry share oversight responsibility for management, financial and clinical functions related to the MINSA hospital network. Recent regulations contribute to the confusion. In sum, the absence of a hospital modernization policy and corresponding legal and regulatory framework contributes to deficiencies in the organization and provision of hospital services.

1.7 **Absence of Standards.** Accreditation standards, facility building codes and monitoring practices to ensure that minimum quality standards are met by health providers do not exist or are not enforced. Some hospitals provide highly specialized services but lack adequate infrastructure, appropriate equipment or trained staff. Small hospitals perform surgeries in unsanitary conditions. In many hospitals, medical care management standards and treatment protocols are absent, unknown or ignored. As suggested above, institutional responsibility for accreditation is unclear. INSS

"licenses" providers to delivery a package of services when in effect this function is the legal responsibility of MINSA. Further, the INSS licensing program does not systematically assess the structure, process and outcomes of health service provision.

1.8 **Lack of Information**. The dearth of reliable information to facilitate planning and decision making plagues the health sector at all levels. Systematic information on costs, case load, inventories, referral patterns, quality and outcomes is lacking. The few systems that exist are self-contained, use obsolete technology, and produce overlapping information. Data collection in MINSA facilities is a routinized procedure responding to central-level and donor information demands. Managers in hospitals, SILAIS and central MINSA units lack access to timely information to gauge performance, appraise quality, assess stocks or track spending.

1.9 **Deficient Material Management**. MINSA patients report that facilities provide about 60 percent of prescribed drugs. Lower levels of drug availability are common in rural areas. A number of factors, including financial shortfalls, contribute to this situation. The procurement and distribution of drugs and medical supplies in MINSA consists of a set of centralized yet fragmented functions performed by different units, usually without coordination or information sharing. The centrally-operated distribution and inventory system is expensive, slow and irregular, driving facilities and their patients to purchase the missing products from local suppliers at inflated prices. Monitoring and supervision as well as assessment of product quality is inadequate. In the hospitals themselves, inventory and distribution systems are in disarray. Absence of therapeutic protocols as well as timely information on the drug consumption patterns contributes to flawed prescription, programming and purchasing practices.

C. Financing and Resource Allocation

1.10 **Low Levels of Financing**. Spending on health care in Nicaragua is one of lowest in the region, attaining only US$58 per capita in 1996. In that same year MINSA represented 55 percent of total health spending while the private sector, social insurance and other government agencies accounted for 32, 10 and 4 percent respectively. Since 1990 MINSA spending as a percent of total sector spending has decreased by nearly one-third (from 84 to 55 percent). More troubling is the declining importance of Government as a source of MINSA financing. By 1996 Government was the source of only 61 percent of total MINSA outlays. Grants and loans from bilateral and multilateral agencies (32 percent of total MINSA spending), and to a lesser extent revenues from user fees and third party payers (7 percent), constituted the remainder. 2/ By 1996 Government financing of MINSA non-capital spending remained at 78 percent of 1990 levels. Particularly hard hit were outlays for

---

2/ Most international assistance received by MINSA is for capital investments.

drugs, materials and supplies, decreasing by two-thirds over this period.

1.11 **Resource Misallocation and Weak Financial Management**. MINSA has made great strides in recent years to strengthen spending on preventive and promotional care, but hospitals continue to consume approximately 50 percent of total, non-investment spending. Although the ratio of hospital spending to total MINSA outlays is acceptable compared to countries elsewhere in the region, questions have been raised about the allocative efficiency of MINSA expenditures on hospitals given the low levels of occupancy (approximately 70 percent) and productivity (see below) observed therein. Also, combining central MINSA and SILAIS administrative offices, overhead consumed a costly 14 percent of total spending in 1996.

1.12 The MINSA budget is not used as a policy instrument to allocate resources or to monitor program performance. Hospital allocations are based mainly on historical patterns and are not linked to outputs or costs. Central Government agencies control nearly 80 percent of facility spending to the extent that hospital managers are unaware of their budgets or total spending. For example, the Ministry of Finance maintains central control of all outlays for personnel while central MINSA administers outlays for drugs and medical supplies. Within MINSA, decision making concerning resource allocation is fragmented. Different MINSA units develop budgets independently of each other, each applying different criteria. There is no financial unit within MINSA overseeing or tracking revenues, spending and resource allocation or assessing how allocations are tied to performance.

D. Health Care Delivery

1.13 **Inequitable Access and Coverage of Basic Services**: Access to basic care is difficult in rural areas, especially in the mountainous regions and the inaccessible Atlantic coast. Whereas 60 percent of overall births are institutional, in rural areas only 42 percent take place in a health establishment. Maternal mortality figures are correspondingly higher in rural provinces: 432 per 100,000 in Jinotega, for instance, compared to 71 in Managua. Most of these deaths are preventable with adequate prenatal and delivery care. Likewise, access to child health care shows considerable inter-regional variation. Institutional treatment for childhood diarrhea, the second cause of child mortality, is 25 percent among rural children and 80% among children in Managua. Infant mortality in rural areas oscillates around 70 per 1,000 births, while the rate for Managua is around 50 and for the country around 60. Inaccessibility is compounded by the problems that afflict the primary health care network, including deterioration of the rural health infrastructure, high rates of attrition and staff rotation, under-execution of assigned budgets, weak management capacity, poor supervision and deficient medical supply systems.

1.14 **Lack of Accountability**. In MINSA facilities, standards for performance (e.g., quality, productivity, compliance with norms and protocols) do not exist or are not enforced. Those who do not perform (hospital directors, administrators, physicians, nurses, etc.) are not sanctioned and good performance is neither acknowledged or rewarded. Hospital management has little authority over staff behavior and work habits. This situation contributes to deficient medical care organization which in turn spurs high average stays and inflated waiting lists and bed occupancy rates.

1.15 **Deficient Human Resource Management and Supply**. With nearly 23,500 employees MINSA is the largest government employer, accounting for about 30 percent of total government employees. Wages are low but work shirking is endemic, especially in hospitals. Upon applying international productivity norms to MINSA facilities, hospitals are overstaffed by an estimated 48 percent. 3/ This is particularly the case for physicians whose numbers exceed international norms by nearly 80 percent. In 1995 it was estimated that MINSA over spent by US $5.5 million (representing 12 percent of total personnel spending) on staff in 29 hospital facilities. Physicians represented over 75 percent of this overspending while administrative and non-professional workers accounted for most of the remainder.

1.16 MINSA's staff mix is unnecessarily skill intensive which in turn raises costs. In part due to their oversupply, physicians are the principal providers of care in hospitals, representing 98 percent of all care. They perform many tasks more appropriate for nurses. Nurses are given little responsibility for patient care and are not considered key actors in the health care team.

1.17 **Productive Inefficiency**. The MINSA network faces the paradoxical situation of an over-supply of physicians combined with an under-supply of physician services. Studies show that doctors work significantly less than the eight hours specified in their contracts. Low productivity is evident at all levels of the MINSA network. On average, surgeons perform less than two interventions per week, hospital-based specialists provide less than three outpatient consultations per day, and general practitioners have six patient contacts per day at health posts. Work shirking by physicians has an important ripple effect on the productivity of other hospital personnel, and ultimately, the efficiency and quality of MINSA facilities, resulting in crowded emergency rooms, extended patient stays, and low utilization of surgical theaters. Low salaries, poor management practices, lack of supervision, deficient clinical organization and perverse incentive structures contribute to this predicament. MINSA hiring practices of adding employees to increase total system output rather than raising

---

3/ Despite the already high levels of staffing, the number of employees increased by 12 percent between 1993 and 1996.

salary levels or providing incentive pay have generated counterproductive behaviors resulting in lower per worker output.

1.18 **Unintegrated Hospital Network.** In Managua, hospitals were constructed and clinical services expanded in a haphazard fashion with little attention to catchment areas, demand or a facility's technical and physical capacity to provide services. This has resulted in overlapping and fragmented services provided in the national "reference" hospitals. The absence of accreditation standards contributes to the disorganization. Referral systems are in disarray as nearly three-fourths of inpatients are admitted upon demand. This reflects the absence of treatment protocols as well as poor coordination between hospitals and primary providers.

1.19 **Poor Maintenance and Dilapidated Infrastructure.** Studies have shown that a significant proportion of hospital equipment is inoperative due to weak maintenance systems, unavailable replacement parts, lack of training and the proliferation of equipment produced by an array of manufacturers (for which there is no technical information). As in the case of recurrent costs, MINSA has no strategy or mechanism to identify the maintenance implications of its capital investments. Infrastructure obsolescence has become a major issue in the 1990s. Deteriorating infrastructure has made it increasingly difficult for facilities to provide water and electricity, preserve equipment, or adequately dispose of toxic wastes.

1.20 **Low Technical Quality.** Assessments of clinical organization, patient flows and clinical practices suggest low levels of technical quality of medical care provided in MINSA hospitals. Problems include: disregard of norms on sterilization and "sterilized" areas; existence of multiple medical records for the same patient; incomplete entry of patient information, laboratory results and treatments in medical records; unfamiliarity with basic treatment protocols; lack of qualification and experience to perform complicated treatment procedures; emergency care provided by unsupervised undergraduate medical students; and absence of a monitoring and control systems related to intra-hospital infections.

E. Government Strategies

1.21 **Social Sector and State Modernization Strategies.** The Government has presented a social strategy, known as "Investing in Our Best Resource". The strategy consists of three elements: (i) promote sustained economic growth and ensure that economic opportunities are available to the poor; (ii) invest in human capital of the poor; and (iii) put in place a safety net consisting of basic goods and services, targeted to protect the chronic and transitional poor. At the same time, the government seeks to improve the efficiency of public spending as a means to generate savings to expand access and raise minimum standards. The National Development

Plan for 1996-2000 seeks to reform the public sector, reducing the government apparatus and directing it to serve more as a regulator and facilitator than a provider of services. The proposed project is consistent with these objectives.

1.22 **Health Strategy**. The Government has presented a detailed health policy statement (Política Nacional de Salud, 1997-2002) that outlines a number of strategies pertinent to the proposed project: (i) modernization of the legal and regulatory framework; (ii) restructuring of MINSA to establish its regulatory and oversight roles and strengthen policy making capabilities; (iii) decentralization and revamping of resource management to hospitals and SILAIS; (iv) reform of personnel management and pharmaceutical supply systems; (v) improvement of management effectiveness by introducing performance-based incentives; (vi) development of information systems; (vii) introduction of alternative financing mechanisms; and (viii) extension of basic services to vulnerable and at-risk populations (mothers and infants and residents of undeserved geographical areas).

F. Bank Strategy

1.23 The Bank's country strategy seeks to achieve sustained growth with equity. This will be accomplished through four strategic instruments: (i) promote development of the private business community and revitalization of export products; (ii) remove financial constraints by reducing the external debt; (iii) improve human capital and reduce poverty; and (iv) optimize the use and conservation of natural resources.

1.24 **Previous Bank Experience**. The proposed project will be the first credit operation directed to the Nicaraguan health sector. However, commencing in 1995 the Bank has implemented two technical cooperations ATN/SF/SC/4127-NI (US$5 million) and PPF-0013-NI (US$425,000) to support basic studies of the sector, development of health policies and strategies, strengthening institutional capacity of MINSA and the preparation of this project. Final disbursements for these operations are contemplated for late 1998. An important lesson from this experience is the need to establish a technically and administratively competent team to support project activities and facilitate management activities.

G. Project Conceptualization. Coordination with Other Donors

1.25 In addition to addressing sector shortcomings and supporting Government health sector policy initiatives, this project is crafted to complement the activities of other donors active in Nicaragua while avoiding duplication. Currently, 15 bilateral and multilateral agencies are implementing projects in the Nicaraguan health sector, investing over US$30 million in 1998. Nearly two-thirds of donor financing is directed to bolster MINSA preventive and promotional programs at the primary care level and

strengthening the capacity of SILAIS to support these programs. Each one of the SILAIS has established a relationship with one bilateral or multilateral agency. The project seeks to build upon the work already underway in the SILAIS and fill gaps evident in current donor programs by financing the extension of a package of services --developed with the support of these donors-- to undeserved populations in rural municipalities. At the same time, the project supports the strengthening of referral linkages between primary providers and hospitals, implement an incentive pay scheme for health workers that is linked to performance, and the development of institutional capacity at the central level.

1.26 A parallel World Bank project (US$32 million) also includes activities that aim to improve management practices and upgrading selected hospitals. While the Bank-financed project supports these activities in national hospitals located in Managua, the World Bank will focus on regional hospitals. Both projects will introduce similar management techniques. Other activities that will be jointly financed include: the design and implementation of an integrated information system, the modernization of central-level MINSA, development of the legal and regulatory framework and the implementation of a social communication strategy. A single unit will coordinate both projects.

II. THE PROJECT

A. Policy Framework

2.1 This project supports stated Government policies to restructure, strengthen and modernize MINSA's hospitals, central-level MINSA units that oversee and support the hospitals, human resource management practices and the maternal-infant care delivery system.

2.2 Government envisions a reformed health sector in which MINSA will assume leadership in policy-making, regulation, monitoring and evaluation for the entire sector while shedding its traditional role of monolithic provider of services. 4/ Functions related to regulation, financing and service provision, that are currently fused within a highly centralized organization, will be separated. Responsibility for resource management and service provision will be transferred to decentralized territorial units (SILAIS) and autonomous hospitals. Public infrastructure will remain public but will be self-governed. Alternative governance structures located in SILAIS and hospitals consisting of local government, private and community representatives will approve plans and programs, oversee financial performance, evaluate management and adapt strategic directions. Accreditation will be the responsibility of an independent commission consisting of representatives from public institutions, private providers and professional societies.

2.3 MINSA also seeks to develop its role as purchaser of services, specializing in financing primary and preventive care for low-income populations together with public health and promotional activities for the entire population. This will contribute to the development of a more pluralistic and competitive service delivery. MINSA will purchase service packages, procedures and treatments from private and autonomous public providers, with a focus on performance and results rather than inputs. Medical supply systems will retain pooled procurement features to achieve economies of scale, but will be demand-driven in the sense that providers will become "holders" of medical supply budgets. Distribution will be the responsibility of pharmaceutical producers or suppliers. Finally, referral systems will be strengthened through financial incentives between ambulatory providers and hospitals.

B. Project Objectives and Concept

2.4 The purpose is to raise the health status of low-income Nicaraguans by improving the efficiency, quality and equity of the health system. This will be accomplished by: (i) modernizing management structures, support systems and clinical practices while upgrading infrastructure and equipment in hospitals; (ii) strengthening MINSA's institutional capacity to manage and allocate its financial

---

4/ Elements of this framework have already been implemented by MINSA. For example, the goods and services budget has been transferred to the SILAIS and the hospitals.

resources, collect and analyze information, and provide technical and managerial support to its hospital network; (iii) extending maternal-infant care to populations with little or no access to basic services; (iv) revamping MINSA staffing patterns and supporting performance-based incentive pay for health teams; and (v) supporting the efficient procurement and distribution of drugs and medical supplies. **Annex** I contains a matrix that matches project strategies and components with problems.

2.5 Full implementation of the government's health reform policies will require eight-to-ten years. Given that MINSA will continue to directly provide services during the foreseeable future, the project will support the implementation of a series of instruments that will be applied internally to MINSA to address the problems presented in Chapter I. These instruments represent the building blocks for substantive change and are consistent with reaching the reformed system outlined above. Taken together, they aim to alter incentive structures and management practices to increase efficiency and improve performance while testing and implementing innovative strategies to extend coverage and raise quality. A brief description of these instruments follows.

(a) Performance agreements (all Components): Quasi-contractual arrangements will be implemented between MINSA and hospitals (and between hospital management and specific clinical and non-clinical departments) that will tie resource allocations to clear-cut and benchmarked outputs related to quality, volume, patient satisfaction and service mix.

(b) Purchasing of cost-effective package of services (Component III): Instead of financing inputs through budgetary line items, MINSA will purchase from public and private providers a standardized package of high impact mother-infant services that will be delivered to under-served populations, under performance agreements or contracts.

(c) Incentive pay for health teams (Component IV): Health teams working in clinical and non-clinical hospital departments can earn cash bonuses that are tied to the degree of achievement of benchmarks specified in their performance agreements with hospital management.

(d) Integrated case management (Component III): In an attempt to supersede episodic management of illness through a fragmented delivery system by a more coordinated approach, primary and hospital providers will implement an agreed-upon protocol for maternal and infant services to guide the delivery of community-, health center- and hospital-based services.

(e) Alternative hospital payment systems (Component II): A prospective service- or activity-based payment system with a

hard budget constraint will be implemented to replace the current system based on historical budgets.

(f) Partial budget holding (Components II and III): A portion of hospital, laboratory, and special-case budgets corresponding to maternity services will be decentralized to selected primary providers. Selection of secondary providers as well as the corresponding resource allocation for maternity services will be demand-driven by primary providers and their patients. Also, budget for drugs and medical supplies will be decentralized to the SILAIS and hospitals, creating a demand-driven system.

C. Project Areas

2.6 The hospital modernization activities (Component I) will focus on two hospitals located in Managua. Hospitals located in other regions are covered by a parallel program financed by the World Bank. The Fund for Safe Motherhood and Childhood (Component III: FONMAT) will be implemented in 46 (of 145) municipalities with a high concentration of indigenous populations, residents living in circumstances of extreme poverty, and with limited access to regular health services.

D. Project Description

1. Component I: Hospital Management Modernization and Infrastructure Upgrading (Amount:US $16.9 million: 31 Percent of Total Costs)

2.7 The objective of this component is to improve the quality, internal efficiency and financial solvency of hospital services through supporting the transformation of governance, organization, management and clinical structures and processes, and the upgrading of equipment and infrastructure. This component ties investments in rehabilitation and equipment to management reforms and to improvements in financial, administrative and clinical systems. The project will finance activities in two hospitals located in Managua, which will be selected through a competitive process. If successfully implemented, these hospitals will serve as models for introducing management changes elsewhere in MINSA's hospital network.

2.8 Upon project completion, these model hospitals will be self-governed, public enterprises accountable to MINSA (as payer) for producing quality services efficiently and in a manner that garners high patient satisfaction. The overarching strategic mission of these facilities will be "the patient comes first". Management will be responsible for resource allocation within their facilities, including the hiring (and firing) and assigning of staff, and the purchase of supplies. Through the use of clinical protocols and audits, clinical effectiveness will be enhanced. The skill mix of staff will reflect greater responsibility of the nursing corps in

patient management. Day case and minimal stay procedures will be adopted as a means to reduce costly inpatient services. Selected support services will be contracted out to the private sector or to self-managed, in-house micro enterprises. Improvements in clinical management will expedite discharge, thereby achieving reductions in length of stay. Accounting and auditing systems will tract resource flows to, from and within each facility. Revamped support systems will establish robust information management, toxic waste disposal, maintenance practices and medical supply inventory and distribution. Infrastructure and equipment will be consistent with the strategic plan of each facility as well as the regional configuration of MINSA's hospital network.

2.9 **Subcomponent Ia: Management Modernization and Autonomy.** Through the financing of consultant services, training, workshops, special studies and study tours, this subcomponent will support interventions in the following functional and programmatic areas: (i) quality assurance; (ii) autonomous governance and internal management structures, including the implementation of "performance agreements"; (iii) reorganization of services supported by third party payers; (iv) human resource management and training; (v) financial management, accounting and auditing; (vi) maintenance systems for plant and equipment; (vii) toxic waste management systems; (viii) management of pharmaceutical and medical supplies; (ix) contracting out of selected support services; (x) introduction of day case and ambulatory surgery units; and (xi) leadership, clinical and management training for nurses. These interventions will be introduced in two phases.

2.10 **Subcomponent Ib: Infrastructure and Equipment Upgrading.** Based on a functional plan that specifies the role of each hospital within a regional network and defines services to be provided given space, human resource and other limitations, this subcomponent will support investments in rehabilitation and equipment to: (i) improve capacity to increase productive efficiency (e.g., day case and ambulatory surgery units), reduce costs of services already provides, or place existing, but idle, and complementary services into use; and (ii) improve the quality of services already provided. Investments will be limited to rehabilitation of existing infrastructure and replacement of high-volume equipment up to US $5.5 million per hospital. According to the results of feasibility studies for two Managua hospitals, this amount will be split more or less evenly between rehabilitation and equipment.

2. Component II: Strengthening of Health Ministry Capacity to Support Hospital Operations (Amount: $15.9 million: 30 Percent of Total Costs)

2.11 Focusing on central-level MINSA, this component will establish or strengthen the "up stream" institutional, regulatory, and managerial functions that will support and facilitate the development and implementation of the "down stream" interventions

in the hospitals supported through the previous component. This will be achieved through the financing of consulting services, training, workshops, study tours, information system equipment and materials.

2.12 If successfully implemented, MINSA will have separated regulatory, financing and provision functions, decentralizing management responsibility for the latter to the self-managed hospitals. Staffing patterns at hospitals will be streamlined to reflect a more efficient skill mix. An accreditation process linked to a multi sectoral commission with public, private and professional representation will enforce transparent quality standards for all health facilities in the sector. A new legal and regulatory framework will support these new roles, structures and processes. Hospitals will be paid according to the volume and productive efficiency of their services. A finance unit will track all financial arrangements between MINSA and its providers. MINSA will be linked to hospitals through performance agreements that specify clear-cut benchmarks which in turn will affect resource allocation. An integrated management information system will contribute to improved decision making, cost analysis and quality control at all levels of MINSA.

2.13 **Subcomponent IIa: Health Ministry Institutional Development**. This subcomponent aims to provide MINSA with the capacity to: (i) oversee and monitor the hospital network; (ii) introduce performance-based contractual relationships (performance agreements) with its self-managed hospitals; (iii) regulate and enforce minimum standards for all facilities operating in the sector; (iv) manage and track MINSA revenues and spending, purchase service packages from providers, and allocate resources to hospitals in function of productivity and other performance criteria; (v) decentralize but monitor hiring practices; (vi) co-ordinate and manage information; and (vii) garner support for the modernization process. This subcomponent will support six major activities.

a. <u>Restructuring and Management Strengthening</u>

2.14 This activity supports the restructuring, function definition and organization of MINSA units that are linked to hospitals; development, testing and implementation of performance agreements between MINSA and hospital management as well as between hospital management and departmental health teams; creation of the capacity to design, implement and monitor modernization activities in the hospitals; and strengthening of the supervisory and evaluation capacity. Primary inputs will be consulting services and training.

b. Financial Management and Alternative Hospital Payment Mechanism

2.15 Financing for technical assistance and training will be provided to establish a financial unit in MINSA with the capacity to purchase services, manage and track financial flows throughout the system, monitor and analyze costs, assign and execute budgets and manage alternative provider payment mechanisms. This activity will also support the development, testing and implementation of a hospital payment mechanism.

c. Management Information Systems

2.16 Since 1997 MINSA has been designing an integrated management information system (MIS) consisting of four modules: (i) finance; (ii) service production; (iii) supplies; and (iv) resource management and costs. The former three have entered a testing phase while the latter remains at a pre-design stage. This activity will support consulting services for the design and testing of this fourth module. 5/ Also, through the financing of hardware, software, additional telephone lines, technical assistance and training in the effective use of this system, the project will implement the system in the hospitals and central MINSA units designated for project financing.

d. Legal and Regulatory Framework

2.17 Support for technical assistance, workshops, training and study tours will be provided for the following areas: the implementation of an accreditation process, creation and operation of a multi sectoral accreditation commission and the development and approval of a regulatory framework for autonomous public hospitals, accreditation, contracting of private providers, decentralized human resource management, and the sale of services to third party payers.

e. Social Communication Strategy

2.18 This activity will support technical assistance, workshops, and the production of communication media and materials to disseminate information on modernization activities contemplated in the project to the citizenry, MINSA workers, and the donor community with emphasis on hospital management and governance reforms, restructuring of central MINSA and the purchasing of mother-infant care. 6/

5/ A parallel project financed by the World Bank will support the testing of the other modules.
6/ Other aspects of the communication strategy will be financed by the parallel World Bank Project.

f. Monitoring and Evaluation

2.19 The project will support the preparation and application of a monitoring and evaluation design for each project component, including the development of process and impact indicators and the collection of base line data prior to implementation of project-financed activities. It will also support the application of an ex post evaluation while strengthening MINSA capacity to conduct monitor and evaluate program performance.

2.20 **Subcomponent IIb: Severance Pay Fund**. Based on assessments of staffing norms, productivity standards, demand of hospital services and physical and technological capacity, this subcomponent aims to address the severe labor redundancies evident in MINSA hospitals. It aims to streamline staffing patterns contributing to a more optimal skill-mix among professional personnel (doctors and nurses) and to the reduction of personnel-related costs. Reduction of redundant staff also will increase economic efficiency, liberate resources for other pressing needs such as the purchase of drugs and medical supplies and decrease overall worker resistance to restructuring and other modernization measures.

2.21 This subcomponent will support a severance pay scheme, financing the monetary compensation of redundant and separated workers. The Government has decided that the scheme will initially be voluntary in nature, and subsequently converted to a mandatory scheme to meet objectives. The fund will target the two most redundant categories of workers employed in MINSA hospitals: (i) physicians; and (ii) administrative and non-professional workers. The average compensation amount for physicians will be US$4,500, and for administrative and non-professional personnel, US$1,400. On average, compensation represents 1.5 years in terms of the value of salary and benefits. The fund will finance compensation for approximately 1,000 physicians and 3,260 administrative and non-professional personnel, reducing the number of employees for each of these groups by one-third by project completion. The number of total MINSA employees will decrease by 18 percent (from 23,435 to 19,175) and the total annual personnel costs by 16 percent (from US$48 million to US$41 million).

3. Component III: Fund for Safe Motherhood and Childhood (Amount: US$:9.2 million: 17 Percent of Total Costs)

2.22 This component, FONMAT, seeks to reduce maternal and infant mortality through improving the access, efficiency, and quality of services for low-income and underserved populations, with special emphasis on impoverished rural areas and indigenous populations. This will be achieved by: (i) developing the purchasing function of MINSA, (ii) defining a high-impact and integrated package of care consisting of prenatal, birth, post-partum and infant services, with a corresponding protocol; (iii) targeting to populations with little or no access to basic services; (iv) introducing a results-

oriented payment system that provides incentives to access hard-to-reach populations, deliver quality care and establish strong referral linkages between primary care units and hospitals; and (v) stimulating the participation of private providers and thereby contributing to a more pluralistic health care network.

2.23 Upon project completion, in addition to having extended coverage of basic services to at-risk, low-income populations, FONMAT will have taken the initial steps to reorient how MINSA interacts with its primary care network and how the latter interacts with secondary services such as hospitals, and specialized care. Instead of financing budgetary line items with the corresponding lack of incentives for performance, payment will be linked to the number of enrollees (covered population), enrollee residence (higher payments for enrollees residing in hard-to-reach communities) and quality of care (application of a protocol).

2.24 The component will establish an account, FONMAT, that will finance three sets of activities: (i) the average per case cost of the package, estimated at US$45; 7/ (ii) provider start-up costs including promotional activities and minor investments in infrastructure and equipment; and (iii) technical assistance and training directed at providers as well as MINSA territorial units (SILAIS) responsible for monitoring and supervision. FONMAT will finance an estimated 20 subprojects, targeting 46 municipalities. Selection criteria include: limited access to basic health services, high incidence of conditions of extreme poverty and high concentration of indigenous populations. The service package will reach about 94,000 pregnant women and 72,000 infants during the course of the project. Private providers including non-profit organizations will be contracted for five subprojects. Public providers participating in FONMAT will be "contracted" through performance agreements while private providers will be contracted by MINSA and project management.

2.25 The per package payment is configured to cover salaries, supplies, pharmaceuticals and transportation. Providers will receive higher per package payments to cover the cost of reaching beneficiaries residing in distant communities. Enrollees will contribute through co-payments and in-kind contributions an estimated 5 percent of the package cost. these revenues will be directed to community-based solidarity funds to cover transportation and other costs for poor beneficiaries residing in dispersed rural hamlets. To facilitate financial sustainability of this activity upon project completion, the component will finance the package payments on a declining basis. 8/

7/ The component supplements MINSA recurrent costs through financing the cost of the complete package rather than subsidizing budgetary line items.

8/ The project will finance the cost of the service package (less the copayment) during the first year of operation for each subproject while the government will assume financial responsibility incrementally (in annual increments of 25 percent of the cost). Government will assume full financial responsibility of all subprojects upon project completion.

4. Component IV: Support for the Supplementary Social Fund (Amount: US$9.2: 17 Percent of Total Costs)

2.26 This component supports Government efforts to raise per capita spending levels in health and reverse the trend of decreasing outlays for health care. The Government has requested bridge financing from the donor community to fund core operating expenditures of the Health and Education Ministries through a Supplementary Social Fund (FSS). The FSS is a temporary, fast-disbursing mechanism funded by external and internal resources. Established in June, 1998 through Presidential Decree No. 46-98, the FSS's principal objective is to increase per capita recurrent spending on health and education above spending levels agreed to by the Government and the IMF through the Enhanced Structural Adjustment Facility (ESAF). 9/ Programs and activities will be identified jointly by Government and donors. FSS is not meant to replace recurrent expenditures financed by Government.

2.27 FSS funding supports and expand priority programs in education and health that target the poor, are consistent with sector modernization initiatives and reforms, and improve the efficiency, equity and accountability of public spending. Consonant with these objectives, this component supports the FSS through financing two activities: (i) performance-based incentive pay for health workers; and (ii) purchase of drugs and medical supplies through a reformed acquisition and distribution system.

2.28 From a more strategic perspective, the FSS seeks to address troublesome trends evident in the health sector, as described in Chapter I. Due in part to weak policy-making capacity and inadequate oversight, many donors tend to define and support specific, stand-alone programs. Programs are generally not coordinated with MINSA on a continuous basis, resulting in fragmented and overlapping activities. The FSS represents an initial step in consolidating and channeling bilateral and multilateral funding to high impact and efficiently-run programs, while strengthening institutional capacity to manage, monitor and evaluate performance of government-defined priority programs. This is consistent with project objectives.

2.29 Channelling the financing of project-supported activities through the FSS will contribute to the extension and sustainability of the modernization process by: (i) serving as a catalyst to attract additional resources from other donors to these activities; and (ii) crafting a menu of innovative and reform-oriented activities

---

9/ Government projection's suggest that increased levels of spending, financed through the FSS, will be sustainable with national resources starting in 2001. Within the framework of the ESAF agreement with the IMF and entry into the HIPC debt reduction initiative, the Government can increase social spending above projected baseline levels, if donors provide concessional funding for this purpose. The FSS will serve as a transitional mechanism (up to three years) to channel this funding to health and education programs until the Government is able to restore per capital social spending early in the next century. In short, the FSS represents a concessional recurrent finance bridge.

to stimulate broader donor participation. To this end, the Bank may redirect the amount and nature of its financing of FSS programs as a consequence of donor contributions becoming available to the FSS.

2.30 **Subcomponent IVa: Performance-based Incentive Pay Scheme.** The objective of this activity is to contribute to the quality, efficiency and user satisfaction of MINSA services through raising the performance and remuneration levels of health workers. The incentive pay scheme will be applied to five SILAIS and seven hospitals where modernization activities are being implemented as well as supported by the IDB and World Bank projects. Bonuses will represent on average 15 percent of fixed salaries. Incentive pay will be part and parcel of the performance agreements negotiated between different entities and units within the MINSA system, as outlined in par. 2.6. Bonuses will be directed to health teams working in primary care units, hospital clinical and non-clinical departments and regional or facility administrative offices. In addition to financing the incentive bonuses, the activity will support training, technical assistance and other costs involved in the redeployment of nurses to under-served rural areas.

2.31 **Subcomponent IVb: Support for Basic Medical Inputs.** This activity aims to improve access to essential drugs and medical supplies by: (i) financing the purchase of basic medicines and supplies from MINSA's basic list (*cuadro básico*); and (ii) providing training and technical assistance to support the establishment on a pilot basis of an efficient and demand-driven acquisition and distribution system for these inputs. Features of the system will include: (i) conversion of providers into decentralized budget holders for the purchase of drugs and supplies; (ii) reorientation of central MINSA units into an autonomous and self-financed logistical support and intermediary agent for pooled procurement; (iii) introduction of quality control standards to ensure product safety; and (iv) application of standardized therapeutic protocols to improve prescription and purchasing practices.

E. Program Costs and Financing

2.32 **Project Costs.** Total project costs are estimated to be US$53.8 million. The breakdown of project costs is summarized in Table 1. 10/ The costs of consulting services, training and materials are drawn from action plans and corresponding levels of effort for each project activity. Estimates of infrastructure and medical equipments are based on feasibility studies of two sample hospitals. The costs of the implementation of an information systems are based on the results of pilots financed by the World Bank. An analysis of unit costs for curative and preventive services, transportation and promotion is the source of cost estimates of the FONMAT service package.

10/ Annex IV contains a cost table that groups expenditures by major spending categories. This table will be used for accounting and disbursement purposes during project implementation.

2.33 **Financing Plan.** Ninety percent of total project costs, equivalent to US$48.6 million, will be financed under concessionary terms through the Fund for Special Operations. Ten percent of total project costs, equivalent to US$5.2 million, will be government counterpart to the operation. Given that this is considered a poverty targeted investment, the matrix is 90/10.

TABLE 1: PROJECT COSTS AND FINANCING PLAN
(US$ Thousands and Percent)

Categories	BID	GON	TOTAL	PERCENT
Component 1 : Hospital Management and Infrastructure Upgrading				
Consultants	3,724.5	395.2	4,119.7	
Training	971.1	0.0	971.1	
Medical Equipment	4,498.7	0.0	4,498.7	
Construction	5,925.3	747.0	6,672.3	
Materials	0.0	91.8	91.8	
Recurrent Costs	0.0	564.9	564.9	
Subtotal Component 1	**15,119.6**	**1,798.9**	**16,918.5**	**31.4**
Component 2: Strengthening of MINSA Capacity to Support Hospital Operations				
Consultants	2,338.3	1,076.4	3,414.7	
Training	1,031.8	0.0	1,031.8	
Equipment	1,335.0	0.0	1,335.0	
Printing	0.0	76.0	76.0	
Severance Pay Fund	9,033.2	0.0	9,033.2	
Recurrent Costs	626.0	370.4	996.4	
Subtotal Component 2	**14,364.3**	**1,522.8**	**15,887.1**	**29.5**
Component 3: Fund for Safe Motherhood and Childhood				
Consultants	1,297.3	149.3	1,446.6	
Training	712.5	0.0	712.5	
Minor Equipment	1,956.2	0.0	1,956.2	
Minor Infrastructure	508.3	56.4	564.7	
Health Promotion	750.0	0.0	750.0	
Recurrent Costs	0.0	524.7	524.7	
Purchase of Service Packages	2,306.3	899.3	3205.6	
Subtotal Component 3	**7,530.6**	**1,629.7**	**9,160.3**	**17.0**
Component 4: Support for the Supplementary Social Fund				
Consultants	63.6	38.3	101.9	
Office Equipment	0.0	5.1	5.1	
Minor Rehabilitation	0.0	26.8	26.8	
Incentive Pay	3,000.0	0.0	3,000.0	
Pharmaceutical/Supplies	6,103.4	0.0	6,103.4	
Recurrent Costs	0.0	18.4	18.4	
Subtotal Component 4	**9,167.0**	**88.6**	**9,255.6**	**17.2**
Administration				
CDT	489.3	0.0	489.3	0.9
Other				
Reimbursement of PPF	427.0	0.0	427.0	0.8
Financial Costs				
Inspection Fee	488.0	0.0	488.0	
Interest	976.0	0.0	976.0	
Credit commission	0.0	267.0	267.0	
Subtotal Financial Costs	**1,464.0**	**267.0**	**1,731.0**	**3.2**
GRAND TOTAL	48,561.8	5,218.4	53,780.2	100.0
PERCENTAGE	90	10.0	100.0	

III. PROJECT EXECUTION

A. Guiding Strategy

3.1 The operational architecture is based on a three-pronged strategy: (i) coordinated policy and decision making within MINSA in support of the modernization effort; (ii) integration of project activities into the modernization process at the relevant institutional levels; and (iii) conversion of modernization policies into sustainable institutional processes and practices. To this end, the project design consists of three corresponding features that build upon existing MINSA structures: (i) a policy-making and oversight body (par. 3.3); (ii) a technical team consisting MINSA and project-contracted staff to coordinate implementation (par. 3.5 - 3.8); and (iii) on-site "change agents" to facilitate execution in collaboration with MINSA line personnel (par. 3.10).

B. Organizational Structure for Program Implementation

3.2 The project executing agency will be MINSA through the Office of the Vice Minister, which will establish a Technical Secretariat (CDT) to oversee project implementation in accordance with the actions plans and operational manual previously approved by the Bank.

1. Modernization Commission (Policy Guidance)

3.3 Government will establish a Health Sector Modernization Commission (CMSS). Presided by the Health Minister, the CMSS will consist of representatives from the Ministry of Finance, Technical Secretariat of the Presidency, the Government's Coordinating Unit for Public Sector Reform (UCRESEP), INSS, the private medical sector, and health worker associations. The CMSS will be a consultative and governance body responsible for approving modernization policies as well as coordinating the modernization initiative within Government and the health sector. Other functions include: (i) monitor implementation of modernization policies, ensuring fulfillment of program objectives; (ii) coordinate external assistance supporting the modernization effort, and (iii) disseminate information on lessons learned.

2. Technical Advisory Group (Technical Coordination)

3.4 To execute the project, the loan will support existing units within MINSA's structure. Under the technical coordination of MINSA's Vice Minister, project implementation will be the responsibility of a Technical Secretariat (CDT - Consejo Directivo Tecnico) consisting of directors of MINSA Directorates relevant to project interventions (Finance, Planning, Integrated Woman, Child and Adolescent Care, Health Services and National Hospital Administration), a Project Director (DP) and six Technical Coordinators (CT), each assigned to a different project component.

The project will support the CDT through financing a minimum staff (DP and CTs) to support implementation and achievement of planned changes, and to ensure compliance with project time lines and Bank procedures. The CDT structure will enable the integration of project activities into MINSA while avoiding duplication with MINSA staff, or similarly, the creation of parallel structures within MINSA.

3.5 The CDT will have two main functions. The first involves providing technical support for the broader sector modernization program supported by MINSA, including providing information, analysis and technical guidance to the CMSS and MINSA authorities on modernization policies and implementation. The second function involves the technical coordination, financial administration and execution of project components. Through specialized committees and supported of the DP and CTs, CDT's project-oriented responsibilities include: (i) guide, coordinate and supervise all technical activities of the project; (ii) prepare annual work plans for each project component in coordination with the relevant MINSA units; (iii) prepare periodic technical reports; (iv) prepare terms of reference for training and consulting services in collaboration with relevant MINSA units; (v) ensure compliance with project time line of activities, as specified in action plans and contractual conditions established in the loan contract ; (vi) develop and maintain a technical and financial information system for program activities; (vii) prepare all documentation related to the satisfaction of contractual conditions; (viii) contract and supervise firms and individuals for the provision of goods and services; and (ix) monitor and evaluate performance and impact.

3.6 To assure clear distinctions between technical operational activities and financial administration and execution, the Borrower will establish within the CDT a small Financial Administrative Unit (UFA). 11/ Consisting of three professionals, the UFA is responsible for providing administrative and financial support to the CDT for all project activities, including the maintenance of accounting records, processing disbursements, preparing financial reports, reviewing contracts and performing related activities according to Government and Bank procedures. The UFA will make payments for activities approved by the CDT.

3.7 The CDT will be jointly supported by this project and a parallel project supported by the World Bank. To prevent costly duplication and guarantee an integrated approach for programmatic areas supported by both projects, the financing of the DP as well as three technical coordinators (e.g., hospitals and institutional modernization) will be shared. Technical coordinators overseeing activities relevant to each Bank's project will be financed separately. In sum, the CDT will consist of six technical coordinators as shown in Table 2. Three of these positions will be

---

11/ The World Bank will establish a separate unit to manage financial arrangements.

jointly financed, reflecting the joint financing of the associated project components.

TABLE 2: CDT STAFFING

Position	Source of Financing	Responsibilities
Technical Vice Minister	MINSA	Provide operational leadership for modernization program.
Project Director (1)	IDB/WB	Oversee all modernization program activities; provide policy advise to CNMSS; inform CNMSS of progress; ensure compliance with Bank procedure.
Tecnical Coordinators 12/ Hospital Management (1) MINSA modernization (1) FONMAT (1) Primary care (1) Monitoring/Evaluation (1) FSS(1) 13/	 IDB/WB IDB/WB IDB WB IDB/WB MINSA	Coordinate technical activities and prepare annual plans for the activities under their domain; ensure timely implementation of activities; provide technical assistance to MINSA units.
Financial Administration Unit 14/ Administrator (1) Finacial Specialists (2)	 IDB IDB	Provide administrative and financial support for all project activities, including the maintenance of accounting records, processing of disbursements, maintaining administrative records, contracts, and carrying out of related activities approved by technical coordinators.
Information Specialist (1)	IDB	Establish and maintain one or more databases for the storage and analysis of information about project activities.

3.8 *As a condition prior to first disbursement of the financing, the Borrower will present evidence to the Bank that it has created under the Office of the Vice Minister the CDT and UFA, and has staffed these units as agreed with the Bank.*

3. On-site Change Agents

3.9 The additional work required of line staff by the project will be supported by 15 full-time change agents who will be assigned to MINSA central units, hospitals and SILAIS that are the object of project interventions. 15/ These process facilitators will foster close interaction between line units, technical coordinators and consultants, promote the transfer of technology, enable the decentralization of technical assistance, and most importantly, advise, accompany and support line personnel responsible for implementation of project activities. They will be contracted through renewable performance-based contracts that specify annual implementation benchmarks. In an intent to align incentives between change agents and the hospitals or units to which they are

12/ Financed by MINSA, other participants in the GTA include five Directorate Chiefs (Finance, Planning, INH, Integrated Health Care, and Health Services).

13/ As per the operational regulations of the FSS (article no. 5), this CT will be appointed by MINSA and serve as the liaison between the GTA and FSS Technical Committee.

14/ Refers to IDB-financed activities only.

15/ The use of change agents does not represent an additional cost to the project. The 15 change agents were extracted from the recommended levels of effort for technical assistance to be provided by national consultants, as specified in the original designs and action plans for each project activity (see Technical Files). For example, rather than contract a large number of short-term national consultants for specific tasks (usually in coordination with or contracted by an international firm), the project team consolidated the projected level of effort for these consultancies into full-time positions.

assigned, performance indicators specified in their contractual terms will correspond to those stipulated in the performance agreements signed between the CDT and the facilities and units.

C. General Operational Guidelines

1. Action Plans

3.10 Project activities have been defined by the action plans prepared for each component, subcomponent and major activity of the project. These are available in the project files. These action plans serve as guides for project implementation and will be used for the development of annual work plans. Separate annual work plans will be prepared for each component and subcomponent of the project.

2. Operational Regulations

3.11 All functions, activities, and procedures of the CDT as well as for each of the components will follow operational regulations, drafts of which are found in the Technical Files. The final version of these regulations will be agreed upon between the Borrower and the Bank. The operational regulations will be elaborated upon to form the operational manual for the project, and may be revised as needed, subject to Bank approval. 16/

3.12 Prior to first disbursement, the Borrower will present the final version of the Operational Manual of the project, which consists of the operational regulations for each of the project components except for the second phase of the Severance Pay Fund. The Operational Manual also will describe all of the functions, activities and procedures of the CDT and UFA as well as component - specific, decision-making committees.

D. Procurement

1. General Procurement of Goods and Services

3.13 Procurement of goods and services will be done according to Bank guidelines, as set forth in Annex B of the loan contract, and will be handled by the CDT. Public international bidding will be required for the procurement of goods over US$250,000 and construction contracts over US$1.0 million. The contracting of consulting services over US$200,000 must be published in Development Business International. Guidelines and procedures pertaining to acquisitions under these amounts will be included in the loan contract. All contracting of consulting services will be done in accordance with Bank standard policies on the selection and contracting of consultants, as specified in Annex C of the Loan

---

16/ Annex A of the loan contract will specify that the Operating Manual shall incorporate the Operational Regulations for the CDT, the Medical Supply System, Severance Pay fund, FONMAT, Hospital Management and infrastructure, incentive pay scheme, Supplementary Social Fund as well as the Acquisition Procedures for Small Purchases.

Contract. Prior to contracting of all consultancy work, the DP in consultation with other CDT staff should elaborate relevant technical documentation to be submitted for Bank approval.

3.14 In addition to the standard policies mentioned in the preceding paragraph, the loan contract will provide that: (i) public international bidding will be required for not less than 90 percent for the procurement of pharmaceuticals and medical supplies (Component IV) and computer hardware and software for the integrated management information system (Component II); (ii) the procurement of consulting services for hospital management (Component Ia), MINSA restructuring and management strengthening (Component IIa), and FONMAT (Component III) will be done in accordance with Bank's procedures, applying the mechanism of Standing Offer Arrangements (SOA). SOA involves the preselection of qualified firms and prenegotiation of general terms and conditions for contracting during a specified time period. The prequalified firms will compete for specific assignments issued by the CDT.

E. Retroactive Financing

3.15 The Bank will reimburse the Borrower with resources of the financing up to US$5 million for spending on compensation packages for physicians through the Severance Pay Fund (Component IIb), contingent on the results of an assessment on compliance with the procedures stipulated in the operational regulations agreed to with the Bank.

3.16 Resources of the Bank loan will be used to reimburse, with the first loan disbursement, in expenditures incurred for project preparation financed through the Bank's Project Preparation Facility (PPF-0013-NI).

F. Disbursements

TABLE 3: Disbursement Schedule
(in US$ millions and Percent)

Component	Year 1	Year 2	Year 3	Year 4	Total	Percent
IDB	10.4	13.1	14.6	9.0	47.1	90
Government	0.6	1.1	1.4	1.8	4.9	10
TOTAL	11.0	14.2	16.0	10.8	52.0	100
Percent	21	27	31	21	100	

G. Execution of Components: Special Considerations

3.17 Operational regulations have been developed for each of the activities presented below and are available in the Technical Files. The CDT is vested with the authority regarding the assessing, selecting, processing and implementing of subprojects related to the activities described below. As specified in the

operational regulations, specialized committees consisting of CDT staff and MINSA personnel will be established to facilitate technical oversight and decision making for specific components. The Administrative-Financial Unit (UFA) is responsible for administrative and financial activities, including contract management and disbursements.

1. Hospital Management and Infrastructure Upgrading (Component I)

3.18 Disbursements for investments in equipment and infrastructure will be linked to progress related to the preparation and implementation of management reforms. Each hospital subproject will be implemented in three steps: (i) selection of "winning" hospitals and preparation of management modernization plan; (ii) implementation of "first phase" management reforms and investment plan; and (iii) implementation of "second phase" management reforms and investment plan. An assessment of progress and problems regarding the implementation of "first phase" management activities will be performed to determine eligibility for "second phase" financing of investments. The CDT will contract a firm to provide technical assistance and training related to the hospital management modernization in the selected hospitals.

3.19 Selection of participating hospitals will be based on an institutional assessment of MINSA acute hospitals located in Managua. Selection criteria include: (i) a demonstrated demand for services with a defined catchment area or within a defined referral network; (ii) acute care facility providing at least the four basic specialties; (iii) favorable labor environment; (iv) demonstrated experiences in improving management and clinical practices; and (v) willingness to accept technical assistance and to participate in audit and control activities. An evaluation of each competing hospital will result in a ranking based on a point system to select the two hospitals that will be supported by this Component. 17/

2. Severance Pay Fund (Subcomponent IIa)

3.20 The Severance Pay Fund (FRV) will be implemented in two phases. The first will involve a voluntary scheme while the second will consist of a mandatory scheme. Disbursement for the second phase will be contingent on the results of an assessment that will ascertain first-phase compliance with the procedures stipulated in the operational regulations agreed to with the Bank. The compensation formula for physicians is based on labor code-mandated severance benefits and tenure. The compensation model is specified in the operational regulations.

17/ Other qualified hospitals will remain in a pool in ranked order as possible alternates or for future extension of the program.

3.21 The selection of redundant physicians will be based on transparent and verifiable criteria related to: (i) productivity; (ii) compliance with responsibilities; (iii) level of training; and (iv) MINSA priorities regarding the configuration of the hospital network. All separated workers will receive a single lump sum payment based on the compensation formula. The rehiring of compensated workers by any public agency is not permitted during a period of seven years.

3.22 *The Bank will disburse financing to cover expenses incurred in compensating personnel separated through the Severance Pay Fund, only upon presentation by the Borrower of evidence that the separations took place in accordance with operating regulations and any modifications there to previously approved by the Bank. This provision will also apply to the amounts which may be made available for this purpose on a retroactive basis as stipulated in par. 3.16.*

3. FONMAT (Component III)

3.23 The project will partially finance the cost of a defined service package on a declining basis with the Borrower assuming full financial responsibility upon project completion. 18/ The annual work plans for each subproject will estimate the contribution from counterpart funds that will be included in the national budget. The operating manual for FONMAT will specify the process and time frame regarding the annual allocation of counterpart funds to finance the subsidy for the service package during the life of the subprojects.

3.24 Implementation of subprojects will follow the following stages: (i) promotion of FONMAT and selection of eligible providers with capacity to deliver the services to the beneficiary communities; (ii) preparation of implementation plan and corresponding subproject proposals by eligible providers; (iii) based on an assessment of implementation plans and subproject proposals, selection and contracting of providers; (iv) provision of service packages by contracted providers; and (v) supervision and monitoring of services by SILAIS. Technical assistance will be provided to key actors (e.g, CDT, providers, communities and SILAIS) at each stage of the process.

3.25 Criteria for selecting eligible providers include evidence of: (i) community acceptance; (ii) prior experience with the provision of basic health services, including health promotion; (iii) prior experience with project management and implementation oriented to community-based work; and (iv) demonstrated capacity to manage funds, personnel and materials.

18/ For each subproject, the project will finance 100 percent of the partial subsidy during the first year of operation, 75 percent in the second, 50 percent in the third and 25 percent in the fourth. Conversely, government counterpart financing will increase incrementally for each subproject.

3.26 Beneficiaries are targeted in a two-step process. First, poor municipalities have been identified through a poverty mapping exercise utilizing composite indices of unsatisfied basic needs as well as the concentration of indigenous populations. Second, within these targeted municipalities, incentives will be directed to providers to target rural areas with dispersed populations where access to care is limited.

3.27 Selection of implementation plans and subproject proposals submitted by eligible providers will be based on the following criteria: (i) community desire to participate in the subproject; (ii) identification of an eligible target population of at least 1,200 beneficiaries per year; (iii) defined geographical area; (iv) service delivery strategy and plan; and (v) organizational capacity.

4. Supplementary Social Fund (Component IV)

3.28 A Coordinating Council (CC) will oversee FSS operations and inform donors on program performance. Under the direction of a manager appointed by the President, the CC will consist of the Ministers of Health, Education and Finance and a representative of the donor community. The CC will review and approve annual work plans submitted by the executing agencies and is responsible for monitoring disbursements and implementation of programs financed by the FSS. Progress in the implementation of the FSS will be monitored through performance indicators agreed with the donors. Line social sector ministries will be responsible for program implementation. Within MINSA, the CDT will be responsible for the technical design, supervision and coordination of activities financed through the FSS in accordance with operational guidelines approved by the CC. The CDT will prepare annual work plans, requests for disbursements and expenditure and progress reports.

3.29 Resources directed to the FSS will be deposited in a special MINFIN account at the Central Bank . The executing agencies will submit disbursement requests to MINFIN based on CC-approved work plans and the estimated resource needs and time line stipulated therein. The FSS will disburse for specific budgetary expenditures related to agreed-upon programs, in accordance with standard government budgetary procedures. Subsequent disbursements (for a specific program) will be contingent upon submission of supporting documentation that prior expenditures were in accordance with programs objectives and the work plan. The purchase of goods and services will follow procedures established in donor agreements and contracts. The Office of the Comptroller General will be responsible for auditing FSS finances. External audits will be performed annually.

3.30 The agreed-upon annual work plan will guide all FSS operations and will consist of the following: (i) description of program including objectives, benchmarks, expected benefits, beneficiaries and costs; (ii) rationale and level of priority for the executing agency;

(iii) operational scheme; (iv) supervisory system; (v) performance indicators; and (vi) technical assistance needs related to program implementation that will be financed through FSS or other sources. Upon approval of the annual plan, estimated expenditures will be incorporated into in the budget of MINSA.

3.31 The project will finance two activities through the FSS: (i) incentive pay scheme; and (ii) the purchase of drugs and medical supplies. As summarized below, spending on these activities will follow processes and procedures specified in the respective operating regulations.

5. Incentive pay scheme (Subcomponent IVa)

3.32 The incentive pay scheme will be managed at two levels and is closely linked to the preparation and implementation of performance agreements. At the central level, a specialized committee within the CDT will be vested with the responsibility to: (i) develop, negotiate and approve performance agreements between MINSA/CDT and local management teams of MINSA's units (i.e., in hospitals, SILAIS, central departments, etc.); (ii) determine the level of bonuses paid to these local management teams, based on performance assessment; and (iii) provide support and oversee the implementation of performance agreements between management teams and their workers.

3.33 At the local level, each MINSA management unit (e.g., hospitals, SILAIS, large health centers, central-level administration, etc.) will constitute a Performance Committee consisting of representatives of the parties (local management and teams of health workers) participating in performance agreements. This committee will be responsible for preparing, negotiating and evaluating performance agreements and determining the level of bonus pay directed to participating worker teams, based on an assessment of performance.

3.34 Quantifiable and verifiable indicators that can be scaled and weighted will be developed and negotiated to form the basis for setting and evaluating performance objectives, and ultimately, determining the level of incentive pay. Indicators will be developed for four performance categories: organization/utilization, technical quality, patient satisfaction and coverage (primary care only). The methodology is presented in the operational regulations for this activity.

6. Medical Supply System (Subcomponent IVb)

3.35 The project will establish on a pilot basis a parallel, demand-driven supply system to serve a subset of MINSA facilities and SILAIS participating in other project activities. Through the FSS, the project will finance the purchase of drugs and supplies to be used for the pilot subprojects in these facilities and regions. The Operational Guidelines for this activity will set out criteria for

selection and appraisal of eligible providers together with procedures for budgeting, ordering, purchasing, stocking and distributing drugs and medical supplies to facilities participating in the pilots.

H. Supervision and Evaluation

1. Project Supervision

3.36 The complexity of this project will necessitate close monitoring by the Bank's technical team, requiring biannual supervisory missions throughout project implementation. These missions will review work plans, investment plans and progress in project activities while assisting the GPA find solutions to problems and bottlenecks that arise during implementation.

2. Annual Reports

3.37 To facilitate the annual reviews, during the execution of the project and prior to the annual reviews the CDT will present annual progress reports on both physical and financial advances in the execution of the current annual work plan, including status of fulfillment of contractual obligations; progress on each plan of action with impact indicators for all subcomponents; and indicators of progress as designed in the Logical Framework (See Annex II). These reports should also present a draft annual work plan for the following year. Together with the first annual report, the Borrower will present an evaluation plan for each component that includes design, methodologies, indicators and corresponding baseline data.

3. Annual Review

3.38 The Bank and the Borrower will hold annual reviews to evaluate progress in the execution of the project and to agree on the terms of the annual work plan for the following year. This review will be based upon a review of the annual reports and work plans, project performance and impact indicators by component to be specified in the loan contract, including those set out in the logical framework action plans and evaluation design. The loan contract will provide that if as a result of these reviews it is determined that adjustments are necessary to ensure the effective and timely execution of the project the Borrower will agree to adapt the necessary measures for this purpose.

4. Mid-Project Evaluation

3.39 The third annual review will include a Mid-Project Evaluation. This evaluation will involve a more in-depth assessment of the general status of progress of the project.

5. Final Evaluation

3.40 Within three months prior to the final disbursement of all project funds, the Bank will carry out a final evaluation with project resources. This evaluation will review progress and impact indicators agreed upon with the Bank, and the progress of actions toward reform.

6. External Audit

3.41 The Borrower, through the Executing Agency, will present the annual financial statements of the project certified through independent external audits acceptable to the Bank.

I. Complementary Activities to be Carried Out Prior to Initial Disbursement

3.42 A Technical Cooperation (TC-98-08-22-3) financed by the Japanese Special Fund, and in collaboration with MINSA, will support the following activities: (i) initiate start-up training and technical assistance for FONMAT; (ii) finance a limited number of change agents to prepare the way for project activities in selected MINSA units; and (iii) design and implement a promotional and social communication strategy to inform key stakeholders of the scope and content of the Government's Modernization Program supported by the project. A PPF will finance CDT staff and external technical assistance to prepare operational manuals, annual work plans, terms of reference and perform tasks related to first disbursement conditionalities.

IV. FEASIBILITY, BENEFITS AND RISKS

4.1 The proposed project will be implemented within a favorable political and policy environment, but institutional and financial feasibility remains a threat to long-term sustainability of project-supported interventions. MINSA's commitment to sector modernization is very strong, while government efforts to modernize the public sector and address pressing social needs are gaining momentum. Project investments will have direct benefits on the most vulnerable populations, particularly poor women and infants, through extending coverage of a package of cost-effective services, raising per capita spending on maternal-infant care, reducing the financial burden on poor families, increasing the availability of drugs and medical supplies in MINSA facilities and improving the quality of services provided by public hospitals.

A. Institutional Feasibility

4.2 Despite gaining experience in project implementation, weak institutional capacity continues to burden MINSA. Building upon lessons learned from execution of the Technical Cooperation, PPF and projects financed by other donors, this project seeks to establish ownership while developing capabilities within MINSA to implement project-supported activities, and ultimately, the modernization program *en toto*. 19/

4.3 Prior experience in Nicaragua has demonstrated that concentrating technical "know how" within the confines of a project implementation unit or delegating it to consulting firms compromises long-term institutional sustainability. Worse, it fosters an "us vs them" rivalry with line personnel as implementation units often become parallel ministries. The proposed organizational structure seeks to avoid this situation by eliminating the concept of a (separate) project coordination unit. This will be achieved by: (i) integrating project implementation into existing MINSA structures, and (ii) merging the tasks and responsibilities (relevant to the modernization process) of project-financed technical specialists with those of MINSA line personnel. The Health Sector Modernization Commission (CMSS) will serve as a policy body for the Government's health modernization program. Under the direction of the Vice Minister and consisting of MINSA Directorate chiefs, the CDT will be responsible for project coordination as well as providing technical guidance to the CMSS on modernization policies. Recognizing the extra work load and the need to fuse technical assistance inputs to line units and facilities, the project will finance: (i) specialists to serve as technical coordinators within the CDT, and (ii) local experts (change agents) will be placed in relevant line offices and

---

19/ The project itself contains a number of activities to strengthen management and institutional capabilities in central MINSA (Components II and IV), in the SILAIS (Component III) and in hospitals (Component I).

facilities. The latter will serve as vehicles to foster the decentralization of technical inputs and implementation responsibility to MINSA hospitals and central-level units.

B. Environmental Feasibility

4.4 The infrastructure activities of the project are limited to rehabilitation and equipping of two hospitals, and are expected to have no negative environmental impact. Hospitals receiving project financing will be required to establish training programs and systems for waste management, as set forth in the operational regulations. Given the deficient environmental situation observed in public hospitals, project action plans will support the following activities: (i) as part of an overall accreditation process, the formulation and approval of norms, policies and enforcement mechanisms to control and manage liquid and solid waste in hospitals; (ii) preparation and approval of legislation on toxic waste management in hospitals; (iii) preparation and implementation of environmental management norms governing internal waste management, personnel health and safety provisions for the operation of equipment; (iv) development and implementation of training and environmental education programs on waste management for health authorities and hospital personnel; and (v) given that municipal systems lack infrastructure for adequate treatment, rehabilitation of infrastructure and installation of equipment and systems for the "self-contained" treatment of liquid and solid wastes.

C. Financial and Economic Analysis

4.5 **Fiscal Impact of Project Interventions**. Project sustainability will depend on the ability of the Government to cover the recurrent costs resulting from project interventions. Operating costs related to personnel, maintenance, purchases of supplies, etc. will be expected to increase because of the following project-supported activities: (i) installation of a management information system; (ii) establishment of an accreditation system; (iii) upgrading of plant and equipment in two hospitals; (iv) incentive pay scheme; (v) coverage extension through FONMAT; and (vi) purchasing of medical supplies through the FSS. There are three sources of reduced costs: (i) reduction of payroll spending resulting from the application of the severance pay fund; (ii) savings from improvement in procurement and distribution of drugs and medical supplies, and (iii) efficiency gains resulting from management improvements and the reorganization of private services provided in public hospitals.

4.6 Total government health spending in 1998 is expected to reach US $67 million. Projections of project financial impact are based on the assumption that government nominal dollar health spending will increase by 25 percent in year 1 (1999) to pay for salary increases resulting from a recent strike settlement, and grow annually at 2.5

percent thereafter. The Government is also committed to raising non-personnel spending in real terms during project implementation. Savings from the project-financed Severance Pay Fund and other efficiency measures will not only offset recurrent costs generated by other project components but will also partially defray the cost of MINSA salary increases. The project does not aim to fill the financial gap created by the salary increases. The Government will have to rely on additional external transfers that will be channelled through the Social Supplementary Fund to cover this gap.

4.7 **Cost-effectiveness**. FONMAT's maternal and child health package consists of interventions with demonstrated high cost effectiveness in reducing disease burden according to international studies. Further, these interventions' estimated overall cost-effectiveness ratio of $50 per DALY gained is consistent with highly cost-effective packages developed elsewhere. 20/

D. Benefits

4.8 **Benefits to the Poor and Women.** FONMAT is targeted to 46 municipalities where over 80 percent of Nicaragua's extremely poor and nearly 80 percent of indigenous populations are concentrated. An estimated 94,000 women and 75,000 infants will be covered through this activity. The service package consists of interventions designed to address the critical health needs of women and infants, including prenatal care, maternity, post-partum services, reproductive health and infant care.

4.9 FONMAT will cover indigenous populations through funding special subprojects in the North Atlantic Autonomous Region (RAAN), targeting three municipalities which contain the majority of Mizquito and Suma populations. In these municipalities 4,500 pregnancies and 4,000 deliveries are expected annually. Currently, less than 10 percent have access to adequate maternal-infant care. The project aims to increase coverage to 40 percent.

4.10 FONMAT's average cost per beneficiary couple (pregnant woman and her infant) will be $47, of which 73 percent represents medical costs, 6 percent for transportation costs to improve access to care, and 21 percent for health promotion costs. FONMAT's beneficiaries will represent 6.0 percent of the total population of the targeted municipalities. Current annual public spending at the municipal level is estimated at US $14.50 per beneficiary couple for FONMAT interventions and $7.8 per capita for all services provided to the entire population. By year four of the project, per beneficiary (couple) spending on FONMAT interventions will increase by three-fold (from US $14.50 to $47) while total per capita spending will increase by 30 percent (US $7.8 to $10.10) per capita.

20/ Based on estimates made by the World Bank (1993) service packages with a cost of $50 per DALY saved are considered highly cost-effective.

4.11 The focus on Managua hospitals is important considering that 30 percent of the population resides in the metropolitan area, the hospitals are referral centers and attend patients from throughout the country, and public facilities are the principal providers of services to the poor. In Managua, where 53 percent of the population lives in conditions of poverty, MINSA hospitals attend to over 80 percent of the demand for inpatient services, including 87 percent of all births.

4.12 **Health Status**. The project will improve health status by reducing maternal and infant mortality by an estimated 40 percent for the direct beneficiaries of FONMAT in the targeted municipalities, resulting in over 4,200 lives saved. Using World Bank data on the burden of disease in countries with income similar to Nicaragua, it was assumed that the annual disease burden in Nicaragua is 233 DALYs lost per 1,000 population. Coverage for pre-natal care will increase from an estimated 29 to 70 percent in targeted municipalities, while coverage of infant care (under one year of age) will increase from 38 to 70 percent. Institutional births will increase from 22 to 60 percent. Coverage will evolve to over 90 percent by year 15 if Government extends the program. Under such an assumption, FONMAT would reduce the burden of disease by 20 percent in the target municipalities over this period.

4.13 **Social Welfare and Economic Relief**. The direct impact of FONMAT on household's disposable income is modest. Households currently spend relatively small sums of money on maternal and child care. In rural areas, about one-half of all women who seek help for their delivery do not pay for care, while those paying spend on average $7.40. Sixty-five percent of women seeking preventive care for their children do not pay out-of-pocket, while those who do spend on average $0.84 per visit. Thus, payments for maternal and child prevention services currently represent about 0.4 percent of annual household income (estimated at $986). FONMAT's copayment to users, set at 5 percent of total costs, would cut in half what households current spend on those services, increasing household disposable income for other health, or non-health goods and services by 0.2 percent. FONMAT's benefits cannot be judged fairly by their impact on household health spending, but rather by the health gains associated with higher coverage. Project benefits to households will exceed those from FONMAT, as the project will also subsidize the provision of drugs and medical supplies at the rural level, a benefit which will also reach the poor households.

4.14 **Efficiency**. The project will increase efficiency by: (i) introducing instruments (such as performance agreements, incentive pay and hospital payment systems) that furnish incentives to providers and managers to produce quality outputs at lower costs; (ii) applying modern management tools (financial, administrative and clinical) in public hospitals and reducing average length of stay and unnecessary hospitalizations; (iii) reducing leakage, waste and losses due to product expiration, inappropriate use and

inadequate storage and distribution in hospital drug and medical supply systems; (iv) allocating resources to high impact and cost-effective interventions targeted to poor and hard-to-access populations; (v) improving hospital capacity to utilize and maintain infrastructure and equipment efficiently and putting idle complementary services into use; and (vi) decreasing payroll expenditures by streamlining the number and mix of health workers.

4.15 **Quality**. Quality will be enhanced through: (i) establishing an accreditation process that applies minimum quality standards to health care providers; (ii) introducing incentives to providers that reward quality and patient satisfaction (e.g., incentive pay scheme, performance agreements, FONMAT); (iii) establishing protocols to guide the provision of maternal-infant services; (iv) upgrading support services in hospitals; (v) and introducing integrated case management, therapeutic protocols and other quality assurance initiatives in hospitals.

E. Risks

4.16 Risks and risk reduction measures are presented in Table 4.

TABLE 4: Risks and Risk Reduction Measures

RISK	RISK REDUCTION MEASURE
Weak institutional capacity and high turnover of staff	This risk will be mitigated by the integration of project coordination and technical assistance into the line units of MINSA which are responsible for implementation. Recent staff salary increases together with the application of the Severance Pay Fund (Component II) and Incentive Pay Scheme (Component IV) will also alleviate this risk.
Declining budgetary allocations	Financial sustainability will continue to be a risk in the long-term. It will be mitigated through: (i) the application of the severance pay fund, (ii) efficiency improvements in MINSA financial management, hospital management and drug procurement and distribution, (iii) incremental assumption of financial responsibility for project activities with strong recurrent cost implications (FONMAT, accreditation); and (iv) the generation of additional revenues through the reorganization of private services in hospitals.
Failure to implement hospital management interventions and autonomous governance structures	The operational regulations condition the financing of investments in infrastructure and equipment to the implementation of management activities. Also recent MINSA policy initiatives seek to: (i) decentralize management through delegation of resource use to hospitals and SILAIS, and (ii) "democratize" governance through the creation of directing boards in these same entities.
Opposition from organized health workers	The risk will be mitigated by maintaining the active participation of physician groups in the development and implementation of Modernization Program and by implementing targeted social communication campaigns. The collective agreement resulting from a recent physician strike settlement resulted in physicians' pledge of support for the program.

LOGICAL FRAMEWORK - SUPPORT FOR MINSA HOSPITAL MODERNIZATION

Summary	Indicators	Means of Verification	Assumptions
Goal: to contribute to improving the health status of the Nicaraguan population.	1. 40% drop in infant mortality rates in the project's target population in four years (72,000 infants, 4,200 lives saved) 2. 40% drop in maternal mortality rates in the project's target population in four years (94,000 pregnancies to term)	- Register of vital statistics - Information system developed under the project - Household survey - Project evaluation	- Consensus is achieved on the objectives and institutional structure of the health sector through the modernization program - The government remains committed to the social development strategy and the fight against poverty - The external variables affecting health remain the same or do not deteriorate (sanitation, water, education for girls, etc.)
Purpose: 1. Strengthen MINSA's efficiency and institutional capacity to formulate and implement policies, manage programs, and provide services	1. Existence of an explicit and public government policy framework on the health sector and the role of health institutions 2. New regulatory framework that defines the hospital network and the public authorities in charge of supervision and accreditation 3. Functional reorganization of MINSA with regard to decentralized management of hospitals 4. Reallocation of public spending on health 5. Demand subsidies to finance a cost-effective package of child and maternal services for low-income communities.	- National health plan - User surveys - Project reports - Information system developed under the project - Public policy paper	- The national authorities and Congress adopt new legislation on health care and hospitals

Summary	Indicators	Means of Verification	Assumptions
2. Improve the quality of health and medical care delivery and user satisfaction	1. Number and type of providers receiving public funds has increased 2. At least 50% of users notice a change for the better in the delivery of services supported by the project 3. Provider accreditation systems in place in four years 4. Protocols in place for treatments in highest demand in four years 5. 50% drop in the rate of hospital infection by year 4 6. At least 75% of the media that mold public opinion perceive a clear consistency between words and deeds promoted by MINSA leadership	– User surveys – Project reports – Project's information system – Hospital and regional files – Accreditation systems – Project evaluation	– The distribution of public spending is realigned pursuant to priorities established by the government for the health sector
3. Equitably expand coverage of health care service delivery with special attention to maternal and infant health	1. Rate of institutional births increases from 22% to 60% in four years among the beneficiary population (and from 8% to 43% among the beneficiary indigenous groups). 2. In target population, coverage for proper prenatal care increases from 29% to 70% in four years. 3. In target population, coverage of infant care (under one year of age) increases from 22% to 70% in four years.	– Register of vital statistics – Project monitoring reports – Project evaluation	– A Modernization Commission and Technical Secretariat (CDT) are set up – The counterpart staff is willing and able to execute the project

Summary	Indicators	Means of Verification	Assumptions
1. HOSPITAL MANAGEMENT MODERNIZATION AND IMPROVED CAPACITY 1A. Management modernization and autonomy: 12 interventions to improve management, organization, and service delivery at pilot hospitals 1B. Infrastructure and equipment: improve the capacity of the pilot hospitals to provide treatment	1.1 Performance agreement signed in year 1 1.2 Hospital management modernization plans in place in year 2 1.3 Investment plans in place in year 4 1.4 Self-management at pilot hospitals in years 3 and 4 1.5 Waste management program and maintenance plan in place in year 4 1.6 Financial management system established in year 3 1.7 Quality assurance program in place in year 2 1.8 400 nurses trained in patient management 1.9 New management structures established in year 2 1.10 Quality standards in place in year 3 1.11 Internal regulations approved for the different services in year 2 1.12 Package of different services approved in year 2 1.13 Internal supplies inventory and distribution system in place	- CDT reports - Hospital accreditation system - Annual audit of hospitals - Each hospital's modernization and investment plans	- The legal status of autonomous hospitals is approved - The labor climate is favorable

Summary	Indicators	Means of Verification	Assumptions
2.INSTITUTIONAL DEVELOPMENT OF MINSA TO SUPPORT HOSPITAL OPERATIONS 2A. Institutional development of MINSA 2A.1 Role of the Intendencia Nacional de Hospitales [National Hospital Administration] (INH) defined and its capacity strengthened	2.1 Framework of performance agreement established in year 1 2.2 Performance agreements signed with five hospitals in year 2 2.3 Structure, organization, and operation of MINSA agencies in support of hospitals defined 2.4 New MINSA-hospital circuits in place in year 3 2.5 Managua hospital network reorganized and package of services approved in year 3	– Semiannual project reports – New INH organization chart – Semiannual reports – Semiannual project reports – Evaluation of financial information system – Evaluation of pilot – Annual audit – Hospital reports – CDT's semiannual reports – Evidence of system evaluation	
2A.2 Integrated financial management system established at the central level; alternative hospital payment system in place	2.6 New budget structure approved in year 1 2.7 Comprehensive financial management system established and in place at MINSA in year 2 2.8 Adjusted bed day rate determined in year 2 2.9 New hospital payment system in place in year 2 2.10 Financial function separated from medical service delivery function in year 3	– Approval of laws and regulations	
2A.3 Comprehensive information system in operation at pilot hospitals and MINSA/INH.	2.11 Production module in place in year 1 2.12 Financial resources module in place in year 2 2.13 Supplies module in place in year 3 2.14 Cost and billing module designed and in place in year 4		
2A.4 Drafting of new policies aimed at new institutional roles and public/private relations defined and implemented, new hospital legal and regulatory framework developed, and accreditation policies and procedures strengthened	2.15 Autonomous hospital's regulatory framework in place in year 1 2.16 Accreditation policies drafted and system operating in year 3 2.17 New laws, regulatory framework, and regulations on hospitals approved Social communication program and		

Summary	Indicators	Means of Verification	Assumptions
2A.5 Strategic communication in place	2.18 Social communication program and strategy designed in year 1 2.19 Multimedia campaign in place in year 2		
2B. Severance Pay Fund; implementation of fund on a voluntary basis	2.20 960 physicians will be separated and compensated 2.21 administrative staff will be separated and compensated 2.22 MINSA payroll expenditures will be reduced by ___%.	- Evaluation of settlement reports	
3. FUND FOR SAFE MOTHERHOOD AND CHILDHOOD (FONMAT): expanded coverage with a package of maternal and child services for communities with limited or no access to health care services in 46 high-risk, extremely poor municipalities with a high concentration of indigenous people.	3.1 Promotion program implemented in year 1 3.2 Five subprojects selected in year 1 3.3 13 subprojects under way in year 2 3.4 20 subprojects financed and under way for 94,000 women and 72,000 children in four years 3.5 Subproject monitoring and supervision system established in year 1 3.6 Counterpart resource allocation system established in year 1 3.7 15 public and five private providers strengthened 3.8 Five SILAIS (of eight with municipalities with a high incidence of extreme poverty) strengthened to provide supervision at the end of four years 3.9 20 local committees in operation at the end of four years	- Annual Fund audit - CDT reports - FONMAT evaluation reports - Monitoring system data	- Counterpart resources are available

Summary	Indicators	Means of Verification	Assumptions
4. SUPPLEMENTARY SOCIAL FUND: support for priority MINSA programs and increased per capita spending on health care	4.1 Resource allocation system in place in year 1	MINFIN decree	Progress has been made in the public sector modernization program
1. Performance-based incentive pay established in eight SILAIS and five hospitals	4.4 Performance indicators identified and approved in year 1 4.5 Performance evaluation methodology and allocation of incentive pay approved in year 1 4.6 ___ performance agreements signed between management teams and teams of workers in year 2 4.7 ___ health care teams consisting of workers receiving performance-based incentive pay in four years	Annual audit of system	
2. Support for MINSA's supply system. Supply system that optimizes use of medicines operating efficiently; improved availability of drugs and medical supplies at _SILAIS and two hospitals	4.8 Basic list [cuadro básico] and therapeutic protocols distributed – year 1 4.9 Decentralization of budget to local providers implemented in year 3 4.10 Standards and respective quality control system implemented in year 3 4.11 System of therapeutic protocols established in year 2 4.12 Accreditation, clearance, and product registration system implemented in year 3 4.13 Rapid procurement system in place in year 3	– CDT semiannual reports – Field visits (pilot)	

PROCUREMENT PLAN
Support for MINSA Hospital Modernization (NI-0024)

Prinicipal Program Procurement	Financing	Method (thousands US$)	Prequal-ification	Approximate Publication Date in AEA
A. Procurement of Works				
New Construction US$ 1,848,200	90% IDB	ICB greater than $1,500 LCB from $50 to $1,490 LS less than $49	Yes Yes No	Fourth quarter of 1999
Rehabilitation US$ 5,327,000	90% IDB	ICB greater than $1,500 LCB from $50 to $1,490 LS less than $49	Yes Yes No	Fourth quarter of 1999
B. Procurement of Goods				
Non-Medical Equipment US$ 1,594,000	100% IDB	ICB greater than $250 LCB between $50 to $249 LS less than $49	Yes No No	Second quarter of 2000
Medical Equipment US$ 4,041,000	100% IDB	ICB greater than $250 LCB between $50 to $249 LS less than $49	Yes Yes No	Second quarter of 2000
Computer Equipment US$ 1,766,200	100% IDB	ICB greater than $50 LS less than $49	Yes No	Second quarter of 2000
Vehicles US$ 393,700	100% IDB	ICB greater than $250 LCB between $50 to $249 LS less than $49	Yes No No	Second quarter of 1999
Pharmaceuticals US$ 6,103,400	100% IDB	ICB greater than $50 LS les than $49	Yes No	Second quarter of 1999
C. Procurement of Services				
Training US$ 2,710,400	100% IDB	LCB greater than $50 LS between $25-49 FA less than $24	No No No	N/A
Printing and Promotional Campaigns US$ 917,800	100% IDB	LCB greater than $50 LS less than $49	No No	N/A
Consultancies (Firm) US$6,370,800	100% IDB	Special Offer Arrangement	Yes	First quarter of 1999
Consultancies (Individuals) US$ 3,451,400 No contract over US$ 100,000	77% IDB	LCB greater than $50 LS less than $49	No No	N/A

FA - Force Account
ICB - International Competitive Bidding
LCB - Local Competitive Bidding
LS - Local Shopping

CORRESPONDENCE BETWEEN HEALTH SECTOR PROBLEMS, PROJECT STRATEGIES AND PROJECT COMPONENTS

Health Sector ıs and Symptoms	**System Strengths and Resources**	**Project Strategies and Objectives**	**Project Compon Subcomponents and Activities**
inefficiency d hospital network enance and dilapidated cal quality	o Extensive facility network o Political will to revamp hospital management	Support the transformation of hospital management by introducing modern governance, organization, management and clinical structures and processes. Upgrade equipment and infrastructure, linking these investments to management reform.	Component 1: Hospital Manag Modernization and Infrastructu
policy formation and esponsibilities ountability standards ormation isallocation and weak agement uman resource and supply	o Recognition of need to restructure MINSA and reduce payroll o Recognition of need to reconfigure hospital network o Integrated information system is already designed o Part of budget is already decentralized	Link resource allocation with performance by introducing alternative hospital payment system and performance "contracts." Reduce the number of redundant workers by implementing voluntary severance pay scheme. Strengthen MINSA's role as leader by restructuring central-level units, creating financial management unit, organizing accreditation process and implementing integrated information management.	Component I: Strengthening He Capacity to Support Hospital O - Restructuring and manageme strengthening - Financial management and a hospital payment systems - Legal and regulatory framew - Social communication strateg - Severance pay fund
access and coverage of of financing	o Active donor community o Government priority to target poor populations with limited access o Successful experiences with community involvement in health programs	Improve access, efficiency, and quality of services to underserved populations by introducing the purchasing of a package of basic services from public and private providers that is targeted to these populations and incorporates a results-oriented payment system	Component 3/4: Fund for Safe M and Childhood
of Financing countability aterial Management	o Active donor community o Recognition of need to raise remuneration levels	Improve quality , efficiency and user satisfaction of MINSA services through linking worker remuneration to performance Improve supply of drugs and medical supplies through supporting the purchase of these items and by establishing a transparent, interated and efficient procurement and distribution system	Component 4: Support for the S Social Fund - Incentive pay scheme - Modernization of medical supp

CUADRO DE COSTOS PARA EL SISTEMA CONTABLE Y DESEMBOLSOS
(En US$)

CATEGORIAS	BID	GON	TOTAL
1. Consultores/capacitación	10,075.5	1,620.9	11,696.4
2. Infraestructura, equipo médico y otros equipos/materiales.	14,223.5	971.2	15,194.7
2.1 Infraestructura	6,433.6	803.4	7,237.0
2.2 Equipo médico	4,498.7	0.0	4,498.7
2.3 Otros equipos/materiales	3,291.2	167.8	3,459.0
3. Indemnizaciones	9,033.2	0.0	9,033.2
4. Paquetes de servicios y promoción de salud	3,056.3	899.3	3,955.6
5. Fondo Social Suplementario	9,167.0	0.0	9,167.0
6. Reembolso del PPF	427.0	0.0	427.0
7. Administración y Costos Recurrentes	1,115.3	1,460	2,575.3
7.1 Administración	489.3	0.0	489.3
7.2 Costos recurrentes	626.0	1,460.0	2,086.0
8. Costos financieros	1,464.0	267.0	1,731.0
8.1 Inspección	488.0	0.0	488.0
8.2 Interés	976.0	0.0	976.0
8.3 Comisión de crédito	0.0	267.0	267.0
TOTAL	48,561.8	5,218.4	53,780.2

RG-II-NI125P-1
NI-0024
Original: English

PROPOSED RESOLUTION

NICARAGUA. LOAN ___/SF-NI TO THE REPUBLICA DE NICARAGUA
(Support for MINSA Hospital Modernization)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the República de Nicaragua, as Borrower, for the purpose of granting it a financing to cooperate in the execution of the support for Ministry of Health -MINSA- hospital modernization. Such financing will be for the amount of up to US$48,600,000, or its equivalent in other currencies, except that of Nicaragua, which are part of the resources of the Bank's Fund for Special Operations, and will be subject to the "Terms and Financial Conditions" and the "Special Contractual Conditions" of the Executive Summary of the Loan Proposal.