

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

MEXICO

HEALTH SERVICES UPGRADING PROGRAM

(ME0159)

LOAN PROPOSAL

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Datos Socioeconómicos Básicos de México

1. Datos Generales

Población Total (miles de habitantes, 1985)	76.850,0
Extensión Territorial (miles de Km2.)	1.958,2
Habitantes por Km2 (1985)	39,2
Tasa de Crecimiento Demográfico (1977-85)	2,7
Producto Interno Bruto por Habitante, 1984 (US\$ 1982)	2.086,1
Mortalidad General por Mil Habitantes (1980-85)	7,1
Mortalidad Infantil por Mil Nacidos Vivos (1980-85)	53,0
Porcentaje de Alfabetismo (1985)	87,9
Nivel de Bajos Ingresos (diciembre 1985), pesos	216.322,0
Tasa de Cambio Controlado (promedio anual 1985) pesos por dólar	256,9
Tipo de Cambio Libre (diciembre 1985) pesos por dólar	371,5

Tenencia de la Tierra y Producción (1970)

	<u>Moderna</u>	<u>Tradicional</u>	<u>Subsistencia</u>	<u>Total</u>
Número de Explotaciones (miles)	200,1	1.140,0	1.479,0	2.815,9
Ejidos	120,3	676,2	1.062,3	1.858,9
Privado	81,2	463,8	412,1	947,1
Por ciento del Total	7,4	40,1	52,5	100,0
Total de Tierra Dedicada al Cultivo (miles de hectáreas) <u>a/</u>	6.650,0	15.960,0	1.835,0	24.445,0

<u>Población Económicamente Activa</u> <u>Por Sectores (1983)</u>	<u>En Miles</u>	<u>Porcentaje</u>
Agricultura	5.244,7	26,8
Minería y petróleo	266,5	1,4
Manufactura	2.309,7	11,8
Construcción	1.420,8	7,3
Electricidad	65,8	0,3

<u>Tasa de Desocupación Abierta (%)</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
Area Metropolitana de:					
Ciudad de México	3,9	4,0	6,0	5,8	5,1
Guadalajara	5,8	5,0	6,1	6,1	3,8
Monterrey	4,2	4,9	9,8	7,5	5,6

a/ Incluye algunas tierras de pastizales y bosques.

Producto Interno Bruto	Composición (%)					Tasa Real de Crecimiento An			
	1981	1982	1983	1984	1985 a/	1981	1982	1983	1984
PIB (a precios de mercado) b/	100,0	100,0	100,0	100,0	100,0	7,9	-0,5	-5,3	3,7
<u>Por Gasto</u>									
Inversión Bruta	30,0	21,5	17,1	17,6	18,7	13,9	-28,7	-24,9	7,5
Consumo	76,9	78,3	77,1	76,6	77,6	7,8	1,2	-1,1	-2,8
Exportaciones	8,9	10,2	12,1	12,9	12,0	6,2	13,7	11,5	10,5
Importaciones	15,9	10,1	6,2	7,2	8,4	120,3	-37,1	-41,7	19,7
<u>Por Origen a/</u>									
Agropecuario	8,8	8,8	9,6	9,5	9,4	6,1	-0,6	2,9	2,5
Minería	3,5	3,8	3,9	3,8	3,8	15,3	9,2	-2,7	1,8
Manufactura	24,7	24,1	23,6	23,8	24,6	7,0	-2,9	-7,3	4,8
Electricidad	1,5	1,6	1,7	1,8	1,8	8,4	6,6	0,7	7,4
Construcción	5,7	5,5	4,7	4,7	4,7	11,8	-5,0	-18,0	3,4
Comercio	25,8	25,5	24,2	24,0	23,8	8,5	-1,9	-10,0	3,0
Comunicaciones y Transportes	7,7	7,4	7,5	7,6	7,7	10,7	-3,8	-4,8	6,4
Servicios Financieros	8,1	8,4	9,0	9,0	9,0	3,8	3,0	1,7	2,7
Gobierno	3,3	3,5	3,8	3,8	3,7	9,1	4,4	3,0	5,3
Otros Servicios	10,8	11,3	11,9	11,8	11,5	7,2	4,4	-0,5	2,6

Preliminar.

Elaborado con datos del "Sistema de Cuentas Nacionales de México". Secretaría de Programación y Presupuesto. Cifras originales a precios

3. <u>Comercio Exterior (millones de US\$)</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985 a/</u>
<u>Exportaciones de Bienes (FOB)</u>	19.420	21.230	22.312	24.196	21.866
<u>Sector Agrícola</u>	1.481	1.233	1.189	1.461	1.323
<u>Sector Manufacturero</u>	2.688	3.018	4.583	5.595	5.267
<u>Sector Petrolero</u>	14.573	16.477	16.017	16.601	14.767
Petróleo crudo	13.305	15.623	14.793	14.968	13.309
<u>Otros Sectores</u>	678	502	524	539	509
<u>Importaciones de Bienes (FOB)</u>	23.927	14.437	8.551	11.254	13.460
Bienes de consumo	2.813	1.517	614	848	1.075
Bienes intermedios	13.541	8.418	5.740	7.833	9.162
Bienes de capital	7.575	4.503	2.197	2.573	3.223
4. <u>Balanza de Pagos (millones de US\$)</u>					
<u>Cuenta Corriente</u>	-12.544	-6.221	5.324	4.238	541
Balanza comercial	-4.510	6.793	13.761	12.942	8.406
Servicios no factoriales	-775	-851	621	950	446
Servicios factoriales	-7.545	-12.459	-9.360	-10.064	-8.540
Transferencias netas	286	296	302	411	452
<u>Cuenta de Capital</u>	21.929	6.754	1.106	39	-1.276
Préstamos netos	20.775	7.914	7.867	3.609	1.675
Inversión directa	1.189	1.657	461	391	491
Otros	-35	-2.817	-7.222	-3.961	-3.442
<u>Cambios de Reservas (- aumento)</u>	-1.012	4.738	-3.301	-3.201	2.329
<u>Errores y Omisiones</u>	-8.373	-5.271	-917	-924	-1.688

a/ Preliminar.

Fuente: Banco de México, Informe Anual. Secretaría de Programación y Presupuesto, Boletín Mensual.

5. <u>Finanzas Públicas</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985 a/</u>
	(En porcentajes del PIB)				
<u>Gobierno Federal</u>					
Ingresos Corrientes	15,9	16,3	18,6	17,3	16,9
Gastos Corrientes	16,2	23,7	22,9	21,4	20,8
Ahorro en Cuenta Corriente	-0,3	-7,4	-4,3	-4,1	-3,9
Ingresos de Capital	0,0	0,0	0,0	0,0	0,0
Gasto de Capital	6,5	5,0	4,0	3,3	3,8
Déficit Total	6,8	12,4	8,3	7,4	7,7
 <u>Sector Público Consolidado</u>					
Ingresos Totales Presupuestales	26,0	30,2	34,4	34,2	32,2
Egresos Totales Presupuestales	38,3	44,8	42,0	41,5	40,5
Déficit Económico	12,3	14,6	7,6	7,3	8,3
Intermediación Financiera	2,4	2,9	1,3	1,4	1,6
Déficit Financiero del Sector Público	14,7	17,5	8,9	8,7	9,9

a/ Preliminar.

Fuente: Secretaría de Hacienda y Crédito Público y Secretaría de Programación y Presupuesto:
Información sobre Gasto Público 1969-78 y Boletín Mensual de Información Económica.

Rev.23-V-86

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	
6. <u>Sistema Bancario Consolidado</u> (Saldos a fin de año. Variación %)					
Oferta Monetaria (Ml)	32,8	62,1	41,2	63,1	
Quasi Dinero (M4) <u>b/</u>	n.d.	69,9	59,9	66,8	
Crédito Interno Total <u>c/</u>	n.d.	134,0	53,9	44,4	
7. <u>Precios (Variación %)</u>					
Deflactor del PIB	27,1	61,2	92,1	66,0	
Consumidor					
Promedio Anual	28,7	58,9	101,9	65,5	
Fin de Año	28,7	98,9	80,8	59,2	
8. <u>Deuda Externa (Millones de US\$)</u>	77.916	85.830	93.697	97.307	9
<u>Largo Plazo</u>	52.923	59.462	82.298	87.507	8
Pública	42.723	51.362	67.498	69.007	7
Privada	10.200	8.100	14.800	18.500	1
<u>Corto Plazo</u>	24.993	26.147	10.139	7.440	
<u>Créditos con FMI</u>	-	221	1.260	2.360	

a/ Preliminar.

b/ Incluye moneda y billetes, depósitos a la vista en moneda nacional y extranjera, instrumentos de ahorro y otros pasivos financieros.

c/ Incluye financiamiento total en moneda nacional e intermediación financiera en moneda extranjera a los sectores públicos y privado no bancario.

n.d. No disponible.

Fuente: Banco de México. Informe Anual e Indicadores Económicos.

9. <u>Servicios de la Deuda Externa</u> (Millones de US\$)	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985 a/</u>
Intereses	8.429	12.203	10.198	11.716	9.917
Amortizaciones	5.968	6.263	8.308	8.270	-
Intereses como Porcentaje de las Exportaciones de Bienes	29,0	46,7	37,5	38,9	35,9

10. <u>Préstamos del BID</u> (Autorizados 1961-1985)	<u>Millones de US\$</u>	<u>Porcentaje del Total</u>
<u>Por Fondos</u>		
<u>Total</u>	3.787	100,0
Capital Ordinario	1.550	40,9
Capital Interregional	1.638	43,3
Fondo para Operaciones Especiales	562	14,8
Fondo en Administración	37	1,0
<u>Por Sector (%)</u>		
Sectores Productivos		
Agricultura y Pesca	1.826	48,2
Industria y Minería	645	17,0
Turismo	216	5,7
Infraestructura Física		
Energía	-	-
Transporte y Comunicaciones	354	9,3
Infraestructura Social		
Salud Pública y Ambiental	360	9,5
Educación y Ciencia y Tecnología	135	3,6
Desarrollo Urbano	91	2,4
Otros		
Financiamiento Exportaciones	73	1,9
Preinversión	88	2,3
Otros	-	-

a/ Preliminar.

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MEXICO

LOAN PROPOSAL

HEALTH SERVICES UPGRADING PROGRAM

(ME - 0159)

I. BASIC INFORMATION ON THE OPERATION

A. Borrower

1.01 Nacional Financiera, S.N.C. (NAFIN).

B. Guarantor

1.02 United Mexican States.

C. Executing Agency

1.03 Ministry of Health (Secretaría de Salud, SSA).

D. Objectives and Description of the Program

1.04 The objectives of the program are: (a) to expand health service coverage, with special emphasis on primary care, so as to reach populations that now have no access to such services; (b) to strengthen and expand the network of secondary facilities in localities where there is a severe shortage of hospital beds for low-income population; (c) to help bring about an improvement in the operating capacity of the health services of SSA and the states; and (d) to assist in the process of decentralizing health services. The program includes the construction and outfitting of primary health care facilities (health centers) and secondary facilities (60-bed and 120-bed hospitals). It includes, as well, a component for development of operating capacity comprising evaluative research, human resource training, development of supervision and evaluation, and promotion of community participation.

E. Total Cost and Financing

1.05 The total cost of the program is estimated as the equivalent of US\$76.3 million, for the financing of which a loan is proposed for US\$30 million in foreign currency from the interregional capital of the Bank, and a loan for US\$11.3 million in local currency from the Fund for Special Operations. The local counterpart would be equivalent to US\$35 million.

F. Terms and Conditions of the Loans

- 1.06 The principal terms and conditions of the proposed loans would be as follows:

	<u>IC loan</u>	<u>FSO loan</u>
Rate of interest:	variable	3% per annum
Credit fee:	1.25% on undisbursed balances	-
Inspection and supervision:	1% of the financing	1% of the financing
Amortization period:	20 years, including a 4-1/2 year grace period	25 years, including a 4-1/2 year grace period
Disbursement period:	4 years	4 years

II. FRAME OF REFERENCE

A. Normative Framework of the National Health System

- 2.01 The Political Constitution of the United Mexican States establishes the right of every Mexican citizen to health protection. This high national priority is reflected in the 1983-88 National Development Plan, the General Health Act of 1984, and the 1984-88 National Health Program.

1. 1983-88 National Development Plan

- 2.02 The 1983-88 National Development Plan defines the priorities, objectives and strategies for the economic and social development of Mexico during that six-year period. The plan, insofar as the health sector is concerned, establishes the following general priorities: (a) to promote national health service coverage; (b) to raise the level of health of the population, particularly that of the rural and marginal urban sectors and of the most vulnerable groups; (c) to contribute to a rate of demographic growth in harmony with the economic and social development of the country; and (d) to promote the well-being of the low-income population, especially minors, the elderly, and the disabled.

2. The General Health Act

- 2.03 The General Health Act, which entered into force on July 1, 1984, sets out the basic precepts of the national health system. This system is composed of federal and state government agencies and dependent units and of individuals or legal entities of the public and private sector that deliver health services, under the coordination of the Ministry of Health (SSA). The General Health Act seeks to rationalize the use of available resources, expand the coverage of services and render their basic quality uniform.

- 2.04 In addition to establishing the guidelines and modalities of access to health services, the act encourages the decentralization of services by delegating jurisdiction between the federal government and state governments on the basis of decentralization agreements. By March 30, 1986 decentralization agreements had been signed between the federal government and 12 states.

3. 1984-88 National Health Program

- 2.05 In its capacity as coordinator of the national health system, the SSA in 1984 drew up a medium-term sectoral program known as the 1984-88 National Health Program (Programa Nacional de Salud 1984-88, PNS). The PNS places special stress on primary care. It considers 1.36 outpatient visits per year per capita of open population as a goal to be achieved by the year 2000 (the figure is currently 0.57). At the secondary level, the goal is 3.0 inpatient discharges per 100 inhabitants (presently 1.6).
- 2.06 The PNS analysis describes the characteristics and fundamental problems confronting the health services in the areas of medical care, public health and welfare, among which the following factors are identified: (a) inadequate health services and their unequal distribution, especially in dispersed population clusters; (b) priority on treatment rather than preventive medicine; (c) operating inefficiencies that lower the quality of services; and (d) a limited and inadequate infrastructure for epidemiological and sanitary surveillance activities.
- 2.07 Based on the preceding diagnosis, the PNS sets out six objectives as a future guide for public administration action in the health field: (a) to provide medical care to the entire population and improve its basic quality; (b) to lower the incidence of communicable diseases and to contain noncommunicable diseases and accidents; (c) to promote public health by diminishing the incidence of the factors that place it in jeopardy and by encouraging self-care; (d) to assist in the improvement of sanitary and environmental conditions; (e) to support the decline in fertility rates, with full respect for the decision and dignity of the parents; and (f) to contribute to the well-being of the population by providing welfare assistance to the most vulnerable groups.

B. Health Coverage

1. Types of institutions and populations served

- 2.08 There are three types of institutions for the delivery of health services to the entire population of the country: (1) private institutions; (2) institutions run by the social security system; and (3) public institutions that deliver care to the open population, which has no formal employment ties and is therefore not covered by social security.

- 2.09 Private medicine offers services to some 3.7 million inhabitants (roughly 5% of the national population).
- 2.10 The social security institutions include the Mexican Social Security Institute (Instituto Mexicano de Seguridad Social, IMSS) and the Institute of Security and Social Services for State Workers (Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado, ISSSTE). IMSS is subsidized by the federal government and has contributions from its beneficiaries and private enterprise. ISSSTE has a federal subsidy and contributions from public employees.
- 2.11 The social security system covers nearly 34.3 million persons (44% of the total population) composed of workers and their households, 27 million of which are covered by IMSS (36% of the total), 6 million are under the ISSSTE (8% of the total) and 1.3 million fall under other federal public institutions such as PEMEX, MARINA, and others.
- 2.12 The public institutions providing health care to the open population, estimated at some 40 million inhabitants, include SSA and the IMSS-COPLAMAR program.
- 2.13 The IMSS-COPLAMAR program, known as the Program of Social Solidarity through Community Participation, provides medical services to the low-income population in rural marginal areas. This program is run by IMSS, but with federal budget funds. The IMSS-COPLAMAR program covers about 14.5% of the population (11 million inhabitants) who have no protection under the social security system.
- 2.14 The SSA institutions provide care to some 13 million inhabitants and include the medical services of the Department of the Federal District. The SSA institutions are described below.
- 2.15 It is estimated that some 14 million Mexicans in the open population have no effective access to institutional health services. The proposed program would be devoted to narrowing the percentage of the open population that has no adequate medical care, in accordance with the National Health Program of the Mexican government.

2. SSA open population prototype

- 2.16 The open population prototype used by SSA establishes three levels of care: first level (primary, ambulatory care), second level (general hospitalization) and third level (specialized hospital care).
- 2.17 The first level ranges from the activities of volunteer promoters, the operation of rural health centers and auxiliary health units, to the rural health centers for dispersed population (CSRDC), the health centers for concentrated population (CSRC), and the urban health centers (CSU). The architectural design of the health centers is based on a modular structure referred to by number of outpatient offices.

- 2.18 The following are the functions of a rural health center: general medical outpatient services, emergency care, epidemiological surveillance, immunizations, mother-child care and family planning, environmental health, health education and community organization. The rural centers are also supposed to train volunteer promoters in the localities for which they are responsible.
- 2.19 The rural health centers for concentrated population also have dental care.
- 2.20 The urban health centers have the same functions, with greater emphasis placed on prenatal and postnatal care, first aid, laboratory analysis and X-ray examinations.
- 2.21 The second level consists in 30-bed to 180-bed general hospitals. For economic and functional reasons, there are now only 60-bed and 120-bed hospitals. These hospitals have functions that range from preventive care, treatment, rehabilitation, human resource training and development, and research. The secondary level hospitals provide treatment including the four basic services of general surgery, gynecology and obstetrics, internal medicine, and pediatrics. They have a clinical laboratory, X-ray, electrocardiograph and other facilities, as well as emergency services. The 120-bed hospitals also have supplementary services in dermatology, ophthalmology, orthopedics, eye-ear-nose and throat and stomatology services, as well as pathological anatomy services.
- 2.22 At the third level are national institutes and specialized hospitals run by SSA. These include the national institutes of oncology, cardiology, respiratory diseases, neurology and neurosurgery, nutrition, pediatrics and perinatology, all of which have structural and program links with SSA.

3. Physical resources of the public health sector

- 2.23 There are approximately 57,467 hospital beds throughout Mexico, or an average of 0.7 per thousand inhabitants. The country also has a total of some 28,211 ambulatory outpatient facilities, where there are an average 0.57 outpatient visits per capita per year. These figures are indicative of a severe deficiency of beds and outpatient facilities and of the respective coverage. The following table compares the supply of beds and ambulatory services in Mexico with other Group A countries, the United States and Canada.

Physical Resources in Mexico and Other
Countries - 1984

	<u>ME</u>	<u>AR</u>	<u>BR</u>	<u>VE</u>	<u>US</u>	<u>CANADA</u>	<u>PAHO Targets</u>
Beds per thousand inhabitants	0.7	5.4	4.3	2.7	5.7	16.2	4.5 <u>c/</u>
Outpatient visits per capita	0.57	6.2	1.5 <u>b/</u>	1.8	n.a.	5.5	2.0 <u>d/</u>
Hospital discharges per capita	1.6	6.6 <u>a/</u>	11.0 <u>b/</u>	5.5	16.7	16.1	10.0 <u>d/</u>

a/ Only the metropolitan area.

b/ Not including the private sector.

c/ PAHO. Punta del Este Meeting, 1971.

d/ PAHO. Ten-year Plan for the Americas, 1979/1980.

Source: PAHO/WHO, Annual Report of the Director, 1984, and 1984-88 National Health Plan of Mexico.

- 2.24 These indicators of outpatient visits, hospital beds, and inpatient discharges in Mexico depict the urgent need to strengthen the health services infrastructure of the country through the construction and outfitting of additional health facilities, as proposed in the present document.

4. Public health sector human resources

- 2.25 The public sector has roughly 54,000 physicians and 76,000 nurses (between university and non-university graduates). Of these, 70% work in the social security systems and the remaining 30% in open population systems. The latter systems should cover a higher percentage of the population (over 50% of the total). These figures are subject to adjustment because of the large number of people who work in more than one institution.
- 2.26 In Mexico there are 56 medical schools, 47 dental schools and 15 nursing schools, which turn out around 8,000 physicians, 5,000 dentists and 10,000 nurses per annum. This is an acceptable supply of professional personnel, according to the recommendations of international health organizations.

III. THE PROGRAM, ITS COST AND FINANCING

A. Objectives

- 3.01 The proposed program is targeted to the principal overall objective of the National Health Plan to provide health care services to the entire population, with special emphasis on primary care, and to improve the basic quality of health care services. For this, it would be necessary to expand the coverage in order to reach the open population now without access to health care facilities, in accordance with the SSA open population prototype.
- 3.02 The specific objectives of the proposed program are as follows:
- a. To expand the health service infrastructure, with special emphasis on primary care in order to reach populations that now lack such services;
 - b. To strengthen and expand the network of secondary establishments in localities where there is a severe deficiency of hospital beds for low-income population;
 - c. To contribute to the improvement of the operating capacity of the health services of SSA and the states; and
 - d. To assist in the process of decentralizing health services.

B. Description

- 3.03 In order to accomplish the objectives described above, a global multiple works program is proposed, which would include the construction and outfitting of approximately:

Primary level:

- 220 rural health centers for dispersed population (CSRD);
- 60 rural health centers for concentrated population (CSRC);
- 60 health centers for urban population (CSU);

Secondary level:

- 60-bed and 120-bed hospitals, with a total of 720 beds.

- 3.04 In addition, the proposed program would include an advisory and research component for development of the operating capacity of present services and the additional services to be included in the program, with emphasis on the state and local levels.

1. Health facility construction and outfitting component

a) Types of health facilities and equipment to be financed

- 3.05 The rural health centers for dispersed population (CSRD) will be in localities with over 1,000 but less than 2,500 inhabitants. A building 108 m² in area will be constructed following a prototype design for the program's works. The buildings will have a medical outpatient office, a treatment and immunization room, observation room, waiting room, general services area, and physician's residence. The staff will be comprised of a general physician or intern performing social service and one nursing auxiliary selected in the community and with special course and in-service training.
- 3.06 The health centers for rural concentrated population (CSRC) will be in localities with over 2,500 but less than 15,000 inhabitants. The buildings will be from 121 to 175 m² in area and will be based on one of three prototypes, depending on the population to be covered. They will have from one to three outpatient offices, and the rest of the facility will be essentially similar to the CSRD, plus a dental office. The facilities will be staffed by one to three physicians, one to three nursing auxiliaries, one to three health promoters, one dental intern and an administrative assistant.
- 3.07 The urban health centers (CSU) will be in localities with more than 15,000 inhabitants. The buildings will be from 121 to 591 m² in area and will be based on one of six prototypes. There will be from one to six outpatient offices, a dental office, a clinical laboratory, space for immunizations and treatment, storage room, pharmacy, administrative area, waiting room and rest rooms. Depending on the infrastructure of the catchment area, they may have in some cases a laboratory and X-ray room. Each prototype structure will be staffed by a physician, a nursing auxiliary, a promoter, and a dentist or dental intern. The laboratory and X-ray facilities will be operated by technicians. The supervisory and support staff will be keyed to the size of the center.
- 3.08 In terms of hospitals, the program is expected to include ten 60-bed general hospitals and one 120-bed hospital, although it might be deemed advisable during the course of program execution to modify these proportions. The 60-bed hospitals will be in localities with from 20,000 to 50,000 inhabitants. The building will measure 4,270 m². There will be emergency, outpatient, medical, dental and hospitalization services for pediatrics, gynecology and obstetrics, internal medicine and general surgery, as well as laboratory, radiology, pharmacy and other support and logistical services. They will have a staff of roughly 168 employees (30 professionals, 82 technicians and auxiliaries, and 56 administrative personnel).

- 3.09 The 120-bed hospital will be in a locality with 50,000 to 100,000 inhabitants and will measure 7,052 m² in area. The infrastructure will be the same as was described for the 60-bed hospitals, but with double the capacity. The hospital will be staffed by roughly 336 employees, 54 of which will be professionals, 168 technicians and auxiliaries, and 114 administrative personnel.
- 3.10 SSA has drawn up detailed lists of materials, equipment and medicines for each of the units described above. The breakdown of equipment and supplies for each functional area of the facilities to be built is defined in a manual that was prepared by the Directorate of Norms on Infrastructure and Medical Equipment (Dirección de Normas de Infraestructura y Equipamiento Médico) of SSA. The norms contained in the manual are believed to be adequate.

b) Selection criteria

- 3.11 The selection criteria that will be used in determining the location of the buildings to be constructed with proceeds of the program are given in Appendix IV of this proposal (Description of the Program, Annex A to the loan contracts). As noted in those criteria, consideration has been given to the geographical size and population in the site of the newly created unit, the number of inhabitants in its catchment area, as well as the degree of geographical dispersion of the population within that area. In addition, consideration is given to the normal travel time of the population in general and the existence of means of communication and roads associated with travel isochrones keyed to local conditions.

c) Representative sample

- 3.12 In order to apply the selection criteria to the present situation and preselect the universe of localities eligible for inclusion in the program, SSA organized a seminar workshop in 1985 with all the coordinators of health services in the 31 Mexican states. At that time a national map was prepared indicating i) existing health services and ii) localities with open population not covered by health services either because of lack of access to the health installations or because the present level of care is inadequate, together with specifications of population size and density and travel time and distance in kilometers between the settlements in a given area and the present health establishments.
- 3.13 The mapping exercise provided the key elements for the determination of the unattended needs in the country. Based on the results of this exercise, a universe of first-level (primary care) and second-level (hospitalization) health units was defined, which would be scaled and located in accordance with the objective of optimizing their cost efficiency. This mapping process is described in detail in chapter VI of the project report.

- 3.14 From the universe described in the preceding paragraph, a representative sample of primary and secondary units was defined which a) comply with the selection criteria described earlier; b) have sites in advanced stage of procurement or donation and final designs and engineering plans ready so that bidding on the construction can begin once the prospective program is approved; and c) allow for uninterrupted implementation of the program.
- 3.15 The sample includes 61 CSRD, 35 CSRC and 42 CSU units, plus five 60-bed hospitals, all of which represents approximately 42% of the direct cost of the program. In addition, each modular version of the centers is represented in the sample. Hence, the sample was used in designing and scaling the program.
- 3.16 The states where the health units of the proposed program would be located, according to the representative sample, are Puebla, Hidalgo, Mexico, Morelos, Guerrero, Guanajuato, Jalisco, Tabasco, Oaxaca, Chiapas and Quintana Roo.

2. Component for development of operating capacity

- 3.17 The proposed program includes a key component for the improvement of the operating capacity of SSA and the state agencies that will be in charge of administering the health services under the decentralization currently in process. The activities in this component were designed to address directly the institutional weaknesses identified in the National Health Plan (see paragraph 4.07) and supplement present-day SSA programs to upgrade its services. This component will also take advantage of the experience acquired in the IMSS-COPLAMAR program targeted to the same open population as the proposed program. Appendix III-11 of the project report contains the tentative terms of reference of the personnel in charge of this component.
- 3.18 The following will be the programming areas of this component:
- a) Evaluative research of health services and demand
- 3.19 This component will contribute to a better understanding of actual health conditions through more reliable diagnosis of the social and epidemiological characteristics of demand and the characteristics of the health services. Research will be conducted in selected states. Each state scheme will involve a pilot study using a sample of community centers where services are provided and where new ones will be installed.
- 3.20 For this activity the services of the following experts are expected to be required: (i) two international advisers who are experts in health research, for 13 months each; (ii) two domestic advisers who are specialists in the same area, for 42 months each; (iii) four

senior researchers, 42 months each; (iv) 8 research assistants, 42 months each; (v) 12 individuals to conduct surveys and codify the data, 24 months each; (vi) one administrator, for two months; and (vii) a secretary and a driver. A minicomputer, typewriters and two pick-up trucks will also be required.

b) Training of human resources

- 3.21 This component will contribute to improvement of the expertise of health personnel at all levels; operating criteria will be unified, and attitudes and skills formed so that the personnel can provide adequate care to the population. The training will cover several categories of professional, technical and administrative staff. About 5,000 individuals in primary care and 5,000 in secondary care are expected to be trained.
- 3.22 Training will be given in state and local procedures and operations. The trainees will be classified into two types: (i) professionals and technicians, under the responsibility of the Directorate General of Education (Dirección General de Enseñanza) of SSA, and (ii) administrative trainees, under the responsibility of the office of the head clerk of SSA. The training centers for primary care technicians will be located in a prototype center of the respective state, and those for secondary level trainees in a prototype hospital. The training centers for administrative personnel will be located in the state headquarters offices.
- 3.23 In order to carry out the training, the need is foreseen to engage: (i) two international advisers, training experts, for six months each; (ii) four domestic advisers skilled in the same area, for six months each; and (iii) 24 training technicians, for a total of 385 man/months.

c) Supervision and evaluation

- 3.24 Procedures for supervision and evaluation conducive to suitable operation of health services are expected to be designed and implemented as part of this component. The basic strategy will be to form state teams coordinated by the state health offices, who will tour all the areas. The state systems will be advised by experts in the area of supervision and evaluation. The evaluation will be conducted periodically and will have a flow chart available along with ex ante and ex post studies.
- 3.25 The following services will be contracted for this activity: (i) two international advisers who are experts in the supervision and evaluation of health services, for a total of 32 man/months; (ii) two domestic advisers skilled in the same area, for a total of 56 man/months; and (iii) six technicians in supervision and evaluation, 42 months each.

d) Promotion of community participation

- 3.26 This component entails a process of health education aimed at the active and concerned participation of the people in the activities of the SSA system and in individual, household and collective self-care. The cultural traits of the populations in the state selected will be studied and suitable procedures applied in selected centers. The basic strategies will be activities for direct schooling of the population, training of school children and the family unit, and information and guidance for the population using promotional means and the mass media. Municipal committees will be established on health and environmental improvement, as well as promotional groups working as accessories to the committees. Municipal representatives and the promoters in the area will participate.
- 3.27 For the realization of this activity, the following services will be contracted: (i) one international adviser for 12 months; (ii) two domestic advisers for a total of 20 man/months; (iii) 12 technicians for 42 months each. Twelve vehicles will also be purchased outfitted with sound, motion picture, television, video cassette and power plant equipment, as well as motion pictures, video cassettes and recordings.

C. Total Cost and Plan of Financing of the Program

1. Total cost of the program

- 3.28 The total cost of the proposed program is the equivalent of US\$76.3 million (rate of exchange Mex\$350 = US\$1), in accordance with the cost table presented below:

Total Cost and Financing Plan
(in thousands of US\$)

	IDB			Local con- tribution	Total	%
	Foreign currency	Local Currency	Total			
1. <u>Engineering and administration</u>	-	-	-	3,260	3,260	4.3
2. <u>Direct costs</u>	24,935	10,433	35,368	25,153	60,521	79.3
(a) Construction	14,534	7,178	21,712	13,388	35,100	
(b) Equipment	10,401	3,255	13,656	11,765	25,421	
3. <u>Concurrent costs</u>	-	-	-	5,767 a/	5,767	7.6
(a) Sites	-	-	-	3,167	3,167	
(b) Development of operating capacity	-	-	-	2,600	2,600	
4. <u>Finance charges</u>	5,065	867	5,932	820	6,752	8.8
(a) Interest	4,765	754	5,519		5,519	
(b) Credit fee				820 b/	820	
(c) Inspection and supervision	300	113	413	-	413	
TOTAL	30,000	11,300	41,300	35,000	76,300	100.0
Percent	39.3	14.8	54.1	45.9	100.0	

a/ See paragraph 3.33.

b/ Payable in dollars.

3.29 The total cost of the buildings is based on the designs drawn up by SSA and on similar construction done by IMSS in recent years. Construction represents 46% of the total cost of the program, including escalation and contingencies.

3.30 The cost of outfitting the centers, based on recent acquisitions for similar establishments, is US\$25,421,000, including a 10% contingency allowance and escalation calculated in accordance with the technical norms of the Bank.

3.31 The finance charges include interest that can be capitalized during the period of execution (4 years), the credit fee and IDB inspection and supervision.

- 3.32 As noted in the preceding table, the category of engineering and administration accounts for 4.3% of the total cost of the program, which is deemed reasonable for this type of program.
- 3.33 In addition to the investments indicated in the cost table, there will be incremental operating and maintenance costs during the period of execution of the program estimated as the equivalent of US\$22 million. As part of the decentralization process of health services to the states, these resources would be derived, on the one hand, from the budgetary allotments authorized for SSA and the states by the Ministry of Programming and Budget (Secretaría de Programación y Presupuesto, SPP) and, on the other, from funds to be contributed by the states themselves, as stipulated in the decentralization agreements signed by the federal government and the states. As a reflection of the high priority assigned to the expansion of health service coverage for the open population in the 1983-88 National Development Plan and in the National Health Program, the Mexican authorities at national and state level have pledged to provide the resources necessary for operation and maintenance once each of the facilities in the program is brought on stream. Based on the estimates made, the conclusion is drawn that these incremental costs, once all the health units in the program are operating at full capacity, will total roughly the equivalent of US\$18.8 million per annum, an amount which, for the reasons indicated, is believed will be available on a timely basis (see Chapter VI, Financial Viability of the Program).

2. Proposed IDB financing

- 3.34 The IDB financing in foreign currency would amount to US\$30 million, or 39.3% of the total cost of the program. This percentage is slightly lower than the upper limit established for social infrastructure programs in a Group A country. The Bank would also contribute the equivalent of US\$11.3 million in local currency. The proceeds from the Bank would be employed to finance: (a) roughly 56% of the construction and equipment costs; (b) interest during the period of construction; (c) IDB inspection and supervision.
- 3.35 The proceeds of the Bank loan in foreign currency would be derived from the IC, with a variable interest rate and a 20-year amortization period. The first amortization installment would be payable six months from the scheduled date for disbursement in full. The proceeds of the IDB loan in local currency would be derived from the FSO, with a 3% interest rate and a 25-year amortization period. The first amortization installment of the FSO loan would also be payable six months from the scheduled date for disbursement in full.
- 3.36 The use of FSO resources is considered justified based on the expected distribution of the program's benefits to low-income groups (see paragraph 6.10).

3. Local contribution

- 3.37 The local contribution, equivalent to US\$35 million, would be derived from national budget funds specifically allocated by the Ministry of Programming and Budget (SPP) as the national counterpart to the program and from contributions of the state governments in the form of sites for the works to be carried out in their respective jurisdictions. SPP would also allocate funds to cover the operating and maintenance costs of the facilities once they are built and outfitted through the yearly budget of SSA. These funds are not included in the total cost of the program. The local contributions would be used to finance: (a) the entire category of engineering and administration; (b) a portion of the direct cost of construction and outfitting; (c) the entire cost of the sites; (d) the credit fee.
- 3.38 The local counterpart funds would also cover the entire cost of the Development of Operating Capacity component, with the exception of the international consulting services, which would be funded by PAHO from parallel financing provided by the UNDP. The cost of the services of these international consultants is estimated as US\$330,000.

IV. THE BORROWER AND EXECUTING AGENCY

A. The Borrower

- 4.01 The IDB borrower would be Nacional Financiera, Sociedad Nacional de Crédito, Institución de Banca de Desarrollo (NAFIN), in its capacity as financial agent of the federal government.
- 4.02 The proposed loans would be covered by the joint and several guarantee of the United Mexican States.

B. The Executing Agency

- 4.03 General responsibility for implementation of the program would rest with the Ministry of Health, through the General Directorate of Planning and Budget of the Office of the Assistant Secretary for Planning. A description of the functions of the executing unit is given in Chapter V.

1. The Ministry of Health (SSA)

a) Responsibilities and functions

- 4.04 Article 39 of the Organic Law of Federal Public Administration sets out the responsibilities and functions of the SSA: (a) to create and administer health care, public assistance and social therapy anywhere in Mexico; (b) to administer the assets and funds allocated by the federal government to public assistance services; (c) to organize and

administer general health services throughout the republic; (d) to monitor and inspect the preparation and distribution of foodstuffs and beverages; and (e) to provide the services under its jurisdiction, either directly or in coordination with the governments of the states and the Federal District.

b) Organization and personnel

- 4.05 The senior officer of SSA is the Secretary, who establishes and directs the policy of the ministry in keeping with lines of action defined by the federal government. The ministry has two director generals (for mass communication and legal affairs), three assistant secretaries (for planning, sanitary regulation, and health development and services), as well as a head clerk (Oficialía Mayor) and internal comptroller.
- 4.06 As of October 1985, SSA had a total staff of 100,546, broken down as follows: executive staff (2,474); medical staff (12,770); technical staff (10,508), nursing staff (25,382), and administrative staff (49,412).

c) Institutional capacity

(i) Operating capacity

4.07

(*) (2) health research, which has been conducted without reference to a general framework marking priority areas; (3) poor intrasectoral coordination, in view of which it is estimated that there is duplication in about 500 localities between SSA units and those of the IMSS-COPLAMAR program in terms of their catchment areas; (4) an infrastructure which is inadequate for providing training for health personnel and coordination with health service needs; (5) the inadequacy of health education programs, which stands in the way of participation by the population in promotional and health protection activities; (6) inadequate infrastructure for the distribution and conservation of inputs at national level; (7) inadequate infrastructure for epidemiological surveillance, together with poor application of present-day norms; and (8) preventive medicine which falls short of the required levels and thus influences the demand for medical care for illnesses and risks that could feasibly be avoided or diminished through preventive action.

- 4.08 The existing data (1984) on the delivery of services by primary and secondary units depicts the low productivity of the SSA network, largely associated with the insufficient operating capacity of those units.

(*) At the request of the borrowing country, the information contained in paragraph 4.07 will not be disclosed. The non-disclosure of this information is in accordance with the country-specific information exception in paragraph 4.1 i of the Bank's Access to Information Policy, document GN-1831-28.

- 4.09 There are extensive legal, policy-programming and normative guidelines for the operation of the SSA health system, as well as priorities established in accordance with epidemiological criteria, along with programming details of activities, goals, and indicators to measure the accomplishment of the goals, by level of care and type of service. Even so, satisfactory operating conditions do not exist for these instruments to be used effectively in order to raise the productivity of the system.
- 4.10 In view of the prevailing situation, Development of Operating Capacity has been included as a key component in the proposed program. It includes four programming areas to reinforce the operating capacity of SSA and the states in charge of implementation of the program and the operation of the country's public health services. The activities in this component are targeted directly to the inefficiencies identified.

(ii) Capacity for supervision of works

4.11

(*) IMSS, which on a number of occasions has implemented projects for SSA, has charged an average of 5% of the direct cost of construction to cover its design, engineering and supervisory expenses. Since the health units will be built in a number of states in Mexico, the decision on what institution or enterprise would supervise construction should be made before the invitation to bid is issued, pursuant to Recommendation A.1, Appendix III.

V. EXECUTION OF THE PROGRAM

A. The Executing Agency and Mechanism for Transfer of Resources

- 5.01 The Ministry of Health (SSA) will act as executing agency of the proposed program. NAFIN, S.N.C., the borrower and financial agent of the federal government, will take delivery of the proceeds of the financing, which, together with the counterpart funds, will be transferred to SSA through budgetary channels.

B. Executing Unit

- 5.02 For execution of the program, SSA has designated the General Directorate of Planning and Budget of the Office of the Assistant Secretary for Planning as executing unit of the program. Hiring of the additional staff needed for the executing unit will be staggered in keeping with a timetable submitted to the Bank, which is considered adequate to cover the operating needs of program execution.

(*) At the request of the borrowing country, the information contained in paragraph 4.11 will not be disclosed. The non-disclosure of this information is in accordance with the country-specific information exception in paragraph 4.1 i of the Bank's Access to Information Policy, document GN-1831-28.

The staff will be hired on a full-time basis. The executing unit will also receive assistance and support from other SSA operating and administrative units.

1. Organization and functions of the executing unit

5.03 The executing unit will have the following structure and functions:

- Management: direct, coordinate and supervise the financial, administrative, institutional and technical activities of the program;
- Finance and Administration: monitor compliance with the conditions of the loan contract; carry out the program budgeting and accounting; process disbursements; draft financial reports; maintain the purchasing, personnel, files, security, and other subsystems;
- Construction and Outfitting: prepare and conduct tendering, evaluate the agency contracted for supervision of construction and the contractors, supervise and inspect construction and installation of equipment;
- Analysis and Evaluation: draft the progress reports of the program; design and operate the statistical systems for the various reporting needs of the program; and follow up and monitor the advancement of the program;
- Development of Operating Capacity: coordinate this component, including the research, training, supervision and evaluation, and community participation activities.

C. Implementation of the Health Facility Construction and Outfitting Component

1. Periods of execution

5.04 The health facility construction and outfitting component would be implemented in four years counting from the effective date of the prospective loan contracts. The term for physical initiation of works will expire 2-1/2 years from the effective date of the loan contracts in the case of the 60-bed and 120-bed hospitals, and three years from the effective date of the loan contracts for the other types of health facilities to be included in the program. Finally, the disbursement period will expire four years from the effective date of the loan contract.

5.05 The three-year period for physical initiation of the health centers is considered justified because the period of construction is relatively short in comparison to the total period for execution of

the program. The period of construction and outfitting ranges from six months in the case of the CSRD, CSRC and single prototype CSU centers, up to 11 months for the CSU using six prototypes. Conversely, it is estimated that the hospitals will be built and equipped within a 16- to 18-month period, based on which the contractual term of 2-1/2 years for this type of construction is recommended.

2. Designs for the program

- 5.06 The basic designs for each category of construction have been worked up by the Project Directorate (Dirección de Proyectos) of SSA on the basis of modular designs. These designs are considered adequate for the program.

3. Tendering procedure

- 5.07 The construction in the program will be done on the basis of tendering conducted in accordance with the procedure agreed upon by the Bank and Mexico.

4. Timetable of execution

- 5.08 The following table indicates the approximate number of units in the program that would be completed each year during the period of execution:

Units to be completed

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Total</u>
<u>Dispersed Rural Health Centers (CSRD):</u>	<u>63</u>	<u>64</u>	<u>60</u>	<u>33</u>	<u>220</u>
<u>Concentrated Rural Health Centers (CSRC):</u>	<u>18</u>	<u>24</u>	<u>15</u>	<u>3</u>	<u>60</u>
1 prototype	10	15	8	-	33
2 prototypes	8	6	7	3	24
3 prototypes	-	2	-	-	2
4 prototypes	-	1	-	-	1
<u>Urban Health Centers (CSO):</u>	<u>9</u>	<u>23</u>	<u>24</u>	<u>4</u>	<u>60</u>
1 prototype	5	5	-	-	10
2 prototypes	3	5	8	-	16
3 prototypes	1	2	-	1	4
4 prototypes	-	3	3	1	7
5 Prototypes	-	5	7	-	12
6 prototypes	-	3	6	2	11
<u>60-bed hospitals</u>	<u>-</u>	<u>4</u>	<u>4</u>	<u>2</u>	<u>10</u>
<u>120-bed hospital</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>1</u>

5. Human resources

- 5.09 It is believed that the following human resources would have to be assigned for the proper functioning of the health units included in this component:

<u>Type of personnel</u>	<u>Primary level</u>	<u>Secondary level</u>
Professional	700	354
Technical and auxiliary	600	988
Administrative	<u>1,721</u>	<u>674</u>
Total	3,021 =====	2,016 =====

- 5.10 This personnel will be assigned to the respective health units as they are brought on stream during the course of program execution.

6. Transportation

- 5.11 The rural health delivery units should be visited periodically by a team of regional supervisors, composed of a physician, a health promotor, and a maintenance technician. The means of transport required for this effort will be supplied by each state, with financial assistance from the SSA budget not included in the program. Both the ambulances and other general service vehicles will be administered by the states on a regional basis. The regions will be organized by the Secretary of Health of each state, in keeping with its individual characteristics.

7. Maintenance

- 5.12 Maintenance of the facilities built with the proceeds of the program in states that have already signed decentralization agreements with the federal government will be carried out by the respective state in accordance with the stipulations of those agreements. In the case of facilities built in states that have not yet signed decentralization agreements with the federal government, SSA will take charge of maintenance.
- 5.13 To ensure that the program's buildings and equipment are maintained properly, SSA must undertake to submit, within the first quarter of each year, beginning in 1988 and for seven years thereafter (i) a yearly plan for the operation and maintenance of the works and equipment of the program, and (ii) a report on the upkeep and maintenance of the works and equipment for the preceding year, pursuant to that plan.

D. Implementation of the Component on Development of Operating Capacity

- 5.14 The various activities foreseen in this component (research, training, supervision and evaluation, and community participation) will directly address the operating deficiencies identified in the National Health Program. Through the evaluative research on services and demand, new expertise will be generated and problems and needs identified that must be considered in the services. The training given to medical and administrative personnel working in the health system will make them more capable and help improve the basic quality of the services delivered. In turn, the development of plans for supervision and evaluation will lead to experience being acquired that will be reflected in the care given the open population. Lastly, the health promotion effort with the target population will lead to greater interest on the part of the communities in supporting and participating in the work of the health centers and hospitals in the program.
- 5.15 The activities in the four programming areas will be carried out in three phases: (1) infrastructure strengthening phase; (2) application and consolidation phase; and (3) integration phase.

- 5.16 The first one will be a preoperative, diagnostic phase essentially of a programming and normative nature. It will last approximately six months. The second phase will involve the execution of the outpatient facilities and applying the expertise acquired both to the new units and to the permanent network. This phase will last approximately three years. The third phase will involve total integration of the technology developed. This phase will be realized on a continuing basis by the organized services of SSA and the states following the period of execution of the proposed program.

E. Timetable of Investments

- 5.17 A summary of the tentative timetable of investments is given below with an indication of the amounts corresponding to the proceeds from the Bank financing and the local counterpart.

Tentative Timetable of Investments
(US\$ thousands or equivalent)

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Total</u>
Bank					
IC	8,163	7,020	10,050	4,767	30,000
FSO	3,375	4,580	2,373	972	11,300
Total	11,538	11,600	12,423	5,739	41,300
Local contribution	12,250	12,102	8,100	2,548	35,000
Total	23,788	23,702	20,523	8,287	76,300
	=====	=====	=====	=====	=====
%	31.2%	31.1%	26.9%	10.8%	100%

F. Availability of Suppliers and Contractors

- 5.18 According to IDB policies and the bidding procedures agreed upon by the Bank and the borrower, the construction work and supply of materials will be subject to international tendering, which will allow for the participation of suppliers from the member countries of the Bank. Mexico, nevertheless, has construction firms with features that place them in a position to undertake the type of construction foreseen in the program.
- 5.19 With respect to the supply of materials, domestic industry produces structural steel, cement, ceramics and all the materials needed for the buildings to be put up in the proposed program. Furthermore, Mexico is believed to have sufficient entrepreneurial capacity to fulfill the needs entailed in the construction work.

G. IDB Inspection and Supervision

- 5.20 Inspection and supervision of the program by the Bank will be in charge of the IDB Field Office in Mexico.

H. Advance of Funds

- 5.21 As a measure aimed at expediting implementation of the program, it is recommended that an advance of funds chargeable to the proceeds of the prospective loans be granted, in a maximum amount equivalent to 10% of each loan.

I. External Audit

- 5.22 In keeping with current practice in Mexico, the yearly financial statements of NAFIN during the life of the loan, commencing in the fiscal year in which program execution begins, should be submitted to the Bank together with an opinion issued by a firm of independent public accountants acceptable to the Bank. Yearly financial statements of the program during its course of execution shall be submitted to the Bank certified by the competent ministry of the guarantor.

J. Ex post Evaluation

- 5.23 In order to determine to what extent the objectives of the program have been achieved, SSA shall gather the yearly baseline information indicated in Appendix IV of this proposal and submit it to the Bank until such time as it conducts the ex post evaluation of the program no later than three years from the date established for the final disbursement.

VI. JUSTIFICATION OF THE PROGRAM

A. Technical Viability

- 6.01 The proposed program meets one of the basic objectives of the National Health Plan, i.e., to deliver health care services to the entire population of the country, with special emphasis on primary care. There is a population of roughly 14 million people in low-income, more backward socioeconomic groups that have no easy access to health care services. The proposed program will provide coverage for nearly 20% of that population through the construction, outfitting and bringing on stream of roughly 220 CSRD, 60 CSRC, 60 CSU, ten 60-bed hospitals and one 120-bed hospital. This does not meet the full demand for health care, particularly secondary care, but will represent a major step forward. In light of this, it has been estimated that the ambulatory patient goal for program services will reach 0.9 outpatient visits per capita per year projected to the year 2000.

- 6.02 No problems are foreseen in the supply of additional medical staff, in light of the large number of graduates each year and because of the requirement for medical students to perform social service prior to graduation by working in rural areas or small city facilities for one year.

B. Institutional Viability

- 6.03 SSA has the physical and human resources needed for the planning, construction, start-up and operation of the services included in the program, with the exception of supervision of construction, which will be contracted out to one or more specialized entities. Likewise, it is believed that the executing unit of the program, as designed, will have the operating and technical capacity to implement the proposed program appropriately. Nevertheless, the operating and technical capacity of SSA and of the health services of the states requires strengthening for effective operation of the health facilities for which they are responsible and in order to increase the productivity of health services, both existing services and the new ones to be included in the proposed program. To this end, a component for Development of Operating Capacity has been included in the program, which comprises training human resources, evaluative research on health services, enhancement of supervision and evaluation, and promotion of community participation.

C. Financial Viability

- 6.04 The impact of the program in terms of funding necessary to cover the local counterpart on a timely basis and the incremental expenses for operation and maintenance of the health care establishments in the program, was examined on the basis of a projection of national resource needs.
- 6.05 The average yearly counterpart during execution of the program, equivalent to US\$8.75 million, represents 1.6% of the total expenditures of SSA in 1985 (equivalent US\$541.2 million).
- 6.06 Current incremental costs stemming from the proposed program once the establishments begin full operation will require the equivalent of US\$18.8 million per annum in local contributions. In relation to the 1985 national budget for current expenditures, these contributions mean additional allocations of approximately 0.3% and represent an increase of roughly 4% in the budget for current expenditures allotted to SSA for health services. Given the high level of priority and commitment granted to the expansion of health services by the Mexican Government, and bearing in mind that the resources needed to cover operating and maintenance costs represent relatively small amounts, it is considered that the resources needed to cover these costs of the health units will be available on a timely basis.

D. Economic Viability

- 6.07 Demand for the program is based on the extensive study by Coordination General del Plan Nacional de Zonas Deprimidas y Grupos Marginados (COPLAMAR-1982), the National Mapping Exercise (SSA-1985), and the health care longitudinal survey initiated in 1985 by SSA-Dirección General de Epidemiología. Priorities and location criteria are established on a nation-wide basis (excluding Metropolitan Mexico City) for an essentially rural based population (población abierta) currently without access to care but within cost-effective reach. This population totals an estimated 6.4 million people. The presently dimensioned program, however, will serve in this first stage only 11 Mexican states and a target population of approximately 2.8 million.
- 6.08 Based on an analysis of 15 prototype health care facilities, there is reasonable evidence that the program can deliver low-cost, efficient services to ambulatory rural disperse and concentrated populations, ambulatory "urban" populations in peripheral areas, and catchment populations of predominantly rural economy based hospitals. Both capital and recurrent inputs appear cost-effectively designed. The present value of economic unit costs for level I care--health centers--ranges from US\$2.11 to 4.54 per consultation, or about 40% less than the best alternative without the program. Unit costs for level II--ten hospitals of 60 beds and one of 120-beds--range US\$73.90-78.71 per discharged patient (about \$16 per patient-day), an estimated 30% less than the "without program" alternative. The present value of potential savings with the program are estimated at US\$27 million.
- 6.09 In order to improve health service outcomes, that is, the impact on health status and socioeconomic well-being of the beneficiary population, a "software" package of institutional strengthening ("Desarrollo de la Capacidad Operativa") has been included in the program. It will include evaluative research, training of human resources, supervision and evaluation, and community participation.
- 6.10 The low-income impact may be seen in that approximately 81% of the economic value of primary level facilities would be allocated to a like proportion of low-income beneficiaries. At the secondary level, with reference to direct beneficiaries only, about 75% of the value of these establishments would benefit low income population. On a weighted basis, that is, the proportion of the value of total facilities utilized by low-income beneficiaries, the distributive effect is estimated at 78%.

E. Legal Viability

- 6.11 No obstacles of a legal nature are foreseen for the approval and implementation of the program. NAFIN, in its capacity as financial agent of the federal government, has the legal authority to act as

the IDB borrower. The loan contracts, as is customary, will be guaranteed by the United Mexican States. Lastly, the Ministry of Health (SSA), in its capacity as coordinator of the national health system, has the legal authority to carry out this program.

VII. RECOMMENDATION

7.01 For the reasons explained above, the proposed program is believed to be feasible from the technical, economic, financial, institutional and legal standpoints. Approval of the loan is therefore recommended and the following normative documents are submitted to the Board of Executive Directors for consideration:

- Proposed resolution, IC loan
- Proposed resolution, FSO loan
- Recommendations
- Description of the Program (Annex A to the loan contracts)

PROPOSED RESOLUTION 1/

MEXICO. LOAN /IC-ME TO NACIONAL FINANCIERA, S.N.C.
(Health Services Upgrading Program)

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 Nacional Financiera, S.N.C., of México, as borrower, and the Estados Unidos Mexicanos, as guarantor, for the purpose of granting the former a loan to cooperate in the execution of a Health Services Upgrading Program (hereinafter referred to as the "Program"). This financing shall be subject substantially to the following conditions:

1. Amount and Currencies: Up to US\$30,000,000, or the equivalent in other currencies, which are part of the inter-regional capital resources of the Bank, to pay for goods and services acquired through international competition in the member countries of the Bank and for such other purposes as may be specified in the loan contract. Payments of amortization and interest shall be made in the currency or currencies specified by the Bank, in a quantity equivalent to the corresponding amount owed, calculated in units of account in terms of dollars of the United States of America, in accordance with provisions to be included in the loan contract.
2. Source of Funds: The inter-regional capital resources of the Bank.
3. Guarantee: Joint and several guarantee of the Estados Unidos Mexicanos.
4. Credit Fee: 1-1/4% per annum on the undisbursed portion of the financing, commencing to accrue 60 days after the date of the contract and payable in dollars of the United States of America on the same dates as the interest.

1/ The provisions contained in this Appendix I and in the following Appendices II, III and IV will only be final when the Board of Executive Directors has approved the loan proposal.

5. Amortization: The borrower shall amortize the loan in a period of 20 years from the date of the contract by means of semi-annual, consecutive, and, insofar as possible, equal installments. The first installment shall be paid six months after the date scheduled for the last disbursement of the financing. The Bank may credit the amortization installments proportionally to the outstanding balance of each of the portions of the loan which accrue different rates of interest.
6. Interest: The borrower shall pay interest semi-annually on the outstanding balances of the loan. The first payment shall be made six months after the date of the loan contract. During the disbursement period, the Bank: (a) shall determine the rate of interest to be applied as of the first day of each January and for the life of the loan to any amount disbursed during the ensuing year; and (b) may modify the interest rate, in accordance with the policy of the Bank, to be applied to disbursements of the loan made during the second half of the year. At the request of the borrower, resources of the financing may be used to pay interest during the period of disbursement thereof.
7. Physical Initiation and Disbursement: The term for physical initiation of all the works of the Program shall expire 3 years after the effective date of the contract, except for the hospitals, in which case the term shall expire 2-1/2 years after the effective date of the contract; the term for disbursement of the financing shall expire 4 years after the effective date of the contract.
8. Special Conditions:
 - (a) The resources of the loan shall be utilized in their entirety by the Secretaría de Salud (hereinafter referred to as the "SSA" or the "executing agency"). If modifications in the legal provisions or the basic regulations concerning the borrower and/or the executing agency are approved which, in the opinion of the Bank, may substantially affect the Program, the Bank shall have the right to require the borrower to provide explanatory and detailed information in order to determine whether such modification or modifications may have an adverse impact on the execution of the Program. Only after hearing the borrower and assessing its information and clarifications may the Bank take such measures as it deems appropriate in accordance with provisions to be set forth in the loan contract and in the guarantee contract.
 - (b) The resources of the loan, together with the resources of loan /SF-ME, shall be used to participate in the execution of a Program estimated at the equivalent of US\$76,300,000. Consequently, the loan and guarantee contracts shall contain such provisions as the Bank deems appropriate to ensure that such additional resources as may be necessary, in addition to the two loans, for the complete execution of the Program shall be duly

provided, in an amount estimated at the equivalent of US\$35,000,000, in accordance with a schedule of investments satisfactory to the Bank.

- (c) In the acquisition of machinery, equipment, and other materials for the Program, and in the awarding of construction contracts, the system of public bids shall be followed in each case in which the value of such acquisitions or contracts exceeds the equivalent of US\$200,000. The bidding shall be subject to the procedures to be attached as an annex to the loan contract.
- (d) The Bank may waive the bidding requirement for procurement of specialized laboratory instruments, office furnishings and supplies, and books and other publications, provided the borrower so requests, stating the reasons for the request and indicating the procedure it plans to follow consistent with the purposes of the financing. In every case, the procurement procedure, as well as each purchase or contract award individually exceeding the sum of US\$25,000 or its equivalent shall be subject to prior approval by the Bank.
- (e) The Bank shall establish such inspection procedures as it deems necessary to assure the satisfactory execution of the Program, and the borrower shall extend all cooperation which is required for the most effective accomplishment of this purpose. From the amount of the financing the sum of US\$300,000 shall be allocated for credit to the income accounts of the Bank to meet expenses of general inspection and supervision.

Original: Spanish
ME-0159
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Appendix II

PROPOSED RESOLUTION

MEXICO. LOAN /SF-ME TO NACIONAL FINANCIERA, S.N.C.
(Health Services Upgrading Program)

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 Nacional Financiera, S.N.C., of México, as borrower and the Estados Unidos Mexicanos, as guarantor, for the purpose of granting the former a loan to cooperate in the execution of a Health Services Upgrading Program (hereinafter referred to as the "Program"). This financing shall be subject substantially to the following conditions:

1. Amount and Currency: Up to the equivalent of US\$11,300,000 in Mexican pesos which are part of the resources of the Fund for Special Operations of the Bank to cover local expenses and for such other purposes as may be specified in the loan contract. Payments of amortization and interest shall be made in Mexican pesos.
2. Source of Funds: The Fund for Special Operations.
3. Guarantee: Joint and several guarantee of the Estados Unidos Mexicanos.
4. Amortization: The borrower shall amortize the loan in a period of 25 years from the date of the contract, by means of semi-annual, consecutive, and, insofar as possible, equal installments. The first installment shall be paid six months after the date scheduled for the last disbursement of the financing.
5. Interest: 3% per annum, payable semi-annually on principal amounts outstanding. The first payment shall be made six months after the date of the contract. At the request of the borrower, resources of the financing may be used to pay interest during the period of disbursement thereof.
6. Physical Initiation and Disbursement: The term for physical initiation of all the works of the Program shall expire 3 years after the effective date of the contract, except for the hospitals, in which case such term shall expire 2-1/2 years the effective date of the

contract; the term for disbursement of the financing shall expire 4 years after the effective date of the contract.

7. Special conditions:

- (a) The resources of the loan shall be utilized in their entirety by the Secretaría de Salud (hereinafter referred to as the "SSA" or the "executing agency"). If modifications in the legal provisions or the basic regulations concerning the borrower and/or the executing agency are approved which, in the opinion of the Bank, may substantially affect the Program, the Bank shall have the right to require the borrower to provide explanatory and detailed information in order to determine whether such modification or modifications may have an adverse effect on the execution of the Program. Only after hearing the borrower and assessing its information and clarifications may the Bank take such measures as it deems appropriate in accordance with provisions to be set forth in the loan contract and in the guarantee contract.
- (b) The resources of the loan, together with the resources of loan /IC-ME, shall be used to participate in the execution of a Program estimated at the equivalent of US\$76,300,000. Consequently, the loan and guarantee contracts shall contain such provisions as the Bank deems appropriate to ensure that such resources as may be necessary, in addition to the two loans, for the complete execution of the Program shall be duly provided, in an amount estimated at the equivalent of US\$35,000,000, in accordance with a schedule of investments satisfactory to the Bank.
- (c) In the acquisition of machinery, equipment, and other materials for the Program, and in the awarding of construction contracts, the system of public bids shall be followed in each case in which the value of such acquisitions or contracts exceeds the equivalent of US\$200,000. The bidding shall be subject to the procedures to be attached as an annex to the loan contract.
- (d) The Bank may waive the bidding requirement for procurement of specialized laboratory instruments, office furnishings and supplies, and books and other publications, provided the borrower so requests, stating the reasons for the request and indicating the procedure it plans to follow consistent with the purposes of the financing. In every case, the procurement procedure, as well as each purchase or contract award individually exceeding the sum of US\$25,000 or its equivalent shall be subject to prior approval by the Bank.
- (e) The Bank shall establish such inspection procedures as it deems necessary to assure the satisfactory execution of the Program, and the borrower shall extend all cooperation which is required for the most effective accomplishment of this purpose. From the

amount of the financing the equivalent of US\$113,000 in mexican pesos shall be allocated for credit to the income accounts of the Bank to meet expenses of general inspection and supervision.

RECOMMENDATIONS

- A. It is recommended that, in addition to the conditions set forth in the proposed resolutions, the following conditions, which must be met to the satisfaction of the Bank, be included in the loan contracts:
1. Unless the Bank agrees otherwise, the borrower shall submit the following documents to the Bank, through the executing agency, before issuing each public call for bids or, where a public call for bids does not apply, before the commencement of the works: (i) the general drawings, specifications, budgets, and other documents necessary for construction and, where applicable, the specific terms and conditions and other documents pertaining to the call for bids; (ii) in the case of works, evidence of legal title to the land enabling construction of the works to proceed, and/or the necessary easements or other rights; and (iii) evidence that there are mechanisms in effect for the appropriate supervision of the construction of the works.
 2. The guarantor and the borrower, through the executing agency, shall take the necessary steps to ensure that all the Program works and equipment will be assigned the necessary personnel and will be operated, maintained and administered in accordance with generally accepted technical standards, pursuant to the terms of the coordination agreements entered into with the States. In the case of those states for which there are no such coordination agreements, the SSA shall agree that said activities shall be carried out pursuant to the above mentioned requirements.
 3. The borrower, through the executing agency, shall submit within the first 3 months of each year, beginning in 1988 and for a period of 7 years thereafter: (a) an annual plan for the operation and maintenance of the works and equipment included in the Program, and (b) a report on the previous year's activity, including data on the preservation and maintenance of the works and equipment pursuant to the above-mentioned annual plan.
 4. Within 6 months from the effective date of the loan contracts, the borrower shall submit to the Bank a timetable for hiring the consultants required under the component for the development of the operating capacity.
 5. For purposes of carrying out an a posteriori evaluation of the Program, the executing agency shall submit the following to the Bank:

- (a) within 6 months after the effective date of the loan contracts:
 - (i) a description of the evaluation unit, (ii) the initial basic data specified in section VI of Appendix IV, and (iii) a description of the system for gathering and processing the data to be used to make annual comparisons with the initial basic data;
 - (b) beginning with the placing in service of the first health unit financed with Program resources, within 90 days after the end of the calendar year and for each year until such time as the a posteriori evaluation report has been submitted, the annual comparative data specified in section VI of Appendix IV;
 - (c) within 36 months after the effective date of the loan contracts, an interim evaluation report on the execution of the Program, on the basis of the information specified in section VI of Appendix IV; and
 - (d) at the third year after the date of the last disbursement of the financing, an a posteriori evaluation report on the results of the Program, on the basis of the information specified in section VI of Appendix IV.
6. Beginning with the fiscal year in which execution of the Program begins, the following financial statements shall be submitted each year to the Bank:
- (a) those for the borrower, during the term of the loan contract, audited by an independent public accounting firm appointed by Mexican authorities, that is acceptable to the Bank; and
 - (b) those for the Program, during the execution thereof, authorized by the competent ministry of the guarantor.
- B. The loan contracts shall include an annex essentially similar to Appendix IV.

THE PROGRAM
(ANNEX A TO THE CONTRACT)

I. Objectives

- 1.01 The Program, which is part of the Programa Nacional de Salud del Gobierno Mexicano, has the following objectives:
- (a) to extend the coverage of health services, with special emphasis on primary health care, so as to reach communities that do not now have these services;
 - (b) to strengthen and extend the system of secondary health care facilities in communities where there is a marked shortage of hospital beds for low-income people;
 - (c) to improve the operating capacity of the Secretaría de Salud and of the States in the administration of health services; and
 - (d) to further the process of decentralizing health services.

II. Description

- 2.01 To achieve these objectives the Program includes the construction and fitting out of health facilities in approximately the following numbers: (a) for Primary Health Care Facilities, 220 rural health centers for scattered populations (RHCS); 60 rural health centers for concentrated populations (RHCC); 60 urban health centers (UHC); and (b) for Secondary Health Care Facilities, 60 and 120 bed hospitals, with a total of 720 beds.
- 2.02 In addition, the Program includes a consulting services and research Component for Development of the Operating Capacity of the Secretaría de Salud and of the States in the administration of existing services, as well as the additional services to be included under the Program. This component will include research activities to evaluate health services and the demand for them, the training of personnel, the development of supervision and evaluation capabilities, and the promotion of community participation.

III. Cost and Financing of the Program

- 3.01 The total cost of the Program is estimated at the equivalent of US\$76,300,000, according to the following approximate breakdown by investment and financing category:

(in thousands of US dollars, or equivalent)

	BANK			Local contri- bution	TOTAL	%
	IC	FSO	Total			
1. <u>Engineering and Administration</u>	-	-	-	3,260	3,260	4.3
2. <u>Direct Costs</u>	24,935	10,433	35,368	25,153	60,521	79.3
(a) Construction	14,534	7,178	21,712	13,388	35,100	
(b) Equipment	10,401	3,255	13,656	11,765	25,421	
3. <u>Concurrent Costs</u>	-	-	-	5,767	5,767	7.6
(a) Land	-	-	-	3,167	3,167	
(b) Development of Operating Capacity	-	-	-	2,600	2,600	
4. <u>Financial Costs</u>	5,065	867	5,932	820	6,752	8.8
(a) Interest	4,765	754	5,519	-	5,519	
(b) Fee	-	-	-	820	820	
(c) Inspection and supervision	300	113	413	-	413	
Total	30,000	11,300	41,300	35,000	76,300	100.0
	=====	=====	=====	=====	=====	=====
%	39.3	14.8	54.1	45.9	100.0	

IV. Procurement

- 4.01 When the goods to be procured or services to be contracted are to be financed in whole or in part with foreign exchange from the financing, the procedures and specific requirements for the bidding or other form of purchase or contracting shall permit the unrestricted offer of goods and services, including those related to any mode of transport, from member countries of the Bank. Consequently, no conditions that would limit or restrict the offer of goods or the participation of contractors from such countries may be imposed through such procedures or specific requirements.

V. Selection Criteria

- 5.01 Before including them in the Program, the executing agency will select the health units and will submit them to the Bank for its approval, on the basis of the following criteria:
- 5.02 The general criteria to be used in the selection of all health units shall be the following:
- (a) they must be included in the universe established in the national survey conducted by the Secretaría de Salud in 1985;
 - (b) if they were not included in the universe mentioned in (a) above, proper justification must be provided in accordance with the compliance of one of the following requisites: (i) the community must be lacking a health care unit open to the general public; or (ii) if there is a health unit it must be in such poor condition that to rehabilitate it would cost over half the amount necessary to establish a new unit; or (iii) it must have premises loaned or rented to it; or (iv) it must not be possible to expand the existing unit;
 - (c) the land site must have adequate water, electricity, communications, and solid-waste disposal systems. If these utilities are not available, the construction work in each case must include the provision of these utilities.
- 5.03 The specific criteria to be used in the selection of health care facilities, by type, shall be the following:
- (a) Primary Health Care Facilities
 - Rural Health Centers Serving Scattered Populations (RHCS): the community must have between 1,000 and 2,500 inhabitants, with a total of 3,000 to 8,000 inhabitants within 60 minutes' travelling time.
 - Rural Health Centers Serving Concentrated Populations (RHCC): the community must have between 2,500 and 15,000 inhabitants, with 3,000 to 5,000 inhabitants per health equipment module within 60 minutes' travelling time;
 - Urban Health Centers (UHC): the community must have at least 15,000 inhabitants, with 3,000 inhabitants per module within 30 minutes' travelling time;

(b) Secondary Health Care Facilities

- 60-bed hospitals: these hospitals will be situated in towns of 20,000 to 50,000 inhabitants, with the catchment area being the area within 120 minutes' travelling time;
- 120-bed hospital: this hospital will be situated in a city of 50,000 to 100,000 inhabitants, with the catchment area being the area within 120 minutes' travelling time.

5.04 In any case where a health care facility is proposed for a community whose characteristics differ from those described in sub-paragraphs (a) and (b) above, the executing agency must provide proper justification.

VI. A Posteriori Evaluation

6.01 The Initial Basic Data are to include:

- (a) the definitive location of each of the health care facilities included in the Program, including the type of facility and catchment area defined in terms of travelling time, showing the population of the immediate community and of the total coverage area, in accordance with the selection criteria set forth in section V hereof;
- (b) for each catchment area and control population (immediate community and coverage area), on an annual basis:
 - (i) the number of out-patient visits per year, by type of visit and type of facility, including hospitals;
 - (ii) the type and level of qualification of the medical staff attending to the patients referred to in sub-paragraph (i) above;
 - (iii) the unit cost per visit (capital costs and recurring costs);
 - (iv) the number of patients discharged from hospitals, their average length of stay, and the type of facility (number of beds);
 - (v) the type and level of qualification of the medical staff attending to the patients referred to in sub-paragraph (iv) above;
 - (vi) the unit cost per patient discharged (capital costs and recurring costs).

6.02 The annual comparative data are to include:

- (a) the same variables listed in paragraph 6.01 above;

- (b) actual construction costs, including overruns;
- (c) changes from the original designs and start-up schedules;
- (d) the resources expended for the operation and maintenance of health units in the Program, based on representative sample; and
- (e) for the Operating Capacity Development Component: the expenses incurred in each Program area.

Methodology

- 6.03 The general framework for the interim evaluation report and the a posteriori evaluation will be based on the ex ante socioeconomic evaluation methodology. In the analysis of the Program, stress will be placed on: (a) re-estimating the ex ante cost/effectiveness and/or cost/benefit indicators, based on the data gathered during the execution of the Program; and (b) the activities of the Component for Development of Operating Capacity in developing impact indicators regarding the population at risk, the state of health, cost/effectiveness, and, so far as the information will allow, cost/benefit.